

**Information Collection Request for
The Community Water System Survey (CWSS)
(Supporting Statement for OMB Form 83-I)**

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PART A OF THE SUPPORTING STATEMENT

A.1 IDENTIFICATION OF THE INFORMATION COLLECTION

A.1.a. Title of the Information Collection

The title of this information collection request (ICR) is *Information Collection Request for the 2006 Community Water System Survey*. The Office of Management and Budget (OMB) control number for this ICR is 2006-2040-New; EPA ICR No. 2232.01.

A.1.b. Short Characterization

In compliance with Executive Order 12866, the Regulatory Flexibility Act, and the Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency's Office of Ground Water and Drinking Water (OGWDW), Standards and Risk Management Division (SRMD) conducts periodic surveys of the financial and operating characteristics of community water systems (CWSs). This information is essential to support economic analyses of the costs and benefits of new regulations and changes to existing regulations on consumers, the water supply industry, and the nation. The information also will be used to measure the financial burden of EPA's regulations on consumers and the industry. Furthermore, data from the survey will help EPA identify, evaluate and develop guidance on Best Management Practices used in water treatment and distribution systems.

EPA will collect basic information on the infrastructure, organization and financial characteristics of community water suppliers by a variety of survey methods, depending on the size of the system. EPA estimates that the survey will provide data from 1,703 respondents, requiring 5,938 hours to complete at a total cost to those respondents of \$203,293. Previous surveys of CWSs were conducted in 1976, 1982, 1986, 1995, and 2000

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A.2 NEED FOR AND USE OF THE COLLECTION

A.2.a. Need/Authority for the Collection

The legal authority for this data collection is the Public Health Service Act (Safe Drinking Water Act), Section 300j-4(1)(A), 33 U.S.C. Section 1316. Copies of the relevant sections of this statute, cited in the order they appear in this information collection request, are in Appendix A.

EPA must conduct this survey in order to collect the data needed to carry out its program development and management responsibilities under the three sections of the 1996 SDWA Amendments which require that EPA have financial information about water systems when performing several regulatory functions. Section 300g-1(b)(3)(C) requires EPA to analyze “quantifiable and nonquantifiable costs . . . [which] are likely to occur solely as a result of compliance with the maximum contaminant level,” and “the incremental cost and benefits associated with each alternative maximum contaminant level considered.” Section 300g-1(b)(4)(D) instructs the Agency to take “cost into consideration” when determining what constitutes “feasible” technology for meeting prescribed Maximum Contaminant Levels (MCLs). Section 300g-4(a)(1)(A) allows EPA to grant variances from National Primary Drinking Water Regulations” on the condition that the system install the best technology, treatment techniques, or other means, which the Administrator finds are available (taking costs into consideration).” Section 300g-4(e) makes special provision for “Small System Variances” and notes that a variance under this subsection may be available only to a system “that cannot afford to comply, in accordance with affordability criteria established by the Administrator (or the state in the case of a state that has primary enforcement responsibility under Section 300g-2) with a national primary drinking water regulation , . . .” Section 300g-4(e)(7) discusses the Administrator's ongoing responsibility to publish information that will assist states in developing affordability criteria. Section 300g-5(a)(1) allows for a system to receive an exemption from meeting an MCL upon a finding that “ . . . due to compelling factors (which may include economic factors), . . . the public water system is unable to comply with such contaminant level or treatment technique requirement or to implement measures to develop an alternative source of supply.”

Given this statutory background, it clearly is not possible to consider treatment costs in a vacuum. Cost impacts can only be assessed when something is known about the operations and treatment-in-place for community water systems—conditions that establish the baseline costs of those bearing the burden of future regulations. Economic factors cannot be adequately considered unless the agency knows something about water system economics. The issue of affordability requires additional information on both costs and the financial condition of community water systems. Further, the 1996 SDWA Amendments have added new dimensions to compliance that imposes additional needs for information on the operations of the regulated systems. The information from this survey, therefore, is essential for the Agency to meet its statutory obligations.

EPA also needs this data collection in order to meet its economic analysis obligations under Executive Order 12866, its obligation to assess and mitigate impacts under the Regulatory Flexibility Act (including the additional requirements of the Small Business Regulatory Enforcement Fairness Act of 1996, (SBREFA)). In addition, the Unfunded Mandates Reform Act (UMRA) of 1995 requires that agencies assess the impact of federal regulatory actions on state, local, and Tribal governments. An effective analysis of incremental costs and benefits, as required of Economic Analyses (EAs) under Executive Order 12866, plus other economic analyses required by SBREFA and UMRA must begin with an analysis of baseline costs. This survey will provide the Agency with baseline information relating to the physical and financial characteristics of drinking water systems. Such information provides the opportunity to evaluate the incremental costs of new regulations as well as to evaluate the consequences of previous actions. For example, current EAs are unable to take into account current information on

storage and distribution costs when trying to model the likely responses of a utility to new regulatory requirements. The results of this survey will allow EPA to replace assumptions with actual, statistically valid, supporting data and to introduce new factors relating to less capital intensive treatment alternatives. Identifying cost-effective regulatory options and establishing the efficacy of subsequent rules will be immensely complicated, if not impossible, without accurate baseline information to be supplied by the survey.

When implementing regulations, there is considerable need for EPA to provide additional guidance to state Public Water Supply Supervision (PWSS) Programs and regulated community water systems. To better design such guidance, EPA needs to know the operating and financial characteristics of these systems.

Finally, the 1996 Amendments to the SDWA created new, preventive programs to help public water systems provide safe drinking water to their customers. One of the most notable of these programs is Section 300g-9, "Capacity Development." Under this Section, states must have the "legal authority or other means to ensure that all new community water systems ... demonstrate technical, managerial, and financial capacity with respect to [National Primary Drinking Water Regulations]." States also need to have a "capacity development strategy" that will help existing water systems acquire and maintain technical, managerial, and financial capacity. The provisions of Section 300g-9 apply primarily to small water systems, and the information on operating and financial characteristics of the proposed survey represent vital background data for the implementation of Section 300g-9.

A.2.b. Use/Users of the Data

OGWDW, and particularly SRMD is the primary user of the data. OGWDW uses the data in meeting its program management responsibilities under the SDWA. This includes taking costs and economic factors into consideration where required by statute (as indicated above) and in meeting the agency's responsibilities under Executive Order 12866, the Regulatory Flexibility Act, SBREFA, and UMRA, as noted above. Specifically, staff from SRMD will use the data in analyses and models which are used to support calculations of the national costs and benefits associated with proposed drinking water regulatory alternatives.

The Drinking Water Protection Division (DWPD) of OGWDW is responsible for working with states and regulated water systems to implement all regulations. To achieve their mission, staff in DWPD need information on the operating and financial characteristics of water systems. DWPD also is responsible for implementation of Section 300g-9, "Capacity Development." As indicated above, the information on financial and operating characteristics of small systems that will be a product of this survey represent essential inputs to the ongoing work in Capacity Development.

The Water Security Division (WSD) works with the states, tribes, drinking water and wastewater systems, and others to enhance the security of water systems and their ability to respond to security threats and breaches. The Division will use the data on system operations and security programs to evaluate the security measures in place. WSD will use the data to assess systems' need for additional measures and information. The data will help the Division better allocate resources in meeting the security needs of water systems.

Data collected in previous surveys have been used by other program offices administering the Superfund and Resource Conservation and Recovery Act (RCRA) programs. Other agency users would include the Office of Policy and the Office of Regional Operations and State/Local Relations in the Office of the Administrator.

Data collected in previous surveys have also found uses outside of the Agency. Past users have included the Department of Agriculture's Rural Utilities Service, the Department of the Interior, the Department of Housing and Urban Development, the U.S. Army Corps of Engineers, White House task forces, the Federal Emergency Management Agency, public interest groups and many private companies and individuals.

A.3. NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

The following sections verify and affirm that this information collection satisfies OMB's collection guidelines, has public support, and does not duplicate another collection.

A.3.a. Nonduplication

EPA has searched the Federal Information Locator System (FILS) in an effort to ensure nonduplication of the data collection efforts. To the best of the Agency's knowledge, financial and operating information of the type needed are not available from any sources other than the 2000 Community Water System Survey (CWSS). Since this survey is now nearly six years old EPA has diminishing confidence in its reliability. Also, since 2000, dramatic changes have occurred in the water industry and its regulatory environment. Specifically, EPA has promulgated a significant number of new rules that may have resulted in significant changes to the operating and financial characteristics of community water systems (CWSs).

One indicator of the weakness of the existing CWSS database is that OGWDW engineers routinely seek other sources of data when working on regulatory development activities. While this results primarily from the analytic requirements of the 1996 amendments, SBREFA etc., the age of the CWSS data also is a factor. For example, one source that was used before the 2000 CWSS data were available was WATER STATS, results from a 1998 survey conducted by the American Water Works Association.

While WATER STATS is useful for a few questions, it also has its weaknesses. One of the most significant weaknesses is that there are very few small system respondents. Indeed, EPA users of WATER STATS tend to use it only for requirements that will apply to medium and large systems. In other words for data on small systems—the subject of many Regulatory Flexibility Act analyses—WATER STATS cannot help. Second, WATER STATS is not, nor does it purport to be, a statistical survey. Therefore, its data cannot be used to reliably characterize the entire regulated industry.

Existing studies by other agencies also do not meet EPA's needs. While the Census of Governments and Survey of Governments contain considerable information on CWSs owned and operated by counties, municipalities, and special districts, their scope does not extend to privately-owned and ancillary systems. Since most small systems are privately owned (and, for reasons stated previously, small systems are of major interest to the Agency), the systems covered in Census studies are of limited usefulness to EPA. Census studies also typically lack details on operating characteristics.

Information about the financial condition of some CWSs is provided by financial rating services, such as Dun and Bradstreet. Like the Census, the rating services are limited only to financial information and do not provide data on operating characteristics of importance to EPA. In addition, systems evaluated by such services are not a statistical sample. Rather, it represents the active, well-managed systems that could realistically seek private-sector financing. Omitted from such reports would be the weaker systems that would likely be the object of any Federal or state assistance.

EPA is expected to collect data from water systems through two other surveys. However these surveys do not meet the objectives of the CWSS. The CWSS was designed to characterize the technical and financial aspects of CWSs on a national basis. The other surveys EPA is expected to conduct are:

- The Drinking Water Infrastructure Needs Survey and Assessment (DWINSA). The DWINSA is used to develop national estimates of capital needs and provide state-by-state estimates. It is

anticipated that EPA will conduct a new DWINSA in 2007. Where possible, EPA will combine any efforts for the CWSS and DWINSA such as the small system site visits. Even though the data collected is different, the burden may be reduced if only one site visit is conducted to a system to collect data for both the CWSS and DWINSA.

- Drinking Water Treatment Screener and Detailed Questionnaire. EPA plans to conduct a survey of drinking water treatment plants as part of its effort to evaluate the need for national effluent guidelines regulations for the drinking water treatment point source category. This survey requests information on drinking water treatment plants operating during the 2005 calendar year. This survey is conducted under the authority of Section 308 of the Clean Water Act (Federal Water Pollution Control Act, 33 U.S.C. Section 1318). This survey will only collect data from systems serving more than 10,000 people and will be collecting operating information specific to drinking water treatment residuals. However, there may be an opportunity to reduce burden by combining efforts through the use of similar financial questions. Preliminary estimates indicate that over 200 systems may be jointly sampled by the two surveys. An effort to use the same financial questions on each questionnaire is currently being pursued. This would mean jointly sampled systems would experience less burden than if slightly different questions were asked twice: once on each survey. Any such possible burden reduction was not taken into account in the burden calculations (A.6).
- Finally, EPA maintains the Safe Drinking Water Information System (SDWIS) that contains information on the operating characteristics and compliance records of all public water suppliers. However, SDWIS contains no financial information and thus does not meet the majority of Agency objectives in conducting this survey. It will, however, be possible to perform regression analyses with SDWIS compliance data and the survey's financial and operating data, to explore possible causes of non-compliance.

A.3.b. Public Notice Required Prior to ICR Submission to OMB

To comply with the 1995 Amendments to the Paperwork Reduction Act (PRA), EPA solicited public comment on this ICR for a 60-day period before it was submitted to OMB. Specifically, EPA published a notice in the *Federal Register* (FR) on Thursday June 1, 2006 requesting comment on the estimated respondent burden and other aspects of this ICR (71 FR 31176). This notice is included in Appendix B. Before submission to OMB, EPA considered any comments received and determined if any adjustments were needed to the burden and cost calculations or to the supporting statement for this ICR. Comments received and EPA's responses are included in Appendix D. An additional *Federal Register* notice will be published when this ICR is submitted to OMB. The public comment period for this additional notice is 30 days.

A.3.c. Consultations

In the development of the survey questionnaire and sampling plan, OGWDW has consulting with Barry D. Nussbaum, Chief Analytical Products Branch in the Office of Environmental Information and Professor Bimal Sinha of the University of Maryland. OGWDW also will conduct an independent peer review of the sampling plan. OGWDW has taken comments from the American Water Works Association and the Association of Metropolitan Water Agencies and will incorporate their comments whenever possible.

OGWDW received feedback from several CWSs. As part of the pre-test of the questionnaire (discussed in section 3.a of part B), OGWDW received comments on the questionnaire from four Massachusetts water systems:

Table A-1. Pre-test Participants

Community Water System	CWS Representative
Abington/Rockland Joint Water	Daniel Callahan
City of Cambridge Water Department	Edward Dowling
Tauton Water Treatment Plant	John Chase
Acton Water District	James Deming

The systems reviewed the data collection instrument, provided feedback on its design, and helped OGWDW gauge the level of effort required to fill out the questionnaire.

A.3.d. Effects of Less Frequent Collection

The information in this survey has not been requested since 2000. As mentioned above, some of the information from the 2000 survey suffers from problems relating to both it's the age of the data and the changes in the industry that have limited its utility.

To the extent that the Agency lacks accurate, up-to-date information on the operating characteristics of community water systems, the regulatory development process suffers. Regulations currently in process, particularly those related to disinfection and disinfectant by-products, require a detailed understanding of system sources, flows, and residence time in various parts of the system. Lack of accurate information could lead to regulations that are inconsistent with the operational realities of the systems being regulated. Information from this survey is essential for realistic policy formulation.

The information on financial characteristics of CWSs is needed to meet the analytical requirements of Executive Order 12866 and the Regulatory Flexibility Act. Old or inaccurate financial data could contribute to overly burdensome or inadequately protective rulemaking.

A.3.e. General Guidelines

This information collection complies with the guidelines in the Paperwork Reduction Act. Specifically, the collection does not require water systems to:

- Submit regular reports to EPA.
- Retain any records for more than three years.
- Prepare a written response to the questionnaire.
- Maintain or provide information in a format other than that in which it is customarily maintained.
- Submit any information that they may consider to be confidential.
- Submit more than one original document.

This information collection:

- Is a statistical survey designed to produce data that can be generalized to the universe of the study (See Part B.2).
- Does not provide remuneration to participants.

- Will transcribe information collected into an automated form.
- Is designed particularly with small entities in mind (See Part A.4.c).
- Does not concern grants or grantees.
- Is voluntary.

A.3.f. Confidentiality

This information collection does not require the respondent to disclose any confidential or sensitive information. There were no claims of confidentiality or complaints that the questions were sensitive in the 1986, 1995, and 2000 CWSSs. Respondents are not obliged to answer these strictly voluntary surveys if the concern should arise.

The inside front cover of the questionnaire contains the following statement: “Participation in the survey is voluntary. However, as a matter of policy, EPA will not disclose the identity of any respondent to this questionnaire, nor the identity of any participating water system. While no respondent has ever claimed that the information asked for in this survey contains confidential business information (CBI), EPA will offer the opportunity of claiming CBI to a representative of your water system in the event that we receive a Freedom of Information Act request for any data that would identify you or your system. It should be noted, however, that EPA has never received a Freedom of Information Act request for such information.”

A.3.g. Sensitive Questions

The questionnaires do not ask any “sensitive” questions pertaining to sexual attitudes/behavior or religious beliefs.

A.4. THE RESPONDENTS AND THE INFORMATION REQUESTED

A.4.a. Respondents/SIC Codes

Respondents to this survey will be drawn from a national sample of CWSs. A CWS is one that serves at least 15 connections or at least 25 year-round residents (40 CFR 141.2). The North American Industry Classification System (NAICS) code for Public Water Systems (PWSs) is 221310. Some CWSs do not supply water as their primary business. These businesses, such as mobile home parks (531190), apartment buildings (531110), condominium and homeowner associations (813990), and nursing homes (523311, 623110, and 623312) sometimes meet the definition of CWS and thus may also be sampled.

As shown by Table A-2 below, community water suppliers represent only a small portion of all public water systems. Also included as public water systems are nontransient noncommunity water systems (NTNCWSs), serving at least 25 of the same people at least six months per year (such as schools, factories, and hospitals), and transient noncommunity water systems (TNCWSs), serving non-residential areas (such as campgrounds, motels and gas stations).

Table A-2. Number of Water Systems

Type of Water Systems	Number of Water Systems
CWS	51,433
NTNCWS	19,375
TNCWS	87,583

Because NTNCWSs and TNCWSs are exceptionally diverse and do not lend themselves to statistical analyses, the Agency has decided to exclude these systems from the survey. Virtually all of the NTNCWSs and TNCWSs are small entities; therefore, this decision will reduce the data collection burden on small entities.

A.4.b. Information Requested

The information that respondents are asked to provide for this survey is generally maintained and reported as a function of the management and operation of the water system. For example, as part of state oversight of the drinking water program, systems generally are required to provide basic data on operations in order to obtain or renew construction and operating permits. Systems, therefore, have a description of the physical plant and daily operating procedures, including information on source, treatment, production, and distribution. Treatment information also may be required by state or Federal regulatory personnel to demonstrate a system's compliance with regulatory requirements. Finally, information on revenues, expenses, and debt are basic accounting information that reasonably could be expected of any business. Also, because many CWSs are regulated by state public utility commissions, they are required to provide financial information in the form of annual financial reports describing all revenues, expenses, assets and liabilities.

A.4.b.1. Data Items

This section provides justification for each of the data items requested in this survey. Separate questionnaires were designed for small, medium, and large systems (serving 25 – 500,000 customers), and very large systems (serving over 500,000 customers). Although there are few very large systems, they supply water to the majority of customers and bear most of the potential burden associated with regulations. Therefore, the questionnaire for very large systems requests some information regarding production and treatment not asked of smaller systems.

The Drinking Water Treatment Screener questionnaire, cited on P. 13, will only collect data from systems serving more than 10,000 people and will be collecting information specific to drinking water treatment residuals. In addition to the very different sampling plans and purposes of the two surveys, the opportunity to reduce burden by combining efforts is also restricted by the limited use of similar financial questions and dramatically different questions pertaining to operating characteristics. Such a combined effort would greatly complicate data collection, custody and processing and would make uniform quality control difficult. Copies of the questionnaires are in Appendix C.

Question 1 asks for information on potential contacts in the CWSs that might be able to answer questions that might arise during the survey. Such information is an integral part of the data collection methodology (described below) that is designed to reduce burden on potential respondents. EPA has asked for a telephone number, fax number, and e-mail address to add flexibility to our communications process. There is a field for CWSs to include information for the most knowledgeable person working at the water system in case the survey respondent differs from who might be contacted if necessary.

Question 2 requests information on the reporting period for which data are being provided. This is necessary in order to ensure that cross-system analyses are not biased by data from different time periods. During data analysis, financial information will all be converted to July 2006 dollars for all systems.

Question 3 asks systems to classify the ownership of the system. This information will allow EPA to (1) confirm the ownership information in SDWIS, (2) distinguish ancillary systems from other private systems, and (3) evaluate the operating and financial data provided in subsequent sections of the survey. Because many small water systems provide water as an ancillary but necessary part of another business, this information is essential to analyze the impact of rules and regulations on small systems.

Question 4 asks systems to describe their current computer status, access to available programs and the internet. This information will help EPA (1) determine if systems have computer access as an option for viewing training materials, (2) target the most widely used computer programs, and (3) determine the best delivery methods for distribution. In making new regulation determinations, the proper method of delivery for information and comment is critical and can become an excessive burden on stakeholders if the systems do not receive it properly explained to them in an acceptable period of time.

Operational Characteristics

Information about the operating characteristics of water systems is needed to assist EPA's OGWDW in fulfilling statutory requirements under SDWA and the Regulatory Flexibility Act, as well as requirements of Executive Order 12866. Information on operating characteristics of water systems is a key component for designing, assessing the impacts of, and implementing Agency programs. Because of the diversity in the water supply industry, information on system operating characteristics gives EPA a basis for developing more accurate assessments of the feasibility of treatment alternatives, and the costs and benefits of federal regulatory efforts on the regulated utilities and impacted consumers. This information also enables the Agency to assess the differential impact of regulations across different types of systems.

This information is needed to meet the standard-setting requirements of Section 104 of the 1996 SDWA Amendments. The information also is useful in developing and targeting technical assistance programs, and in assisting the Agency in identifying the types of systems that would benefit from technical training and guidance.

Operating information acquired through this survey also will be used to verify data in SDWIS and to analyze sources of non-compliance by comparing data collected with information in SDWIS.

This questionnaire seeks to obtain comprehensive information on all sources, all treatment, all production, and all entry points to the distribution system. The need for this comprehensive approach arose for two reasons. First, it became clear from analyses of earlier surveys (prior to the 2000 survey), that the Agency's failure to get such comprehensive pictures of operations made it very difficult for the Agency to assess the impacts of alternative regulatory approaches. Second, the growing importance of the risk-risk tradeoff between disinfection and disinfectant by-products requires that the Agency have a more detailed understanding of the entire production process. For example, the Agency needs to know when disinfection is introduced, or what the retention time of treated water is in various parts of the system.

Information from surveys before 2000 has proven to be inadequate for current rules. The 2000 CWSS began collecting information in the described manner. During a series of meetings held during the design phase of the 2000 CWSS, it became clear that an understanding of the treatment in place required a comprehensive approach that provided information on all sources and linked the flows from all sources to all treatment plants.

Questions 5 through 7 seek information on the number and flow characteristics of ground water sources, surface water intakes, purchased water connections, and treatment plants at a utility. EPA has found it difficult to reliably characterize the impacts of regulations without a clear understanding of this intake-specific and plant-level information. Indeed, the Agency has been hindered in past regulatory development efforts by having only aggregate utility-level data.

Question 5 asks a system to draw a schematic of their water system. A visual layout of the water system helps EPA understand the challenges different types of systems face for transmission, treatment, and distribution of water.

Question 6 asks for average flow, peak daily production, design flow, whether the source is a seasonal or emergency connection and if the water is treated. This will help complete a characterization of the system by identifying the number of sources, intakes, and connections that contribute to the total system volume. These data will allow the Agency to understand the size of the system in order to evaluate rate structures and identify relationships between cost and volume of water.

Question 7 asks for this information by water treatment plant. The description of water sources from these questions is critical because of the different regulatory programs and options that may apply only to water of a specific source type. For example, many of the current rules on microbials were designed specifically for systems whose source water came from surface water sources. Also, very large water systems typically have mixed water sources. The data will support Agency occurrence analyses, since vulnerability to certain contaminants is related to the type of water source. These data will be used in the cost analyses which support regulation development.

Question 8 provides critical plant-level information necessary for reliably characterizing the feasibility of treatment alternatives. The information from this question will enable the Agency to estimate the range of costs and contaminant removal potential of those alternatives in relation to the flows that would be

treated at the individual plant level within utilities having multiple plants. Treatment objectives describe the cost feasibility of future regulations without increasing the cost to a system for Agency cost analysis.

Question 9 addresses residuals management, an increasingly important part of the cost of regulations. Each EA must address the cost of residuals management, and the Agency currently does not have an adequate baseline on types of residuals management being used.

Very large systems will be asked to provide additional details regarding treatment. Question 10 of the very large system questionnaire requests that systems provide raw water and post-treatment concentrations for any unregulated contaminants the system monitors. The Agency realizes that the water systems may not have concentration data for all entry points; therefore, the questions request available aggregate data. The Agency will use these data to assist in performing occurrence analyses, treatment evaluations, and affordability determinations used for regulation development. This type of analysis is feasible for very large systems because of their small number; at the same time, it is important because these systems supply much of the nation's drinking water.

Many of the possible alternative sources of data for contaminants, such as the National Drinking Water Contaminant Occurrence Database (NCOD) and SDWIS, do not contain complete data on regulated or other contaminants of concern. For example, SDWIS only contains occurrence data for public water systems with MCL violations. Also, public water systems are not required to submit contaminant occurrence data to the NCOD. As a result the, databases currently used may have substantial gaps in occurrence data; therefore, Question 10 is the only source of these data that will allow the Agency to perform accurate analyses for regulation development.

Question 11 is the survey's only question on storage. The number of different types of storage in use is necessary to better estimate degradation in distribution system water quality and potential risk in the distribution system. The volume of treated storage in the system is vital to an analysis of regulatory options in the Microbial and Disinfection/Disinfectants Byproducts (M/DBP) cluster of rules. Disinfection and the likely contact time with the disinfectant are determinants of the potential risk posed by disinfectant byproducts. The purpose of the tank, physical arrangements, how it is operated, maintenance activities and turnover rate facilitate understanding in how tanks are operated and how utilities consider the impacts of operation on water quality that lead to public health risks.

Question 12 collects data on the current inventory of pipe, the amount of transmission lines and distribution mains replaced in the past 5 years in each water system, and the amount of new transmission lines and distribution mains installed. The importance of this information is related to the significance of the long-term costs associated with transmission and distribution system replacement. The Agency will use this information to develop its own assessment of these costs in terms of overall system requirements.

Questions 13 requests that the system describe the pressure zones located in their distribution system. Pressure zones and backflow are considered a high priority by most experts and stakeholders. Pressure reductions can lead to backflow or intrusions, and control of pressure helps reduce the risks from both. As contamination does not spread evenly throughout the distribution system, the number of pressure zones will be used to estimate the total population affected during a contamination event because water circulates within a pressure zone but less frequently between pressure zones. The amount of booster disinfection in the distribution system indicates opportunities for water quality control in the distribution system and is very important for controlling contamination events. Booster disinfection by pressure zone is not available and will be used to determine regulatory options and cost to utilities. These data will be used to estimate possible approaches to risk reduction and economic impact of potential requirements.

Some of this information is known for large utilities, but there is little data on smaller systems that do not participate in research projects.

Questions 14 through 17 requests information on the system's flushing practices in the distribution system. The information on what utilities are doing on a regular basis to maintain water quality in the distribution system will be used to determine what is working, what is not, and which existing programs can be built upon to best reduce public health risk in the distribution system. It will be used to estimate costs for potential requirements when determining how many systems already have programs in place versus how many have to add new programs. This information is not available in a nationally representative sample and is especially lacking for small systems.

Question 18 asks for data on the concentration of disinfection residuals during different time periods of the year. As these data varies by season, this information is critical to understand the nature of disinfection by products for regulation analysis. They will be used to estimate the economic impact of current and future regulations.

Question 19 is a request for information about the service area of the system. This is approximated by information on ZIP codes of customers. This information is needed to estimate median household income and other demographic characteristics in the service area, and it will be used to help the Agency better understand the financial context in which the system operates.

Question 20 asks systems to describe their current water system security programs and if they use any of the training materials provided by EPA. Identifying the most used training materials, best methods of delivery and how stakeholders incorporate assistance materials into their programs will allow EPA to better allocate resources in meeting the needs of the system.

Financial Characteristics

An essential question in any economic analyses is whether the regulated community can afford to implement proposed regulations. This question requires an analysis of the financial impacts of the regulation on both the water system and its consumers. The financial questions ask basic information that is essential to this analysis. These questions are updated from previous surveys to provide the most accurate portrait of the system. Although still relatively simple, they describe the whole picture of a systems financial stability.

The information requested in Question 21 is for total production flows, the distribution to different customer types, and types of revenue from each customer type. It also gathers information on the customer base of the water system. This information is critical for understanding the cost impacts of regulations on household consumers and other water system customers. Revenue is one of the essential elements from any operating statement that would enable the Agency to assess the financial condition of the system. This information has been collected in all previous versions of the CWSS, and these data form an important part of the financial baseline for EAs.

Question 22 and 23 ask about the system's rate structure and forms of rate relief for customers with low or fixed incomes. These questions are essential for evaluating the impact of proposed regulations on households.

Question 24 gathers information on seasonal populations or events that might affect production. This information is used in conjunction with the information requested in Questions 21 to understand the benefits and per capita cost impacts of regulatory alternatives.

Question 25 and 26 ask for system expenses. This basic information has been collected in all previous versions of the CWSS, and these data form an important part of the financial baseline for EAs.

Question 27 gathers information on capital investments and the source of funds for such investments. Part of the EA process involves estimation of the cost of capital for new investment required by regulations. These questions provide the baseline information that can be used to estimate the cost of capital.

Question 28 asks a system if they have an asset management plan. These plans are necessary for a financially stable water system. It is critical for EPA to understand the water industry's adoption of asset management – a key “Pillar” in the Agency's Sustainable Infrastructure initiative. With Questions 27 and 28, EPA can determine the level of outreach necessary for promoting an asset management plan based on this response.

A.4.b.2. Respondent Activities

Respondent activities will vary by system size. For small systems (serving populations of fewer than 3,300), our data collection approach involves a site visit by an experienced water system engineer. The site visit staff will make a physical inspection of the physical plant in the system and complete the questions about production, treatment, storage, and distribution. The respondent will be asked to provide the information necessary to answer the financial questions. For example, if the respondent has a financial statement, that should be sufficient for most of the questions. For those questions where there is no available data, respondents will be asked to provide estimates.

Systems serving populations over 3,300 will be asked to fill out the questionnaire. Systems serving more than 3,300 people may fill out a traditional paper version of the questionnaire. They also will be given two ways to fill out an electronic version of the questionnaire. They can request a spreadsheet version that they can fill out on their computer. Respondents can fill out a web-based version of the questionnaire by visiting a CWSS web site that will allow them to start their responses, add to them and complete them over a period of time. If they wish, they also can respond to the questionnaire through a telephone interview.

Systems may respond to questions by attaching schematics, diagrams, or reports when possible. Finally, we will request the system's most recent financial statement. Based on our experience, most medium, large, and very large systems have financial statements prepared by professionals. Also the larger the system is the more likely that these statements have also been audited.

A.5. THE INFORMATION COLLECTED – AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

The following sections describe Agency activities related to analyzing, maintaining, and distributing the information collected. The primary activities associated with this collection will be performed by a contractor hired by the Agency to develop the collection methodology and to collect and analyze the data.

A.5.a. Agency Activities

The EPA will be involved in the following activities:

- Providing guidance on questionnaire design and information collection.
- Reviewing requests for confidentiality and providing appropriate protections.
- Answering questions from respondents regarding the purpose and use of the information gathered.
- Distributing the information.
- Conducting additional analyses of the data, as needed.

Upon completion of the collection, review, and initial analysis of the survey data, a database will be developed to sort the raw data for easy access and subsequent analysis by EPA personnel. The Agency will receive an electronic copy of this database. In addition, the Agency will receive a summary report providing descriptive information on various financial and operational characteristics of water systems resulting from this survey.

Additional Agency activities resulting from this collection are assumed to be part of the overall activities in support of the OGWDW ICR regulatory development program pursuant to the SDWA. Burdens associated with specific regulations and the Public Water System Supervision (PWSS) Program are estimated separately in other ICRs.

A.5.b. Collection Methodology and Management

The collection methodology proposed by the Agency will vary by system size. For the smallest systems (those serving populations of 3,300 or less), EPA proposes to have all information collected by senior engineers employed by the contractor. These engineers will make on-site visits to all systems in this size category. The collection methodology is identical to that which has been used successfully in the 1995 and 1999 DWINSAs, as well as the 2000 CWSS. In all cases, the quality of information collected was high. The response rates for the DWINSA exceeded 99 percent; for the 2000 CWSS, the response rate was more than 90 percent.

As far as the types of data collected, the difference between the CWSS and the DWINSA is that the CWSS asks for the collection of some financial information, while the DWINSA focused exclusively on infrastructure. (From the standpoint of purpose, the two surveys are very different. The DWINSA seeks estimates of future capital needs. The CWSS seeks data on current operating and financial characteristics.) To ensure the quality of data collection, the engineers proposed for the field data collection will be trained in basic accounting principles and procedures to be used in the collection of financial data. In addition, EPA anticipates drawing a single small system sample for both the 2007 CWSS and 2007 DWINSA and that one site visit will be conducted to each system selected. Both surveys will be completed during that one site visit, therefore reducing the burden on the state, EPA, and small systems.

For systems serving populations greater than 3,300, the Agency is proposing the use of a mail survey, with telephone follow-up. Questionnaires will be mailed to a random sample of CWSSs, who will be asked to fill out the questionnaire and return it to EPA. To assist systems in filling out the questionnaire, each potential respondent will be assigned an analyst who will work with the system throughout the survey and will be able to answer all technical questions. Each potential respondent will be contacted by the analyst assigned to it to confirm the receipt of the survey, explain the questionnaire, and to respond to the system's questions. Each system also will receive at least one additional follow-up phone call. Systems also may contact EPA contractor staff through a dedicated toll-free telephone number.

Systems serving more than 3,300 people may fill out a traditional paper version of the questionnaire. They also will be given two ways to fill out an electronic version of the questionnaire. They can request a spreadsheet version that they can fill out on their computer. Systems can also fill out a web-based version of the questionnaire by visiting a CWSS web site. If they wish, they can also respond to the questionnaire through a telephone interview.

Systems serving more than 3,300 people can provide the following documentation:

- A diagram of the system, showing flows from source to distribution;
- Submit site plans and flow charts of the treatment facilities; and
- A current financial statement.

The pre-test group participants (listed in section A.3.c, above) indicated that, for some questions, they would prefer to provide documentation that provides the information requested rather than fill out that part of the questionnaire. Therefore, when a question can be answered by attaching diagrams, charts, or financial or other reports that contain the information requested, systems will be given the option of attaching the documents in lieu of filling out that question. Small systems will be visited by contractor staff that will draw diagrams and schematics as needed; small systems also may provide additional documentation to respond to questions as appropriate.

Any documentation provided will be used to validate the information provided through the questionnaire and to create in-depth profiles. All documents submitted will become an integral part of the completed questionnaire and survey record for review by EPA staff.

The data collection method proposed for systems serving populations greater than 3,300 was pre-tested and will be pilot-tested prior to its use.

The pre-test of the data collection instrument consisted of four systems, of different ownership, sizes and water source types. Since EPA has reliable information on the general approach for small systems, the pre-test focused on systems serving populations greater than 3,300. Once the survey is approved by EPA and OMB, a pilot test of up to 50 representative systems will be conducted before conducting the full-scale survey. The respondents will be a representative sample of systems. (See Section B.2 for details.) The completed questionnaires will be collected and tracked through receipt, data entry, and data cleaning steps, tabulated, and returned to OGWDW. OGWDW will check the data and maintain it as a data file for Agency analysis. The contractor will provide OGWDW with a description of the database and how to use it.

It may be possible for OGWDW to collect financial information from some larger systems through another survey being conducted by EPA's Office of Science and Technology (OST). In which case, the financial questions for systems being co-sampled will be omitted from the CWSS, and the data will be gathered through the OST Survey.

Data quality will be assured by implementing the following procedures throughout the collection and processing phases of the survey:

Selection of Contractor Personnel. The Cadmus Group, Inc. has been responsible for several of the largest surveys of public water supplies (e.g., the 1995, 1999, and 2003 DWINSAs and the 1995 and 2000 CWSS). Central to EPA's approach to these surveys has been the reliance on experienced water system professionals for data collection. Whether conducting on-site data collection or telephone follow-up, the personnel thoroughly understand water supply. The staff have worked in the industry for many years and they can speak the language, ask the right questions, and properly interpret responses.

Training. This is one of the most important steps in quality assurance. It is particularly important when relying heavily on the judgment of a large cadre of trained professionals working independently (as will be the case for small systems). The factor which reduces the likelihood of errors and increases the identification of those that do occur is a well-trained staff that has a common and thorough understanding of all aspects of the survey – the questionnaires, the data to be collected, and the ultimate uses of these data. The training will include a detailed review of the coding guide.

Quality Assurance of Data Collection. The staff working on this project will be supervised by a senior-level Data Collection Manager. The Manager will review the first 25 questionnaires submitted by each person working on the project. This will enable the Manager to perform a quality assurance process to ensure that all personnel are fully trained and using identical assumptions and procedures. Furthermore, the schematics, flow charts, and financial reports submitted by each system will be used to validate the systems' responses to the questionnaire.

Documentation. As questionnaires are completed and submitted by small system contractor personnel, these personnel will be asked to submit documentation to support the conclusions in their questionnaires. This documentation should be sufficient to enable the Data Collection Manager to review the questionnaire and understand how the personnel reached their conclusions.

Receipt Control. The primary objective of the receipt control system will be to ensure that completed questionnaires are logged in promptly and given proper custody. A second objective is to monitor cumulative receipts to identify potential problems with the response rate for which action would be appropriate. Data related to the case identification and its disposition code will be given scan edit promptly so that forms received can be moved into the data preparation process as rapidly as feasible. Bar codes will be used to expedite the process, minimize errors in respondent identification and avoid unnecessary following after the form is returned.

Data Entry. Verification will be 100 percent. It is believed that the best approach to keying accuracy is careful design of instrument layout and well trained personnel. The approach used will be 100 percent independent key verification to uncover inevitable errors. The second (more senior) key operator will resolve discrepancies. Although the survey is designed to minimize coding as much as possible, recoding will be done to provide a measure of the degree of inter-coder reliability. In such cases, a 5 percent sample of forms will be duplicated and sent to independent coders before coding. Ordinarily, manually-coded data items will receive a 100 percent verification of the first 20 cases coded by each coder and a 10 percent sample thereafter. Error rates will be used as a criterion for release or retraining.

Data Edit and Imputation. Data edits will be developed by EPA. Edits will specify when respondents are to be followed up to resolve unlikely or inconsistent responses. EPA will determine which questions contain information that is critical for conducting subsequent analyses in support of regulatory development and implementation efforts. Responses to these questions will receive additional review by

technical experts. The review will focus on determining whether the responses to these questions are consistent with each other and to responses to other questions.

The questionnaires will be subjected to 100 percent editing review. The process will check skip patterns, standardize the recording of quantitative data, and identify any potential problems. Protocols will guide the data preparation staff; any changes to responses will be documented and logged. Data validation checks will include distribution frequencies for categorical and continuous variables, univariates for each continuous variable, item-specific cross tabulations of categorical variables, item-specific cross-univariates of continuous data, and item-specific logic edits.

Monitoring. A routine component of quality control effort is monitoring staff performance and reporting on data quality and system performance. Recognizing that every system has inherent variability, these monitoring activities will seek to uncover unexpected variations having assignable causes. Also, they will provide a baseline for future guidance.

Data Processing. Once the reviewed, edited, and validated database is prepared, several data processing steps will create files suitable for analysis and tabulations. These steps include devising rules for handling missing data, creating derived variables from the survey data, and attaching sample weights to the analytical file. Detailed specifications will guide each step, and each step will be documented. Version control will be maintained for all computer programs and for each interim stage of all data files.

In addition, the Agency will develop an electronic reporting form that systems can use to complete the questionnaire. It is anticipated that this form will reduce the burden for systems completing the form and for Agency to perform data entry.

A.5.c. Small Entity Flexibility

EPA has proposed for CWSs that the data be collected by professional water supply engineers. The principal method, used by the professional water supply engineers when on-site, will be a physical inspection of the water system’s plant and equipment. This exercise imposes no burden on the small system owner and operator. Therefore, the only burden anticipated for small entities is that associated with providing small amounts of information that cannot be supplied through the physical inspection. These will include location of financial information (if any) and giving oral answers to questions posed by the site engineer.

This method has been used in both the 1995 and 1999 DWINSAs and the 2000 CWSS. In all of these surveys, it was credited with substantially increasing small entity flexibility.

A.5.d. Collection Schedule

The following schedule assumes OMB clearance for this collection will be obtained by November 2006. For each task, we show the date by which the task will be completed.

Table A-3. Proposed CWSS Schedule

Task	Date to be Completed
Design Questionnaires and Sampling Plan	May - July 2006
Pretest Questionnaires	June 2006

Conduct Pilot Test	November 2006
Draw Sample and Begin Full Survey	January 2007
End Data Collection	July 2007
Submit Draft Report	June 2008
Submit Final Report	October 2008

A.6 ESTIMATING THE BURDEN AND COST OF THE COLLECTION

A.6.a. Estimating Respondent Burden

Respondent cost estimates are based on separate estimates for systems with service populations of 3,300 and below, those with service populations of 3,301 to 50,000, those with service populations of 50,001 to 500,000, and those with service populations over 500,000. As mentioned above, our data collection methods will be different for small systems. To the extent possible, the current estimates are based on the pre-test and the experience of The Cadmus Group, Inc. with similar surveys using the same methodologies for the same respondents. These include the 1995, 1999, and 2003 DWINSAs and 2000 CWSS.

For small systems (serving populations of up to 3,300), the most likely respondent will be the system operator. For financial questions, particularly for systems with service populations larger than 1,000, the operator may need to consult with a clerical person who handles financial records. For systems serving populations greater than 3,300, the primary respondent will be the system operator, or system engineer. The request for financial information will be referred to the accounting department. As with small systems, it usually can be handled by a clerk or bookkeeper in the accounting department. EPA assumes that the average hourly rate for respondents in systems serving populations greater than 50,000 will be \$33.88, and the hourly rate for systems serving populations 50,000 and fewer will be \$28.24. These are the rates used in the ICR for the 2007 DWINSA. They also are consistent with rates used in other drinking water ICRs associated with proposed regulations. These are conservative estimates.

The average amount of time required for a respondent in a system serving populations of 3,300 and fewer is 1 hour. While our site visit personnel may be on-site for a longer time, much of that time is spent conducting a physical inspection of the system rather than asking questions. Our current estimate of the average amount of time required for a respondent in a system serving populations of more than 3,300 is 5 hours.

In addition to the activities of CWSs, the states will be asked to brief the site visitors about the small systems to be visited. (See section B.2.b. in part B.) EPA assumes states personnel will spend 0.5 hours on each small system to be visited. It also assumes the average hourly rate of those reviewing the list of small systems is \$36.10 per hour.¹ This rate, which has been inflated to year 2005 dollars (\$65,255) is consistent with the rates used in ICRs recently developed by SRMD.

These hour estimates are based on EPA's experience in the DWINSAs and previous CWSSs. This is planned as a one-time collection and does not entail any record keeping or future reporting.

A.6.b. Estimating Respondent Costs

The total respondent costs are calculated below based on the labor effort and costs described in the previous section (A.6.a.). There are no capital or operating and maintenance costs to the respondents in this collection effort.

Table A-4. Preliminary Burden and Cost Estimate for Respondents

Size of System	Sample Size	Burden Hrs.	Cost/Hr.	Total Hrs.	Total Cost
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¹ According to the *ICR Handbook*, an employee works an average of 2,080 hours in one year.

Less than 3,300	600	1	\$28.24	600	\$16,944
3,301 to 50,000	363	5	\$28.24	1,815	\$51,256
50,001 to 500,000	637	5	\$33.88	3,185	\$107,908
Greater than 500,000	92	5	\$33.88	460	\$15,585
Total	1,692	3.5816	\$31.63	6,060	\$191,693

The estimated burden and costs to the states are shown in Table A-5, based on the labor effort and costs described in the previous section.

Table A-5. Preliminary Burden and Cost Estimate for the States

Size of System	Sample Size	Burden Hrs.	Cost/Hr.	Total Hrs.	Total Cost
Less than 3,300	600	0.5	\$36.10	300	\$10,830
3,301 to 50,000	0	0	0	0	0
50,001 to 500,000	0	0	0	0	0
Greater than 500,000	0	0	0	0	0
Total	600	0.5	\$36.10	300	\$10,830

A.6.c. Estimating Agency Burden and Costs

Annual agency burden and cost estimates for the survey are based upon the experience of EPA's technical staff in developing surveys of this magnitude. These estimates are presented in Section A.6.e.

The labor rates used to calculate costs of EPA employees and contractors performing the survey activities were estimated for three labor classes: Manager, Technical, and Clerical. The Manager rate is \$58.58 per hour assuming GS15, Step 5. The technical rate is \$49.80 per hour based on a GS14, Step 5. The clerical rate is \$16.13 based on a GS5. Overhead costs were equal to 60% of direct labor. The Contractor rate was assumed to be \$80.00 per hour to develop the questionnaire and sampling plan, \$70.00 per hour to collect the data from medium, large, and very large systems, conduct quality assurance and quality control, develop the data base, and to conduct the initial analysis of the data, and \$173.00 per hour to conduct the site visits. These rates included all direct and all applicable indirect costs and fee.

A.6.d. Estimating the Respondent Universe and Total Burden Cost

Since EPA is expecting 600 completed data collection instruments for systems serving populations of less than 3,300 at 1 hour per system, it is estimated that the total respondent burden for small systems is to be 600 hours total. EPA estimates the total burden for the states to be 0.5 hours per small system, for a total burden to the states of 300 hours. Since EPA is expecting 1,092 completed data collection instruments for systems serving populations of more than 3,300 at 5 hours per system, it is estimated that the total respondent burden for medium, large, and very large systems to be 5,460 hours. There is no record keeping burden associated with these surveys; therefore, the annual burden and cost is the same as the respondent burden and cost.

At \$28.24 an hour, 600 small systems will complete the survey at a cost of \$16,944. At \$28.24 an hour, 363 medium systems will complete the survey at a cost of \$51,256. At \$33.88 an hour, 729 large and very large systems will complete the survey at a cost of \$123,493. The total cost to respondents is

estimated to be \$191,692. At a cost of \$36.10 an hour the cost to states to brief the small system site visit contractors on the 600 small systems is \$10,830.

ANNUAL BURDEN:

Burden to Respondents:

Hrs. per Small System Respondent (1) x No. of Respondents (600) +
 Hrs. per Medium System Respondent (5) x No. of Respondents (363) +
 Hrs. per Large System Respondent (5) x No. of Respondents (637) +
 Hrs. per Very Large System Respondent (5) x No. of Respondents (92) = 6,060
 Average burden per respondent = 3.58 hours (3 hours 35 minutes)

Burden to States:

Hrs per Small System (0.5) x No. of Respondents (600) = 300 hours

ANNUAL COST:

Cost to Respondents:

Cost per Hour for Small Systems (\$28.24) x No. of Hours (600) +
 Cost per Hour for Medium Systems (\$28.24) x No. of Hours (1,815) +
 Cost per Hour for Large Systems (\$33.88) x No. of Hours (3,185) +
 Cost per Hour for Very Large Systems (\$33.88) x No. of Hours (460) = \$191,693

Average cost per respondent = \$113.31

Cost to States:

Cost per Hour (\$36.10) x No of Hours (300) = \$10,830.

A.6.e. Bottom Line Burden Hours and Cost Tables

The Agency master table displaying the Agency burden and cost estimates – including contractor costs – is presented in the table below:

Table A-6. Agency Burden Cost Estimates

Tasks	Hours					Total Cost
	Contractor	Manager	Technical	Clerical	Total	
Administration	102	0	0	0	102	8,466
Defining Survey Objectives	411	40	200	8	659	54,006
Questionnaire Design	931	40	400	8	1,379	\$113,104
Sample Design	400	24	300	8	732	\$59,562
Internal EPA and OMB Approval	520	24	350	8	902	\$73,507
Sample Selection	500	40	210	8	758	\$55,690
Training for Data Collection	560	40	420	8	1,028	\$80,163

Tasks	Hours					Total Cost
	Contractor	Manager	Technical	Clerical	Total	
Data Collection	9,800	130	1,060	40	11,030	\$1,017,683
QA/QC of Data	600	80	210	8	898	\$66,440
Data Base Development	3,000	40	320	8	3,368	\$264,456
Data Analysis	3,000	130	530	8	3,668	\$264,627
Report Preparation	3,000	40	530	40	3,610	\$297,016
Storing and Maintaining Data	0	4	210	40	254	\$18,142
Total	22,824	632	4,740	192	28,388	\$2,372,862

AGENCY TOTAL BURDEN: 28,388 HRS.

AGENCY TOTAL COST: \$2,372,862

Table A-7 summarizes the total burden and cost of the survey, including respondent, contractor, and agency burdens and costs.

Table A-7. Summary of Burden and Cost Estimates

	EPA	Contractor	States	Respondents	Total
Burden (hours)	5,564	22,824	300	6,060	34,789
Cost (dollars)	\$441,916	\$1,930,946	\$10,830	\$191,693	\$2,575,385

A.6.f. Reasons for Change in Burden

This section is not applicable since we are not renewing or modifying an existing ICR.

A.6.g. Burden Statement

The annual public reporting and recordkeeping burden for this collection of information is estimated to average 3.55 hours per response, including the time for reviewing instructions, gathering information, and completing and reviewing the collection of information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OW-2006-0454, which is available for online viewing at www.regulations.gov, or in person viewing at the Water Docket in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2422. An electronic version of the public docket is available at www.regulations.gov. This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select "search," then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OW-2006-0454 in any correspondence.

The following burden statements appear on the inside covers of the questionnaires.

Participation in the survey is voluntary. However, as a matter of policy, EPA will not disclose the identity of any respondent to this questionnaire, nor the identity of any participating water system. While no respondent has ever claimed that the information asked for in this survey contains confidential business information (CBI), EPA will offer the opportunity of claiming CBI to a representative of your water system in the event that we receive a Freedom of Information Act request for any data that would identify you or your system. It should be noted, however, that EPA has never received a Freedom of Information Act request for such information.

The public reporting and record keeping burden for this collection of information is estimated to average 3 hours 35 minutes per response or to range from 1 hour to 5 hours per respondent annually. 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, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Include the EPA ICR number and OMB control number in any correspondence. Do not send the completed survey to this address.

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PART B OF THE SUPPORTING STATEMENT

B.1. SURVEY OBJECTIVES, KEY VARIABLES, AND OTHER PRELIMINARIES

B.1.a. Survey Objectives

The overall purpose of conducting this survey is to supply the Office of Ground Water and Drinking Water (OGWDW) with accurate, up-to-date information on the water systems it regulates so that it may comply with statutory requirements and executive orders, support the administration's recommendations for reauthorizing the Safe Drinking Water Act (SDWA), and accomplish its many other program responsibilities as described in Part A, Sections A.2.a, A.2.b, A.3.d, and 5.c.

In accomplishing this purpose, the survey will achieve the following objectives:

- Help to determine the cost of any new federal drinking water regulations.
- Help predict the ability of water systems of various sizes to absorb additional regulatory costs imposed by EPA.
- Determine the extent of need by water systems for technical and financial assistance in maintaining existing operations and in meeting current Federal requirements.
- Determine the collective impacts of all water regulations implemented since the last survey in 2000.
- Help guide implementation of significant new administration initiatives.
- Assist the agency in crafting regulations that are sensitive to small system needs and capabilities.
- Guide states and other assistance providers in targeting needy water systems and developing technical assistance programs.
- Help determine the operating and financial factors associated with successful regulatory compliance, and identify factors associated with poor compliance records.
- Help to verify the accuracy of information contained in the Safe Drinking Water Information System (SDWIS).

B.1.b. Key Variables

To satisfy the objectives of the survey the following kinds of essential information for the water systems will be collected:

- Size of population served.
- Type of ownership.
- Type, number and geographic distribution of water source.
- Volume of water pumped and delivered.
- Type and extent of distribution system.

- Types of water treatment processes employed.
- Revenues (by source).
- Expenditures (by source).
- Rate structure.
- Sources of capital.

B.1.c. Statistical Approach

The survey will be of a scientific probability sample of community water systems (CWSs). The inferences to be made to the entire target population will satisfy the survey objectives and the information needs of EPA’s programs. A sample survey is being conducted instead of a census survey because the latter would be prohibitively expensive, and unnecessarily burdensome to CWSs.

The survey is being designed and conducted with the assistance of a contractor:

Contractor	Contractor Roles
The Cadmus Group, Inc. 57 Water Street Watertown, MA 02472	<ul style="list-style-type: none"> • Technical oversight for all contractor activities. • Questionnaire design and testing. • Oversight of field operations, including site visits and administration of questionnaire. • Statistical sample design. • Data processing. • Training, mailing, and logistics. • Preparation of tables and final statistical report and survey documentation. • Data collection and data processing.

B.1.d. Feasibility

For medium, large, and very large systems, the survey questionnaires have been designed with the capabilities of the typical respondent in mind. A major portion of the survey questionnaires are refinements of the 2000 survey. This survey provided guidance in developing questions that respondents would be able to answer. Generally, the respondent should be able to obtain the requested information from readily accessible records and reports kept by the system.

To reduce the burden on small systems, EPA contractor engineers will visit the water systems that serve 3,300 or fewer people. The contractor engineers will spend approximately an hour with the system owner or operator, requesting information that will be helpful in estimating system infrastructure needs. The engineer will then conduct a physical inspection of the system to confirm information provided by the owner or operator.

Reliance on site visits to small CWSs was strongly recommended by the EPA workgroup to avoid problems faced in past surveys of small CWSs:

- *Total non-response.* Since many systems have not clearly identified responsible parties, and since responsible parties often are reluctant to respond to data collection instruments, it is difficult to use a mail or telephone survey to obtain the necessary information.

- *Item non-response.* System owners and operators often do not know the details of the operating or financial characteristics of their systems. Because EPA contractor engineers will conduct site visits to gather data, item non-response should be eliminated.
- *Reliability.* State drinking water regulators are suspicious of information provided directly from owners or operators of small CWSs. Unlike larger systems, small CWSs usually do not have professional, certified operators. Instead, one is likely to meet trailer park owners, volunteers from homeowners associations, and others who are not water supply professionals.

Finally, employing site visits will substantially reduce the burden on small CWSs. Total burden on the systems, on average, will be about an hour. Instead of completing a data collection instrument, the system owner or operator can answer questions asked by the visiting engineer. The approach was discussed with knowledgeable state drinking water regulators, as well as representatives of small CWSs, and all parties agreed that it was the best approach to achieve the desired results of the survey.

Sufficient funds are available in the existing contract to complete the survey.

The time frame for the survey is acceptable to users of the data within the OGWDW.

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B.2 SURVEY DESIGN

B.2.a. Target Population and Coverage

The target population is CWSs in operation in 2007. A CWS is a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents (40 CFR 141.2).

B.2.b. Sample Design

The CWSS will be based on a nationally representative sample of CWSs. The survey will use a stratified random sample design to ensure the sample is representative. The sample will be stratified by several characteristics of water systems to increase the efficiency of estimates based on the sample. To improve the quality of the data collected, the survey will be administered on-site for small systems; to limit the travel costs involved in visiting each small system in the sample, they will be selected in geographic clusters in a two-stage design.

B.2.b.1. Sample Frame

The sampling frame is developed from the SDWIS. SDWIS is a centralized database of information on public water systems, including their compliance with monitoring requirements, maximum contaminant levels (MCLs), and other requirements of the SDWA Amendments of 1996. The following information will be extracted from SDWIS for the statistical survey:

- Name of system.
- Address of system.
- Population served.
- Total design capacity.
- Number of connections.
- Primary source (surface water or ground water).
- Public water system identification number (PWSID).
- Ownership type.
- Consecutive system (i.e., does system purchase or sell water).

From these data, we will develop a list frame from which we will (1) calculate summary statistics for use in calculating sample size, and (2) randomly choose systems within the design strata which will take part in the survey.

Justification For The Use of SDWIS

SDWIS is the appropriate sampling frame because:

- It fully covers the target population.
- It contains no duplication.
- It contains no foreign elements (i.e., elements that are not members of the population).
- It contains information for identifying and contacting the units selected in the sample.
- It contains other information that will improve the efficiency of the sample design.

SDWIS is the ideal choice for a sample frame because of its inclusive coverage of all units of observation for this survey. In addition, SDWIS has two other advantages: it contains information that will facilitate

contacting the respondents, and it contains other information that is useful in stratifying the sample, thereby improving the efficiency of the sample design.

The use of SDWIS as a sample frame in previous surveys was subject to some criticism. Since 1989, EPA has conducted audits of the quality of SDWIS data. As a result, EPA is aware of the problems with SDWIS. The audits, however, show that errors in classification of systems by strata proposed for this survey are rare. Audits show that systems are misclassified by population or source in fewer than one percent of all cases.

The EPA is taking several steps to prepare SDWIS for use as a sample frame for the 2007 DWINSA. Problematic data will be identified and the states will be asked to review the data and provide any necessary changes. These data will serve as the sample frame for the 2007 CWSS.

B.2.b.2. Sample Size

The domains of the population of interest for the OGWDW are based on two major characteristics of the systems.

- **The primary source of water.** Systems that rely primarily on ground water are distinguished from surface water systems.
- **The size of the population served by the system.** Eight size categories will be used: systems that serve less than 100 people; systems that serve 101 to 500 people; systems that serve from 501 to 3,300 people; systems that serve from 3,301 to 10,000 people, systems that serve from 10,001 to 50,000 people; systems that serve 50,001 to 100,000 people; systems that serve from 100,001 to 500,000 people; and systems serving more than 500,000 people.

The two water sources and the eight system sizes produce 16 strata.

The regulatory impact models require reasonably precise parameter estimates from each of these domains. The sample size in each domain should be large enough to provide a sufficient number of completed questionnaires to obtain estimates with reasonable precision. Table B-1 shows the number of systems in the sample frame and the minimum sample size required to obtain an estimate for a 50 percent statistic with an error not exceeding ± 10 percentage points (except for a 1 in 20 chance) in each domain. We will take a census of systems serving more than 100,000 people.

We used a 50 percent statistic because the standard error is largest when the population percentage is 50 percent. The error will be smaller for other population percentages.

B.2.b.3. Stratification Variables

The sample is stratified to achieve two goals. First, stratifying the data allows us to draw inferences about specific population domains. For example, EPA may wish to draw conclusions about systems serving populations of less than 10,000 or 3,300. We can ensure that estimates of the sub-populations will meet the required levels of precision by drawing the necessary number of observations for each stratum.

The second goal achieved by stratifying the data is that we can increase the efficiency of our estimates by grouping systems into relatively homogeneous strata. The strata were chosen to minimize the differences among systems within strata, and to maximize the differences among strata. Based on the results of previous surveys, we assume there are important differences in the way systems are operated and in their finances across the strata selected. The operating characteristics and treatment requirements of ground

water systems tend to be different from surface water systems. The operating and financial characteristics of large systems tend to be more complex than small systems. System management, and the resources available to it, also may vary by system size.

Table B-1. Frame and Sample Sizes by Strata

Source of Water	Population Served	Frame Size	Sample Size
Ground	100 or less	12,503	96
	101-500	14,827	103
	501 - 3,300	12,063	158
	3,301 - 10,000	3,672	94
	10,001-50,000	2,330	93
	50,001 - 100,000	352	76
	100,001 - 500,000	188	188
	More than 500,000	23	23
Surface	100 or less	268	71
	101-500	573	83
	501 - 3,300	1,164	89
	3,301 - 10,000	953	88
	10,001-50,000	1,043	88
	50,001 - 100,000	298	73
	100,001 - 500,000	300	300
	More than 500,000	69	69
All		50,626	1,692

The size of the population served and the primary source of water are the explicit stratification variables. The sample frame will be divided by eight population sizes: less than 100; 100 – 500, 501 – 3,300, 3,301 – 10,000, and 10,000 – 50,000, 50,001 – 100,000, and 100,001 – 500,000, and more than 500,000. Systems will be further divided by two source-water categories: ground water and surface water.

B.2.b.4. Sampling Method

Systems serving populations greater than 100,000 will be selected with certainty. For systems serving populations of 100,000 or fewer, the sampling method will be an equal probability systematic sample within each explicitly defined stratum. There are 12 such strata, given by the intersection of the six population size classes whose systems are not being selected with certainty and the two water sources. Within each stratum, the data will be sorted by EPA Region and size of the population served. This ensures the geographical dispersion among the sample systems and increases the probability that a range of population sizes within each explicit stratum is sampled. The total sample size – including the strata that will be sampled with certainty – will be 1,703.

The survey statisticians will prepare detailed specifications to direct the sampling, and to document the process. These specifications will ensure the sample is drawn in conformity with the sample design and in a statistically valid manner. Standard statistical software will be used to draw the sample.

B.2.b.5. Multi-Stage Sampling

In order to achieve the required precision, reduce the burden to small systems, and to keep costs down, a two-stage cluster sample will be used for systems serving fewer than 3,300 people. The use of a two-stage sample design will result in slightly reduced precision for the stratum-level estimates.

First-Stage Sample

All small CWSs will be assigned to a county (or county equivalent in jurisdictions that do not have counties). Data on all small CWSs will be sorted by county so that EPA can determine the number of systems, by strata, in each county. If a particular county does not contain the required number of systems (a minimum of 6 systems), it is grouped with an adjacent county; the combined county group is referred to as a county-cluster. The first-stage sample will be approximately 120 counties, selected with probability proportional to size, where size is a composite measure of the number of small systems in each county. This method ensures that counties with more CWSs serving 3,300 or fewer people have a greater probability of being selected.²

States will be given a SDWIS list of small CWSs in the county (or counties) selected in the first-stage sample for their jurisdictions, and EPA will ask states to verify that the systems on the list are active CWSs with populations of 3,300 and fewer and assigned to the appropriate county. If the number of systems in a county is large (e.g., 100 or more), EPA will select a sub-sample of the systems in that county to reduce the burden on the state. This review by the states will produce a clean sample frame for the second-stage sample.

Second-Stage Sample

In the second stage, a stratified random sample of five systems is drawn from each of the counties or county-clusters selected in the first stage of sampling.

B.2.c. Precision Requirements

B.2.c.1. Precision Targets

To satisfy EPA's decision-making needs, the sample is designed to provide estimates of percentages of error not exceeding 10 percentage points (expect for a 1 in 20 chance) within each domain for an estimated proportion. The domains are shown in Table B-1. For example, suppose 50 percent of the systems in a domain report that they boost chlorine residuals in their distribution system. EPA could be 95 percent confident that between 40 percent and 60 percent of the systems within this domain boost chlorine residuals.

Systems serving populations greater than 100,000 will be sampled with certainty; therefore, there will be no sampling error in these domains.

² This method is based on Folsom, R.E., F.J Potter., and S.R. Williams, "Notes on a Composite Size Measure for Self-Weighting Samples in Multiple Domains," *American Statistical Association 1987 Proceedings of the Section on Survey Research Methods*, August, 1987, pp. 792-796.

B.2.c.2. Nonsampling Error

EPA will use several quality assurance techniques to maximize response rates, response accuracy, and processing accuracy to minimize nonsampling error. A pre-test will supplement the experience of EPA and its contractors in formulating a strategy to reduce non-sampling error.

The data collection approach proposed by EPA should reduce both overall non-response rates and item non-response. It also should improve both the accuracy and consistency of the data reported by the systems. Small systems will be visited by EPA contractor engineers, which will ensure that the necessary data are collected and are consistent across systems. Technical assistance will be made available to medium, large, and very large systems to help them fill out the questionnaire and to ensure accurate and consistent responses to the survey's questions. Each system will be contacted by contractor staff; also, systems will be provide a dedicated toll-free telephone number they can call for assistance.

In addition, the following steps will improve the quality of the data:

- A brief cover letter will be sent to the respondents that will explain the purpose of the survey and the information to be collected. It will be on official EPA letterhead, and will be signed by a senior EPA official.
- The data collection instrument design, content, and format will be thoroughly reviewed and tested before the survey begins. The approach will be pre-tested to ensure that the necessary data can be collected.
- Items being asked are those that owners or operators of systems should know. We do not ask questions that require monitoring, research, or calculations on the part of the respondents.
- Standardized software will be used for sample selection.
- We expect complete coverage of the target population using SDWIS, as updated by EPA.
- Data will be 100 percent independently keyed and verified.

The Agency will also will develop an electronic reporting form that systems can use to complete the questionnaire. It is anticipated that this form will reduce the burden for systems completing the form and for Agency to perform data entry and improve the accuracy of the data. The electronic versions of the questionnaire will include data validation checks to confirm responses as they are provided. Systems also will have the option of filling out a web-based questionnaire. The web-based version also will include data validation checks to confirm responses as they are provided and will allow respondents to pause in answering the questions and return to complete the questionnaire at a later time .

B.2.d. Questionnaire Design

The questions contained in the surveys are designed to obtain information on a variety of water system related technical and financial data. Many of the questions seek to obtain qualitative information, which would then be used to create descriptive statistics. Section A.4.b.1. provides the justification for each question in the survey.

In order to limit the burden on respondents and to improve the quality of the data collected, small CWSs will not be required to fill out a questionnaire. As discussed in section B.4, EPA contractor engineers will visit water systems serving 3,300 or fewer people, and will fill out the questionnaire based on the information they collect. Contractor personnel will provide assistance to systems serving populations over 3,300. If the information requested in a question is available in schematics or other documentation of the system, the system may simply attach the documentation to the question rather than fill out the question.

To ensure quality of the data collected by the questionnaire, it was subject to several rounds of close review and comment by EPA, Cadmus, and independent reviewers. (See section A.3.c in Part A for the list of reviewers.) Special attention will be paid to the presentation and layout of the questions, response categories, response recording blocks, and instructions to clarify the questionnaire for respondents.

A copy of the survey instrument is in Appendix C.

B.3. PRE-TESTS AND PILOT TESTS

B.3.a. Pre-tests

The survey instrument was sent to nine water systems. Three systems participated in a focus group discussion of the questionnaire. A fourth system provided comments separately. The other five systems did not comment on the questionnaire; OGWDW is following up with these systems to get any comments they may have on the questionnaire. The questionnaires and instructions were revised in accordance with the results of the pre-test.

B.3.b. Pilot Study

Following OMB approval the, a pilot study of up to 50 respondents will be conducted for both the site visits to small systems and the multi-step data collection for medium and large systems.

The purpose will be to fine-tune any troublesome questions, increase clarity, reduce respondent burden, and test survey processing systems before the surveys are fielded. EPA plans to use the pilot responses for any water systems also selected in the main survey.

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B.4. COLLECTION METHODS AND FOLLOW-UP

B.4.a. Collection Methods

Site visits will be conducted of small systems — those serving 3,300 or fewer systems. EPA contractor engineers will physically inspect the system and interview system owners and operators. They will then fill out the questionnaire based on the information they collect.

Systems serving populations of over 3,300 will be asked to fill out the questionnaire electronically or by hand. Each potential respondent will be contacted to provide technical assistance and to respond to questions. Systems will be asked to mail in site plans and other diagrams along with the completed questionnaire.

Several measures will be in place to assure the quality of the data collection. The final version of the questionnaires will incorporate lessons learned from the pre-test and pilot test. Complete and detailed question-by-question specifications will be prepared for every questionnaire item, to unambiguously document for interviewers and analysts the meaning, purpose, and context of all questions. Interviewers will receive formal training for interviewing techniques and for specific CWSS topics. Staff with detailed substantive knowledge of water systems will conduct follow up phone calls to address technical issues that may arise. Supervisory staff will monitor the interviews. Special data collection operations (such as tracing) will be used to improve response rates, sample coverage, and locating the correct sampled CWS.

B.4.b. Survey Response and Follow-Up

The response rate is the ratio of responses to eligible respondents. The target response rate for the survey will be 75 percent for systems serving more than 3,300 people and 95 percent for systems serving 3,300 and fewer, for an overall response rate of 81%. These anticipated response rates are based on actual response rates from the 2000 CWSS, factoring in a slight increase resulting from the small systems site visits being conducted in conjunction with the 2007 DWINSA, which historically achieves a higher response rate, and the use for the first time of a web-based questionnaire to facilitate responses.

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B.5. ANALYZING AND REPORTING SURVEY RESULTS

B.5.a. Data Preparation

The contractor will key and independently verify the data. Senior data entry operators will be used for the verification to assure quality control. Editing will consist of automated logic and range checks, and checks for missing data. Missing data will be imputed by using standard methods such as cell means, regression, and hot deck to supply values for the missing items.

B.5.b. Analysis

The statistical procedures used to analyze the data will be left up to the individual data users. The contractor will prepare a report tabulating the results of the survey and indicating the precision of the resulting national estimates. Examples of statistics that will be produced are:

- Frequency distributions of all discrete variables in the questionnaire.
- Counts of customers being served by water systems in each domain (e.g., the number of active residential connections served by ancillary systems, with fewer than 500 customers, receiving primarily surface water).
- Counts for each domain of interest of water systems with certain characteristics (e.g., the number of treatment technologies for each of the population categories and water sources).
- Mean and median rates by customer category, revenues, expenses, capital expenditures, and other financial data for each domain of interest.

The fully weighted data will be provided on a data file accessible to the EPA program offices for customized analyses.

B.5.c. Reporting Results

The survey results will be made available to the Agency and the public through the following means:

- A printed report of key statistical tables. These survey results will be distributed to all interested offices at EPA. Additional copies will be made available to the general public through the National Technical Information Service (NTIS);
- An electronic copy of the report will be posted to the OGWDW web site; and
- Mainframe access (Agency only).

A report containing the questionnaire, sampling plan, weights, variances, and formulas and response rates will be prepared and distributed with the data. Record layouts, codes and complete file documentation will be developed for Agency mainframe data file users.

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Appendix A

Relevant Sections of Statutes

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Sec. 300j-4(a)(1)(A)

(1)(A) Every person who is subject to any requirement of this subchapter 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 subchapter, in determining whether such person has acted or is acting in compliance with this subchapter, in administering any program of financial assistance under this subchapter, 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.

Sec. 300g-1(b)(3)(C)

(C) Health risk reduction and cost analysis. -

(i) Maximum contaminant levels. - When proposing any national primary drinking water regulation that includes a maximum contaminant level, the Administrator shall, with respect to a maximum contaminant level that is being considered in accordance with paragraph (4) and each alternative maximum contaminant level that is being considered pursuant to paragraph (5) or (6) (A), publish, seek public comment on, and use for the purposes of paragraphs (4), (5), and (6) an analysis of each of the following:

(I) Quantifiable and nonquantifiable health risk reduction benefits for which there is a factual basis in the rulemaking record to conclude that such benefits are likely to occur as the result of treatment to comply with each level.

(II) Quantifiable and nonquantifiable health risk reduction benefits for which there is a factual basis in the rulemaking record to conclude that such benefits are likely to occur from reductions in co-occurring contaminants that may be attributed solely to compliance with the maximum contaminant level, excluding benefits resulting from compliance with other proposed or promulgated regulations.

(III) Quantifiable and nonquantifiable costs for which there is a factual basis in the rulemaking record to conclude that such costs are likely to occur solely as a result of compliance with the maximum contaminant level, including monitoring, treatment, and other costs and excluding costs resulting from compliance with other proposed or promulgated regulations.

(IV) The incremental costs and benefits associated with each alternative maximum contaminant level considered.

(V) The effects of the contaminant on the general population and on groups within the general population such as infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations that are identified as likely to be at greater risk of adverse health effects due to exposure to contaminants in drinking water than the general population.

(VI) Any increased health risk that may occur as the result of compliance, including risks associated with co-occurring contaminants.

(VII) Other relevant factors, including the quality and extent of the information, the uncertainties in the analysis supporting subclauses (I) through (VI), and factors with respect to the degree and nature of the risk.

(ii) Treatment techniques. - When proposing a national primary drinking water regulation that includes a treatment technique in accordance with paragraph (7)(A), the Administrator shall

publish and seek public comment on an analysis of the health risk reduction benefits and costs likely to be experienced as the result of compliance with the treatment technique and alternative treatment techniques that are being considered, taking into account, as appropriate, the factors described in clause (i).

(iii) Approaches to measure and value benefits. - The Administrator may identify valid approaches for the measurement and valuation of benefits under this subparagraph, including approaches to identify consumer willingness to pay for reductions in health risks from drinking water contaminants.

(iv) Authorization. - There are authorized to be appropriated to the Administrator, acting through the Office of Ground Water and Drinking Water, to conduct studies, assessments, and analyses in support of regulations or the development of methods, \$35,000,000 for each of fiscal years 1996 through 2003.

Sec. 300g-1(b)(4)(D)

(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.

Sec. 300g-4(a)(1)(A)

(a) Notwithstanding any other provision of this part, variances from national primary drinking water regulations may be granted as follows:

(1)(A) A State which has primary enforcement responsibility for public water systems may grant one or more variances from an applicable national primary drinking water regulation to one or more public water systems within its jurisdiction which, because of characteristics of the raw water sources which are reasonably available to the systems, cannot meet the requirements respecting the maximum contaminant levels of such drinking water regulation. A variance may be issued to a system on condition that the system install the best technology, treatment techniques, or other means, which the Administrator finds are available (taking costs into consideration), and based upon an evaluation satisfactory to the State that indicates that alternative sources of water are not reasonably available to the system. The Administrator shall propose and promulgate his finding of the best available technology, treatment techniques or other means available for each contaminant for purposes of this subsection at the time he proposes and promulgates a maximum contaminant level for each such contaminant. The Administrator's finding of best available technology, treatment techniques or other means for purposes of this subsection may vary depending on the number of persons served by the system or for other physical conditions related to engineering feasibility and costs of compliance with maximum contaminant levels as considered appropriate by the Administrator. Before a State may grant a variance under this subparagraph, the State must find that the variance will not result in an unreasonable risk to health. If a State grants a public water system a variance under this subparagraph, the State shall prescribe at the [1] time the variance is granted, a schedule for -

(i) compliance (including increments of progress) by the public water system with each containment level requirement with respect to which the variance was granted, and

(ii) implementation by the public water system of such additional control measures as the State may require for each contaminant, subject to such contaminant level requirement, during the period ending on the date compliance with such requirement is required. Before a schedule prescribed by a State pursuant to this subparagraph may take effect, the State shall provide notice and opportunity for a public hearing on the schedule. A notice given pursuant to the preceding sentence may cover the prescribing of more than one such schedule and a hearing held pursuant to such notice shall include each of the schedules covered by the notice. A schedule prescribed pursuant to this subparagraph for a public water system granted a variance shall require compliance by the system with each contaminant level requirement with respect to which the variance was granted as expeditiously as practicable (as the State may reasonably determine).

Sec. 300g-4(e)

(e) Small system variances

(1) In general A State exercising primary enforcement responsibility for public water systems under section 300g-2 of this title (or the Administrator in nonprimacy States) may grant a variance under this subsection for compliance with a requirement specifying a maximum contaminant level or treatment technique contained in a national primary drinking water regulation to -

(A) public water systems serving 3,300 or fewer persons; and

(B) with the approval of the Administrator pursuant to paragraph (9), public water systems serving more than 3,300 persons but fewer than 10,000 persons, if the variance meets each requirement of this subsection.

(2) Availability of variances A public water system may receive a variance pursuant to paragraph (1), if -

(A) the Administrator has identified a variance technology under section 300g-1(b)(15) of this title that is applicable to the size and source water quality conditions of the public water system;

(B) the public water system installs, operates, and maintains, in accordance with guidance or regulations issued by the Administrator, such treatment technology, treatment technique, or other means; and

(C) the State in which the system is located determines that the conditions of paragraph (3) are met.

(3) Conditions for granting variances A variance under this subsection shall be available only to a system -

(A) that cannot afford to comply, in accordance with affordability criteria established by the Administrator (or the State in the case of a State that has primary enforcement responsibility under section 300g-2 of this title), with a national primary drinking water regulation, including compliance through -

(i) treatment;

(ii) alternative source of water supply; or

(iii) restructuring or consolidation (unless the Administrator (or the State in the case of a State that has primary enforcement responsibility under section 300g-2

of this title) makes a written determination that restructuring or consolidation is not practicable); and

(B) for which the Administrator (or the State in the case of a State that has primary enforcement responsibility under section 300g-2 of this title) determines that the terms of the variance ensure adequate protection of human health, considering the quality of the source water for the system and the removal efficiencies and expected useful life of the treatment technology required by the variance.

(4) Compliance schedules A variance granted under this subsection shall require compliance with the conditions of the variance not later than 3 years after the date on which the variance is granted, except that the Administrator (or the State in the case of a State that has primary enforcement responsibility under section 300g-2 of this title) may allow up to 2 additional years to comply with a variance technology, secure an alternative source of water, restructure or consolidate if the Administrator (or the State) determines that additional time is necessary for capital improvements, or to allow for financial assistance provided pursuant to section 300j-12 of this title or any other Federal or State program.

(5) Duration of variances The Administrator (or the State in the case of a State that has primary enforcement responsibility under section 300g-2 of this title) shall review each variance granted under this subsection not less often than every 5 years after the compliance date established in the variance to determine whether the system remains eligible for the variance and is conforming to each condition of the variance.

(6) Ineligibility for variances A variance shall not be available under this subsection for -

(A) any maximum contaminant level or treatment technique for a contaminant with respect to which a national primary drinking water regulation was promulgated prior to January 1, 1986; or

(B) a national primary drinking water regulation for a microbial contaminant (including a bacterium, virus, or other organism) or an indicator or treatment technique for a microbial contaminant.

(7) Regulations and guidance

(A) In general Not later than 2 years after August 6, 1996, and in consultation with the States, the Administrator shall promulgate regulations for variances to be granted under this subsection. The regulations shall, at a minimum, specify -

(i) procedures to be used by the Administrator or a State to grant or deny variances, including requirements for notifying the Administrator and consumers of the public water system that a variance is proposed to be granted (including information regarding the contaminant and variance) and requirements for a public hearing on the variance before the variance is granted;

(ii) requirements for the installation and proper operation of variance technology that is identified (pursuant to section 300g-1(b)(15) of this title) for small systems and the financial and technical capability to operate the treatment system, including operator training and certification;

(iii) eligibility criteria for a variance for each national primary drinking water regulation, including requirements for the quality of the source water (pursuant to section 300g-1(b)(15)(A) of this title); and

(iv) information requirements for variance applications.

(B) Affordability criteria Not later than 18 months after August 6, 1996, the Administrator, in consultation with the States and the Rural Utilities Service of the Department of Agriculture, shall publish information to assist the States in developing affordability criteria. The affordability criteria shall be reviewed by the States not less often than every 5 years to determine if changes are needed to the criteria.

(8) Review by the Administrator

(A) In general The Administrator shall periodically review the program of each State that has primary enforcement responsibility for public water systems under section 300g-2 of this title with respect to variances to determine whether the variances granted by the State comply with the requirements of this subsection. With respect to affordability, the determination of the Administrator shall be limited to whether the variances granted by the State comply with the affordability criteria developed by the State.

(B) Notice and publication If the Administrator determines that variances granted by a State are not in compliance with affordability criteria developed by the State and the requirements of this subsection, the Administrator shall notify the State in writing of the deficiencies and make public the determination.

(9) Approval of variances A State proposing to grant a variance under this subsection to a public water system serving more than 3,300 and fewer than 10,000 persons shall submit the variance to the Administrator for review and approval prior to the issuance of the variance. The Administrator shall approve the variance if it meets each of the requirements of this subsection. The Administrator shall approve or disapprove the variance within 90 days. If the Administrator disapproves a variance under this paragraph, the Administrator shall notify the State in writing of the reasons for disapproval and the variance may be resubmitted with modifications to address the objections stated by the Administrator.

(10) Objections to variances

(A) By the Administrator The Administrator may review and object to any variance proposed to be granted by a State, if the objection is communicated to the State not later than 90 days after the State proposes to grant the variance. If the Administrator objects to the granting of a variance, the Administrator shall notify the State in writing of each basis for the objection and propose a modification to the variance to resolve the concerns of the Administrator. The State shall make the recommended modification or respond in writing to each objection. If the State issues the variance without resolving the concerns of the Administrator, the Administrator may overturn the State decision to grant the variance if the Administrator determines that the State decision does not comply with this subsection.

(B) Petition by consumers Not later than 30 days after a State exercising primary enforcement responsibility for public water systems under section 300g-2 of this title proposes to grant a variance for a public water system, any person served by the system may petition the Administrator to object to the granting of a variance. The Administrator shall respond to the petition and determine whether to object to the variance under subparagraph (A) not later than 60 days after the receipt of the petition.

(C) Timing No variance shall be granted by a State until the later of the following:

(i) 90 days after the State proposes to grant a variance.

(ii) If the Administrator objects to the variance, the date on which the State makes the recommended modifications or responds in writing to each objection.

Sec. 300g-2

(a) In general For purposes of this subchapter, a State has primary enforcement responsibility for public water systems during any period for which the Administrator determines (pursuant to regulations prescribed under subsection (b) of this section) that such State -

(1) has adopted drinking water regulations that are no less stringent than the national primary drinking water regulations promulgated by the Administrator under subsections (a) and (b) of section 300g-1 of this title not later than 2 years after the date on which the regulations are promulgated by the Administrator, except that the Administrator may provide for an extension of not more than 2 years if, after submission and review of appropriate, adequate documentation from the State, the Administrator determines that the extension is necessary and justified;

(2) has adopted and is implementing adequate procedures for the enforcement of such State regulations, including conducting such monitoring and making such inspections as the Administrator may require by regulation;

(3) will keep such records and make such reports with respect to its activities under paragraphs (1) and (2) as the Administrator may require by regulation;

(4) if it permits variances or exemptions, or both, from the requirements of its drinking water regulations which meet the requirements of paragraph (1), permits such variances and exemptions under conditions and in a manner which is not less stringent than the conditions under, and the manner in which variances and exemptions may be granted under sections 300g-4 and 300g-5 of this title;

(5) has adopted and can implement an adequate plan for the provision of safe drinking water under emergency circumstances including earthquakes, floods, hurricanes, and other natural disasters, as appropriate; and

(6) has adopted authority for administrative penalties (unless the constitution of the State prohibits the adoption of the authority) in a maximum amount -

(A) in the case of a system serving a population of more than 10,000, that is not less than \$1,000 per day per violation; and

(B) in the case of any other system, that is adequate to ensure compliance (as determined by the State); except that a State may establish a maximum limitation on the total amount of administrative penalties that may be imposed on a public water system per violation.

(b) Regulations

(1) The Administrator shall, by regulation (proposed within 180 days of December 16, 1974), prescribe the manner in which a State may apply to the Administrator for a determination that the requirements of paragraphs (1), (2), (3), and (4) of subsection (a) of this section are satisfied with respect to the State, the manner in which the determination is made, the period for which the determination will be effective, and the manner in which the Administrator may determine that such requirements are no longer met. Such regulations shall require that before a determination of the Administrator that such requirements are met or are no longer met with respect to a State may become effective, the Administrator shall notify such State of the determination and the reasons therefore and shall provide an opportunity for public hearing on the determination. Such regulations shall be promulgated (with such modifications as the Administrator deems appropriate) within 90 days of the publication of the proposed regulations in the Federal Register. The Administrator shall promptly notify in writing the chief executive officer of each State of the promulgation of regulations under this paragraph. Such notice shall contain a copy of the

regulations and shall specify a State's authority under this subchapter when it is determined to have primary enforcement responsibility for public water systems.

(2) When an application is submitted in accordance with the Administrator's regulations under paragraph (1), the Administrator shall within 90 days of the date on which such application is submitted (A) make the determination applied for, or (B) deny the application and notify the applicant in writing of the reasons for his denial.

(c) Interim primary enforcement authority A State that has primary enforcement authority under this section with respect to each existing national primary drinking water regulation shall be considered to have primary enforcement authority with respect to each new or revised national primary drinking water regulation during the period beginning on the effective date of a regulation adopted and submitted by the State with respect to the new or revised national primary drinking water regulation in accordance with subsection (b)(1) of this section and ending at such time as the Administrator makes a determination under subsection (b)(2)(B) of this section with respect to the regulation.

Sec. 300g-4(e)(7)

(7) Regulations and guidance

(A) In general Not later than 2 years after August 6, 1996, and in consultation with the States, the Administrator shall promulgate regulations for variances to be granted under this subsection. The regulations shall, at a minimum, specify -

(i) procedures to be used by the Administrator or a State to grant or deny variances, including requirements for notifying the Administrator and consumers of the public water system that a variance is proposed to be granted (including information regarding the contaminant and variance) and requirements for a public hearing on the variance before the variance is granted;

(ii) requirements for the installation and proper operation of variance technology that is identified (pursuant to section 300g-1(b)(15) of this title) for small systems and the financial and technical capability to operate the treatment system, including operator training and certification;

(iii) eligibility criteria for a variance for each national primary drinking water regulation, including requirements for the quality of the source water (pursuant to section 300g-1(b)(15)(A) of this title); and

(iv) information requirements for variance applications.

(B) Affordability criteria Not later than 18 months after August 6, 1996, the Administrator, in consultation with the States and the Rural Utilities Service of the Department of Agriculture, shall publish information to assist the States in developing affordability criteria. The affordability criteria shall be reviewed by the States not less often than every 5 years to determine if changes are needed to the criteria.

Sec. 300g-5 (a)(1)

(a) Requisite findings A State which has primary enforcement responsibility may exempt any public water system within the State's jurisdiction from any requirement respecting a maximum contaminant level or any treatment technique requirement, or from both, of an applicable national primary drinking water regulation upon a finding that -

(1) due to compelling factors (which may include economic factors, including qualification of the public water system as a system serving a disadvantaged community pursuant to section 300j-12(d) of this title), the public water system is unable to comply with such contaminant level or treatment technique requirement, or to implement measures to develop an alternative source of water supply,

(2) the public water system was in operation on the effective date of such contaminant level or treatment technique requirement, or, for a system that was not in operation by that date, only if no reasonable alternative source of drinking water is available to such new system,

(3) the granting of the exemption will not result in an unreasonable risk to health; and reasonably be made that will result in compliance with this subchapter or, if compliance cannot be achieved, improve the quality of the drinking water.

Sec. 300g-9

(a) State authority for new systems

A State shall receive only 80 percent of the allotment that the State is otherwise entitled to receive under section 300j-12 of this title (relating to State loan funds) unless the State has obtained the legal authority or other means to ensure that all new community water systems and new nontransient, noncommunity water systems commencing operation after October 1, 1999, demonstrate technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the date of commencement of operations.

(b) Systems in significant noncompliance

(1) List Beginning not later than 1 year after August 6, 1996, each State shall prepare, periodically update, and submit to the Administrator a list of community water systems and nontransient, noncommunity water systems that have a history of significant noncompliance with this subchapter (as defined in guidelines issued prior to August 6, 1996, or any revisions of the guidelines that have been made in consultation with the States) and, to the extent practicable, the reasons for noncompliance.

(2) Report Not later than 5 years after August 6, 1996, and as part of the capacity development strategy of the State, each State shall report to the Administrator on the success of enforcement mechanisms and initial capacity development efforts in assisting the public water systems listed under paragraph (1) to improve technical, managerial, and financial capacity.

(3) Withholding The list and report under this subsection shall be considered part of the capacity development strategy of the State required under subsection (c) of this section for purposes of the withholding requirements of section 300j-12(a)(1)(G)(i) of this title (relating to State loan funds).

(c) Capacity development strategy

(1) In general Beginning 4 years after August 6, 1996, a State shall receive only -

(A) 90 percent in fiscal year 2001;

(B) 85 percent in fiscal year 2002; and

(C) 80 percent in each subsequent fiscal year, of the allotment that the State is otherwise entitled to receive under section 300j-12 of this title (relating to State loan funds), unless the State is developing and implementing a strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity.

(2) Content In preparing the capacity development strategy, the State shall consider, solicit public comment on, and include as appropriate -

(A) the methods or criteria that the State will use to identify and prioritize the public water systems most in need of improving technical, managerial, and financial capacity;

(B) a description of the institutional, regulatory, financial, tax, or legal factors at the Federal, State, or local level that encourage or impair capacity development;

(C) a description of how the State will use the authorities and resources of this subchapter or other means to -

(i) assist public water systems in complying with national primary drinking water regulations;

(ii) encourage the development of partnerships between public water systems to enhance the technical, managerial, and financial capacity of the systems; and

(iii) assist public water systems in the training and certification of operators;

(D) a description of how the State will establish a baseline and measure improvements in capacity with respect to national primary drinking water regulations and State drinking water law; and

(E) an identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy (including all appropriate agencies of Federal, State, and local governments, private and nonprofit public water systems, and public water system customers).

(3) Report Not later than 2 years after the date on which a State first adopts a capacity development strategy under this subsection, and every 3 years thereafter, the head of the State agency that has primary responsibility to carry out this subchapter in the State shall submit to the Governor a report that shall also be available to the public on the efficacy of the strategy and progress made toward improving the technical, managerial, and financial capacity of public water systems in the State.

(4) Review The decisions of the State under this section regarding any particular public water system are not subject to review by the Administrator and may not serve as the basis for withholding funds under section 300j-12 of this title.

(d) Federal assistance

(1) In general The Administrator shall support the States in developing capacity development strategies.

(2) Informational assistance

(A) In general Not later than 180 days after August 6, 1996, the Administrator shall -

(i) conduct a review of State capacity development efforts in existence on August 6, 1996, and publish information to assist States and public water systems in capacity development efforts; and

(ii) initiate a partnership with States, public water systems, and the public to develop information for States on recommended operator certification requirements.

(B) Publication of information The Administrator shall publish the information developed through the partnership under subparagraph (A)(ii) not later than 18 months after August 6, 1996.

(3) Promulgation of drinking water regulations In promulgating a national primary drinking water regulation, the Administrator shall include an analysis of the likely effect of compliance with the regulation on the technical, financial, and managerial capacity of public water systems.

(4) Guidance for new systems Not later than 2 years after August 6, 1996, the Administrator shall publish guidance developed in consultation with the States describing legal authorities and other means to ensure that all new community water systems and new nontransient, noncommunity water systems demonstrate technical, managerial, and financial capacity with respect to national primary drinking water regulations.

(e) Variances and exemptions Based on information obtained under subsection (c)(3) of this section, the Administrator shall, as appropriate, modify regulations concerning variances and exemptions for small public water systems to ensure flexibility in the use of the variances and exemptions. Nothing in this subsection shall be interpreted, construed, or applied to affect or alter the requirements of section 300g-4 or 300g-5 of this title.

(f) Small public water systems technology assistance centers

(1) Grant program The Administrator is authorized to make grants to institutions of higher learning to establish and operate small public water system technology assistance centers in the United States.

(2) Responsibilities of the centers The responsibilities of the small public water system technology assistance centers established under this subsection shall include the conduct of training and technical assistance relating to the information, performance, and technical needs of small public water systems or public water systems that serve Indian Tribes.

(3) Applications Any institution of higher learning interested in receiving a grant under this subsection shall submit to the Administrator an application in such form and containing such information as the Administrator may require by regulation.

(4) Selection criteria The Administrator shall select recipients of grants under this subsection on the basis of the following criteria:

(A) The small public water system technology assistance center shall be located in a State that is representative of the needs of the region in which the State is located for addressing the drinking water needs of small and rural communities or Indian Tribes.

(B) The grant recipient shall be located in a region that has experienced problems, or may reasonably be foreseen to experience problems, with small and rural public water systems.

(C) The grant recipient shall have access to expertise in small public water system technology management.

(D) The grant recipient shall have the capability to disseminate the results of small public water system technology and training programs.

(E) The projects that the grant recipient proposes to carry out under the grant are necessary and appropriate.

(F) The grant recipient has regional support beyond the host institution.

(5) Consortia of States At least 2 of the grants under this subsection shall be made to consortia of States with low population densities.

(6) Authorization of appropriations There are authorized to be appropriated to make grants under this subsection \$2,000,000 for each of the fiscal years 1997 through 1999, and \$5,000,000 for each of the fiscal years 2000 through 2003.

(g) Environmental finance centers

(1) In general The Administrator shall provide initial funding for one or more university-based environmental finance centers for activities that provide technical assistance to State and local officials in developing the capacity of public water systems. Any such funds shall be used only for activities that are directly related to this subchapter.

(2) National capacity development clearinghouse The Administrator shall establish a national public water system capacity development clearinghouse to receive and disseminate information with respect to developing, improving, and maintaining financial and managerial capacity at public water systems. The Administrator shall ensure that the clearinghouse does not duplicate other federally supported clearinghouse activities.

(3) Capacity development techniques The Administrator may request an environmental finance center funded under paragraph (1) to develop and test managerial, financial, and institutional techniques for capacity development. The techniques may include capacity assessment methodologies, manual and computer based public water system rate models and capital planning models, public water system consolidation procedures, and regionalization models.

(4) Authorization of appropriations There are authorized to be appropriated to carry out this subsection \$1,500,000 for each of the fiscal years 1997 through 2003.

(5) Limitation No portion of any funds made available under this subsection may be used for lobbying expenses.

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Appendix B

Federal Register Notice

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Appendix C

2007 Community Water System Survey Questionnaire

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Appendix D

Comments and Response to Comments Received on the 1st *Federal Register* Notice

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Comments Received

Comments were received from two respondents.

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Addendum

Burden and Cost by System Type

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The total respondent costs are calculated below based on the labor effort and costs described in section A.6.a.. There are no capital or operating and maintenance costs to the respondents in this collection effort. The table distinguishes between respondent costs borne by state, local, or tribal governments and those borne by the private sector.

Addendum Table 1. Preliminary Burden and Cost Estimate for Respondents by Ownership

Size of System	Sample Size	Burden Hrs.	Cost/Hr.	Total Hrs.	Total Cost
State, Local, or Tribal Governments					
Less than 3,300	298	1	\$28.24	298	\$8,416
3,301 to 50,000	322	5	\$28.24	1,610	\$45,466
50,001 to 500,000	553	5	\$33.88	2,765	\$93,678
Greater than 500,000	76	5	\$33.88	380	\$12,874
Total	1,249	4.05	\$31.75	5,053	\$160,435
Private					
Less than 3,300	302	1	\$28.24	302	\$8,528
3,301 to 50,000	41	5	\$28.24	205	\$5,789
50,001 to 500,000	84	5	\$33.88	420	\$14,230
Greater than 500,000	16	5	\$33.88	80	\$2,710
Total	443	2.27	\$31.04	1,007	\$31,258

The estimated burden and costs to the states are shown in Addendum Table 2, based on the labor effort and costs described in the previous section. The burden and costs are in addition to those shown in Addendum Table 1.

Addendum Table 2. Preliminary Burden and Cost Estimate for the States

Size of System	Sample Size	Burden Hrs.	Cost/Hr.	Total Hrs.	Total Cost
Less than 3,300	600	0.5	\$36.10	300	\$10,830
3,301 to 50,000	0	0	0	0	0
50,001 to 500,000	0	0	0	0	0
Greater than 500,000	0	0	0	0	0
Total	600	0.5	\$36.10	300	\$10,830