



Final Information Collection Request for the Microbial Rules

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ACRONYMS

| | |
|----------|--|
| ADWR | Aircraft Drinking Water Rule |
| AMWA | Association of Metropolitan Water Agencies |
| ARCS | Aircraft Reporting and Compliance System |
| ASDWA | Association of State Drinking Water Administrators |
| AWWA | American Water Works Association |
| BLS | Bureau of Labor Statistics |
| CCP | Composite Correction Program |
| CCR | Consumer Confidence Report |
| CDC | Centers for Disease Control and Prevention |
| CFE | Combined Filter Effluent |
| CFR | Code of Federal Regulations |
| CPE | Comprehensive Performance Evaluation |
| CWS | Community Water System |
| CWSS | Community Water Systems Survey |
| DBPR | Disinfectants and Disinfection Byproducts Rule |
| DWSRF | Drinking Water State Revolving Fund |
| EPA | Environmental Protection Agency |
| ESWTR | Enhanced Surface Water Treatment Rule |
| ETT | Enforcement Targeting Tool |
| FAA | Federal Aviation Administration |
| FBRR | Filter Backwash Recycling Rule |
| FTE | Full Time Equivalent |
| GWR | Ground Water Rule |
| GWUDI | Ground Water Under the Direct Influence of Surface Water |
| HAA5 | Haloacetic Acids |
| HPC | Heterotrophic Plate Count |
| ICR | Information Collection Request |
| IESWTR | Interim Enhanced Surface Water Treatment Rule |
| IFA | Individual Filter Assessment |
| LCR | Lead and Copper Rule |
| LT1ESWTR | Long Term 1 Enhanced Surface Water Treatment Rule |
| LT2ESWTR | Long Term 2 Enhanced Surface Water Treatment Rule |
| MCL | Maximum Contaminant Level |
| MCLG | Maximum Contaminant Level Goal |
| M-DBP | Microbial Disinfectants and Disinfection Byproducts |
| NAICS | North American Industry Classification System |
| NAWC | National Association of Water Companies |
| NCWS | Noncommunity Water System |
| NPDWRs | National Primary Drinking Water Regulations |
| NRDC | Natural Resources Defense Council |
| NRWA | National Rural Water Association |
| NTU | Nephelometric Turbidity Unit |
| O&M | Operation and Maintenance |
| OGWDW | Office of Ground Water and Drinking Water |
| OMB | Office of Management and Budget |
| PN | Public Notification |
| PRA | Paperwork Reduction Act |
| PWS | Public Water System |
| PWSS | Public Water System Supervision |

| | |
|--------|--|
| RegNeg | Regulation Negotiation |
| RIA | Regulatory Impact Analysis |
| RFA | Regulatory Flexibility Analysis |
| RTCR | Revised Total Coliform Rule |
| SBARP | Small Business Advocacy Review Panel |
| SBREFA | Small Business Regulatory Enforcement Fairness Act |
| SCADA | Supervisory Control and Data Acquisition |
| SDWA | Safe Drinking Water Act |
| SDWIS | Safe Drinking Water Information System |
| SER | Small Entity Representative |
| SOC | Standard Occupational Classification |
| SWAP | Source Water Assessment Program |
| SWTR | Surface Water Treatment Rule |
| TCR | Total Coliform Rule |
| TNCWS | Transient Noncommunity Water System |
| TTHM | Total Trihalomethanes |
| UIC | Underground Injection Control |
| V&Es | Variances and Exemptions |

1 IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) Title and Number of the Information Collection

Title: Information Collection Request for the Microbial Rules

OMB Control Number: 2040-0205

EPA Tracking Number: 1895.07

1(b) Short Characterization

The Office of Ground Water and Drinking Water (OGWDW) at the U.S. Environmental Protection Agency (EPA or the Agency) is responsible for developing National Primary Drinking Water Regulations (NPDWRs) as mandated by the Safe Drinking Water Act (SDWA). section 1412 of the SDWA requires EPA to establish NPDWRs for contaminants that may adversely impact human health. In section 1414, the Act further requires EPA to enforce these regulations to ensure that the nation's drinking water dependably complies with the standards stipulated in the Code of Federal Regulations (CFR), 40 CFR part 141, subpart B.

Section 1445 of the SDWA stipulates that every drinking water supplier must conduct monitoring, maintain records, and provide such information as is needed for EPA to implement its monitoring and enforcement responsibilities with respect to the Act. State¹ governments—in those states that have assumed primary enforcement responsibility (primacy) for public water systems (PWSs) under SDWA section 1413—ensure that PWSs are complying with these monitoring requirements. As part of the Public Water System Supervision (PWSS) Program, the OGWDW uses the Safe Drinking Water Information System (SDWIS) to record some of the data collected as a result of NPDWR requirements. SDWIS is a database management system that assists EPA in tracking and interpreting violations data and other program-related data. These data assist EPA in fulfilling its SDWA obligations.

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

¹ Throughout this document, the terms "state" or "states" are used to refer to all types of primacy agencies. There are currently 57 primacy agencies, including the 50 states, the District of Columbia, U.S. territories (Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas), and Navajo Nation. Though Wyoming and the District of Columbia do not have primacy, the EPA burden for these activities is counted as primacy agency burden.

This ICR examines PWS, air carrier, primacy agency and EPA burden and costs for recordkeeping and reporting required in support of microbial contaminant-associated rulemakings. These rules include the following:

- 1) Surface Water Treatment Rule (SWTR)²
- 2) Total Coliform Rule (TCR)
- 3) Interim Enhanced Surface Water Treatment Rule (IESWTR)
- 4) Filter Backwash Recycling Rule (FBRR)
- 5) Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR)
- 6) Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)
- 7) Ground Water Rule (GWR)
- 8) Aircraft Drinking Water Rule (ADWR)³

This ICR estimates burden and costs for May 1, 2012, through April 30, 2015, for the rules above. It updates the burden and cost estimates provided in the Microbial Rules ICR dated December 2008, which expires on April 30, 2012. ADWR burden is being incorporated into this programmatic ICR for the first time. Note that the standalone ADWR ICR is currently scheduled to expire on February 28, 2013. However, once this Microbial Rules ICR is approved, the standalone ADWR ICR will be cancelled. The burden and cost estimates for each rule are discussed in greater detail in section 6 of this document.

Continuing costs and burden for several existing drinking water regulations are evaluated in this ICR. The total annual burden associated with this ICR is estimated to be approximately 12.9 million hours per year. The total annual cost associated with this ICR is estimated to be approximately \$590.5 million. The distribution of annual burden between PWSs, air carriers and primacy agencies is approximately 10.3 million hours, 0.04 million hours, and 2.6 million hours respectively. The distribution of annual costs between PWSs, air carriers and primacy agencies is approximately \$467.8 million, \$4.0 million and \$118.7 million, respectively. There is no EPA burden or cost for this ICR⁴. Section 6 and Appendices B through H detail these burden and cost calculations.

The approximate annual operation and maintenance (O&M) and capital costs are \$136.2 million (\$115.8 million for O&M and \$20.4 million for capital). This represents the “cost burden” as reported in the OMB inventory. Note that these costs are for PWSs and air carriers only; primacy agencies do not have capital or O&M costs associated with the Microbial Rules.

² This Microbial Rules ICR includes all SWTR components except disinfectant residual monitoring and associated activities, which are included in the Disinfectants and Disinfection Byproducts, Chemical, and Radionuclides (DDBP/Chem/Rads) Rules ICR (see section 4(b)(i)).

³ The burden for this rule was previously addressed in standalone ICR OMB #2040-0277. It is being incorporated into the Microbial Rules ICR for the first time. Note that the ADWR applies only to air carriers that operate aircraft public water systems. As discussed further in section 4, although aircraft public water systems are technically PWSs, air carriers rather than PWSs are the respondents for the ADWR.

⁴ EPA directly implements the Aircraft Drinking Water Rule, but the burden and cost for these activities is accounted for in the PWSS Program ICR under the 231.9 Regional full time equivalents (FTEs) dedicated to drinking water protection implementation activities.

The total number of respondents for this ICR is 153,083; 57 of these respondents are primacy agencies, 47 are air carriers, and the balance are existing PWSs (152,979). The total annual number of responses for these respondents is 28.9 million (26.7 million for PWSs, 0.136 million for air carriers and 2.1 million for primacy agencies).

2 NEED FOR AND USE OF THE COLLECTION

2(a) Need/Authority for the Collection

This section identifies the regulatory or statutory authority for the information collection activities covered in this ICR and describes why EPA needs the information. Section 4 contains a summary of the major recordkeeping and reporting requirements for rules covered by this ICR.

The Microbial Rules ICR includes the following rules addressing microbial contaminants:

- 1) Surface Water Treatment Rule
- 2) Total Coliform Rule
- 3) Interim Enhanced Surface Water Treatment Rule
- 4) Filter Backwash Recycling Rule
- 5) Long Term 1 Enhanced Surface Water Treatment Rule
- 6) Long Term 2 Enhanced Surface Water Treatment Rule
- 7) Ground Water Rule
- 8) Aircraft Drinking Water Rule

As EPA publishes new regulations, EPA will amend the appropriate ICR to include the new rules.

For a graphical depiction of the structure of the OGWDW ICRs, see Figure 1. A complete itemization of the activities included in the three primary ICRs, as well as other drinking water program ICRs, is included as Exhibit 1.

The information collected under this ICR is required by EPA to carry out its monitoring and enforcement responsibilities under SDWA.

Section 1412(b) authorizes EPA to establish NPDWRs to protect public health. Further, §1445 of the SDWA requires that PWSs collect information to assist EPA in determining compliance:

“every person who is a supplier of water 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 him in establishing regulations, in determining whether such person has acted or is in compliance with this title...”

In addition, §1401(1)(d) of the SDWA 1986 Amendments defines NPDWRs to include “criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels; including accepted methods for quality control and testing procedures to insure compliance with such levels....” This section authorizes EPA to require systems and laboratories to use Agency-approved methods and quality assurance criteria for collecting and analyzing water samples.

Figure 1. Structure of OGWDW ICRs

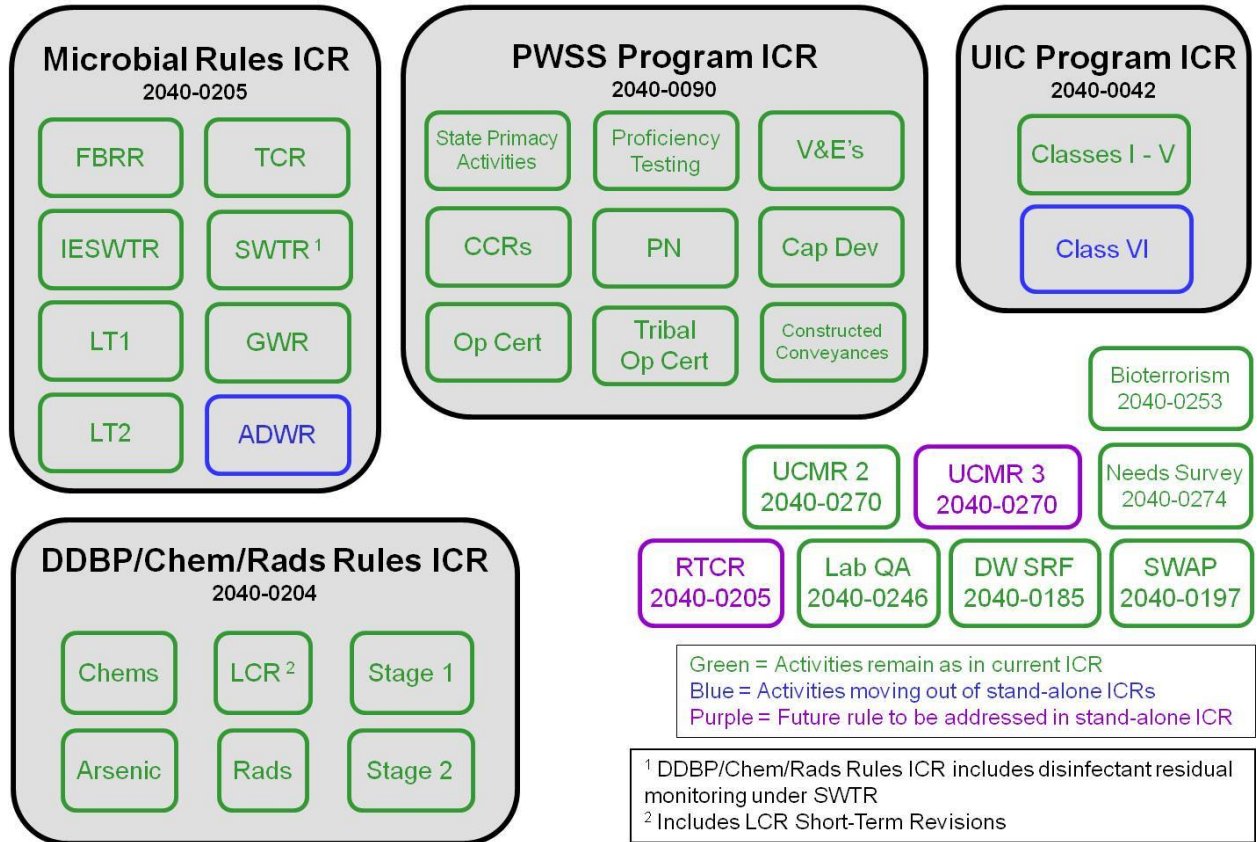


Exhibit 1: Structure of OGWDW ICRs

| Currently covered | To be covered in the future |
|---|--|
| PWSS Program ICR (2040-0090) | |
| Consumer Confidence Reports (CCRs) | |
| Variations & Exemptions (V&Es) | |
| Capacity Development Program | |
| General State Primacy Activities | |
| Public Notification (PN) | |
| Operator Certification Expense Reimbursement Grants Program | |
| Tribal Operator Certification | |
| Constructed Conveyances | |
| Proficiency Testing | |
| Microbial Rules ICR (2040-0205) | |
| Surface Water Treatment Rule (SWTR), except disinfectant residual monitoring and associated activities ⁵ | Revised Total Coliform Rule (RTCR) |
| Total Coliform Rule (TCR) | |
| Interim Enhanced Surface Water Treatment Rule (IESWTR) | |
| Filter Backwash Recycling Rule (FBRR) | |
| Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) | |
| Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) | |
| Ground Water Rule (GWR) | |
| Aircraft Drinking Water Rule (ADWR) | |
| Disinfectants/Disinfection Byproducts, Chemical, and Radionuclides Rules ICR (2040-0204) | |
| Stage 1 Disinfectants and Disinfection Byproducts Rule (DBPR) | |
| Disinfectant Residual Monitoring and associated activities under the SWTR | |
| Stage 2 DBPR | |
| Chemical Phase Rules | |
| Radionuclides Rule | |
| Arsenic Rule | |
| Lead and Copper Rule (LCR) | |
| Source Water Assessment Program (SWAP) ICR (2040-0197) | |
| SWAP | |
| Underground Injection Control (UIC) Program ICR (2040-0042) | |
| Underground Injection Control Program (UIC) Base Program Activities | Class VI Geologic Sequestration Rule– Under current EPA ICR Number 0370.24 |
| Class V Rule | |
| Florida Class I Rule | |

⁵ Disinfectant residual monitoring and associated activities are included in the DDBP/Chem/Rads Rules ICR.

| Currently covered | To be covered in the future |
|--|-----------------------------|
| Drinking Water State Revolving Fund (DWSRF) Program ICR (2040-0185) | |
| Drinking Water State Revolving Fund Program (DWSRF) | |
| Drinking Water Infrastructure Needs Survey ICR (2040-0274) | |
| 2011 Needs Survey | |
| Title VI of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002: Drinking Water Security and Safety ICR (2040-0253) | |
| Vulnerability Assessments and Emergency Response Plans for community water systems (CWSs). | |
| Unregulated Contaminant Monitoring Rule ICR (2040-0270) | |
| Monitoring of Unregulated Contaminants | |
| Laboratory Quality Assurance Evaluation Program for Analysis of Cryptosporidium ICR (2040-0246) | |
| Proficiency Testing Program for Laboratories Analyzing Cryptosporidium Samples | |

- *Surface Water Treatment Rule*

The 1986 SDWA Amendments required EPA to propose and promulgate a NPDWR specifying criteria under which filtration would be required as a treatment technique for public water systems supplied by surface water sources (section 1412 (b)(7)(C)(i)). In promulgating this regulation and setting the criteria, EPA was required to consider source water quality; protection afforded by watershed management programs; treatment techniques, such as disinfection practices and length of water storage; and other factors relevant to protection of health. The requirements for the SWTR included in this ICR help EPA promote public health through proper operation of filtration techniques. Additional SWTR requirements, such as monitoring and watershed control programs, promote protection of public health in the absence of filtration.

- *Total Coliform Rule*

The 1986 SDWA Amendments required EPA to publish maximum contaminant level goals (MCLGs) and promulgate NPDWRs for the 83 contaminants listed in the Advance Notice of Proposed Rulemaking at 47 FR 45502 (March 4, 1982) and 48 FR 45502 (October 5, 1983). EPA believes that promulgation of this regulation complied with the statutory requirements for regulating total coliforms in all PWSs.

- *Interim Enhanced Surface Water Treatment Rule*

SDWA was amended in August 1996, resulting in the addition of new sections that establish new drinking water requirements. SDWA section 1412(b)(2)(C) of the 1996

amendments required EPA to promulgate an Interim Enhanced Surface Water Treatment Rule. The IESWTR set the first drinking water standards to control *Cryptosporidium* in large systems.

- *Filter Backwash Recycling Rule*

The 1996 SDWA amendments established new drinking water requirements for filtration. SDWA section 1412(b)(14) requires the Administrator to promulgate a regulation to govern the recycling of filter backwash water within the treatment process of a PWS. The FBRR satisfies this regulatory requirement.

- *Long Term 1 Enhanced Surface Water Treatment Rule*

SDWA section 1412(b)(2)(C) established a number of regulatory deadlines, including two stages of the Enhanced Surface Water Treatment Rule (ESWTR). The LT1ESWTR is part of the first stage of the ESWTR. The LT1ESWTR strengthens the standards previously established under the SWTR and applies the standards set for *Cryptosporidium* in the IESWTR to small systems.

- *Long Term 2 Enhanced Surface Water Treatment Rule*

SDWA section 1412(b)(2)(C) established a number of regulatory deadlines, including two stages of the ESWTR. The LT2ESWTR is part of the final stage of the ESWTR. The rule requires further treatment to remove *Cryptosporidium* based on the amount of *Cryptosporidium* present in a system's source water.

- *Ground Water Rule*

The 1996 SDWA amendments required the Administrator to publish a national drinking water regulation requiring disinfection of ground water as necessary (§1412(b)(8)). The GWR sets conditions where disinfection of ground water is considered necessary. The final GWR was promulgated November 8, 2006.

- *Aircraft Drinking Water Rule*

Section 1411 of the SDWA gives EPA the authority to ensure that aircraft that meet the definition of a PWS comply with the NPDWRs:

Subject to sections 1415 and 1416, national primary drinking water regulations under this part shall apply to each public water system in each State; except that such regulations shall not apply to a public water system

- 1) which consists only of distribution and storage facilities (and does not have any collection and treatment facilities);*
- 2) which obtains all of its water from, but is not owned or operated by a public water system to which such regulations apply;*
- 3) which does not sell water to any person; and*
- 4) which is not a carrier which conveys passengers in interstate commerce.*

Aircraft PWSs are considered transient non-community water systems (TNCWSs); such systems regularly serve an average of at least 25 individuals daily at least 60 days per year. As with other PWSs, water used for human consumption onboard an aircraft must meet the requirements of the SDWA. EPA promulgated the ADWR to tailor existing health-based drinking water standards to the unique characteristics of aircraft.

2(b) Use/Users of the Data

The information described in section 4 of this ICR will be collected by EPA and made available to the public upon request, as required by the Freedom of Information Act (40 CFR Chapter 1 part 2). In some cases, SDWA requires that the information be provided to the public or the primacy agency. Primary users of the data collected under this ICR are OGWDW, PWS managers, air carriers and primacy agencies, which include state regulators, Indian Tribes, and, in some instances, EPA Regional Administrators. Other users include the following:

- Staff from other EPA programs (such as Superfund, the Resource Conservation and Recovery Act, and the Office of Enforcement and Compliance Assurance)
- Federal Emergency Management Agency
- Centers for Disease Control and Prevention (CDC)
- Military bases
- Farmers Home Administration
- Department of Interior
- Department of Housing and Urban Development
- U.S. Army Corps of Engineers
- White House Task Forces
- American Water Works Association (AWWA)
- Association of Metropolitan Water Agencies (AMWA)
- National Rural Water Association (NRWA)
- National Association of Water Companies (NAWC)
- Association of State Drinking Water Administrators (ASDWA)
- Natural Resources Defense Council (NRDC)
- Consumers Federation of America
- News organizations

Primacy agencies maintain records compiled from PWS respondents (§142.14) and can use these records to track PWS monitoring and compliance violations, as well as enforcement activities. The primacy agency can also track schedules for PWSs trying to achieve compliance.

Primacy agencies report information on PWS violations to SDWIS. This federal information system allows EPA and states to store and retrieve information over time. Trends in compliance data can be evaluated at the system, state, and national program levels. Usually, these data are used by the Agency for maintaining oversight and to communicate information on drinking water program implementation.

3 NON-DUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

3(a) Non-duplication

EPA has made an effort to ensure that the data collection efforts associated with this ICR are not duplicated. EPA consulted with state environmental programs, other federal agencies (such as the CDC), and regulated entities (such as PWSs and their representative trade associations) during the development of each rule discussed in this document. To the best of EPA's knowledge, data currently required by the SDWA (and its implementing regulations codified at 40 CFR parts 141 and 142) are not available from any other source.

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

To comply with the 1995 Amendments to the 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 requesting comment on the estimated respondent burden and other aspects of this ICR (Appendix A). EPA did not receive any comments during the 60-day comment period.

3(c) Consultations

Throughout the development and implementation of various microbial regulations, OGWDW has held numerous meetings with interested stakeholders, including state and EPA Regional personnel and PWS representatives, to identify the value and ease of collecting information needed to fulfill SDWA obligations. As a standard regulatory development practice to promote public involvement, EPA formally solicits public comment on proposed drinking water rules. Before any rule is finalized, EPA logs and evaluates all written comments on proposed rules. Additionally, EPA usually holds public meetings during which any interested party may provide oral testimony for Agency consideration. Such meetings are typically announced in the Federal Register notice accompanying the proposed rule.

In the initial phases of program development, or to confirm assumptions on which rules or guidelines are based, EPA often augments formal meetings with other workshops or meetings to gather information. The following are specific examples of meetings and other consultations held by EPA to address the regulations contained in this ICR.

- In 1985, EPA held a workshop to discuss options for regulating microbial contaminants.
- In 1985, the Federal Register presented a discussion on the need for mandatory filtration and disinfection of surface water. This Federal Register notice also requested public comment on the subject.
- A Federal Register notice was published on May 6, 1988, to discuss additional alternatives for the proposed SWTR.
- The TCR was published on June 29, 1989. The 1989 TCR was reviewed as part of the six-year review of drinking water standards. EPA published its preliminary revise/do not revise decisions in the Federal Register to request public comment

(67 FR 19029-19090). EPA received and reviewed comments from 44 commenters. EPA held a stakeholder meeting on May 30, 2002 to discuss the results of these preliminary findings.

- In 1992, EPA instituted a formal regulation negotiation (RegNeg) process to discuss proposed amendments to the SDWA with potentially affected parties (57 FR 53866; Nov. 13, 1992). This RegNeg Committee included representatives from water utilities and other industries, state public health and regulatory agencies, environmental groups, consumer groups, and EPA. The RegNeg Committee agreed that EPA should propose three rules: Information Collection Rule (finalized in 1996), a staged Enhanced Surface Water Treatment Rule, and a staged Disinfectants and Disinfection Byproducts Rule.
- A microbial contaminants and disinfection byproducts advisory committee, formed under the authority of the Federal Advisory Committees Act, convened in 1997 to review the data and assumptions used to support the 1994 proposed changes to the SWTR and data that had subsequently been collected. In July 1997, participants signed an agreement in principle, outlining the Committee's recommendations to EPA on the major components of the IESWTR and Stage 1 DBPR.
- Between March and December 1997, the Small System Data Needs Working Group held six meetings to discuss availability of water quality and financial data for small systems.
- Twenty-four small entity representatives (SERs) were invited to participate in a teleconference to discuss the FBRR and LT1ESWTR on April 28, 1998. Of the 24 invited SERs, 15 participated in the teleconference.
- On August 21, 1998, a Small Business Advocacy Review Panel (SBARP) met to discuss the proposed FBRR and LT1ESWTR. Two additional meetings of the SBARP were held between August 21 and October 19, 1998.
- In September 1998, the SBARP distributed information on regulatory approaches and costs to the SERs for review and comment.
- The SBARP and SERs participated in a joint teleconference on September 25, 1998.
- A Stage 2 Microbial Disinfectants and Disinfection Byproducts (M-DBP) Advisory Committee was formed under the authority of the Federal Advisory Committees Act. The committee represented a broad cross section of organizations and convened 14 times between March 1999 and February 2000.
- EPA held 3 meetings with representatives of small entities and one meeting with tribal representatives to discuss LT2ESWTR.
- In December 1997, EPA held a preliminary meeting on the GWR. After the initial meeting, five meetings were held throughout the country. Early involvement meetings were also held with state regulators. EPA also received input from small system operators.
- EPA consulted with stakeholders during development of the proposed ADWR using a facilitated, collaborative process. Stakeholders included representatives from air carriers, airline associations, flight attendant associations, public interest groups, and others. EPA held a public meeting on the subject on June 1, 2005. Stakeholder consultations were implemented during several one-on-one meetings

with Agency personnel and during 2-day collaborative workshops held in January 2006 and March 2007.

As part of the revision of the Microbial Rules ICR, in December 2011 EPA consulted with representatives of PWSs and states regarding the accuracy of EPA's burden estimates. The groups consulted were NAWC, NRWA, AWWA, AMWA, and ASDWA. These groups' comments were incorporated into this ICR to the extent possible. The end of each appendix to the ICR contains a table summarizing EPA's previous and revised burden estimates for the relevant rule.

Since the regulations covered by this ICR are not new, the typical consultations, workshops, and meetings held for proposed rules were not held immediately prior to the development of this document.

3(d) Effects of Less Frequent Collection

EPA has considered a wide range of alternatives for frequency of data collection. Where possible, EPA has chosen to require the least frequent collection that remains consistent with overall public health protection objectives. If data are collected less frequently, the primacy agency may not identify in a timely fashion significant contaminant concentrations which might threaten the health and safety of drinking water consumers.

For some microbial contaminant regulations, the primacy agency has discretion in adjusting the monitoring schedules. Monitoring schedules vary based on the number of people served by a system, contaminants likely to be found, and source of raw water supply. The monitoring frequency design also considers that the number of people served affects exposure to contaminants, as well as the resources available to undertake monitoring activity. Monitoring frequencies have been carefully devised based on the following factors:

- Data quality needed for a representative sample.
- Precision and accuracy needed from the representative sample.
- Number of people served by the system.
- Source of the supply (e.g., surface water or ground water).
- Contaminants likely to be found.
- Historical variability in contaminant occurrence.

3(e) General Guidelines

This ICR was prepared in accordance with the October 2009 ICR Handbook prepared by EPA's Office of Environmental Information, Office of Information Collection, Collection Strategies Division. The ICR Handbook provides the most current instructions for ICR preparation to ensure compliance with the 1995 PRA amendments and OMB's implementing guidelines.

3(f) Confidentiality

No confidential information will be collected as a result of this ICR.

3(g) Sensitive Questions

No information of a sensitive nature will be collected as a result of this ICR.

4 RESPONDENTS AND INFORMATION REQUESTED

4(a) Respondents/NAICS Codes

Data associated with this ICR are collected and maintained at the PWS, air carrier, state and federal levels. Respondents include:

- Owners/operators of PWSs, who must report to the primacy agency.
- All commercial air carriers that fly routes between two or more locations within the United States and whose aircraft meet the definition of a PWS. Air carriers report to EPA.⁶
- Primacy agencies, which must report to EPA.

The North American Industry Classification System (NAICS) code for PWSs is 22131. The NAICS code for state agencies that include drinking water programs is 92411 (Administration of Air and Water Resources and Solid Waste Management Programs) or 92312 (Administration of Public Health Programs). Ancillary systems (i.e., those that supplement the function of other establishments like factories, power plants, mobile home parks, etc.) cannot be categorized in a single NAICS code. For ancillary systems, the NAICS code is that of the primary establishment or industry. The NAICS codes for air carriers are 481111 and 481211, the codes for scheduled and unscheduled air transportation industries, respectively.

4(b) Information Requested

Exhibits 2 and 3 summarize the respondent information collection requirements covered by the Microbial Rules ICR. These requirements are also discussed below.

⁶ Note that technically aircraft are PWSs if they serve 25 or more people at least 60 days each year. However, aircraft water systems are not included in the inventory of PWSs contained in SDWIS. Additionally, the ADWR applies only to air carriers that own and operate aircraft water systems. Because many air carriers own or operate more than one aircraft, there is not a one-to-one correspondence between aircraft water systems and respondents. For these reasons, for the ADWR standalone ICR, EPA did not group aircraft water systems with PWS respondents (NAICS code 22131). Instead, EPA determined that air carriers were the appropriate respondents. EPA has decided to carry that designation forward as it incorporates the ADWR ICR into the Microbial Rules ICR.

Exhibit 2: PWS Recordkeeping and Reporting Requirements

| Requirement | Regulatory Citation | Frequency/Retention |
|--|--------------------------------------|---|
| General Requirements (apply to all regulations) | | |
| Reporting | | |
| Except where a different period is specified in an individual drinking water regulation, PWSs are required to submit the following to the state: | | |
| Results of any test measurement or analysis required in 40 CFR part 141. | 40 CFR 141.31(a) | At the end of the required monitoring period |
| Failure to comply with any NPDWR. | 40 CFR 141.31(b) and (c) | As necessary, unless state lab performs analysis and reports results to state |
| Copies of records required to be maintained under section 141.33 and/or copies of documents that the state is entitled to under section 1445 of SDWA or state law. | 40 CFR 141.31(e) | As requested by the state |
| Recordkeeping | | |
| Except where a different period is specified in an individual drinking water regulation, PWSs are required to retain the following information: | | |
| Records of bacteriological or chemical analyses and related information. | 40 CFR 141.33(a) | 5 years for bacteriological data; 10 years for chemical data |
| Records of actions taken by the PWS to correct violations of NPDWRs. | 40 CFR 141.33(b) | 3 years after last action taken related to the violation |
| Copies of any written reports, summaries or communications relating to sanitary surveys. | 40 CFR 141.33(c) | 10 years |
| Records concerning a variance or exemption granted. | 40 CFR 141.33(d) | 5 years following the expiration of the variance or exemption |
| SWTR (all requirements except those regarding disinfection residual monitoring) | | |
| Unfiltered Systems – Reporting | | |
| Report source water quality information to the state for each month the system serves water to the public. | 40 CFR 141.75(a)(1)(i) through (ix) | Monthly |
| Report to the state a summary of PWS compliance with all watershed control program requirements. | 40 CFR 141.75(a)(3) | Annually |
| Report to the state on the on-site inspection conducted during that year. | 40 CFR 141.75(a)(4) | Annually |
| Any waterborne disease outbreak potentially attributable to that water system must be reported to the state. | 40 CFR 141.75(a)(5)(i) | As necessary, as soon as possible but not later than end of the next business day. |
| Any time turbidity exceeds 5 nephelometric turbidity units (NTU) the PWS must inform the state. | 40 CFR 141.75(a)(5)(ii) | As necessary, as soon as practical but no later than 24 hours after learning of the exceedance. |
| Filtered Systems – Reporting | | |
| Report to the state turbidity measurements and associated information for each month the system serves water to the public. | 40 CFR 141.75(b)(1)(i) through (iii) | Monthly |

| Requirement | Regulatory Citation | Frequency/Retention |
|---|----------------------------------|--|
| Any time turbidity exceeds 5 NTU the PWS must inform the state. | 40 CFR 141.75(b)(3)(ii) | As necessary, as soon as practical but no later than 24 hours after learning of the exceedance. |
| Any waterborne disease outbreak potentially attributable to that water system must be reported to the state. | 40 CFR 141.75(b)(3)(i) | As necessary, as soon as possible but not later than end of the next business day. |
| TCR | | |
| Reporting | | |
| Prepare written sample siting plan for state review. | 40 CFR 141.21(a)(1) | As necessary |
| Notify the state if fecal coliforms or <i>E. coli</i> are present. | 40 CFR 141.21(e)(1) | As necessary, by end of the day in which system receives results, or if state office is closed, by end of next business day. |
| Report to the state any exceedance of the maximum contaminant level (MCL) for total coliforms. | 40 CFR 141.21(g)(1) | As necessary, by end of next business day. |
| Report to the state any failure to comply with coliform monitoring requirements. | 40 CFR 141.21(g)(2) | As necessary, within 10 days after discovering the violation. |
| Recordkeeping | | |
| Subject to general requirements as listed above. | | |
| IESWTR | | |
| Reporting | | |
| A PWS using alternative filtration technologies must demonstrate to the state that the system achieves required removal/inactivation. | 40 CFR 141.173(b) | As necessary |
| A PWS must report combined filter effluent (CFE) turbidity levels for each month that the system serves water to the public. | 40 CFR 141.175(a)(1) through (3) | Monthly |
| A PWS must report that it has conducted individual filter turbidity monitoring for each month that the system serves water to the public. | 40 CFR 141.175(b) | Monthly |
| If certain measurement thresholds are exceeded, a PWS must report individual filter turbidity measurements for each month that the system serves water to the public. | 40 CFR 141.175(b)(1) through (4) | As necessary |
| Following certain exceedances, a PWS must report to the state the reason for the exceedance or that it has produced a filter profile. | 40 CFR 141.175(b)(1) and (2) | As necessary |
| Following certain exceedances, a PWS must report to the state that it has conducted a filter self-assessment. | 40 CFR 141.175(b)(3) | As necessary |
| Following certain exceedances, a PWS must submit to the state a comprehensive performance evaluation (CPE). | 40 CFR 141.175(b)(4) | As necessary |
| If certain CFE measurement thresholds are exceeded, systems must inform the state. | 40 CFR 141.175(c)(1) and (2) | As necessary, as soon as possible but no later than the end of the next business day. |

| Requirement | Regulatory Citation | Frequency/Retention |
|--|--|----------------------------|
| A PWS must submit information to the state as part of the required consultation process when making significant changes to disinfection practices. | 40 CFR 141.172(c)(4) | As necessary |
| Recordkeeping | | |
| Systems must maintain the results of individual filter turbidity monitoring. | 40 CFR 141.175(b) | 3 years |
| A PWS must retain disinfection profile data in graphic form, as a spreadsheet, or in some other format acceptable to the state for review as part of sanitary surveys conducted by the state. | 40 CFR 141.172(b)(6) | As necessary |
| FBRR | | |
| Recordkeeping | | |
| Collect and retain on file the following recycle flow information for review and evaluation by the state: 1) Copy of the recycle notification and information previously submitted to the state; 2) List of all recycle flows and the frequency with which they are returned; 3) Average and maximum backwash flow rate through the filters and the average and maximum duration of the filter backwash process in minutes; 4) Typical filter run length and a written summary of how filter run length is determined; 5) The type of treatment provided for the recycle flow; and 6) Data on the physical dimensions of the equalization and/or treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and frequency at which solids are removed, if applicable. | 40 CFR 141.76(d)(1) through (6), 141.33 | 10 years |
| LT1ESWTR | | |
| Reporting | | |
| A PWS using alternative filtration technologies must demonstrate to the state that the system achieves required removal/inactivation. | 40 CFR 141.552(a) | As necessary |
| A PWS must report combined filter effluent turbidity levels for each month that the system serves water to the public. | 40 CFR 141.570(a), 141.551 | Monthly |
| A PWS must report that it has conducted individual filter turbidity monitoring for each month that the system serves water to the public. | 40 CFR 141.570(b)(1), 141.560(d) | Monthly |
| If certain measurement thresholds are exceeded, a PWS must report individual filter turbidity measurements for each month that the system serves water to the public. | 40 CFR 141.570(b)(2), 141.560(d), 141.563(a) | As necessary |
| Following certain exceedances, a PWS must report to the state the reason for the | 40 CFR 141.570(b)(2), 141.563(a) | As necessary |

| Requirement | Regulatory Citation | Frequency/Retention |
|---|--------------------------------------|---|
| exceedance. | | |
| Following certain exceedances, a PWS must report to the state that it has conducted a filter self-assessment. | 40 CFR 141.570(b)(3) | As necessary |
| Following certain exceedances, a PWS must report to the state that a comprehensive performance evaluation (CPE) was triggered. | 40 CFR 141.570(b)(4) | As necessary |
| Following certain exceedances, a PWS must submit to the state a CPE. | 40 CFR 141.570(b)(5) and 141.563(c) | As necessary within 120 days after the CPE was triggered |
| Report a description of the proposed change in disinfection, the system's disinfection profile for <i>Giardia lamblia</i> (and, if necessary, viruses) and disinfection benchmark, and an analysis of how the proposed change will affect the current levels of disinfection. | 40 CFR 141.570(d), 141.542 | As necessary |
| Recordkeeping | | |
| Records of individual filter turbidity monitoring measurements. | 40 CFR 141.571(a), 141.560(e) | At least 3 years |
| Records of disinfection profiles (including raw data and analysis). | 40 CFR 141.571(b), 141.536 | Indefinitely |
| Records of disinfection benchmarking (including raw data and analysis). | 40 CFR 141.571(c) | Indefinitely |
| LT2ESWTR | | |
| Reporting | | |
| Results of <i>E. coli</i> and <i>Cryptosporidium</i> (and turbidity, if applicable) source water monitoring. | 40 CFR 141.706(a) | Monthly while monitoring is required |
| Bin classification (or mean <i>Cryptosporidium</i> level for unfiltered systems). | 40 CFR 141.710(e)(1)-(e)(2), 141.712 | 6 months after source water monitoring is complete |
| Use of uncovered finished water reservoirs and a schedule for covering or disinfecting them. | 40 CFR 141.714(b) | One time, by April 1, 2008. |
| Systems installing technology must demonstrate compliance with technology based criteria. | 40 CFR 141.715 | Varies |
| Systems changing disinfection practices must develop a disinfection profile and benchmark for <i>Giardia</i> and viruses. | 40 CFR 141.708-141.709 | As necessary |
| Sampling schedule. | 40 CFR 141.702 | Once prior to initial monitoring and once during second round of monitoring |
| Recordkeeping | | |
| Records of sample results for <i>Cryptosporidium</i> , <i>E. coli</i> and turbidity. | 40 CFR 141.706 | At least 3 years |
| Systems changing technologies must complete a disinfection profile for <i>Giardia</i> and viruses. | 40 CFR 141.708 | At least 3 years |
| Results of treatment monitoring associated with microbial toolbox and with uncovered finished water reservoirs. | 40 CFR 141.722 | At least 3 years |

| Requirement | Regulatory Citation | Frequency/Retention |
|---|----------------------------|---|
| Notification that systems will not conduct source water monitoring due to having 5-log treatment in place. | 40 CFR 141.722 | At least 3 years |
| GWR | | |
| Reporting | | |
| A PWS conducting compliance monitoring must notify the state any time the system fails to meet any state-specified requirements including, but not limited to, minimum residual disinfectant concentration, membrane operating criteria or membrane integrity, and alternative treatment operating criteria, if operation in accordance with the criteria or requirements is not restored within 4 hours. | 40 CFR 141.405(a) | As soon as possible but no later than the close of the next business day. |
| After completing any corrective action, a PWS must notify the state of completion of the corrective action. | 40 CFR 141.405(a) | Within 30 days. |
| If a PWS with a positive TCR sample does not conduct source water monitoring, the system must provide documentation to the state that it met the state criteria for avoiding monitoring. | 40 CFR 141.405(a) | Within 30 days |
| Recordkeeping | | |
| Records of corrective actions. | 40 CFR 141.405(b) | At least 10 years |
| Reports of public notification. | 40 CFR 141.405(b) | At least 3 years |
| Documentation of records of decisions and records of invalidation of fecal indicator-positive ground water source samples. | 40 CFR 141.405(b) | At least 5 years |
| For consecutive systems, documentation of notification to the wholesale system(s) of total-coliform positive samples that are not invalidated. | 40 CFR 141.405(b) | At least 5 years |
| Records of the state-specified minimum disinfectant residual. | 40 CFR 141.405(b) | At least 10 years |
| Records of the lowest daily residual disinfectant concentration and records of the date and duration of any failure to maintain the state-prescribed minimum residual disinfectant concentration for a period of more than 4 hours. | 40 CFR 141.405(b) | At least 5 years |
| Records of state-specified compliance requirements of membrane filtration and of parameters specified by the state for state-approved alternative treatment and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than 4 hours. | 40 CFR 141.405(b) | At least 5 years |

| Requirement | Regulatory Citation | Frequency/Retention |
|--|----------------------|---|
| ADWR⁷ | | |
| Reporting | | |
| Development of a sampling plan. | 40 CFR 141.806(a)(1) | One time, by April 19, 2011 (or for new aircraft, during the first quarter of operation). |
| The coliform sampling frequency listed in the sampling plan. | 40 CFR 141.806(a)(1) | One time, by April 19, 2011 (or for new aircraft, during the first quarter of operation). |
| Development of an operations and maintenance plan. | 40 CFR 141.806(a)(1) | One time, by April 19, 2011 (or for new aircraft, during the first quarter of operation). |
| Frequency for routine disinfection and flushing, cited in the operations and maintenance plan. | 40 CFR 141.806(a)(1) | One time, by April 19, 2011 (or for new aircraft, during the first quarter of operation). |
| Inventory information for each aircraft. | 40 CFR 141.806(b)(1) | One time, by April 19, 2011 |
| Changes in aircraft inventory. | 40 CFR 141.806(b)(2) | 10 days after the calendar month in which the changes occurred. |
| Coliform sampling results. | 40 CFR 141.806(b)(3) | According to the frequency established in the sampling plan, within 10 days after the sampling period ends. |
| Routine disinfection and flushing events. | 40 CFR 141.806(b)(3) | According to the frequency established in the operations and maintenance plan, within 10 days of the end of the disinfection and flushing period. |
| All events requiring notification to passengers or crew, or non-routine disinfection and flushing, or non-routine sampling. | 40 CFR 141.806(b)(4) | Within 10 days of the event. |
| Failure to comply with the monitoring or disinfection and flushing requirements. | 40 CFR 141.806(b)(5) | Within 10 calendar days of discovery of the failure. |
| Changes in disinfection and flushing and coliform sampling frequencies. | 40 CFR 141.806(b)(6) | No later than 10 days following the calendar month in which the change occurred. |
| Evidence of a self-inspection. | 40 CFR 141.806(c) | Within 90 days of completion of the inspection. |
| Whether a deficiency detected during a self-inspection or compliance audit has been corrected, and a schedule if it has not. | 40 CFR 141.806(c) | Within 90 days of the detection of the deficiency. |
| Recordkeeping | | |
| Records of bacteriological analyses. | 40 CFR 141.807(a) | At least 5 years |
| Records of any disinfection and flushing. | 40 CFR 141.807(b) | At least 5 years |
| Records of self-inspections. | 40 CFR 141.807(c) | At least 10 years |
| Sampling plans, such plans must be available for review by the Administrator upon request, including during compliance audits. | 40 CFR 141.807(d) | None specified; must be maintained and available for review by EPA. |

⁷ Respondents for ADWR are determined differently than respondents for other rules in the ICR. See previous footnote.

| Requirement | Regulatory Citation | Frequency/Retention |
|---|----------------------------|--|
| Aircraft water system operations and maintenance plans. | 40 CFR 141.807(e) | None specified, must be maintained in accordance with Federal Aviation Administration (FAA) requirements and made available for review by EPA. |
| Copies of public notices issued to passengers and crew. | 40 CFR 141.807(f) | At least 3 years |

Exhibit 3
Primacy Agency Recordkeeping
and Reporting Requirements

| Requirement | Regulatory Citation | Minimum Frequency/ Retention Period |
|---|-----------------------------|---|
| General Requirements (apply to all regulations) | | |
| Reporting | | |
| Submit reports to the Administrator containing new violations by PWS and new enforcement actions by states that occurred during the previous quarter. | 40 CFR 142.15(a)(1) and (2) | Quarterly |
| Recordkeeping | | |
| Maintain records of tests, measurements, analyses, decisions, and determinations performed on each PWS to determine compliance with applicable provisions of state primary drinking water regulations. | 40 CFR 142.14(a) | Varies (not less than one year) |
| Retain files, which shall include for each PWS in the state reports of sanitary surveys, records of any state approvals, and records of any enforcement actions. | 40 CFR 142.14(d)(2) and (3) | 12 years |
| SWTR (all requirements except those regarding disinfection residual monitoring) | | |
| Reporting | | |
| A list identifying the name, PWS identification number and date of the determination for each PWS that the state has determined is not required to provide filtration treatment. | 40 CFR 142.15(c)(1)(i)(A) | As necessary |
| A list identifying the name and PWS identification number of each PWS that the state has determined has no means of having a sample transported and analyzed for heterotrophic plate count (HPC) by a certified laboratory under the requisite time and temperature conditions and is providing adequate disinfection in the distribution system. | 40 CFR 142.15(c)(1)(i)(B) | As necessary |
| Notification of any determination that a PWS is not required to provide filtration treatment. | 40 CFR 142.15(c)(1)(ii) | As necessary within 60 days of the end of the calendar quarter. |
| Recordkeeping | | |
| Records of microbiological analyses. | 40 CFR 142.14(a)(1) | 1 year |
| Records of microbiological analyses of repeat or special samples. | 40 CFR 142.14(a)(2) | 1 year |
| Records of turbidity measurements. | 40 CFR 142.14(a)(3) | 1 year |
| Records of decisions made on a system-by-system and case-by-case basis under provisions of part 141, subpart H, subpart P, or subpart T must be made in writing and kept at the state. | 40 CFR 142.14(a)(4)(ii) | Varies |

| Requirement | Regulatory Citation | Minimum Frequency/ Retention Period |
|--|---|---|
| Records of any decision to allow a PWS to substitute a turbidity limit, sample at alternate locations, use continuous monitoring (for unfiltered systems), or reduce sampling or reporting. | 40 CFR 142.14(a)(4)(ii)(A)(1) through (5),(7),(8) | 40 years or until 1 year after the decision is reversed or revised. |
| Records of any decision that a violation of the total coliform MCL was not caused by a deficiency in treatment of the source water. | 40 CFR 142.14(a)(4)(ii)(B)(3) | One year after the decision is made. |
| Records of any decision that total coliform monitoring otherwise required because the turbidity of the source water exceeds 1 NTU is not feasible, except that if such decision allows a system to avoid monitoring without receiving state approval in each instance. | 40 CFR 142.14(a)(4)(ii)(B)(4) | One year after the decision is made. |
| Records of any decision that a public water system's watershed control program meets the requirements of 141.71(b)(2). | 40 CFR 142.14(a)(4)(ii)(C)(3) | Until the next decision is available and filed. |
| Records of any decision that an individual is a qualified operator for a PWS using a surface water source or a ground water source under the direct influence of surface water. | 40 CFR 142.14(a)(4)(ii)(C)(4) | Until the qualification is withdrawn. |
| Records of any decision that a party other than the state is approved by the state to conduct on-site inspections. | 40 CFR 142.14(a)(4)(ii)(C)(5) | Until the decision is withdrawn. |
| Records of any decision that an unfiltered PWS has been identified as the source of a waterborne disease outbreak, and, if applicable, that it has been modified sufficiently to prevent another such occurrence. A copy of the decision must be provided to the system. | 40 CFR 142.14(a)(4)(ii)(C)(6) | Until filtration treatment is installed. |
| Records of any decision that certain interim disinfection requirements are necessary for an unfiltered PWS for which the state has determined that filtration is necessary, and a list of those requirements. A copy of the requirements must be provided to the system. | 40 CFR 142.14(a)(4)(ii)(C)(7) | Until filtration treatment is installed. |
| Records of any decision that automatic shut-off of delivery of water to the distribution system of an unfiltered PWS would cause an unreasonable risk to health or interfere with fire protection. | 40 CFR 142.14(a)(4)(ii)(C)(8) | Until rescinded. |

| Requirement | Regulatory Citation | Minimum Frequency/ Retention Period |
|---|--|--|
| Records of any decision that a PWS may use alternative filtration technology because they consistently achieve 99.9 percent removal and/or inactivation of <i>Giardia lamblia</i> cysts and 99.99 percent removal and/or inactivation of viruses. A copy of the decision must be provided to the PWS. | 40 CFR 142.14(a)(4)(ii)(C)(11) | Until the decision is reversed or revised. |
| Records of any decision that a system using a ground water source is under the direct influence of surface water. | 40 CFR 142.14(a)(4)(ii)(C)(14) | 40 years |
| Records of any determination that a PWS supplied by a surface water source or a ground water source under the direct influence of surface water is not required to provide filtration treatment. A copy of the determination must be provided to the system. | 40 CFR 142.14(a)(4)(ii)(C)(14)(iii) | 40 years or until withdrawn, whichever is earlier. |
| Records of analysis for other than microbiological contaminants (including total coliform, fecal coliform, and heterotrophic plate count), residual disinfectant concentration, other parameters necessary to determine disinfection effectiveness. | 40 CFR 142.14(a)(6) | 12 years |
| Special Primacy Requirements | | |
| An application for approval of a state program revision that adopts 40 CFR part 141, subpart H Filtration and Disinfection. | 40 CFR 142.16(b) | One time |
| TCR | | |
| Reporting | | |
| Reports to the Administrator containing a list of PWSs that the state is allowing to monitor less frequently than once per month for CWSs or less frequently than once per quarter for Noncommunity Water Systems (NCWSs). | 40 CFR 142.15(c)(2) | One time; update as needed. |
| Recordkeeping | | |
| Records of microbiological analyses. | 40 CFR 142.14(a)(1) | 1 year |
| Records of microbiological analyses of repeat or special samples. | 40 CFR 142.14(a)(2) | 1 year |
| Records of any decision to waive the 24-hour time limit for collecting repeat samples after a total coliform-positive routine sample. | 40 CFR 142.14(a)(5)(i)(A) | 5 years |
| Records of any decision to allow a system to waive the requirement for five routine samples the month following a total coliform-positive sample. | 40 CFR 142.14(a)(5)(i)(B) | 5 years |
| Records of any decision to invalidate a total coliform-positive sample. | 40 CFR 142.14(a)(5)(i)(C) | 5 years |

| Requirement | Regulatory Citation | Minimum Frequency/ Retention Period |
|---|----------------------------|---|
| Records of any decision to reduce the total coliform monitoring frequency for certain CWSs to less than once per month. A copy of the reduced frequency decision must be provided to the system. | 40 CFR 142.14(a)(5)(ii)(A) | Retain in such a manner that a system's current status may be determined. |
| Records of any decision to reduce the total coliform monitoring frequency for certain NCWSs to less than once per quarter. A copy of the reduced frequency decision must be provided to the system. | 40 CFR 142.14(a)(5)(ii)(B) | Retain in such a manner that a system's current status may be determined. |
| Records of any decision to reduce the total coliform monitoring frequency for certain NCWSs during any month the system serves 1,000 persons or fewer. A copy of the reduced frequency must be provided to the system. | 40 CFR 142.14(a)(5)(ii)(C) | Retain in such a manner that a system's current status may be determined. |
| Records of any decision to waive the 24-hour limit for taking a total coliform sample for PWSs that do not practice filtration in accordance with part 141, subpart H, and that measure a source water turbidity level exceeding 1 NTU near the first service connection. | 40 CFR 142.14(a)(5)(ii)(D) | Retain in such a manner that a system's current status may be determined. |
| Records of any decision that certain NCWSs may reduce the frequency of their sanitary survey to less than once every five years, along with a record of the reduced frequency. A copy of the reduced frequency decision must be provided to the system. | 40 CFR 142.14(a)(5)(ii)(E) | Retain in such a manner that a system's current status may be determined. |
| A list of agents other than the state, if any, approved by the state to conduct sanitary surveys. | 40 CFR 142.14(a)(5)(ii)(F) | Retain in such a manner that a system's current status may be determined. |
| Records of any decision to allow a PWS to forgo fecal coliform or <i>E. coli</i> testing on a total coliform-positive sample if that system assumes that the total coliform-positive sample is fecal coliform-positive or <i>E. coli</i> -positive. | 40 CFR 142.14(a)(5)(ii)(G) | Retain in such a manner that a system's current status may be determined. |
| IESWTR | | |
| Reporting | | |
| A list of subpart H systems that have had a sanitary survey completed during the previous year and an annual evaluation of the state's program for conducting sanitary surveys. | 40 CFR 142.15(c)(5) | Annually |
| Recordkeeping | | |
| Records of turbidity measurements. | 40 CFR 142.14(a)(3) | 1 year |
| Records of decisions made on a system-by-system and case-by-case basis under provisions of part 141, subpart H, subpart P, or subpart T. | 40 CFR 142.14(a)(4)(ii) | As necessary |

| Requirement | Regulatory Citation | Minimum Frequency/ Retention Period |
|--|-------------------------------|---|
| Records of systems consulting with the state concerning a significant modification to their disinfection practice (including the status of the consultation). | 40 CFR 142.14(a)(7)(i) | As necessary |
| Records of decisions that a system using alternative filtration technologies can consistently achieve a 2-log (99 percent) removal of <i>Cryptosporidium</i> oocysts, as well as the required levels of removal and/or inactivation of <i>Giardia</i> and viruses for systems using alternative filtration technologies. | 40 CFR 142.14(a)(7)(ii) | As necessary, kept until decision is reversed or revised. |
| Records of systems required to conduct a filter self-assessment, CPE or composite correction program (CCP). | 40 CFR 142.14(a)(7)(iii) | As necessary |
| FBRR | | |
| Reporting | | |
| Subject to general requirements as listed above. | | |
| Recordkeeping | | |
| Records of any decisions made to approve alternate recycle locations. | 40 CFR 142.14(a)(4)(ii)(A)(9) | 40 years or until 1 year after decision is reversed or revised. |
| LT1ESWTR | | |
| Reporting | | |
| Subject to general requirements as listed above. | | |
| Recordkeeping | | |
| Records of turbidity measurements. | 40 CFR 142.14(a)(3) | Not less than one year. |
| Records of decisions made on a system-by-system and case-by-case basis under provisions of part 141, subpart H, subpart P, or subpart T. | 40 CFR 142.14(a)(4)(ii) | As necessary |
| Records of systems consulting with the state concerning a significant modification to their disinfection practice (including the status of the consultation). | 40 CFR 142.14(a)(7)(i) | As necessary |
| Records of decisions that a system using alternative filtration technologies can consistently achieve a 2-log (99 percent) removal of <i>Cryptosporidium</i> oocysts, as well as the required levels of removal and/or inactivation of <i>Giardia</i> and viruses for systems using alternative filtration technologies. | 40 CFR 142.14(a)(7)(ii) | As necessary |
| Records of those systems required to conduct a filter self-assessment, CPE or CCP. | 40 CFR 142.14(a)(7)(iii) | As necessary |
| LT2ESWTR | | |
| Reporting | | |
| The bin classification after the initial and after the second round of source water monitoring for each filtered system. | 40 CFR 142.15(c)(6) | After each round of monitoring. |
| Any change in treatment requirements for these systems due to watershed assessments during sanitary surveys. | 40 CFR 142.15(c)(6) | After each round of monitoring. |

| Requirement | Regulatory Citation | Minimum Frequency/ Retention Period |
|---|----------------------|--|
| The determination of whether the mean <i>Cryptosporidium</i> level is greater than 0.01 oocysts/L both after the initial and after the second round of source water monitoring for each unfiltered system. | 40 CFR 142.15(c)(6) | As necessary |
| Recordkeeping | | |
| Results of <i>Cryptosporidium</i> and <i>E. coli</i> source water monitoring. | 40 CFR 142.14(a)(9) | As necessary |
| Bin classification after the first and second round of monitoring. | 40 CFR 142.14(a)(9) | As necessary |
| Any change in treatment requirements for filtered systems due to watershed assessment during sanitary surveys. | 40 CFR 142.14(a)(9) | As necessary |
| The determination of whether the mean <i>Cryptosporidium</i> level is greater than 0.01 oocysts/L after the initial and after the second round of source water monitoring for each unfiltered system. | 40 CFR 142.14(a)(9) | As necessary |
| The treatment processes or control measures that systems use to meet their <i>Cryptosporidium</i> treatment requirements. | 40 CFR 142.14(a)(9) | As necessary |
| A list of systems required to cover or treat the effluent of an uncovered finished water storage facility. | 40 CFR 142.14(a)(9) | As necessary |
| GWR | | |
| Reporting | | |
| The month and year in which the most recent sanitary survey was completed. or, for a state that used a phased review process, the date the last element of the applicable eight elements was evaluated for each ground water system. | 40 CFR 142.15(c)(7) | As necessary |
| The date the system completed the corrective action. | 40 CFR 142.15(c)(7) | As necessary |
| All ground water systems providing at least 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log virus inactivation and removal) before or at the first customer for any ground water source(s). | 40 CFR 142.15(c)(7) | As necessary |
| Recordkeeping | | |
| Records of written notices of significant deficiencies. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of corrective action plans, schedule approvals, and state-specified interim measures. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of confirmations that a significant deficiency has been corrected or the fecal contamination in the ground water source has been addressed. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of state determinations and records of ground water systems' documentation for not conducting | 40 CFR 142.14(d)(17) | At least 12 years |

| Requirement | Regulatory Citation | Minimum Frequency/ Retention Period |
|--|----------------------|--|
| triggered source water monitoring. | | |
| Records of invalidations of fecal indicator-positive ground water source samples. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of state approvals of source water monitoring plans. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of notices of the minimum residual disinfections concentration (when using chemical disinfection) needed to achieve at least 4-log virus inactivation before or at the first customer. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of notices of the state-specified monitoring and compliance requirements (when using membrane filtration or alternative treatment) needed to achieve at least 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log inactivation and removal) before or at the first customer. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of written notices from the ground water system that it provides at least 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source. | 40 CFR 142.14(d)(17) | At least 12 years |
| Records of written determinations that the ground water system may discontinue 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log inactivation and removal). | 40 CFR 142.14(d)(17) | At least 12 years |
| ADWR | | |
| States do not have information collection requirements for the ADWR. | | |

4(b)(i) Data Items

1) *Surface Water Treatment Rule*⁸

Provisions of the SWTR require the following data to be collected by PWSs:

- Source water coliform data for unfiltered systems.
- Combined filter effluent turbidity data for filtered systems.

⁸ Includes all rule components except disinfectant residual monitoring and associated activities, which are included in the DDBP/Chem/Rads Rules ICR (see footnote 2 for more information). All remaining SWTR requirements are included in this Microbial Rules ICR.

- Source water turbidity for unfiltered systems.
- Residual disinfectant concentrations for filtered and unfiltered systems. (This requirement is addressed under the DDBP/Chem/Rads ICR).
- Annual summaries of watershed control programs for unfiltered systems.
- Annual reports summarizing the results of on-site inspections for unfiltered systems.
- A report to the primacy agency within 48 hours following attribution of any waterborne disease outbreak in filtered and unfiltered systems.

In addition, primacy agencies must submit special reports as specified in §142.15(c)(1). These reports include:

- List of PWSs not required to provide filtration.
- List of PWSs not required to analyze for HPC.
- Notification of determination that a PWS is not required to provide filtration.

2) *Total Coliform Rule*

The TCR requires PWSs to collect and report presence or absence of coliform bacteria (as total coliform) in the distribution system and data on the presence or absence of *E. coli* or fecal coliform. Primacy agencies must maintain results of sanitary surveys conducted under TCR.

In addition, primacy agencies must submit special reports as specified in §142.15(c) and must maintain records as specified in §142.14(a)(5). These reports include lists of PWSs that have received permission for reduced monitoring or monitoring waivers and the effective dates of these waivers.

3) *Interim Enhanced Surface Water Treatment Rule*

EPA must balance the health risks from microbial organisms (such as *Giardia lamblia* and *Cryptosporidium*) against risks from compounds formed during water disinfection. The IESWTR and Stage 1 Disinfectants and Disinfection Byproducts Rule (DBPR), which were promulgated concurrently, address complex and interrelated drinking water issues. The IESWTR requires individual filter monitoring and modifies the allowable turbidity levels specified in the SWTR.

Under the IESWTR, PWSs must report the following:

- The total number of CFE turbidity measurements that exceeded their 95th percentile turbidity limit and the number of measurements that exceed their maximum turbidity limit.
- That they have conducted individual filter turbidity monitoring, including the dates, filter number, and turbidities of any measurements that exceed 1.0 NTU.
- Reports of exceptions to turbidity performance for individual filters.
- If a self-assessment is required, the system must report the date that it was triggered and the date that it was completed.

- If a comprehensive performance evaluation (CPE) is required, the system must report that the CPE is required and the date that it was triggered.
- If a CPE is required, the system must submit a copy of the completed CPE report.
- When those systems that are required to develop a disinfection profile plan a significant change in disinfection practice, they must submit the profile, along with an analysis of how the proposed change will affect the current disinfection benchmark to the state for review.

The IESWTR requires PWSs to keep the following records:

- Individual filter turbidity measurements.

The IESWTR (in §142.14) requires primacy agencies to maintain the following items:

- Records of turbidity measurements for individual filters.
- Records of disinfectant residual measurements and other parameters necessary to document disinfection effectiveness.
- A list of systems consulting with the state to modify their disinfection practices.
- A record of state decisions regarding the use of alternative filtration technologies that have demonstrated 99 percent removal of *Cryptosporidium* oocysts by specific water systems.
- Records of any other system-by-system and case-by-case decisions made by the state under provisions of part 141, subpart H or subpart P or subpart T.
- Records of those systems required to perform filter self-assessments, CPEs or composite correction programs (CCPs).

Additionally, the primacy agency must report the following (per §142.15):

- Subpart H systems⁹ that have had a sanitary survey in the last year.
- Evaluation of the state's program for conducting sanitary surveys for all subpart H systems.

4) *Filter Backwash Recycling Rule*

Under the FBRR, PWSs should already have reported the following, but they must keep records of the reported information on file:

- Recycle notification, which includes plant schematic, recycle flow and plant flow.
- List of all recycle flows and the frequency with which they are returned.
- Average and maximum backwash flow rates through the filters.
- Average and maximum duration of the filter backwash process.

⁹ Subpart H systems include all PWSs using surface water or ground water under the direct influence of surface water (GWUDI) as a source (40 CFR §141.2).

- Typical filter run length and a written summary of how filter run length is determined.
- Type of treatment provided for the recycle flow.
- Data on the physical dimensions of the equalization and/or treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used, average dose of treatment chemicals, frequency of treatment chemical use, and frequency at which solids are removed, if applicable.
- Primacy agencies must maintain records of decisions regarding alternate recycle locations at PWSs.

5) *Long Term 1 Enhanced Surface Water Treatment Rule*

Under LT1ESWTR, PWSs must report the following:

- The total number of CFE turbidity measurements that exceeded their 95th percentile turbidity limit and the number of measurements that exceed their maximum turbidity limit.
- That they have conducted individual filter turbidity monitoring, including the dates, filter number, and turbidities of any measurements that exceeded 1.0 NTU.
- If a system exceeds 1.0 NTU in two consecutive measurements the system must include the filter number, date, time, and reason for the exceedance at the end of the month.
- Reports of exceptions to turbidity performance for individual filters.
- If a self-assessment is required, the system must report the date that it was triggered and the date that it was completed.
- If a CPE is required, the system must report that the CPE is required and the date that it was triggered.
- If a CPE is required, the system must submit a copy of the completed CPE report.
- Results of optional monitoring that show total trihalomethane (TTHM) levels <0.064 mg/L and haloacetic acid (HAA5) levels <0.048 mg/L (only if the system wishes to forgo profiling) or report that disinfection profiling has begun.
- A description of the proposed change in disinfection, the system's disinfection profile for *Giardia lamblia* (and, if necessary, viruses) and disinfection benchmark, and an analysis of how the proposed change will affect the current levels of disinfection.

The PWS recordkeeping requirements under the rule include:

- Records of individual filter turbidity measurements.
- Records of disinfection profiles.
- Records of benchmarking.

Currently, states are subject to the general reporting requirements under 40 CFR 142.15. There are no additional reporting requirements under this rule.

The additional state recordkeeping requirements under LT1ESWTR include:

- Records of turbidity measurements for individual filters.
- Records of disinfectant residual measurements and other parameters necessary to document disinfection effectiveness.
- A list of systems consulting with the state to modify their disinfection practices.
- A record of state decisions regarding the use of alternative filtration technologies that have demonstrated 99 percent removal of *Cryptosporidium* oocysts by specific water systems.
- Records of any other system-by-system and case-by-case decisions made by the state under provisions of part 141, subpart H or subpart P or subpart T.
- Records of those systems required to perform filter self-assessments, CPE or CCP.

6) *Long Term 2 Enhanced Surface Water Treatment Rule*

PWSs must submit the following information:

- Sampling schedule, including sampling location(s) and planned dates for source water sampling (for initial and second round monitoring).

For systems that filter and serve 10,000 or more people, monitor as follows (note that the first round of monitoring occurred during previous ICR periods; a second round of monitoring will begin during the last year of this ICR period):

- Monthly *E. coli* and *Cryptosporidium* monitoring results, to be taken over a period of 2 years, plus two matrix spike samples for *Cryptosporidium*.
- Monthly turbidity monitoring results (sampled concurrently with *Cryptosporidium* and *E. coli*).

For small systems (serving fewer than 10,000 people) that filter (the first round of monitoring occurred during previous ICR periods; a second round of monitoring will begin in the last year of this ICR period):

- Biweekly *E. coli* monitoring results, to be taken over a period of 1 year.
- If system exceeds the *Cryptosporidium* monitoring trigger based on *E. coli* monitoring results, then 24 *Cryptosporidium* samples, plus two matrix spike samples for *Cryptosporidium*.

For unfiltered systems, 24 *Cryptosporidium* samples over a period of 2 years for large systems and 1 or 2 years for small systems, plus two matrix spike samples for *Cryptosporidium* (again, a small amount of burden will be incurred during the last year of this ICR period).

For filtered systems, sampling plans and bin classifications for the second round of monitoring must be reported to the state. All unfiltered systems must report their mean *Cryptosporidium* levels to the state. (A small amount of burden will be incurred during the last year of this ICR period.)

PWSs of all sizes that propose to make a significant change to their disinfection practice will complete disinfection profiles and benchmarks for *Giardia lamblia* and viruses and report these, along with a description of the proposed change in disinfection practice and an analysis of how the proposed change will affect the current level of disinfection (some of this burden will occur outside the ICR period).

PWSs of all sizes that install new technology as a result of their bin classifications or choose to disinfect the effluent from an uncovered finished water reservoir will be required to demonstrate compliance with certain criteria for each technology.

PWSs must keep all monitoring data collected under the LT2ESWTR on file for 3 years. These data must be available for review during sanitary surveys.

States will be required to maintain the following data:

- Results of initial and reassessment source water monitoring for small systems.
- Initial bin classifications for each filtered system and mean *Cryptosporidium* level for each unfiltered system.
- Records of toolbox treatment technologies that systems choose to meet their treatment technique requirements, plus any changes in toolbox treatment technologies, including all documentation necessary to demonstrate compliance with required design and implementation criteria for receiving log credit for toolbox options.
- Any changes to initial bin classifications based on watershed assessment during sanitary surveys.
- Records of technologies employed by unfiltered systems to meet virus, *Giardia*, and *Cryptosporidium* inactivation requirements.
- List of systems required to cover or treat effluent of an uncovered finished water reservoir.

States must report the following to EPA:

- Initial bin classification for each filtered system and any changes in bin classifications. Mean *Cryptosporidium* level for each unfiltered system. (This activity was completed during the previous ICR period; however, similar activities for the second round of monitoring will begin during the last year of this ICR period.)
- Any finding that a system is not meeting its required *Cryptosporidium* treatment level.

7) *Ground Water Rule*

PWSs must report or provide the following additional information (40 CFR 141.405(a)):

- Failure to meet any state-specified requirements including minimum residual disinfectant concentration, membrane operating criteria or membrane integrity,

and alternative treatment operating criteria, if operation in accordance with the criteria or requirements is not restored within 4 hours.

- Completion of corrective action (within 30 days of completion).
- Documentation to the state within 30 days of a total coliform-positive sample that a PWS met the state criteria that exempt the system from source water monitoring requirements.

PWSs must keep records of the following (40 CFR 141.405(b)):

- Documentation of corrective actions.
- Documentation of notice to the public.
- Documentation of records of decisions and records of invalidation of fecal indicator-positive ground water source samples.
- For consecutive systems, documentation of notification to the wholesale system(s) of total-coliform positive samples that are not invalidated.
- For systems, including wholesale systems, that are required to perform compliance monitoring, the additional requirements include the following:
 - Records of the state-specified minimum disinfectant residual.
 - Records of the lowest daily residual disinfectant concentration and records of the date and duration of any failure to maintain the state-prescribed minimum residual disinfectant concentration for a period of more than 4 hours.
 - Records of state-specified compliance requirements for membrane filtration and of parameters specified by the state for state-approved alternative treatment, and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than 4 hours.

For records kept by the states, the additional requirements include the following (40 CFR 142.14(d)(17)):

- Records of written notices of significant deficiencies.
- Records of corrective action plans, schedule approvals and state-specified interim measures.
- Records of confirmations that a significant deficiency has been corrected or the fecal contamination in the ground water source has been addressed.
- Records of state determinations and records of ground water systems' documentation for not conducting triggered source water monitoring.
- Records of invalidations of fecal indicator-positive ground water source samples.
- Records of state approvals of source water monitoring plans.
- Records of notices of the minimum residual disinfectant concentration (when using chemical disinfection) needed to achieve at least 4-log virus inactivation before or at the first customer.
- Records of notices of the state-specified monitoring and compliance requirements (when using membrane filtration or alternative treatment) needed to achieve at least 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log inactivation and removal) before or at the first customer.

- Records of written notices from the ground water system that it provides at least 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source.
- Records of written determinations that the ground water system may discontinue 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log inactivation and removal).

Additionally, the state must report the following (40 CFR 142.15):

- The month and year in which the most recent sanitary survey was completed or, for a state that used a phased review process, the date the last element of the applicable eight elements was evaluated for each ground water system.
- The date the system completed the corrective action.
- All ground water systems providing at least 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log virus inactivation and removal) before or at the first customer for any ground water source(s).

8) *Aircraft Drinking Water Rule*

Air carriers are required to maintain records for the following activities and submit the following items to EPA:

- Information on total coliform sampling frequency and disinfection and flushing frequency.
- Water system inventory and any subsequent changes.
- Monitoring results for total coliform bacteria samples taken as part of routine, repeat, and post-disinfection follow-up sampling.
- Analytical results for *E. coli*, required when total coliform results are positive.
- Evidence of self-inspection of water system components completed every 5 years, including an indication that deficiencies have been corrected and if not corrected, a description of the deficiency, an explanation of why it has not been corrected, and a schedule for correction.
- Notification of all events requiring public notice and corrective action.
- Failure to comply with the monitoring and disinfection and flushing procedures.

Air carriers are also required to maintain the following documents¹⁰:

- An O&M plan for the aircraft PWS was required to be developed and included in the aircraft O&M program required by FAA, and must be made available for EPA review upon request.

¹⁰ Burden to develop O&M plans and coliform sampling plans for existing aircraft was accounted for under the standalone ADWR ICR and is not included again under the Microbial Rules ICR as it is a one-time activity. Additionally, the number of aircraft acquired post-ADWR promulgation is assumed to be a very small percentage of the existing ADWR inventory; therefore the burden to develop new O&M and coliform sampling plans for aircraft acquired post-ADWR promulgation is assumed to be negligible.

- Air carriers were also required to develop a coliform sampling plan as part of their O&M plan, which must be available for EPA review upon request.
- O&M plans and coliform sampling plans must also be developed for any new aircraft the air carrier acquires through purchases, ownership transfers, or any other means. These plans must be made available for EPA review upon request.

4(b)(ii) Respondent Activities

PWSs and primacy agencies must complete the activities described in the sections below.

Public Water Systems

In general, each PWS is involved in the following collection activities:

- Gathering information.
- Processing, compiling and reviewing the information collected.
- Submitting reports and other documents.
- Recording and maintaining the information.

For this ICR, these activities are necessary to complete monitoring, reporting and recordkeeping requirements associated with microbial contaminant-related regulations.

1) Surface Water Treatment Rule

Requirements for reporting under the SWTR are separated into those for systems that use filtration treatment and those for systems that do not use filtration treatment. The reporting requirements for these types of PWSs are summarized in the paragraphs below.

Unfiltered Systems

- Monitor and report information on the results of source water monitoring for total or fecal coliform and turbidity.
- Submit this information each month that the system is in operation.
- Summarize fecal or total coliform monitoring by including the number of total or fecal coliform samples collected; the values obtained for each measurement; the number of results less than 20/100 milliliters (mL) for fecal coliform or less than 100/100 mL for total coliform during the month; the cumulative number of fecal or total coliform results obtained since the start of the six consecutive month compliance period; and the percent of samples less than the respective performance standard for the six-month compliance period.
- Summarize turbidity information to include the maximum turbidity value obtained each month; the value and date of each measurement that exceeded five NTUs; and the date the occurrence was reported to the state.
- Monitor and report disinfectant residual levels (this requirement is addressed under the DBP/Chem/Rads ICR).
- Submit annual reports on watershed control programs and onsite inspections.

Filtered Systems

- Monitor and report to the state on a monthly basis information regarding CFE turbidity. Turbidity reporting requirements vary according to the filtration technology used.
- Monitor and report disinfectant residual levels (this requirement is addressed under the DBP/Chem/Rads ICR).

2) *Total Coliform Rule*

PWSs must conduct the following activities to comply with the TCR:

- Collect water samples at specified intervals, as defined in the federal or state regulations.
- Collect monitoring data on the presence of total coliform bacteria in the distribution system.
- Collect data on the presence or absence of *E. coli* or fecal coliform, following a positive routine total coliform sample.
- Report laboratory results and violations to the state at frequencies required by federal and state regulations.

3) *Interim Enhanced Surface Water Treatment Rule*

The IESWTR only applies to systems serving at least 10,000 people using surface water or ground water under the direct influence of surface water (GWUDI); these PWSs are required to do the following:

- Conduct continuous monitoring of individual filter turbidity for each filter in the system.
- Report individual filter turbidity monitoring results to the state at frequencies specified in the federal regulations.
- Report exceptions to the state in cases where the monitoring shows exceedances of specific turbidity levels.
- Perform a filter profile and/or filter assessment, or obtain a CPE if warranted.
- Provide a CPE report to the state if necessary.

4) *Filter Backwash Recycling Rule*

The rule requires all PWSs to collect and retain on file recycle flow information for review and evaluation by the state beginning June 8, 2004 (40 CFR 141.76(d)).

5) *Long Term 1 Enhanced Surface Water Treatment Rule*

Under the LT1ESWTR, PWSs are required to do the following:

- Conduct continuous monitoring of individual filter turbidity for each filter in the system.
- Record individual filter turbidimeter readings at the specified intervals.
- Report individual filter turbidity monitoring results to the state at frequencies specified in the federal regulations.
- Report exceptions to the primacy agency in cases where the monitoring shows exceedances of specific turbidity levels.
- Perform a filter profile and filter assessment, or arrange for a CPE if warranted.
- Provide a CPE report to the state, if necessary.
- Develop a disinfection benchmark, if necessary.
- Consult with the state before making significant changes to disinfection practices.

6) *Long Term 2 Enhanced Surface Water Treatment Rule*

Under the LT2ESWTR systems are required to do the following:

- Monitor source water for *E. coli* and *Cryptosporidium* and calculate a treatment bin classification based on monitoring results. This requirement applies to filtered systems only. Systems serving at least 10,000 people are also required to monitor source water turbidity; the burden for turbidity monitoring is assumed to be negligible. Initial monitoring and bin classification were completed during the previous ICR period, but a second round of monitoring will begin in the last year of this ICR period. Filtered systems serving less than 10,000 people may monitor for *E. coli* as a trigger instead. These systems will only sample for *Cryptosporidium* if their *E. coli* results exceed certain levels.
- Monitor source water for *Cryptosporidium* only and calculate treatment requirements based on monitoring results. This requirement applies to unfiltered systems only.
- Install additional treatment if monitoring results trigger a system into a bin classification requiring additional treatment for *Cryptosporidium* and report on compliance with the requirements for the treatment installed.
- Prepare disinfection benchmarking reports for *Giardia* and viruses if disinfection is changed.
- Keep all monitoring data on file for 3 years.

7) *Ground Water Rule*

Under the GWR, systems are required to do the following:

- Undergo a sanitary survey, compiling records and accompanying the state or third party conducting the survey.
- Conduct triggered source water monitoring if the system tests positive for total coliform in the distribution system under TCR, for systems not providing 4-log treatment of viruses. Under triggered monitoring requirements (40 CFR 141.402) a system must collect at least one source water sample and have that sample tested for a fecal indicator (*E. coli*, enterococci, or coliphage) specified by the state. If a system detects the state-specified fecal indicator at its source, then the system must take five additional samples within 24 hours unless the state determines that corrective action must be taken immediately.
- Conduct source water assessment monitoring for fecal indicators if required to do so by the state.
- Comply with treatment technique requirements and any associated reporting requirements if the state identifies a significant deficiency during a sanitary survey or the system has confirmed fecal contamination of its source water.
- Monitor disinfectant residual for compliance, for systems providing disinfection to achieve 4-log inactivation of viruses.
- Maintain records of GWR information listed in section 4(b)(i).

8) *Aircraft Drinking Water Rule*

Air carriers will need to undertake the following activities in order to meet reporting requirements under the ADWR:

- Report the development of a new sampling plan; submit new monitoring and disinfection and flushing frequency information for new purchases or transfers of ownership of aircraft; and maintain sampling plans.
- Report changes in aircraft water system inventory within 10 days after the end of the month in which they occurred.
- Take routine and repeat coliform samples, including preparing for shipping and sending off for analysis.
- Take post-disinfection follow-up coliform samples following corrective action, including preparing for shipping and sending off for analysis.
- Submit routine, repeat, and post-disinfection sampling results to EPA.
- Record routine, repeat, and post-disinfection coliform sampling activities.
- Record disinfection and flushing activities conducted as part of routine activity or corrective action.
- Prepare and provide public notification to passengers and crew as needed, and report to EPA that public notification occurred.
- Conduct a comprehensive self-inspection of aircraft water system components at least every 5 years.
- Submit evidence of self-inspection to EPA, including report of deficiencies corrected and unresolved deficiencies and their correction schedule.

Primacy Agencies

In general, primacy agencies conduct the following activities with regard to reporting and recordkeeping:

- Maintain an inventory of PWSs.
- Compile results of analyses of drinking water samples.
- Analyze and review PWS data.
- Make determinations concerning PWSs.
- Track PWS compliance.
- Report systems not in compliance with drinking water requirements.
- Maintain state approval of plans and specifications, enforcement activities, and variances and exemptions (V&Es) for each PWS.

By conducting these activities, primacy agencies are able to evaluate PWS performance and to identify PWS needs and problem areas. They also identify enforcement targets and systems requiring remedial action. In addition, states serve as respondents when reporting compliance data to the federal government. Some of these activities are covered in the PWSS Program ICR as general primacy activities. Therefore, only microbial contaminant-specific recordkeeping activities have been included in this Microbial Rules ICR.

1) Surface Water Treatment Rule

The SWTR states that primacy agencies must conduct the following:

- Collect and maintain information submitted by PWSs.
- Record which systems using surface water are required to provide filtration and which are not. These records must be kept indefinitely.
- Submit a special report to the EPA Administrator listing PWSs that are not required to filter.
- Retain the results of microbiological contaminant analyses of source water samples in the same manner as other microbiological contaminant analytical results.

2) *Total Coliform Rule*

Primacy agencies are required by the TCR to conduct the following activities:

- Analyze monitoring results and identify systems not in compliance with either MCL (or performance criteria) or monitoring and reporting frequencies.
- Provide in writing permission for reduced monitoring or monitoring waivers; maintain for five years.
- Submit to the EPA Administrator a special report that lists PWSs that have received permission to reduce monitoring requirements.
- Collect and maintain data regarding the results of sanitary surveys conducted under the TCR.

3) *Interim Enhanced Surface Water Treatment Rule*

Primacy agencies are required to maintain records of state verification activities and each determination made and to report to EPA in accordance with state reporting requirements. In addition, primacy agencies ensure that PWSs are implementing IESWTR properly. To meet these responsibilities, states are involved in the following additional activities:

- Reviewing individual filter turbidity monitoring data.
- Conducting CPEs for PWSs.
- Conducting sanitary surveys.
- Consulting with PWSs on changes in disinfection practice.
- Conducting follow-up inspections.

4) *Filter Backwash Recycling Rule*

For the FBRR, primacy agencies incur a recordkeeping requirement for maintaining data submitted by conventional and direct filtration PWSs that recycle. Primacy agencies must also maintain written approval for all PWSs with alternate recycle locations.

5) *Long Term 1 Enhanced Surface Water Treatment Rule*

Primacy agencies have the responsibility for ensuring the implementation of the LT1ESWTR (40 CFR 142.16). EPA anticipates that states will be involved in the following activities:

- Consulting with PWSs on changes in disinfection practice.
- Conducting CPEs for PWSs (if requested).
- Conducting follow-up inspections.
- Compliance tracking for turbidity

6) *Long Term 2 Enhanced Surface Water Treatment Rule*

Primacy agencies have the responsibility for ensuring the implementation of the LT2ESWTR. This will include the following activities (some of these activities will occur during future ICR periods):

- Maintaining and updating the data management system.
- Reviewing small system sampling schedules and sampling locations.
- Maintaining *E. coli* and *Cryptosporidium* monitoring data from small systems.
- Responding to systems' inquiries.
- Reviewing and approving bin classifications.
- Reviewing disinfection profiles and benchmarks.
- Reviewing and, in some cases, approving processes to meet bin treatment requirements.
- Reporting the information required in section 4(b)(i).
- Keeping records of the information in section 4(b)(i).

7) *Ground Water Rule*

States will need to perform the following tasks:

- Perform sanitary surveys, and reporting and recordkeeping requirements associated with performing sanitary surveys.
- Tracking and filing monitoring results and reviewing any additional reporting.

8) *Aircraft Drinking Water Rule*

EPA is the primacy agency for the ADWR; EPA activities under this rule are described in section 5(a) of this document.

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

5(a) Agency Activities

As part of its oversight responsibility, EPA maintains SDWIS and evaluates SDWIS data to determine system compliance. Agency personnel also reformat, distribute, and store these data for a number of uses, including responding to Congressional and public inquiries. EPA also oversees its regional and state programs, provides technical assistance, and develops policies designed to ensure consistent program implementation. EPA officials serve as respondents when testifying to Congress on the PWSS Program or in the courts for enforcement actions.

EPA also acts as the enforcement authority for the ADWR. Because aircraft fly in interstate commerce, no single state can have primacy over an aircraft PWS, as described in 40 CFR 142.3(b). Therefore, EPA oversees ADWR compliance. The Agency will be responsible for collecting the information generated as air carriers comply with the rule. EPA activities include the following:

- Train EPA staff.
- Provide technical assistance to air carriers.
- Review sampling frequency and disinfection and flushing frequency information.
- Review routine, repeat, and post-disinfection monitoring results.
- Review information on public notification events.
- Review aircraft water system inventory changes.
- Review certifications and reports of air carrier self-inspections.
- Conduct onsite compliance audits, as needed.

Burden and costs for these activities are addressed in the PWSS Program ICR (OMB No. 2040-0090). Section 5(a) of the PWSS Program ICR contains additional detail regarding the activities supported by the collection of SDWIS data described in the first paragraph of this section. The 231.9 regional full time equivalents (FTEs) covered under the PWSS Program ICR include the EPA ADWR burden.

In addition to these activities, the Agency assumes the activities performed by the state for those states, territories and tribes that do not have primacy. Specifically, the Agency will be involved in the following activities related to microbial contaminant regulations:

- Training PWS and consultant staff.
- Analyzing and reviewing PWS data.
- Making compliance determinations concerning PWSs.
- Conducting CPEs and sanitary surveys.
- Meeting with PWSs about changes in recycling practices.
- Compliance tracking.
- Recordkeeping.

Burden and costs for these activities are accounted for under the primacy agency burden (see section 6). EPA Regional offices also conduct general primacy activities for states, territories and tribes that do not have primacy. This burden is addressed in the PWSS ICR and is included in the general primacy burden for primacy agencies.

Exhibit 4 EPA Requirements

| Requirement | Regulatory Citation | Frequency |
|--|--------------------------|--------------------------|
| General Requirements (apply to all regulations) | | |
| For states and other entities for which the Agency maintains primacy, the Agency must maintain the records and perform the reporting activities required of states. (This burden is addressed under primacy agency burden.) | 40 CFR 142.14 and 142.15 | As necessary |
| Review state request for approval of a program revision and notify state of determination regarding request. | 40 CFR 142.12(d)(3) | One time, as necessary |
| SWTR | | |
| Publish a notice of any proposed comprehensive review of state decisions to determine if PWSs must provide filtration. | 40 CFR 142.80(b) | As necessary |
| Notify each state affected by the results of a comprehensive review. | 40 CFR 142.80(c) | As reviews are completed |
| Make the results of comprehensive reviews available to the public. | 40 CFR 142.80(c) | As reviews are completed |
| Notify the state if periodic reviews or other available information indicate that the state has abused its discretion in applying the criteria for avoiding filtration or that the state has failed to prescribe compliance schedules for PWSs that must provide filtration. | 40 CFR 142.81(a) | As necessary |
| Notify the state that a public hearing will be held on the notice provisions. | 40 CFR 142.81(b) | As necessary |
| Publish a notice of the public hearing in the Federal Register and in a newspaper of general circulation in the involved state. | 40 CFR 142.81(c) | As necessary |
| TCR | | |
| Subject to general requirements as listed above. | | |
| IESWTR | | |
| Subject to general requirements as listed above | | |
| FBRR | | |
| Subject to general requirements as listed above. | | |
| LT1ESWTR | | |
| Subject to general requirements as listed above. | | |
| Publish a notice of any proposed comprehensive review of state decisions to determine if PWSs must provide filtration. | 40 CFR 142.80(b) | As necessary |
| Notify each state affected by the results of a comprehensive review. | 40 CFR 142.80(c) | As reviews are completed |
| Make the results of comprehensive reviews available to the public. | 40 CFR 142.80(c) | As reviews are completed |
| Notify the state if periodic reviews or other available information indicate that the state has abused its discretion in applying the criteria for avoiding filtration or that the state has failed to prescribe compliance schedules for PWSs that must provide filtration. | 40 CFR 142.81(a) | As necessary |

| Requirement | Regulatory Citation | Frequency |
|--|--|------------------|
| Notify the state that a public hearing will be held on the notice provisions. | 40 CFR 142.81(b) | As necessary |
| Publish a notice of the public hearing in the Federal Register and in a newspaper of general circulation in the involved state. | 40 CFR 142.81(c) | As necessary |
| LT2ESWTR | | |
| Subject to general requirements as listed above. | | |
| Approving laboratories | 40 CFR 141.705 | As necessary |
| Collecting and managing sampling location descriptions, sampling schedules, and monitoring data submitted by medium and large systems. | 40 CFR 141.702(a), 141.703(f), 141.706(b) | As necessary |
| GWR | | |
| Subject to general requirements as listed above. | | |
| ADWR | | |
| No specific EPA requirements are stated in the ADWR; however, EPA will conduct the oversight activities described previously for the ADWR. | | |

5(b) Collection Methodology and Management

Primacy agencies must report data to EPA on a quarterly basis. These data include any new data and revisions or corrections to existing data. This information is maintained in SDWIS, which contains the following:

- Inventory data for each PWS.
- Violations.
- Enforcement actions and some follow-up activity.
- Variances and exemptions.

Primacy agencies transmit SDWIS data to EPA both manually and electronically. In the District of Columbia, Wyoming, and Indian Lands (except for the Navajo Nation, which has primacy), results of system samples are sent directly to the EPA Region. Virtually all SDWIS data are reported electronically by the primacy agency.

SDWIS data support a number of rule implementation and program management activities, which include the following:

- Using data pulled from SDWIS on a quarterly basis, the Office of Enforcement and Compliance Assurance uses the Enforcement Targeting Tool (ETT) to generate a list of PWSs that are considered “priority systems” for enforcement. These data provide senior management with information on trends in drinking water enforcement.

- Supporting PWSS program file reviews. EPA undertakes a comparison of SDWIS data to primacy agency data—the primary purposes of which are to assess the quality of data and recommend any necessary changes in collection or reporting methodologies.
- Promoting consistent national program implementation. The process of file reviews provides insights into the primacy agency’s interpretation of regulations. Such information supports fair and consistent SDWA implementation and enforcement.

In addition to SDWIS, EPA has developed and maintains the web-based Aircraft Reporting and Compliance System (ARCS) for air carriers complying with the ADWR. Air carriers must report all compliance data to ARCS unless they receive permission to use another reporting method. The burden for developing this system was addressed in the standalone ICR for the ADWR.

All costs for rule-related data management activities are addressed in the PWSS Program ICR (OMB No. 2040-0090). Section 5(b) of the PWSS Program ICR contains additional detail regarding the activities supported by the previously described collection of SDWIS data.

5(c) Small Entity Flexibility

In developing this ICR, EPA considered the requirement of the Small Business Regulatory Enforcement Fairness Act (SBREFA) to minimize the burden of information collections on small entities. Small entities include “small businesses,” “small organizations” and “small government jurisdictions.” These terms are defined below.¹¹

- A small business is any business that is independently owned and operated and not dominant in its field as defined by the Small Business Administration regulations under section 3 of the Small Business Act.
- A small organization is any non-profit enterprise that is independently owned and operated and not dominant in its field.
- A small governmental jurisdiction is the government of a city, county, town, township, village, school district or special district that has a population of fewer than 50,000. This definition may also include Indian Tribes.

The major requirement under SBREFA is a regulatory flexibility analysis (RFA) of all rules that have a “significant economic impact on a substantial number of small entities.” Since this ICR is not currently associated with new rules, it is not currently subject to the SBREFA.

Throughout the 1992–1993 negotiated rulemaking process for the Stage 1 DBPR and the IESWTR and the July 1994 proposals for these rules, a small PWS was defined as a system serving fewer than 10,000 people. This definition reflects the original 1979 standard for TTHMs, which applied only to systems serving at least 10,000 people. The definition thus recognizes that the baseline conditions from which systems serving fewer than 10,000 people

¹¹ These definitions were taken from §601 of the Regulatory Flexibility Act.

would approach disinfection byproduct control and simultaneous control of microbial pathogens would be different than those for systems serving 10,000 or more people. Subsequent to the 1994 proposals, EPA defined a “small business” (for purposes of RFAs in drinking water regulations) as a PWS serving 10,000 or fewer people. This definition is consistent with the approach used herein and in the 1996 Congressional amendments to SDWA.

EPA has made significant efforts to minimize the burden for all respondents, particularly for small entities. In setting monitoring requirements, EPA has been able to minimize burden for small entities as detailed below.

1) *Surface Water Treatment Rule*

Only a small percentage of small systems use surface water supplies; therefore, this rule does not have a significant economic impact on a substantial number of small entities. Since system size is the key determinant of the monitoring frequency requirements of the SWTR, systems serving fewer than 3,300 people will have the least stringent monitoring requirements.

EPA will allow a reduction in the frequency of turbidity monitoring from six samples per day to one sample per day for systems using slow sand filtration treatment or other eligible technologies. Systems serving fewer than 500 people may also reduce sampling to once per day regardless of filtration type.

2) *Total Coliform Rule*

The number of required coliform samples varies directly with system size. Specifically, for CWSs, the number of samples ranges from a minimum of one sample per month for systems serving fewer than 1,000 people to 480 samples per month for those serving 3,960,001 or more people. This requirement is codified at 40 CFR 141.21(a). Generally, quarterly monitoring must be conducted at noncommunity water systems (NCWSs) using ground water only and serving 1,000 or fewer people. As provided for in §141.21(a)(3)(i), however, the primacy agency may reduce the quarterly monitoring frequency as a result of a sanitary survey.

3) *Interim Enhanced Surface Water Treatment Rule*

Except for sanitary survey requirements, which are carried out by the primacy agency, the IESWTR only applies to systems serving at least 10,000 people. Accordingly, the rule does not have a significant impact on small entities.

4) *Filter Backwash Recycling Rule*

The FBRR applies to both large and small systems. Therefore, the rule will have an effect on small entities. Accordingly, as part of the economic analysis for the rule, EPA certified that this rule would not have a significant impact on a substantial number of small systems. As a result, an RFA was not required.

5) *Long Term 1 Enhanced Surface Water Treatment Rule*

The LT1ESWTR applies only to subpart H systems serving less than 10,000 people. Therefore, the rule will have an effect on small entities. After considering the economic impacts of the rule on small entities, EPA certified that this action would not have a significant economic impact on a substantial number of small entities. The Agency determined that less than one percent of small entities will experience an impact of one percent or more of their annual revenues or expenditures. No affected small governmental jurisdictions are expected to incur annual costs exceeding three percent of their annual revenue. Accordingly, an RFA was not required.

6) *Long Term 2 Enhanced Surface Water Treatment Rule*

The LT2ESWTR allows small systems to monitor for *E. coli* instead of *Cryptosporidium*. The analysis for *E. coli* is much less expensive than *Cryptosporidium*. Small systems are only required to monitor for *Cryptosporidium* if *E. coli* concentrations are above a trigger value. In addition, systems with at least 2 years worth of historical *Cryptosporidium* data may use that data instead of performing new monitoring.

7) *Ground Water Rule*

The GWR was developed in consultation with the Small Business Advocacy Review Panel. Several of the panel's recommendations were incorporated into the rule. These recommendations include:

- Risk targeted approach – only those systems most at risk are required to monitor or provide corrections.
- Using coliform monitoring instead of more expensive viral monitoring – the rule requires preliminary monitoring for coliform. Only if coliform monitoring is positive is monitoring for other organisms required.

8) *Aircraft Drinking Water Rule*

EPA has chosen to apply the same requirements to air carriers of all sizes. EPA has developed the ADWR to provide flexibility to all air carriers including small entities or small businesses. For example, where a maintenance frequency is not specified by the water tank manufacturer, air carriers can choose the combination of monitoring and disinfection and flushing that accommodates existing routine aircraft maintenance schedules. The ADWR allows air carriers with positive total coliform samples 72 hours to implement disinfection and flushing as corrective action or the alternative of 24 hours to collect repeat samples. It also allows them additional time before corrective action is required if they prevent public access to the water by physically shutting off or disconnecting the water system or preventing the flow of water through the taps. The rule also permits air carriers to take only one routine sample (instead of two) for certain aircraft with a removable/portable water tank that is drained every day of passenger service, where the aircraft has only one tap.

5(d) Collection Schedule

The collection schedules for each rule are summarized below. Additional information may be obtained by consulting the individual rules for specific collection schedules.

**Exhibit 5
Collection Schedule**

| Rule | Collection Commencement Year |
|-------------|--|
| SWTR | 1991/1993 (depending on filtration status) |
| TCR | 1991 – coliform monitoring 1994 – sanitary surveys for CWSs, 1999 for NCWSs |
| IESWTR | 2002 – turbidity monitoring 2002/2004 - sanitary surveys (depending on size and source type) |
| FBRR | 2004 – recordkeeping |
| LT1ESWTR | 2005 – turbidity monitoring |
| LT2ESWTR | 2006 – <i>Cryptosporidium</i> and <i>E. coli</i> monitoring first round (depends on system size; all sampling completed by 2011) 2010 – disinfection profiling (depends on system size) |
| | 2012 – reporting for compliance with new technologies |
| | 2015 – second round of <i>Cryptosporidium</i> and <i>E. coli</i> monitoring |
| GWR | 2009 – sanitary survey, triggered monitoring, corrective action plans, compliance monitoring |
| ADWR | April 2011 – inventory data, sampling and O&M plan information October 2011 – coliform sampling data, dates routine disinfection and flushing are performed |

6 ESTIMATING BURDEN AND COST OF COLLECTION

This section estimates the burden and cost to PWSs, air carriers and primacy agencies for complying with drinking water information requirements associated with microbial contaminant rulemakings. These include the following:

- 1) Surface Water Treatment Rule¹²
- 2) Total Coliform Rule
- 3) Interim Enhanced Surface Water Treatment Rule
- 4) Filter Backwash Recycling Rule
- 5) Long Term 1 Enhanced Surface Water Treatment Rule
- 6) Long Term 2 Enhanced Surface Water Treatment Rule
- 7) Ground Water Rule
- 8) Aircraft Drinking Water Rule

This ICR updates the annual burdens and costs associated with these rulemakings for the three-year ICR period of May 1, 2012, through April 30, 2015. This section also discusses the assumptions used to estimate cost and burden and describes the change in annual burden, as compared with the current OMB annual burden inventory.

EPA is committed to accurately characterizing the burden and costs of rules it promulgates. Consequently, EPA has refined some of the assumptions for calculating the burden and costs associated with implementing the drinking water regulations contained in this ICR. For this update, many assumptions were revised based on program changes and well-documented changes in some data. To provide a comparable basis on which to calculate the requirements addressed by the Microbial Rules ICR, and to address inconsistencies, EPA applied uniform assumptions to all rules where applicable. The categories of assumptions are listed below.

- Labor rates—for PWSs, a 2010 labor rate of \$20.24 was obtained from the Bureau of Labor Statistics (BLS). An overhead rate of 60 percent was applied, resulting in an hourly rate of \$32.38. For states, a 2010 labor rate of \$27.37 was obtained from the BLS. An overhead rate of 60 percent was applied, resulting in an hourly rate of \$43.79.
- PWS inventory figures from the most recent frozen SDWIS database pull (October 2010).
- Number of entry points—data from the 2006 Community Water Systems Survey (CWSS).
- Number of plants—data from the 2006 CWSS.

In addition, EPA has revised some of the estimates of burden for particular activities (e.g., sampling, developing reports) to reflect consultations with representatives of PWSs and states (see section 3(c)).

¹² Includes all rule components except disinfectant residual monitoring and associated activities, which are included in the DDBP/Chem/Rads Rules ICR.

6(a) Respondent Burden

6(a)(i) Burden to Public Water Systems

The annual PWS burden for May 1, 2012, through April 30, 2015, is estimated to be approximately 10.3 million hours. Exhibit 6 (after section 6(b)) shows the breakdown of the annual burden hours on a rule-specific basis. The annual air carrier burden for the same time period is 0.035 million hours (see Exhibit 7). Wherever possible, activity-level burden assumptions were carried forward from previous ICRs or were updated to reflect consultation results. However, if updated data were available (e.g., system inventories), the most recent data were used in burden calculations. Appendices B through H show the assumptions and detailed burden calculations for each rule. The following further describes the bases for the burden estimates for each rule.

1) *Surface Water Treatment Rule*

Activities associated with the SWTR account for 1.78 million annual burden hours per year. The assumptions used to calculate the SWTR burden are based largely on assumptions carried forward from the 2008 Microbial Rules ICR. This ICR includes burden estimates for all components of the SWTR except disinfectant residual monitoring and associated activities, which are included in the DDBP/Chem/Rads Rule ICR. For unfiltered systems, burden estimates include raw water sampling for coliform, on-site inspections, watershed management and raw water turbidity monitoring. The burden for filtered systems includes only finished water turbidity monitoring. Section 6(f) describes the reasons for changes between the burden reported in the 2008 Microbial Rules ICR and this ICR. Detailed burden and cost calculations for the SWTR are provided in Appendix B.

2) *Total Coliform Rule*

Activities associated with the TCR account for a burden of 3.51 million hours per year. The burden estimates include routine total coliform monitoring and repeat sampling for *E. coli* or fecal coliform. The assumptions used to calculate the TCR burden are based largely on assumptions carried forward from the 2008 Microbial Rules ICR. Section 6(f) describes the reasons for changes between the burden reported in the 2008 Microbial Rules ICR and this ICR. Appendix C summarizes the assumptions used to calculate the TCR burden and provides the detailed burden and cost calculations.

3) *Interim Enhanced Surface Water Treatment Rule*

Activities associated with IESWTR account for a burden of 4.28 million hours per year. Included in this burden are individual filter turbidity monitoring, turbidity exceptions reporting, and conducting individual filter assessments (IFAs). The assumptions used to calculate the IESWTR burden are based largely on the assumptions carried forward from the 2008 Microbial Rules ICR. Reasons for changes in burden between the 2008 Microbial Rules ICR and this ICR are summarized in section 6(f). Detailed information about assumptions, burden, and calculations are provided in Appendix D.

4) *Filter Backwash Recycling Rule*

No burden is estimated for PWSs for this rule. Currently, the rule requires PWSs to maintain records on recycle flow. The burden associated with this recordkeeping is assumed to be negligible.

5) *Long Term 1 Enhanced Surface Water Treatment Rule*

Activities associated with the LT1ESWTR account for a burden of 0.14 million hours per year. The burden estimates for PWSs include turbidity exceptions reporting and turbidity monitoring. The assumptions used to calculate the LT1ESWTR burden are based largely on the assumptions carried forward from the 2008 Microbial Rules ICR. Reasons for changes in burden between the 2008 Microbial Rules ICR and this ICR are summarized in section 6(f). Detailed information about assumptions, burden, and calculations are provided in Appendix E.

6) *Long Term 2 Enhanced Surface Water Treatment Rule*

Activities associated with the LT2ESWTR account for a burden of 0.043 million hours per year. The burden estimates include reporting associated with demonstrating compliance with installed treatment. PWS burden estimates also account for some of the burden associated with developing disinfection profiles and benchmarks. The initial round of monitoring for *E. coli* and/or *Cryptosporidium* was completed during the previous ICR period. However, the second round of monitoring will begin during the last year of this ICR period; only large systems will incur burden for this activity during this ICR period. In addition, the burden estimates for PWSs include completion of a sampling plan for those systems conducting monitoring.

Appendix F summarizes the assumptions used to calculate the LT2ESWTR burden and provides the detailed burden and cost calculations.

7) *Ground Water Rule*

Activities associated with the GWR account for a burden of 0.58 million hours per year. For ground water systems providing 4-log treatment of viruses, the burden estimates include compliance monitoring to demonstrate treatment effectiveness and associated reporting, including reports of disinfection failure. In addition, burden estimates for developing corrective action plans are included. For ground water systems that do not provide 4-log treatment of viruses, PWS burden estimates also account for burden associated with conducting triggered source water monitoring if the system tests positive for total coliform in the distribution system under the TCR, including the burden for initially notifying the state that the system provides disinfection. PWS burden also includes the burden associated with sanitary surveys.

Appendix G summarizes the assumptions used to calculate the GWR burden and provides the detailed burden and cost calculations.

8) *Aircraft Drinking Water Rule*

Activities associated with the ADWR account for an air carrier burden of 0.035 million hours per year. The assumptions used to calculate the ADWR burden are based largely on assumptions carried forward from the standalone ADWR ICR for the final rule. Air carrier burden includes sampling, reporting associated with sampling and O&M activities, self-inspection, and public notice.

ADWR burden is being incorporated into this programmatic ICR for the first time. Note that the standalone ADWR ICR is currently scheduled to expire on February 28, 2013. However, once this Microbial Rules ICR is approved, the standalone ADWR ICR will be cancelled. Appendix H summarizes the assumptions used to calculate the ADWR burden and provides the detailed burden and cost calculations.

6(a)(ii) Burden to Primacy Agencies

The annual burden for primacy agencies for May 1, 2012, through April 30, 2015 is estimated to be approximately 2.56 million hours. Exhibit 8 (at the end of section 6(b)) shows the annual burden hours on a rule-specific basis. Many other primacy agency activities, such as compliance assurance and data management, cannot be divided among specific rules and are included in the PWSS Program ICR as general primacy activities. The bases for burden estimates included in this ICR are detailed below.

1) *Surface Water Treatment Rule*

The annual state burden for the SWTR is expected to be 0.27 million hours. All of this burden is associated with review of finished water turbidity monitoring results. Estimates for primacy agency burden for the SWTR are based on assumptions carried forward from the 2008 Microbial Rules ICR. Detailed calculations for burden and cost are shown in Appendix B.

2) *Total Coliform Rule*

For primacy agencies, the annual burden associated with the TCR is estimated to be approximately 0.46 million hours. This reflects burden to monitor TCR-related activities such as reviewing routine coliform reports, *E. coli* and fecal coliform reports, and additional routine sampling reports. The burden for sanitary surveys for ground water systems is now addressed under the GWR (see Appendix G). Sanitary survey burden for surface water systems is included under IESWTR. Estimates for primacy agency burden for the TCR are based on assumptions carried forward from the 2008 Microbial Rules ICR. Appendix C shows detailed burden and cost calculations.

3) *Interim Enhanced Surface Water Treatment Rule*

Primacy agencies are expected to expend 0.95 million annual burden hours implementing requirements of the IESWTR. The assumptions used to calculate the IESWTR burden are based largely on assumptions carried forward from the 2008 Microbial Rules ICR. The burden includes estimates for review of turbidity monitoring results and exceptions reports. Additionally, states conduct CPEs as necessary and sanitary surveys for all surface water systems. Detailed cost and burden calculations are included in Appendix D.

4) *Filter Backwash Recycling Rule*

No burden is estimated for states for this rule. The burden associated with the recordkeeping requirements in this rule is assumed to be negligible.

5) *Long Term 1 Enhanced Surface Water Treatment Rule*

The annual state burden for the LT1ESWTR is expected to be 0.12 million hours. The assumptions used to calculate the LT1ESWTR burden are based largely on assumptions carried forward from the 2008 Microbial Rules ICR. The burden includes estimates for compliance tracking and recordkeeping of turbidity monitoring for small systems, and review of turbidity monitoring and turbidity exceptions reports. Additionally, states conduct turbidity exceptions reporting, which includes CPEs and annual exception reports for systems serving 10,000 people or fewer. Detailed calculations for burden and cost are shown in Appendix E.

6) *Long Term 2 Enhanced Surface Water Treatment Rule*

The annual state burden for the LT2ESWTR is expected to be 0.029 million hours. The assumptions used to calculate the LT2ESWTR burden are based largely on assumptions carried forward from the 2008 Microbial Rules ICR. State burden includes reviewing monitoring results and assisting with and reviewing bin classifications. States will also review disinfection profiles and benchmarks for systems that significantly change their disinfection practices.

Appendix F summarizes the assumptions used to calculate the LT2ESWTR burden and provides the detailed burden and cost calculations.

7) *Ground Water Rule*

The annual state burden for the GWR is expected to be 0.74 million hours. The assumptions used to calculate the GWR burden are based largely on assumptions carried forward from the GWR ICR. The burden includes that associated with performing sanitary surveys, as well as burden to review initial compliance monitoring notification and compliance monitoring reports submitted by PWSs. In addition, states will ensure PWSs are complying with treatment technique requirements and any associated reporting requirements. For ground water systems that do not provide 4-log treatment of viruses, state burden estimates also account for review of triggered source water monitoring results. Lastly, the burden includes annual administrative activities such as recordkeeping, staff training, and technical assistance to PWSs. Appendix G summarizes the assumptions used to calculate the GWR burden and provides the detailed burden and cost calculations.

8) *Aircraft Drinking Water Rule*

Note that EPA is the primacy agency for the ADWR, as EPA has direct oversight for that rule. This burden is captured in the 231.9 regional EPA FTEs in the PWSS Program ICR.

6(b) Respondent Costs

6(b)(i) Cost to Public Water Systems

Exhibit 6 shows the annual costs for PWSs over the three-year ICR period. Annual costs are estimated at approximately \$467.8 million, which consists of \$334.7 million in labor costs, \$112.8 million in operation and maintenance (O&M) costs, and \$20.4 million in capital costs.

Exhibit 7 shows the annual costs for air carriers over the three-year ICR period. Annual costs are estimated at approximately \$4.0 million, which consists of \$0.92 million in labor costs, \$3.0 million in O&M costs, and \$0.003 million in capital costs.

PWS labor costs are based on the number of burden hours times the average hourly wage rate, including overhead. The average hourly wage rate for PWSs is the rate quoted by the Bureau of Labor Statistics for Standard Occupational Classification (SOC) Code 51-8031, “Local Government—Water and Liquid Waste Treatment Plant and System Operators.” The quoted rate was \$20.24 in 2010 dollars (see <http://stats.bls.gov/oes/current/oes518031.htm>). In addition, 60 percent overhead was assumed, bringing the loaded, inflated rate to \$32.38 in 2010 dollars. For air carriers, four labor rates are used and are all loaded by 50 percent. All rates are from the Bureau of Labor Statistics in 2010 dollars (see Appendix H for SOC codes for each occupation). The first labor rate is for “Transportation, Storage, and Distribution Managers” at a loaded rate of \$62.00. The second labor rate is for “Cleaners of Vehicles and Equipment” at a loaded rate of \$15.94. Labor rates for “Transportation Inspectors” and “Inspectors, Testers, Sorters, Samplers, and Weighers” were also used at loaded rates of \$45.12 and \$25.44, respectively.

In addition to the labor costs, there are O&M costs associated with the SWTR, TCR, IESWTR, LT1ESWTR, LT2ESWTR, GWR and ADWR. For the SWTR, these O&M costs reflect non-labor costs associated with coliform analyses (unfiltered systems) and turbidity analyses (unfiltered and filtered systems). Coliform analysis O&M costs are based on analysis costs as listed in the ADWR Economic Analysis. Turbidity analysis O&M costs are based on vendor quotes regarding calibration materials needed to perform turbidity analyses. TCR O&M costs reflect non-labor costs associated with coliform and *E. coli* analysis. IESWTR O&M costs reflect non-labor costs associated with turbidity analysis for individual filters. For the IESWTR, turbidity analysis costs are based on O&M cost equations for operating an integrated supervisory control and data acquisition (SCADA) system. These cost equations are carried forward from the IESWTR Regulatory Impact Analysis (RIA). LT1ESWTR O&M costs also reflect non-labor costs associated with turbidity analysis for individual filters. LT2ESWTR O&M costs reflect non-labor costs associated with *Cryptosporidium* and *E. coli* laboratory analysis. GWR O&M costs reflect non-labor costs associated with compliance (disinfection) monitoring (maintenance costs, monthly reagents, charts and recorder pens).

The SWTR, IESWTR and LT1ESWTR also include capital costs for turbidity monitoring equipment. For these rules, capital costs are estimated based on vendor estimates and costing equations for in-line and bench-top turbidimeters, or SCADA systems needed to comply with turbidity monitoring requirements. Capital costs are distributed evenly across the replacement period for turbidity analysis equipment (estimated to be 7 years). The GWR includes capital costs for chlorine monitoring equipment (chlorine analyzer, power cord and chart recorder). The ADWR includes a capital cost for refrigerators purchased by air carriers, which is distributed evenly across the replacement period for the equipment (estimated to be 10 years).

Further detail on the O&M and capital costs for the SWTR, TCR, IESWTR, LT1ESWTR, LT2ESWTR, GWR and ADWR can be found in Appendices B, C, D, E, F, G and H, respectively.

6(b)(ii) Cost to Primacy Agencies

Exhibit 8 shows that the annual costs to primacy agencies are estimated at approximately \$118.7 million. All costs incurred by primacy agencies are labor costs. Labor costs are based on the number of burden hours times the average hourly wage rate, including overhead. Labor rates in 2010 dollars are used and are loaded with a 60 percent overhead factor. A loaded labor rate of \$43.79 per hour in 2010 dollars was used for state labor. The labor costs are based on the BLS SOC Code 19-2041, "State Government - Environmental Scientists and Specialists, Including Health," an average FTE cost of \$ \$91,087, including overhead, which equates to approximately \$43.79 per hour.¹³ In addition, another labor rate was used for states conducting sanitary surveys and reviewing compliance monitoring results for the GWR. Loaded, this rate comes to \$58.86 per hour.

There are no O&M or capital costs for primacy agencies under this ICR.

¹³ According to the ICR Handbook, an employee works an average of 2,080 hours in one year.

Exhibit 6
Annual PWS Burden and Cost
May 1, 2012 – April 30, 2015

| Activity | Annual Burden Hours | Cost | | | | Annual Responses |
|--------------|---------------------|-------------------------|-----------------------|---------------------------|-------------------------|-------------------|
| | | Annual Labor Cost (\$K) | Annual O&M Cost (\$K) | Annual Capital Cost (\$K) | Total Annual Cost (\$K) | |
| SWTR | 1,783,619 | \$57,761 | \$4,414 | \$2,206 | \$64,381 | 18,039,574 |
| TCR | 3,508,253 | \$113,611 | \$81,818 | N/A | \$195,429 | 3,668,442 |
| IESWTR | 4,280,585 | \$138,622 | \$16,938 | \$15,823 | \$171,383 | 3,781,397 |
| LT1ESWTR | 138,391 | \$4,482 | \$2,894 | \$2,266 | \$9,642 | 321,982 |
| LT2ESWTR | 43,039 | \$1,394 | \$619 | N/A | \$2,012 | 8,626 |
| GWR | 581,601 | \$18,834 | \$6,076 | \$88 | \$24,998 | 897,601 |
| TOTAL | 10,335,489 | \$334,704 | \$112,759 | \$20,383 | \$467,846 | 26,717,624 |

Note: Detail may not add exactly to totals due to rounding.

Exhibit 7
Annual Air Carrier Burden and Cost
May 1, 2012 – April 30, 2015

| Activity | Annual Burden Hours | Cost | | | | Annual Responses |
|--------------|---------------------|-------------------------|-----------------------|---------------------------|-------------------------|------------------|
| | | Annual Labor Cost (\$K) | Annual O&M Cost (\$K) | Annual Capital Cost (\$K) | Total Annual Cost (\$K) | |
| ADWR | 35,087 | \$923 | \$3,049 | \$3 | \$3,975 | 136,225 |
| TOTAL | 35,087 | \$923 | \$3,049 | \$3 | \$3,975 | 136,225 |

Exhibit 8
Annual Primacy Agency Burden and Cost
May 1, 2012 – April 30, 2015

| Activity | Annual Burden Hours | Cost | | | | Annual Responses |
|--------------|---------------------|-------------------------|-----------------------|---------------------------|-------------------------|------------------|
| | | Annual Labor Cost (\$K) | Annual O&M Cost (\$K) | Annual Capital Cost (\$K) | Total Annual Cost (\$K) | |
| SWTR | 266,889 | \$11,688 | N/A | N/A | \$11,688 | 76,108 |
| TCR | 458,937 | \$20,098 | N/A | N/A | \$20,098 | 1,835,748 |
| IESWTR | 947,908 | \$41,511 | \$0 | \$0 | \$41,511 | 70,619 |
| LT1ESWTR | 119,237 | \$5,222 | \$0 | \$0 | \$5,222 | 67,045 |
| LT2ESWTR | 28,642 | \$1,254 | N/A | N/A | \$1,254 | 307 |
| GWR | 738,226 | \$38,914 | N/A | N/A | \$38,914 | 33,714 |
| TOTAL | 2,559,838 | \$118,686 | N/A | N/A | \$118,686 | 2,083,540 |

Note: Detail may not add exactly to totals due to rounding.

6(c) Agency Burden and Costs

Burden and costs to the federal government are incurred by EPA's drinking water program at Headquarters and EPA Regions to assist primacy agencies in implementing drinking water regulations. EPA burden and costs for on-going general activities for all EPA drinking water regulations (not just those listed in this ICR) are accounted for under the PWSS Program ICR. Burden and costs included in the PWSS Program ICR cover all cross-cutting (non-rule specific) regulatory activities associated with compliance tracking, regulatory enforcement, and rule development activities. There are no rule-specific activities expected for EPA under any of the rules covered by this ICR, except for EPA's oversight of air carriers for the ADWR. EPA's burden under the ADWR is shown for informational purposes in Appendix H; however, this burden is not included in the total burden for the ADWR. As explained above and in section 5(a), EPA ADWR burden is accounted for in the PWSS Program ICR.

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

Respondents for this ICR include PWSs, air carriers and primacy agencies. This ICR estimates that the number of PWS respondents is 152,979¹⁴ existing PWSs. All PWSs are not necessarily subject to each of the information collection requirements contained in this ICR. Each rule associated with this ICR identifies the types of PWSs that are subject to that particular requirement. The numbers, by type of PWSs affected for each rule, are identified in the appendices. The number of air carrier respondents is 47. Note that air carriers are respondents for the ADWR only.

In addition to the PWS and air carrier respondents, this ICR assumes 57 primacy agencies (50 states plus the District of Columbia, U.S. territories, and Indian Nations)¹⁵. Therefore, the total number of respondents is 153,083. The total costs and burden for these respondents are summarized in Exhibits 6, 7, and 8.

6(e) Bottom Line Burden Hours and Costs

The bottom line burden hours and costs for this ICR are presented in Exhibit 9. The total annual respondent burden associated with this ICR, which includes burden for PWSs, air carriers and primacy agencies, is estimated to be approximately 12.9 million hours. The corresponding total annual respondent costs are estimated to be \$590.5 million. The annual capital and O&M costs are approximately \$136.2 million.

¹⁴ Source: SDWIS/FED Data from October 2010.

¹⁵ For several of these entities, primacy activities are actually implemented by EPA Regional offices. However, as a simplifying assumption, they are included with the states for respondent calculations under this ICR.

Exhibit 9
Bottom Line Annual Burden and Cost
May 1, 2012 – April 30, 2015

| | | |
|--|-----------------------|---|
| Annual Number of Respondents | 153,083 (=) | |
| | 152,979 (+) | Existing PWSs |
| | 47 (+) | Existing Air Carriers |
| | 57 | Primacy agencies |
| Total Annual Responses | 28,937,389 (=) | |
| | 26,717,624 (+) | PWS responses (see Exhibit 6) |
| | 136,225 (+) | Air Carrier responses (see Exhibit 7) |
| | 2,083,540 | Primacy agency responses (see Exhibit 8) |
| Number of Responses per Respondent | 189.0 (=) | |
| | 28,937,389 (/) | Total annual responses from above |
| | 153,083 | Total number of respondents from above |
| Total Annual Respondent Hours | 12,930,414 (=) | |
| | 10,335,489 (+) | PWS hours (see Exhibit 6) |
| | 35,087 (+) | Air Carrier hours (see Exhibit 7) |
| | 2,559,838 | Primacy agency hours (see Exhibit 8) |
| Hours per Response | 0.45 (=) | |
| | 12,930,414 (/) | Total annual respondent hours from above |
| | 28,937,389 | Total annual responses from above |
| Annual O&M and Capital Cost (\$K)¹ | \$136,194 (=) | |
| | \$112,759 (+) | Total PWS O&M costs (see Exhibit 6) |
| | \$20,383 (+) | Total PWS capital costs (see Exhibit 6) |
| | \$3,049 (+) | Total Air Carrier O&M costs (see Exhibit 7) |
| | \$3 | Total Air Carrier capital costs (see Exhibit 7) |
| Total Annual Respondent Cost (\$K) | \$590,507 (=) | |
| | \$467,846 (+) | For PWSs (see Exhibit 6) |
| | \$3,975 (+) | For Air Carriers (see Exhibit 7) |
| | \$118,686 | For primacy agencies (see Exhibit 8) |
| Total Annual Hours (resp. plus Agency) | 12,930,414 (=) | |
| | 12,930,414 (+) | Total annual respondent hours from above |
| | 0 | Total EPA hours |
| Total Annual Cost (\$K) (resp. plus Agency) | \$590,507 (=) | |
| | \$590,507 (+) | Total annual respondent cost from above |
| | \$0 | Total EPA cost |

Note: Detail may not add exactly to totals due to rounding.

¹No Primacy Agency capital or O&M costs are incurred, see Exhibit 8.

6(f) Reasons for Change in Burden

This section presents the change in burden and explains the reasons for the change in burden. The discussion is divided into two parts:

- Section 6(f)(i) summarizes the burden adjustments made (by addition of new rules) since the 2008 Microbial Rules ICR (see Exhibit 11).
- Section 6(f)(ii) summarizes burden adjustments to each rule since the 2008 Microbial Rules ICR (see Exhibits 12 through 14).

Exhibit 10 summarizes how each of these changes affects the overall burden inventory for the Microbial Rules ICR.

Exhibit 10 Summary of Changes in Annual Burden (Includes PWS, Air Carrier and Primacy Agency Burden)

| Type of Change | Burden (hours) | Running Total | Comment |
|--|----------------|---------------|--|
| Burden Estimated in the 2008 Microbial Rules ICR | 10,669,916 | 10,669,916 | This burden serves as the baseline for the 2012 Microbial Rules ICR. |
| Restructuring Adjustments—see Section 6(f)(i) | 17,583 | 10,687,499 | Burden for ADWR is now included in this ICR. |
| Other Adjustments to Burden—see Section 6(f)(ii) | 2,242,915 | 12,930,414 | Burden for which EPA seeks approval in this ICR. |

Note: Detail may not add exactly to totals due to rounding.

6(f)(i) Restructuring Adjustments

Restructuring adjustments have been made to consolidate the burden for the regulation being incorporated into the Microbial Rules ICR. These adjustments are discussed below and summarized in Exhibit 11.

- Burden associated with the ADWR. The final ADWR was promulgated October 19, 2009. ADWR burden is being incorporated into this programmatic ICR for the first time. Note that the standalone ADWR ICR is currently scheduled to expire on February 28, 2013. However, once this Microbial Rules ICR is approved, the standalone ADWR ICR will be cancelled.

Exhibit 11
Restructuring Adjustments to the Annual Burden
Inventory for the Microbial Rules ICR
(Includes PWS, Air Carrier and Primacy Agency Burden)

| Action | Annual Burden Hours | Brief Explanation |
|--------------|---------------------|--|
| N/A | 10,669,916 | Inventory for the 2008 Microbial Rules ICR carried forward as the baseline for 2012 Microbial Rules ICR (includes PWS, State, and EPA burden). Current opening inventory for the 2012 Microbial Rules ICR. |
| Add | 17,583 | This represents the current ADWR burden inventory. This inventory is being moved from the ADWR ICR (OMB 2040-0277) into the 2012 Microbial Rules ICR. |
| Total | 10,687,499 | Microbial Rules ICR inventory based on current burden inventories. |

Note: Detail may not add exactly to totals due to rounding.

6(f)(ii) Other Burden Adjustments

Changes in calculated burden are a result of updating relevant baseline information for each rule with the most current and accurate information available (e.g., PWS inventories) and updating to 2010 labor rates. Where appropriate, estimated violation, waiver, and other associated rates have also been updated to reflect current information on rule compliance. Burden also may have changed as a result of consultation with water industry representatives and due to changes in rule requirements.

Additional changes were made to the burden for the SWTR. The number of systems incurring burden for combined filter effluent turbidity monitoring was modified from the 2008 ICR to include all filtered surface water systems that do not purchase water, in order to be consistent with the rule. The SWTR requires all surface water systems that provide filtration to monitor representative samples of filtered water. When the standalone ICRs for the IESWTR and LT1ESWTR were consolidated into the Microbial Rules ICR, systems that provide conventional or direct filtration (the majority of filtered systems) were mistakenly excluded. Other burden adjustments were made for the GWR. The sanitary survey burden was updated to include the full rather than incremental burden of conducting surveys.

Exhibits 12-14 summarize reasons for these changes and quantify the changes by rule. Burden adjustments associated with PWS activities resulted in a burden increase of 1,813,482 hours and are detailed in Exhibit 12. Burden adjustments associated with air carrier activities resulted in a burden increase of 17,504 hours and are detailed in Exhibit 13. Burden adjustments for primacy agencies result in an increase of 411,929 hours per year, as shown in Exhibit 14.

Exhibit 12
Adjustments to PWS Burden from Previous ICR Estimates

| Activity | Previous Annual Burden Estimate (hours) 2008-2011 | 2012-2015 Annual Burden Estimate | Change in Burden | Reason for Change in Burden |
|--------------|---|----------------------------------|------------------|--|
| SWTR | 776,724 | 1,783,619 | 1,006,895 | The change in burden is attributable to the use of updated system inventories and plant per system ratios, as well as a change in the universe of systems addressed in the rule. The number of systems incurring burden for turbidity monitoring was changed to include all filtered surface water systems that do not purchase water. Previously, systems with conventional or direct filtration were excluded. |
| TCR | 3,464,341 | 3,508,253 | 43,912 | The change in burden results from updated system inventories. Additionally, coliform violation rates used to estimate repeat and additional monitoring burden have been updated based on SDWIS data from the FY10Q03 frozen database. |
| IESWTR | 3,875,847 | 4,280,585 | 404,738 | The change in burden is attributable to the use of updated system inventories, plant per system ratios, and percentages of systems using conventional and direct filtration. |
| FBRR | 0 | 0 | 0 | Existing PWSs should have completed requirements associated with changing the recycle return location no later than 2006. New PWSs will design their plants to meet the return location requirements. The burden going forward is expected to be negligible. |
| LT1ESWTR | 162,290 | 138,391 | (23,899) | The change in burden results from updated system inventories. |
| LT2ESWTR | 66,406 | 43,039 | (23,367) | The change in burden results from updated system inventories and plant per system ratios, and it reflects the change in rule requirements. Systems completed monitoring activities in the previous ICR period and will begin technology reporting in this ICR period. Additionally, <i>E. coli</i> system sample analysis burden was increased in response to consultations. |
| GWR | 176,399 | 581,601 | 405,202 | The change in burden results from updated system inventories and plant per system ratios. Also, the previous ICR only included 2 years of GWR burden, as the GWR burden was only incorporated into the Microbial Rules ICR following the expiration of the standalone ICR. During this ICR period, systems will continue to add 4-log disinfection and conduct compliance monitoring to comply with the GWR. The number of systems conducting compliance monitoring increases each year post-GWR promulgation as more systems install 4-log disinfection. Therefore, the number of systems conducting compliance monitoring during this ICR period is higher than during the last ICR period. Lastly, sanitary survey burden was updated to include the full rather than incremental burden of conducting surveys. |
| TOTAL | 8,522,007 | 10,335,489 | 1,813,482 | Adjusted PWS Burden. |

Note: Detail may not add exactly to total due to independent rounding.

Exhibit 13 Adjustments to Air Carrier Burden from Previous ICR Estimates

| Activity | Previous Annual Burden Estimate (hours) 2008-2011 | Annual Burden Estimate | Change in Burden | Reason for Change in Burden |
|--------------|---|------------------------|------------------|---|
| ADWR | 17,583 | 35,087 | 17,504 | This represents the current ADWR annual air carrier burden estimate. This burden is being moved from the ADWR ICR (OMB 2040-0277) into the 2012 Microbial Rules ICR. The 2012-2015 burden estimate reflects changes in rule requirements. Air carriers have completed implementation and will begin monitoring, disinfection and flushing, self-inspections, and public notice activities in this ICR period. |
| TOTAL | 17,583 | 35,087 | 17,504 | Adjusted Air Carrier Burden |

Exhibit 14 Adjustments to Primacy Agency Burden from Previous ICR Estimates

| Activity | Previous Annual Burden Estimate (hours) 2008-2011 | 2012-2015 Annual Burden Estimate | Change in Burden | Reason for Change in Burden |
|--------------|---|----------------------------------|------------------|---|
| SWTR | 183,216 | 266,889 | 83,673 | The change in burden is attributable to the use of updated system inventories and plant per system ratios, as well as a change in the universe of systems addressed in the rule. (The state burden is based on the system burden). |
| TCR | 591,019 | 458,937 | (132,082) | The change in burden results from updated system inventories. (The state burden is based on the number of systems complying with the rule). Additionally, sanitary survey burden has been moved and is now addressed under the GWR. |
| IESWTR | 897,456 | 947,908 | 50,452 | The change in burden is attributable to the use of updated system inventories, plant per system ratios, and percentages of systems using conventional and direct filtration. (The state burden is based on the number of systems complying with the rule). |
| FBRR | 0 | 0 | 0 | States have completed the review and recordkeeping associated with the FBRR. The burden going forward is expected to be negligible. |
| LT1ESWTR | 141,732 | 119,237 | (22,495) | The change in burden results from updated system inventories. (The state burden is based on the system burden). |
| LT2ESWTR | 43,844 | 28,642 | (15,202) | The change in burden results from updated system inventories and plant per system ratios, and it reflects the change in rule requirements. Systems completed monitoring activities in the previous ICR period and will begin technology reporting in this ICR period, and states will be overseeing this activity. |
| GWR | 290,642 | 738,226 | 447,584 | The change in burden results from updated system inventories and plant per system ratios (state burden for some rule components is based on the number of systems complying with the rule). Also, the previous ICR included only 2 years of GWR burden, as the GWR burden was only incorporated into the Microbial Rules ICR following the expiration of the standalone ICR. Lastly, sanitary survey burden was updated to include the full rather than incremental burden of conducting surveys. |
| TOTAL | 2,147,909 | 2,559,838 | 411,929 | Adjusted Primacy Agency Burden |

Note: Detail may not add exactly to totals due to rounding.

Exhibit 15 shows the effects of these adjustments on the bottom line burden. Adding 1,813,482 hours to account for adjustments to PWS burden, adding 17,504 hours to account for adjustments to air carrier burden and adding 411,929 hours to account for adjustments to primacy agency burden yields 12,930,414 hours.

Exhibit 15
Adjustments to Annual Burden Carried Forward from Previous ICR Estimates
(Includes PWS, Air Carrier and Primacy Agency Burden)

| Action | Annual Burden Hours | Brief Explanation |
|--------------|---------------------|--|
| None | 10,687,499 | 2008 Microbial Rules ICR inventory based on current burden inventories (see Exhibit 11). |
| Add | 1,813,482 | Adjustment to the PWS burden carried forward from previous ICRs (see Exhibit 12). |
| Add | 17,504 | Adjustment to Air Carrier burden carried forward from standalone ICR (see Exhibit 13) |
| Add | 411,929 | Adjustment to the primacy agency burden carried forward from previous ICRs (see Exhibit 14). |
| Total | 12,930,414 | Hours requested in 2012 Microbial Rules ICR (see Exhibit 10). |

Note: Detail may not add exactly to totals due to rounding.

6(g) Burden Statement

The public reporting burden for collections included in this ICR is detailed in Exhibit 15 above. The annual respondent burden is estimated to average approximately 12.93 million hours, of which 10.34 million hours are attributable to PWSs, 0.035 million hours to air carriers and 2.56 million hours to primacy agencies (numbers may not add due to rounding). These estimates include time for gathering information as well as developing and maintaining records.

Burden means the total time, effort, or financial resources expended by people to generate, maintain, retain, 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 request for information collection 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 part 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-2011-0442, which is available for online viewing at www.regulations.gov, or in person viewing at the Water Docket in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The EPA

Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426. An electronic version of the public docket is available at www.regulations.gov. This site can be used to submit or view public comments, to 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. Comments can also be sent 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. Please include the EPA Docket ID Number (EPA-HQ-OW-2011-0442) and the OMB Control Number 2040-0205 in any correspondence.