



U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA)

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Regulations & Guidance

Current Drinking Water Rules (by date issued) (ALL ABOUT PDF FILES)

Chart of key regulatory dates (2000-2006) PDF file

- National Primary Drinking Water Regulations: Analytical Method for Uranium
- Withdrawal of Direct Final Rule, National Primary Drinking Water Regulations: Analytical Method for Uranium
- National Primary Drinking Water Regulations: Minor Corrections and Clarification to Drinking Water Regulations: National Primary Drinking Water Regulations for Lead and Copper (June 29, 2004)
- National Primary and Secondary Drinking Water Regulations: Approval of Additional Method for the Detection of Coliforms and E. coli in Drinking Water; Final Rule (February 13, 2004) (HTML) (PDF)
- Unregulated Contaminant Monitoring Regulation: Approval of Analytical Method for Aeromonas; National Primary and Secondary Drinking Water Regulations: Approval of Analytical Methods for Chemical and Microbiological Contaminants; Final Rule (October 29, 2002) (read online) (PDF)
- Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; National Primary Drinking Water Regulations; and National Secondary Drinking Water Regulations; Methods Update; Final Rule (October 23, 2002) (read online) (PDF) (Fact Sheet)
- Unregulated Contaminant Monitoring Regulation for Public Water Systems; Establishment of Reporting Date: Direct Final Rule (March 12, 2002) (read online) ~ (PDF)
- * Long Term 1 Enhanced Surface Water Treatment Rule (January 14, 2002) (read online) ~ (PDF)
- Unregulated Contaminant Monitoring Amendment to List 2 Rule and Delay of Reporting Monitoring Results (September 4, 2001) - Direct Final Rule
- * Filter Backwash Recycling Rule (June 8, 2001) (read online) ~ (PDF)
- * Arsenic Rule (Jan 22, 2001) (read online) ~ (PDF)
- Unregulated Contaminant Monitoring List 2 Rule (Jan. 11, 2001) (HTML) ~ (PDF)
- Radionuclides Rule (Dec 7, 2000) (HTML) ~ (PDF)
- Drinking Water State Revolving Fund Rule (Aug 7, 2000) (HTML) ~ (PDF)
- Removal of the MCLG for Chloroform (May 30, 2000) (HTML)
- Public Notification Rule (May 4, 2000) (HTML) ~ (PDF)
- Analytical Methods for Perchlorate and Acetochlor (Mar 2, 2000) (HTML) ~ (PDF)
- * Lead and Copper Rule minor revisions (Dec 20, 1999) (HTML)
- Underground Injection Control Regulations for Class V Injection Wells (Dec 7, 1999) (HTML) ~ (PDF)
- Analytical Methods for Chemical and Microbiological Contaminants and Revisions to Laboratory Certification Requirements (Dec 1, 1999) (HTML)
- Revisions to the Unregulated Contaminant Monitoring Rule. (Sep 17, 1999) (HTML) ~ (PDF)
- Suspension of Unregulated Contaminant Monitoring Requirements for small public water systems (Jan 8, 1999) (HTML)
- * Interim Enhanced Surface Water Treatment Rule (Dec 16, 1998) (HTML) ~ (PDF)
- * Stage 1 Disinfectants and Disinfection Byproducts Rule (Dec 16, 1998) (HTML) ~ (PDF)
- * Consumer Confidence Report Rule (Aug 19, 1998) (HTML) ~ (PDF)
- Variances and Exemptions Rule (Aug 14, 1998) (HTML) ~ (PDF)

Drinking Water Regulations

Current Rules

Proposed Rules

Code of Federal Regulations

Guidance & Policy

Drinking Water Standards (List of Contaminants & MCLs)

- Drinking Water Contaminant Candidate List (March 2, 1998) (HTML) ~ (PDF)
- Revisions to State Primacy Requirements (April 28, 1998) (HTML)
- Small System Compliance Technology List for the Surface Water Treatment Rule (Aug 6, 1997) (PDF)
- Withdrawal of 1991 proposed rule on Radon-222 (Aug 6, 1997) (HTML)
- Analytical Methods for Radionuclides (Mar 5, 1997) (HTML)
- Information Collection Rule (May 14, 1996) (HTML) ~ (PDF)

Proposed rules and other notices open for public comment

Newly proposed rules are listed on the Open for Comment page

Proposed Rules and Notices for which the comment period has closed (date closed)

- National Primary Drinking Water Regulations: Analytical Method for Uranium - Proposed Rule
- * ● Disinfectants/Disinfection By-Products, Chemical, and Radionuclides Rules Information Collection Rule (Renewal)
- Microbial Rules Information Collection Rule (Renewal)
- Public Water System Supervision Program Information Collection Rule (Renewal)
- The Final Draft of the Tribal Drinking Water Operator Certification Program Guidelines is available and EPA is requesting comments
- Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; National Primary Drinking Water Regulations; and National Secondary Drinking Water Regulations; Analysis and Sampling Procedures - Proposed Rule
 - Federal Register Notice
 - More Information
- Drinking Water Contaminant Candidate List 2 (June 1, 2004)
- National Primary Drinking Water Regulations: Minor Corrections and Clarification to Drinking Water Regulations (May 3, 2004)
- * ● National Primary Drinking Water Regulations: Long Term 2 Enhanced Surface Water Treatment Rule - Proposed Rule (May 15, 2004)
- Stage 2 Disinfectants and Disinfection Byproducts Proposed Rule (May 15, 2004)
- Proposed Aeromonas and NPDWR Methods Rule (May 6, 2002)
- Proposed ground water rule (August 9, 2000)
- Proposed radon rule (November 2, 1999)
- Sulfate health effects study (May 12, 1999)

Code of Federal Regulations (PDF files) -- The CFR compiles all rules currently in effect, and is updated annually as of July 1. To view or search these parts in a section-by-section format, or for other federal regulations, visit the Government Printing Office [\[EXIT disclaimer\]](#) site. You can also try GPO's new E-CFR [\[EXIT disclaimer\]](#), which is updated weekly. (ALL ABOUT PDF FILES)

- National Primary Drinking Water Regulations 40 CFR part 141
- National Primary Drinking Water Regulations Implementation 40 CFR part 142
- National Secondary Drinking Water Regulations 40 CFR part 143
- Underground Injection Control Program 40 CFR part 144
- State UIC Program Requirements 40 CFR part 145
- Underground Injection Control Program Criteria & Standards 40 CFR part 146
- State Underground Injection Control Programs 40 CFR part 147
- Hazardous Waste Injection Restrictions 40 CFR part 148
- Sole Source Aquifers 40 CFR part 149

Guidance and Policy

EPA has created a new web site for guidance documents. Presently, the site contains only documents issued since January 1999.

- Water Supply Guidance
- Quick Reference Guides
 - Standardized Monitoring Framework (EPA 816-F-04-010 March 2004)
 - Lead and Copper Rule: A Quick Reference Guide (EPA 816-F-04-009 March 2004) (125 K PDF FILE)
- **Guidance on new rules:**
 - Arsenic Rule
 - Consumer Confidence Report Rule
 - Lead and Copper Rule
 - Microbial and Disinfection Byproducts Rules
 - Public Notification Rule
 - Radionuclides Rules
 - Unregulated Contaminant Monitoring Rule
- **Guidance for Small Systems**
- **Alternative Monitoring Guidelines**
- **Guidance on the Drinking Water State Revolving Fund Program**
- **Guidance on Analytical Methods for Drinking Water (1998)**
- **Manual for the Certification of Laboratories Analyzing Drinking Water**
- **Guidance on Data/Databases**
- **Guidance on State Source Water Assessment and Protection Programs (1997)**
- **Guidance for Future State Ground Water Protection Grants (1997)**

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Lead and Copper Rule: A Quick Reference Guide

Overview of the Rule

Title	Lead and Copper Rule (LCR) ¹ , 56 FR 26460 - 26564, June 7, 1991
Purpose	Protect public health by minimizing lead (Pb) and copper (Cu) levels in drinking water, primarily by reducing water corrosivity. Pb and Cu enter drinking water mainly from corrosion of Pb and Cu containing plumbing materials.
General Description	Establishes action level (AL) of 0.015 mg/L for Pb and 1.3 mg/L for Cu based on 90 th percentile level of tap water samples. An AL exceedance is not a violation but can trigger other requirements that include water quality parameter (WQP) monitoring, corrosion control treatment (CCT), source water monitoring/treatment, public education, and lead service line replacement (LSLR).
Utilities Covered	All community water systems (CWSs) and non-transient, non-community water systems (NTNCWSs) are subject to the LCR requirements.

Public Health Benefits

Implementation of the LCR has resulted in . . .	<ul style="list-style-type: none"> ▶ Reduction in risk of exposure to Pb that can cause damage to brain, red blood cells, and kidneys, especially for young children and pregnant women. ▶ Reduction in risk of exposure to Cu that can cause stomach and intestinal distress, liver or kidney damage, and complications of Wilson's disease in genetically predisposed people.
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Lead and Copper Tap Sampling Requirements

- ▶ First draw samples must be collected by all CWSs & NTNCWSs at cold water taps in homes/buildings that are at high risk of Pb/Cu contamination as identified in 40 CFR 141.86(a).
- ▶ Number of sample sites is based on system size (see Table 1).
- ▶ Systems must conduct monitoring every 6 months unless they qualify for reduced monitoring (see Table 2).

Size Category	System Size	Number of Pb/Cu Tap Sample Sites		Number of WQP Tap Sampling Sites	
		Standard	Reduced	Standard	Reduced
Large	> 100K	100	50	25	10
	50,001-100K	60	30	10	7
Medium	10,001 - 50K	60	30	10	7
	3,301 - 10K	40	20	3	3
Small	501 - 3,300	20	10	2	2
	101 - 500	10	5	1	1
	< 100	5	5	1	1

Can Monitor . . .	If the System . . .
Annually	1. Serves ≤ 50,000 and is ≤ both ALs for 2 consecutive 6-month monitoring periods; or 2. Meets Optimal Water Quality Parameter (OWQP) specifications for 2 consecutive 6-month monitoring periods.
Triennially	1. Serves ≤ 50,000 and is ≤ both ALs for 3 consecutive years of monitoring; or 2. Meets OWQP specifications for 3 consecutive years of monitoring; or 3. Has 90 th percentile Pb levels < 0.005 mg/L & 90 th percentile Cu level < 0.65 mg/L for 2 consecutive 6-month periods (<i>i.e.</i> , accelerated reduced Pb/Cu tap monitoring); or 4. Meets the 40 CFR 141.81(b)(3) criteria.
Once every 9 years	Serves ≤ 3,300 and meets monitoring waiver criteria found at 40 CFR 141.86(g).

^a Samples are collected at reduced number of sites (see Table 1 above).

Treatment Technique and Sampling Requirements

CORROSION CONTROL TREATMENT INSTALLATION: All large systems (except systems that meet the requirements of 40 CFR 141.81(b)(2) or (3)) must install CCT. Medium and small systems that exceed either AL must install CCT.

WATER QUALITY PARAMETER MONITORING: All large systems are required to do WQP monitoring. Medium and small systems that exceed either AL are required to do WQP monitoring.

¹The June 1991 LCR was revised with the following Technical Amendments:
56 FR 32112, July 15, 1991;
57 FR 28785, June 29, 1992;
59 FR 33860, June 30, 1994;
and the LCR Minor Revisions
65 FR 1950, January 12, 2000.



Treatment Technique and Sampling Requirements if the AL is Exceeded

① Water Quality Parameter (WQP) Monitoring

- ▶ All systems serving > 50,000 people, and those systems serving ≤ 50,000 people if 90th percentile tap level > either AL, must take WQP samples during the same monitoring periods as Pb/Cu tap sample.
- ▶ Used to determine water corrosivity, and if needed, to help identify type of CCT to be installed and how CCT should be operated (*i.e.*, establishes OWQP levels).
- ▶ WQPs include: pH, alkalinity, calcium, conductivity (initial WQP monitoring only), orthophosphate (if phosphate-based inhibitor is used); silica (if silicate-based inhibitor is used), and temperature (initial WQP monitoring only).
- ▶ Samples are collected within distribution system (*i.e.*, WQP tap samples), with number of sites based on system size (see Table 1), and at each entry point to distribution system (EPTDS).
- ▶ Systems installing CCT, must conduct follow-up monitoring for 2 consecutive 6-month periods – WQP tap monitoring is conducted semi-annually; EPTDS monitoring increases to every two weeks.
- ▶ After follow-up monitoring, State sets ranges of values for the OWQPs.
- ▶ Reduced WQP tap monitoring is available for systems in compliance with OWQPs; *Reduced monitoring does not apply to EPTDS monitoring.*
- ▶ For systems < 50,000, WQP monitoring is not required whenever 90th percentile tap levels are ≤ both ALs.

② Public Education (PE)

- ▶ Only required if Pb AL is exceeded (*no public education is required if only Cu AL exceeded*).
- ▶ Informs Public Water System's (PWS) customers about health effects, sources, and what can be done to reduce exposure.
- ▶ Includes billing inserts sent directly to customers, pamphlets or brochures distributed to hospitals & other locations that provide services to pregnant woman & children, and for some CWSs, newspaper notices and public service announcements (PSAs) submitted to TV/radio stations.
- ▶ System must begin delivering materials within 60 days of Pb AL exceedance and continue every 6 months for PSAs and annually for all other forms of delivery for as long as it exceeds Pb AL.
- ▶ Different delivery methods and mandatory language for CWSs & NTCWSs.
- ▶ Can discontinue delivery whenever ≤ Pb AL; but must recommence if Pb AL subsequently exceeded.
- ▶ PE requirements are in addition to the Public Notification required in 40 CFR Subpart Q.

③ Source Water Monitoring and Treatment

- ▶ All systems that exceed Pb or Cu AL must collect source water samples to determine contribution from source water to total tap water Pb/Cu levels and make a source water treatment (SOWT) recommendation within 6 months of the exceedance.
- ▶ One set of samples at each EPTDS is due within 6 months of first AL exceedance.
- ▶ If State requires SOWT; system has 24 months to install SOWT.
- ▶ After follow-up Pb/Cu tap and EPTDS monitoring, State sets maximum permissible levels for Pb & Cu in source.

④ Corrosion Control Treatment

- ▶ Required for all large systems (except systems that meet the requirements of 40 CFR 141.81(b)(2) or (b)(3)) and medium/small systems that exceed either AL. The system shall recommend optimal CCT within 6 months.
- ▶ Corrosion control study required for large systems.
- ▶ If State requires study for medium or small systems, it must be completed within 18 months.
- ▶ Once State determines type of CCT to be installed, PWS has 24 months to install CCT.
- ▶ Systems installing CCT must conduct 2 consecutive 6-months of follow-up monitoring.
- ▶ After follow-up Pb/Cu tap & WQP monitoring, State sets OWQPs.
- ▶ Small & medium systems can stop CCT steps if ≤ both ALs for 2 consecutive 6-month monitoring periods.

If the system continues to exceed the AL after installing CCT and/or SOWT...

⑤ Lead Service Line (LSL) Monitoring

- ▶ Two types of sampling associated with LSL replacement (LSLR):
 - *Optional* - Monitoring from LSL to determine need to replace line. If all Pb samples from line ≤ 0.015 mg/L then LSL does not need to be replaced and counts as replaced line.
 - *Required* - Monitoring if entire LSL is **not** replaced to determine impact from "partial" LSLR. Sample is collected that is representative of water in service line that is partially replaced.
- ▶ Monitoring only applies to system subject to LSLR.

⑥ Lead Service Line Replacement

- ▶ System must replace LSLs that contribute more than 0.015 mg/L to tap water levels.
- ▶ Must replace 7% of LSL per year; State can require accelerated schedule.
- ▶ If only a portion of a LSL is replaced, PWS must:
 - Notify customers at least 45 days prior to replacement about the potential for increased Pb levels;
 - Collect sample within 72 hours of replacement and mail/post results within 3 days of receipt of results.
- ▶ Systems can discontinue LSLR whenever ≤ Pb AL in tap water for 2 consecutive monitoring periods.



For additional information on the LCR, call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA web site at www.epa.gov/safewater/lcrmr/implement.html; or contact your State drinking water representative.

Proposed Stage 2 Disinfectants and Disinfection Byproducts Rule

Summary

EPA is proposing the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) to reduce disease incidence associated with the disinfection byproducts that form when public water supply systems add disinfectants. The Stage 2 DBPR will supplement existing regulations by requiring water systems to meet disinfection byproduct maximum contaminant levels (MCLs) at each monitoring site in the distribution system. The proposal also contains a risk-targeting approach to better identify monitoring sites where customers are exposed to high levels of disinfection byproducts (DBPs). This proposed regulation will reduce DBP exposure and provide more equitable health protection, and will result in lower cancer and reproductive and developmental risks.

Background

Chlorine and other chemical disinfectants have been widely used by public water systems as a principal barrier to microbial contaminants in drinking water. DBPs are formed when certain disinfectants interact with organic and inorganic materials in source waters. The levels of DBPs in drinking water can vary significantly from one point in a distribution system to another. Epidemiology and toxicology studies have shown a link between bladder, rectal and colon cancers and DBP exposure. Additionally, human epidemiology and animal toxicology studies report an association between chlorinated drinking water and reproductive and developmental endpoints such as spontaneous abortion, stillbirth, neural tube defects, pre-term delivery, intrauterine growth retardation, and low birth weight. Because of the combined weight of evidence from the health data, and consideration of the large number of people exposed to DBPs (approximately 254 million Americans), EPA has proposed additional DBP control measures beyond those already required for public water systems.

The proposed Stage 2 DBPR reflects a consensus Agreement in Principle of the Stage 2 M-DBP Federal Advisory Committee. This Committee consisted of organizational members representing EPA, State and local public health and regulatory agencies, local elected officials, Indian tribes, large and small drinking water suppliers, chemical and equipment manufacturers, and public interest groups. The Committee's activities resulted in the collection and evaluation of substantial new information. The Committee signed an Agreement in Principle stating the consensus recommendations of the group that was published by EPA in December, 2000.

About this Regulation

The Stage 2 DBPR will protect public health by supplementing existing drinking water regulations with risk-targeted monitoring and compliance determinations for current disinfection byproduct MCLs. This regulation will apply to all systems that add a disinfectant other than ultraviolet light.

Initial Distribution System Evaluation (IDSE): Under the Stage 2 DBPR, systems will conduct an evaluation of their distribution system to identify the locations with high disinfection byproduct concentrations. These locations will then be used by the systems as the sampling sites for DBP compliance monitoring.

Locational Running Annual Average: Under the Stage 2 DBPR, compliance with the maximum contaminant levels for two groups of disinfection byproducts (total trihalomethanes (TTHM) and

haloacetic acids (HAA5)) will be calculated for each monitoring location in the distribution system. This approach, referred to as the locational running annual average (LRAA), differs from current requirements which determine compliance by calculating the running annual average of samples from all monitoring locations across the system.

Other requirements: The Stage 2 DBPR would also require systems to determine if they are experiencing short term peaks in DBP levels referred to as “significant excursions.” Systems experiencing significant excursions would be required to review their operational practices and work with their State to determine actions that may be taken to prevent future excursions.

Environmental and Public Health Benefits

The Stage 2 DBPR will improve the control of disinfection byproducts in drinking water systems with the highest risk levels. EPA estimates that full implementation of the Stage 2 DBPR will reduce the incidence of bladder cancer cases by up to 182 cases per year, with an associated reduction of up to 47 premature deaths. While the Stage 1 DBPR provided a major reduction in DBP exposure, new national survey data suggest that some customers are receiving drinking water with elevated, or peak DBP concentrations even when the average levels in their water distribution systems are in compliance with the Stage 1 DBPR. Some of these peak concentrations can be substantially greater than the Stage 1 DBPR maximum contaminant levels (MCLs). The new survey results also showed that existing Stage 1 DBPR monitoring sites may not be the locations where the highest DBP concentrations occur in distribution systems. EPA’s analysis of this new information concludes that significant public health benefits may be achieved through further cost-effective reduction of DBPs in distribution systems. The new requirements provide for more consistent protection from DBPs across the entire distribution system and the reduction of DBP peaks, requiring only those systems with the greatest risk to make capital improvements. In addition, reduction of reproductive and developmental health effects that may be associated with exposure to elevated DBP levels will come from the provisions of this regulation, though these benefits have not been quantified.

Cost of the Regulation

The Stage 2 DBPR will result in increased costs to public water systems and States. The annual cost of the rule is expected to be \$54.3 to 63.9 million. Public water systems will bear approximately 98 percent (equivalent to \$53.1 to 62.8 million) of this total cost, with States incurring the remaining 2 percent (\$1.1 to 1.2 million). The average annual household cost is estimated to be \$0.51 per year, and over 99 % of households will experience annual costs of less than \$12 per year.

How to Get Additional Information

For general information on the Stage 2 DBPR, contact the Safe Drinking Water Hotline, at (800) 426-4791. For copies of the Federal Register notice of the proposed regulation or technical fact sheets, visit the EPA Safewater website, www.epa.gov/safewater/mdbp/st2/st2dbpr.html. The Safe Drinking Water Hotline is open Monday through Friday, excluding legal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time.

Proposed Long Term 2 Enhanced Surface Water Treatment Rule

Summary

EPA is proposing the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) to reduce disease incidence associated with *Cryptosporidium* and other pathogenic microorganisms in drinking water. The LT2ESWTR will supplement existing regulations by targeting additional *Cryptosporidium* treatment requirements to higher risk systems. This regulation also contains provisions to mitigate risks from uncovered finished water storage facilities and to ensure that systems maintain microbial protection as they take steps to reduce the formation of disinfection byproducts (DBPs).

Background

Cryptosporidium is a protozoan parasite that is of particular concern in drinking water because it is resistant to disinfectants like chlorine and it has been associated with waterborne disease outbreaks. Ingestion of *Cryptosporidium* can cause acute gastrointestinal illness, and health effects in sensitive subpopulations (e.g., infants, AIDS patients, the elderly) may be severe, including the risk of death.

Existing drinking water regulations require public water systems (systems) that use surface water sources and provide filtration to achieve at least a 99 percent (2-log) removal of *Cryptosporidium*. New data on *Cryptosporidium* infectivity, occurrence, and treatment indicate that current treatment requirements are adequate for the majority of systems, but there is a subset of systems with higher vulnerability to *Cryptosporidium* where additional treatment is necessary. This vulnerable subset includes those filtered systems with the highest source water *Cryptosporidium* levels, along with unfiltered systems (systems that use surface water sources and do not provide filtration).

About this Regulation

The LT2ESWTR will protect public health by supplementing existing drinking water regulations with additional risk-targeted treatment requirements for *Cryptosporidium*. This regulation will apply to all systems that use surface water or ground water under the direct influence of surface water.

***Cryptosporidium* treatment:** Under the LT2ESWTR, systems initially conduct source water monitoring for *Cryptosporidium* to determine their treatment requirements. Filtered systems will be classified in one of four risk bins based on their monitoring results. EPA projects that the majority of systems will be classified in the lowest risk bin, which carries no additional treatment requirements. Systems classified in higher risk bins must provide 90 to 99.7 percent (1.0 to 2.5-log) additional reduction of *Cryptosporidium* levels. The regulation specifies a range of treatment and management strategies, collectively termed the “microbial toolbox,” that systems may select to meet their additional treatment requirements. All unfiltered systems must provide at least 99 or 99.9 percent (2 or 3-log) inactivation of *Cryptosporidium*, depending on the results of their monitoring.

Monitoring: *Cryptosporidium* monitoring by large systems (serving at least 10,000 people) will begin six months after the LT2ESWTR is finalized and will last for a duration of two years. Small systems (serving less than 10,000 people) are on a delayed schedule and will start monitoring when the required large system monitoring is finished. To reduce monitoring costs, small filtered systems will initially conduct one year of monitoring for *E. coli*, which is a bacterium that is less expensive to analyze than *Cryptosporidium*. These systems will be required to monitor for *Cryptosporidium* for

one year only if their *E. coli* results exceed specified triggering concentrations. Systems must conduct a second round of monitoring beginning six years after the initial bin classification. Systems may grandfather equivalent previously collected data in lieu of conducting new monitoring, and systems are not required to monitor if they provide the maximum level of treatment required under the rule.

Other requirements: The LT2ESWTR proposal also contains disinfection profiling requirements to ensure that systems maintain protection against microbial pathogens as they take steps to reduce the formation of DBPs. These requirements are needed because EPA is concurrently developing a Stage 2 Disinfection Byproducts Rule that will establish more stringent standards for certain DBPs. Disinfection profiling involves systems assessing the level of disinfection they currently provide and then determining the impact that a proposed change in their disinfection practice would have on this level. Additionally, the proposed LT2ESWTR has requirements that address risk in uncovered finished water storage facilities, which are subject to contamination if not properly managed or treated.

The LT2ESWTR proposal reflects a consensus Agreement in Principle of the Stage 2 Microbial and Disinfection Byproducts Federal Advisory Committee.

Environmental and Public Health Benefits

The LT2ESWTR will improve the control of *Cryptosporidium* and other microbiological pathogens in drinking water systems with the highest risk levels. EPA estimates that full implementation of the LT2ESWTR will reduce the incidence of cryptosporidiosis - the gastrointestinal illness caused by ingestion of *Cryptosporidium* - by 256,000 to 1,019,000 cases per year, with an associated reduction of 37 to 141 premature deaths. The additional *Cryptosporidium* treatment requirements of the LT2ESWTR will also reduce exposure to other microbial pathogens, such as *Giardia*, that co-occur with *Cryptosporidium*. Additional protection from microbial pathogens will come from the provisions of this regulation that address disinfection profiling and uncovered finished water storage facilities, though these benefits have not been quantified.

Cost of the Regulation

The LT2ESWTR will result in increased costs to public water systems and States. The mean annualized present value costs of the LT2ESWTR are estimated to range from approximately \$73.5 to \$111 million (using a three percent discount rate). Public water systems will bear approximately 99 percent of this total cost (\$72.5 to \$110 million total annualized), with States incurring the remaining 1 percent (\$0.9 to \$1.0 million total annualized). The average annual household cost is estimated to be \$1.07 to \$1.68 per year, with 98 to 99 percent of households experiencing annual costs of less than \$12 per year.

How to Get Additional Information

For general information on the LT2ESWTR, contact the Safe Drinking Water Hotline, at (800) 426-4791. For copies of the Federal Register notice of the proposed regulation or technical fact sheets, visit the EPA Safewater website, www.epa.gov/safewater/lt2/index.html. The Safe Drinking Water Hotline is open Monday through Friday, excluding legal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time.

I-A.4 MCL and MCLG

I-A.4.a What is the revised arsenic MCL?

The Final Rule establishes an arsenic MCL of 0.01 mg/L (10 µg/L or 10 ppb) (40 CFR 141.62(b)(16)). The compliance date is January 23, 2006 (40 CFR 141.6(j)). A special rule requirement was published in the Arsenic Rule, “Arsenic sampling results will be reported to the nearest 0.001 mg/L (40 CFR 141.23(i)(4)),” to demonstrate that EPA clearly intended 10 ppb (0.010 mg/L) to be used for determining compliance.

I-A.4.b What is the new arsenic MCLG?

The Rule also finalizes an MCLG for arsenic of 0 mg/L (40 CFR 141.51(b)).

I-A.5 Benefits of the Arsenic Rule

I-A.5.a What are the benefits of lowering the arsenic MCL?

EPA estimated in the Economic Analysis (EPA 815-R-00-026) that reducing arsenic from 50 ppb (0.050 mg/L) to 10 ppb (0.010 mg/L) would prevent:

- More than 19-31 cases of, and 5-8 deaths from, bladder cancer each year;
- More than 19-25 cases of, and 16-22 deaths from, lung cancer each year; and,
- A number of cases of cancerous and noncancerous diseases, such as skin cancer and heart disease.

I-A.6 Record Keeping

I-A.6.a What records are primacy States required to keep?

The standard record keeping requirements for primacy States under the SDWA apply to the Arsenic Rule (40 CFR 142.14). Each State that has primary enforcement responsibility must 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. States must keep the following records for the stated period of time:

- Certifications of compliance with the public notification (PN) requirements received from PWSs, copies of the public notices received from PWSs, and records of any State determinations establishing alternative PN requirements for three years (40 CFR 142.14(f)).