



# Federal Register

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**Part IV**

**Environmental  
Protection Agency**

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**40 CFR Parts 141 and 142  
National Primary Drinking Water  
Regulations for Lead and Copper: Short-  
Term Regulatory Revisions and  
Clarifications; Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 141 and 142**

[EPA-HQ-OW-2005-0034; FRL-8476-5]

RIN 2040-AE83

**National Primary Drinking Water Regulations for Lead and Copper: Short-Term Regulatory Revisions and Clarifications**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** EPA is finalizing seven targeted regulatory changes to the National Primary Drinking Water Regulations (NPDWR) for lead and copper. This final rule strengthens the implementation of the Lead and Copper Rule (LCR) in the following areas: monitoring, treatment processes, public education, customer awareness, and lead service line replacement. These changes provide more effective protection of public health by reducing exposure to lead in drinking water.

**DATES:** This final rule is effective on December 10, 2007.

The compliance date for all of this final rule's provisions is 180 days after promulgation except if by that date, the primacy State has not adopted this rule, in which case compliance with this final rule is required the earlier of either the State's adoption of the rule, or two years after December 10, 2007. For purposes of judicial review, this rule is promulgated as of October 10, 2007 as provided in 40 CFR 23.7.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-HQ-OW-2005-0034. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) Web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Water Docket, EPA Docket Center, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The 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 Public Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426.

**FOR FURTHER INFORMATION CONTACT:** For technical inquiries, contact Jeffrey Kempic, Office of Ground Water and Drinking Water (MC 4607M), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 564-4880; e-mail address: [kempic.jeffrey@epa.gov](mailto:kempic.jeffrey@epa.gov). For regulatory inquiries, contact Eric Burneson, Office of Ground Water and Drinking Water (MC 4607M), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 564-5250; e-mail address: [burneson.eric@epa.gov](mailto:burneson.eric@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. General Information**

*A. Does This Action Apply to Me?*

Entities potentially affected by the Lead and Copper Rule Short-Term Regulatory Revisions final rulemaking are public water systems (PWSs) that are classified as either community water systems (CWSs) or non-transient non-community water systems (NTNCWSs). Regulated categories and entities include:

Category	Examples of regulated entities
Industry .....	Privately-owned CWSs and NTNCWSs.
State, Tribal, and local governments.	Publicly-owned CWSs and NTNCWSs.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by this action, you should carefully examine the definition of "public water system" in § 141.2, the section entitled "Coverage" of § 141.3, and the applicability criteria in § 141.80(a) of title 40 of the Code of Federal Regulations. If you have questions regarding the applicability of this action to a particular entity, consult one of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

*B. Abbreviations Used in This Document*

- AL: Action Level
- CCR: Consumer Confidence Report
- CFR: Code of Federal Regulations
- CWS: Community Water System
- CWSS: Community Water System Survey
- EPA: Environmental Protection Agency

- ICR: Information Collection Request
- LCR: Lead and Copper Rule
- LCRMR: Lead and Copper Rule Minor Revisions
- LSL: Lead Service Line
- LSLR: Lead Service Line Replacement
- LT2: Long Term 2 Enhanced Surface Water Treatment Rule
- MCLG: Maximum Contaminant Level Goal
- MDL: Method Detection Limit
- NDWAC: National Drinking Water Advisory Council
- NPDWR: National Primary Drinking Water Regulation
- NTNCWS: Non-Transient Non-Community Water System
- O&M: Operation and Maintenance costs
- OMB: Office of Management and Budget
- PE: Public Education
- POE: Point-of-Entry Devices
- POU: Point-of-Use Devices
- RFA: Regulatory Flexibility Act
- RIA: Regulatory Impact Analysis
- SBA: Small Business Administration
- SDWA: Safe Drinking Water Act
- SDWIS/FED: Safe Drinking Water Information System, Federal Version
- UMRA: Unfunded Mandates Reform Act

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## I. Background

### A. What Is the Statutory Authority for the Lead and Copper Rule?

The Safe Drinking Water Act (SDWA) (42 U.S.C. 300f et seq.) requires EPA to establish maximum contaminant level goals (MCLGs) and National Primary Drinking Water Regulations (NPDWRs) for contaminants that may have an adverse effect on the health of persons, may occur in public water systems at a frequency and level of public concern, and in the sole judgment of the Administrator, regulation of the contaminant would present a meaningful opportunity for health risk reduction for persons served by public water systems (section 1412(b)(1)(A)). The 1986 amendments to SDWA established a list of 83 contaminants for which EPA is to develop MCLGs and NPDWRs, which included lead and copper. The 1991 NPDWR for Lead and Copper (56 FR 26460, U.S. EPA, 1991a) fulfilled the requirements of the 1986 SDWA amendments with respect to lead and copper.

### B. What Is the Regulatory History of the Lead and Copper Rule?

EPA promulgated maximum contaminant level goals (MCLGs) and NPDWRs for lead and copper (LCR) on June 7, 1991. The goal of the LCR is to provide maximum human health protection by reducing lead and copper levels at consumers' taps to as close to the MCLGs as is feasible. To accomplish this goal, the LCR establishes requirements for community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) to optimize corrosion control and conduct periodic monitoring. Systems are required to perform public education when there are action level exceedances at more than 10 percent of the taps that are sampled, treat source water if it contributes significantly to lead and copper levels at the tap, and replace lead service lines in the distribution system if the lead level at the tap continues to exceed the action level after optimal corrosion control has been installed. EPA proposed minor revisions to the LCR (LCRMR) in 1996 (60 FR 16348, U.S. EPA 1996a) and finalized these minor revisions on January 12, 2000 (65 FR 1950, U.S. EPA 2000b). These minor revisions streamlined the requirements of the LCR, promoted consistent national

implementation, and reduced the reporting burden to affected entities. These minor revisions also addressed the areas of optimal corrosion control demonstration, lead service line replacement requirements, public education requirements, monitoring requirements, analytical methods, reporting and recordkeeping requirements, and special privacy considerations. The LCRMR did not change the action level, MCLG, or the rule's basic requirements.

### *C. Why Is EPA Promulgating the LCR Short-Term Regulatory Revisions?*

The purpose of the Lead and Copper Rule (LCR) is to protect populations from exposure to lead and copper in drinking water and reduce potential health risks associated with lead and copper. In 2004, the District of Columbia experienced incidences of elevated drinking water lead levels, which prompted EPA to initiate a comprehensive national review of the LCR to evaluate the implementation and effectiveness of the rule. The purpose of the review was to determine whether elevated drinking water lead levels were a national problem; if a large percentage of the population received water that exceeded the lead action level; if a significant number of systems failed to meet the action level; how well the existing LCR worked to reduce drinking water lead levels; and if the regulation is currently being effectively implemented, especially with respect to monitoring and public education requirements. EPA's comprehensive review consisted of several elements, including a series of workshops designed to solicit issues, comments, and suggestions from stakeholders on particular issues; a review of monitoring data to evaluate the effectiveness of the LCR; and a review of the LCR implementation by States and water utilities. As a result of this multi-part review, EPA identified seven targeted rule changes intended to strengthen the implementation of the LCR in the areas of monitoring, customer awareness, and lead service line replacement in the short-term. The short-term changes finalized in this action are expected to ensure and enhance protection of public health by reducing exposure to lead in drinking water. This final rule does not amend the portion of the regulations related to copper, however provisions addressing copper will be considered for future revisions to the rule. EPA will propose any future regulatory changes under a separate regulatory action.

## **II. What Do the LCR Short-Term Regulatory Revisions Require?**

### *A. Minimum Number of Samples Required*

#### 1. Proposed Revision

The proposed LCR Short-Term Regulatory Revisions (71 FR 40828, July 18, 2006, U.S. EPA 2006a) clarified and maintained that five samples per monitoring period is the minimum number of samples required for systems serving 100 people or fewer.

#### 2. Final Revision

EPA's final revision to the minimum number of samples requirement adds a provision that gives States the discretion to allow water systems with fewer than five taps for human consumption to collect one sample per tap. Under this alternate sampling schedule, the sample with the highest test result will be compared to the action level to determine compliance. While fewer samples may be taken, comparing the single highest level provides public health protection since it does not allow water systems to ignore a potential problem by taking repeat samples at taps that have low lead results when they get a high sample result. See section III.A for more information on this regulatory revision and also for EPA's response to significant public comments on the proposal. A complete response to all comments on this rule is found in the Lead and Copper Docket at [www.regulations.gov](http://www.regulations.gov).

### *B. Definitions for Compliance and Monitoring Periods*

#### 1. Proposed Revision

EPA's proposed revision clarified the "compliance period" as the three year calendar period as defined at § 141.2 and the "monitoring period" as the specific period in which water systems must conduct required monitoring. EPA also proposed to revise several sections of the LCR to more precisely define when the "start date" for the compliance calendar begins. EPA also proposed to clarify that systems on reduced monitoring schedules must monitor during four consecutive months, and systems on triennial monitoring must monitor once every 3 calendar years, with a similar requirement for small systems with a monitoring waiver to ensure they monitor every 9 years.

#### 2. Final Revision

EPA is maintaining the revision as proposed for defining the compliance and monitoring periods. Based on commenter concerns with implementing

the clarified definition of the term "monitoring period," EPA is allowing States flexibility in extending the timeframe to complete public education activities after an action level (AL) exceedance. For more information and EPA's response to significant public comments, see section III.B of this notice.

### *C. Reduced Monitoring Criteria*

#### 1. Proposed Revision

EPA proposed a revision that would disallow water systems that exceeded the lead action level from initiating or remaining on a reduced lead and copper monitoring schedule based solely on the results of their water quality parameter (WQP) monitoring. This proposed change would modify the reduced monitoring provisions at § 141.86(d)(4).

#### 2. Final Revision

EPA is maintaining the revision as proposed for reduced monitoring criteria. For more information and EPA's response to significant public comments, see section III.C of this notice.

### *D. Advanced Notification and Approval Requirements for Water Systems That Intend To Make Any Long-Term Change in Water Treatment or Add a New Source of Water*

#### 1. Proposed Revision

EPA proposed to amend several sections of the *Code of Federal Regulations (CFR)* to require water systems to obtain prior approval by the State to add a new source of water or change a treatment process prior to implementation.

#### 2. Final Revision

EPA is maintaining the revision as proposed for advanced notification and approval requirements with a slight modification to clarify EPA's intention. In finalizing this regulatory revision, EPA is clarifying the requirements for advance notification and approval to apply to those treatment changes that would have *long-term* impacts on water quality. EPA has provided examples of long-term treatment changes in § 141.90(a)(3) of this final rule. EPA believes that this clarification will prevent water systems from notifying the State and requesting approval for changes that are operational in nature or made on a daily basis. See section III.D of this notice for more information regarding this regulatory revision and EPA's response to significant public comments on this issue.

*E. Requirements To Provide a Consumer Notice of Lead Tap Water Monitoring Results to Consumers Who Occupy Homes or Buildings That Are Tested for Lead*

1. Proposed Revision

EPA proposed revisions to require water systems to notify consumers in homes or buildings tested for lead of their results. Specifically, systems must provide written notification to household occupants within 30 days after the water system learns the results for samples collected from that household and post or otherwise notify occupants of non-residential buildings of the results of lead testing. EPA also indicated that the consumer notification must contain an explanation of lead health effects, list steps consumers can take to reduce lead drinking water exposure, provide utility contact information, and include the lead maximum contaminant level goal or MCLG, lead action level, and definitions of each from § 141.153(c)(1).

2. Final Revision

EPA is maintaining the revision as proposed to consumer notification language. EPA is also adding language to § 141.85(d)(4), which provides an example of an alternative mechanism of consumer notification for NTNCWSs. For more information and EPA's response to significant public comments, see section III.E of this notice.

*F. Public Education Requirements*

1. Proposed Revision

EPA proposed to revise the public education requirements of the LCR in the areas of message content, delivery requirements, and the Consumer Confidence Report (CCR). The proposed revisions would modify the mandatory language in public education to make it shorter and easier to understand; require water systems to deliver material to new organizations, engage in new outreach activities, post lead information on water bills, issue two press releases during periods of lead action level exceedance; and modify the CCR such that all CWSs with lead detects above the method detection limit (MDL) of 0.001 mg/L would have to include information about the risks of lead in drinking water in the CCR on a regular basis.

2. Final Revision

EPA is maintaining the proposed revisions to the public education requirements, but is adding a provision that water systems must submit public education language for State review and

approval at the option of the State. Generally, EPA is retaining the delivery requirements as proposed, but has made modifications to address challenges with water system jurisdiction and delivery of materials. EPA is now requiring that all systems have a simple informational statement about lead in their CCR because the actual level of lead exposure for drinking water varies between individual homes and levels detected by the system for compliance and would not necessarily reflect the risk faced by consumers. EPA also realizes there are situations where the most vulnerable populations may be exposed to elevated levels of lead for many months before being notified. In addition, this simplifies compliance tracking and enforcement of this requirement. See section III.F of this notice for more information on the final public education requirements and for EPA's responses to significant public comments.

*G. Reevaluation of Lead Service Lines Deemed Replaced Through Testing*

1. Proposed Revision

EPA proposed to require water systems to reevaluate lead service lines classified as "replaced" through testing if they resume lead service line replacement programs.

2. Final Revision

EPA is maintaining the revision as proposed for reevaluation of lead service line replacement, but is adding a provision to allow an alternative time schedule for systems that have completed a 15-year replacement program before re-exceeding the lead action level. For more information and EPA's response to significant public comments, see section III.G of this notice.

**III. Discussion of the Lead and Copper Rule Short-Term Regulatory Revisions and Clarifications**

*A. Minimum Number of Samples Required*

1. How Is EPA Revising This Rule?

EPA is clarifying the minimum sampling requirement for small water systems that have fewer than five taps by making revisions to § 141.86(c). These revisions include a clarification that the term "taps" means "taps that can be used for human consumption," as opposed to outlets such as hose bibs or taps at utility sinks. In addition, the revisions clarify what a system must do to meet the minimum five number of samples requirement when the system physically has fewer than five taps. In

this situation, the water system must sample all taps at least once and then take repeat samples on different days until a total of five samples are obtained.

EPA is, however, adding a provision to § 141.86(c) that gives States the discretion to allow water systems that have fewer than five taps, to collect one sample per tap that can be used for human consumption. To qualify for this provision, the water system must make a request to the State in writing and the State must approve the request in writing or by onsite verification. Under this alternate sampling schedule for all water systems collecting fewer than five samples, the sample with the highest test result will be compared to the lead action level to determine compliance. If any sample result is above the action level, the system is deemed to be exceeding the action level and must complete compliance actions (e.g., public education, corrosion control treatment, and lead service line replacement). EPA is adding regulatory text to § 141.80 to describe this new compliance determination. The alternate sampling schedule may also be applicable for water systems that are on reduced monitoring and EPA is adding a provision to § 141.86(d)(4)(i) for those systems. The provision allows the water system to reduce sampling frequency to once per year, but in no case can the number of samples required be reduced below the minimum of one sample per tap that can be used for human consumption.

2. What Is EPA's Rationale for the Minimum Number of Samples Required Revisions?

In the original Lead and Copper Rule of 1991, the term "site" is used to refer to the number of samples collected, and there has been confusion as to whether "site" refers to taps or physical locations. EPA is clarifying that sampling "sites" refer to "taps that can be used for human consumption." The phrase "that can be used for human consumption," is being added to the regulations to ensure that samples are taken from taps which would pose the highest risk for exposure to lead, rather than from taps that are not typically used for human consumption.

EPA is also making clarifications for water systems that have fewer than five taps that can be used for human consumption. In the proposal for this rule, EPA maintained that systems must take a minimum of five samples in order to adequately capture the variability of lead levels and that it was more cost effective for small systems to take more samples than install corrosion control or

source treatment based on a small pool of samples taken (71 FR 40828 at 40831, U.S. EPA, 2006a). EPA is maintaining that systems must take a minimum of five samples as part of this rule. However, EPA is also giving States the discretion to offer an alternative requirement, on which it requested comment in the proposed rule, described as follows.

EPA requested comment on an alternative sampling requirement for NTNCWS with fewer than five taps that can be used for human consumption. The water systems would be required to sample 100 percent of the taps that can be used for human consumption. Under the alternative sampling provision, systems collecting fewer than five samples will compare the sample with the highest result to the action level to determine if they must complete compliance actions such as public education, corrosion control treatment installation, and/or lead service line replacement. EPA believes that requiring systems to use the highest sample result to determine compliance is health protective because it does not allow water systems to take repeat samples at taps that have low levels of lead when they get a high sample result. In addition, the alternative sampling schedule alleviates the cost burden associated with taking repeat samples. After evaluating comments, EPA has determined that the alternative sampling provision will also be made available to CWS with fewer than five taps for human consumption, such as washeterias in Alaska and Navajo hauling points.

### 3. What Were the Key Issues Raised by Commenters on the Minimum Number of Samples Required Revisions and EPA's Response to These Issues?

The majority of commenters did not agree with EPA's proposal to require water systems with fewer than five taps to collect repeat samples from the same taps and they supported the idea of allowing small water systems to sample 100 percent of taps available for human consumption. Commenters stated that repeat sampling would be a cost burden imposed on the smallest sized systems. Some commenters also stated that repeat sampling was an unfair requirement for small systems since large systems are not required to take repeat samples or sample all of their available taps for compliance. To address these concerns, EPA is giving discretion to the States to allow small systems with fewer than five taps to take fewer than five samples. EPA stresses, however, that the requirement is not less stringent, since systems collecting

fewer than 5 samples must compare the sample with the highest concentration to the action level. By taking fewer than 5 samples, systems with fewer than 5 taps are giving up the opportunity to take repeat samples at taps with low lead results.

Two States supported not changing the minimum number of samples requirement because of the administrative burden of verifying available taps. Although other commenters believed that there was no better statistical representation than sampling 100 percent of taps in a system, one of the States stated that it is statistically "risky" to base compliance on a single sample since lead levels vary greatly even with corrosion control treatment in place. The other State that did not favor the alternative suggested that EPA offer States discretion to allow the alternative of sampling 100 percent of taps. EPA agrees with the State and has made changes in this rule to reflect this suggestion. Because the alternative is not mandatory, those States which do not agree with the provision are not required to allow water systems to utilize the alternative sampling schedule.

In their comments, a few States indicated that small systems with fewer than 5 taps are "primarily" NTNCWSs, thus indicating that some are CWSs. The commenters who supported this approach did not provide any reason for limiting this to NTNCWSs and in fact, the reasons for supporting the alternative would apply equally well to any small system with fewer than 5 taps. As a result, States can approve the alternative monitoring for both CWSs and NTNCWSs with fewer than five taps. In expanding this alternative monitoring to CWSs, EPA emphasizes that this is only allowed for systems such as washeterias in Alaska and Navajo hauling points, where there are physically fewer than five taps within the system. Small CWSs with more than five taps cannot use this alternative monitoring to take fewer than the required number of samples pursuant to the table in § 141.86(c).

### *B. Definitions for Compliance and Monitoring Periods*

#### 1. How Is EPA Revising This Rule?

EPA is making a number of clarifications throughout the LCR to clearly explain when compliance and monitoring periods begin and end. In addition, the Agency is also clarifying the timing of actions following a lead or copper action level exceedance and the

timing of monitoring activities with regard to reduced monitoring schedules.

EPA is clarifying that the term "compliance period" is a three-year calendar year period within a nine-year compliance cycle, which is consistent with the definition in § 141.2. EPA is also defining the term "monitoring period" as the specific time period during which a water system must perform the required monitoring (e.g., June–September).

In this case and consistent with these definitions, systems will be deemed to be exceeding the action level as of the date on which the monitoring period ended (i.e., on September 30). EPA is modifying several sections of the LCR that describe the timing of actions after an action level exceedance, including corrosion control treatment steps in § 141.81(e), source water monitoring and treatment recommendations to the State in § 141.83(a), lead service line replacement in § 141.84(b)(1), public education for community water systems in § 141.85(b)(2) and for non-transient non-community water systems in § 141.85(b)(4), source water monitoring requirements in § 141.88(b) and (d), and the reporting requirements in § 141.90(a) and (e).

Also, for systems on reduced monitoring, the monitoring period is from June to September or some other consecutive four-month period during normal operation when the highest lead levels are most likely to occur. EPA has modified the reduced monitoring provisions in § 141.86(d)(4)(iv)(A) to reflect this requirement. In addition, the Agency is clarifying when a system may begin reduced monitoring in § 141.86(d)(4)(i) and (ii), as well as when a system on reduced monitoring must resume standard monitoring according to § 141.86(d)(4)(vi)(B). In addition, the timing for water quality parameter monitoring is now more clearly defined in § 141.87(d) and (e).

Lastly, systems on triennial monitoring must conduct their monitoring during a four-month consecutive period every three years and are therefore not allowed to monitor during Year 1 of the first compliance period and during Year 3 of the second compliance period. The Agency is modifying the reduced monitoring provisions for lead and copper sampling in § 141.86(d)(4)(iii), for water quality parameter sampling in § 141.87(e)(2)(ii), and for triennial source water monitoring in § 141.88(d)(1)(i). EPA is making a similar change for small systems with monitoring waivers to ensure that they monitor every nine years, which modifies §§ 141.86(g)(4)(i) and 141.88(e).

## 2. What Is EPA's Rationale for the Compliance and Monitoring Period Definition Revisions?

EPA is making revisions regarding monitoring and compliance periods in order to clarify the meaning of these terms, to address the issues associated with the timing of actions following a lead or copper action level exceedance, and to address the timing of samples that should be taken under reduced monitoring schedules.

Under the previous regulations, there was uncertainty about when a system was determined to have exceeded the action level and the corresponding deadlines for completing corrosion control studies, lead service line replacement and public education (e.g., end of December or the end of September for systems monitoring June to September). The changes made in this final rule clarify that a system is deemed to be exceeding the action level on the last day of the monitoring period in which the exceedance occurred.

The clarified timing of actions following a lead or copper action level exceedance is also intended to ensure that the system and the State begin actions to reduce exposure (e.g., corrosion control, public education, and lead service line replacement) as soon as possible. The deadlines for completing these follow-up activities will be calculated from the date the system is determined to be exceeding the action level (i.e., end of the monitoring period), with some discretion for States to extend the deadline for completing public education activities on a case-by-case basis.

The timing of samples that should be taken for systems on reduced monitoring schedules ensures that States and systems have an accurate assessment of the effectiveness of corrosion control. This relates to both the duration and frequency of monitoring. Under this requirement, samples must be taken during four consecutive months. For most systems, this will mean monitoring during June to September during one of the three years in the three-year compliance period. For systems where the State has approved some other 4-month period, all samples must be taken during that 4-month period. Sampling during a short, fixed time period will allow the system to more accurately evaluate the effectiveness of the corrosion control treatment than will collecting the same number of samples over a 3-year period. In addition, systems on triennial monitoring are also not allowed to monitor during Year 1 of the first compliance period and during Year 3 of

the second compliance period because that would allow five years to pass between monitoring rounds. Similarly, systems on nine-year monitoring waivers are not allowed to monitor during Year 1 of the first nine-year period and Year 9 of the second nine-year period.

## 3. What Were the Key Issues Raised by Commenters on the Compliance and Monitoring Period Definition Revisions and EPA's Response to These Issues?

Most commenters agreed with the definitions of monitoring and compliance periods in the proposed revisions, but some had implementation concerns. Two commenters agreed that four months is reasonable for monitoring activities, including distribution, collection, and initiation of lab processing. However, several expressed concern that the clock for compliance actions should not start until compliance has been determined after the end of the monitoring period or that States should be given flexibility to alter compliance action schedules. In response to these commenters, EPA is modifying § 141.85(b)(3)(iv) to allow States flexibility in extending the timeframe on a case-by-case basis to complete public education activities after an action level exceedance. However, systems must start these activities and States must approve in writing any deadline extension within 60 days of the end of the monitoring period in which the exceedance occurred. This ensures that the system and the State begin public education actions to reduce exposure as soon as possible, but allows these actions to continue past the 60-day timeframe as needed for effective implementation. States should still make every effort to get public water systems to complete their public education activities within 60 days after the end of the monitoring period.

In addition, one commenter indicated that under the current version of the LCR, small and medium systems exceeding the action level must perform water quality parameter monitoring within the same monitoring period. The commenter then stated that the systems may not obtain their sample results and identify that they have exceeded the action level until after the monitoring period has ended. As a result, this requirement effectively sets systems up for water quality parameter monitoring violations. In the 1991 LCR, EPA recognized that many factors influence water corrosivity and because of this, decided to require small and medium water systems detecting lead and/or copper above the action levels to

measure for water quality parameters (56 FR 26460 at 26526, U.S. EPA, 1991a). However, EPA recognizes that under the monitoring period clarifications made in this final rule, systems on reduced monitoring that exceed the action level will most likely not be taking water quality parameters and would have automatically incurred a violation based on the requirement in § 141.87(d). The end of the 6-month period in which small and medium water systems must sample for water quality parameters would have corresponded to the end of the 4-month monitoring period in which they must sample for lead and copper under § 141.86(d)(4). For example, a system that takes lead and copper tap samples between June and September and exceeds the action level, would only have until the end of September to take all of their water quality parameters. The system would most likely not be aware of the exceedance until the end or after the end of the monitoring period and would incur a violation for not having already completed water quality parameter monitoring. Therefore, EPA is revising the requirement in § 141.87(d) to require the start of the 6-month period in which the system must take water quality parameters to correspond with the start of the 4-month monitoring period in which they must sample for lead and copper under § 141.86(d)(4). This revision will allow small and medium systems on reduced monitoring that exceed the action level two months to take water quality parameter samples after the end of the 4-month monitoring period in which they had to take lead and copper tap samples. For example, a system that takes lead and copper tap samples between June and September and exceeds the action level, would have until the end of November to take water quality parameter samples. This provision is intended primarily for systems that are not aware of the exceedance until the end of the lead and copper monitoring period. Those systems that are aware of the action level exceedance earlier in the 4-month lead and copper monitoring period should conduct their monitoring once they become aware of the exceedance to better capture the water quality conditions at the time of the exceedance.

### C. Reduced Monitoring Criteria

#### 1. How Is EPA Revising This Rule?

EPA is no longer allowing water systems that exceed the lead action level to initiate or remain on a reduced lead and copper monitoring schedule based solely on the results of their water

quality parameter monitoring. This change modifies the reduced monitoring provisions in § 141.86(d)(4), specifically subsections (ii), (iii) and (iv). These sections discuss when small and large water systems may reduce the required number of lead and copper samples in accordance with paragraph (c) of § 141.86.

## 2. What Is EPA's Rationale for the Reduced Monitoring Revisions?

EPA is making this change because the Agency believes that reduced monitoring should only be permitted where it has been demonstrated that corrosion control treatment is both effective and reliable. Compliance with water quality parameters alone may not always indicate that corrosion control is effective.

Monitoring lead levels is particularly critical for systems that are exceeding the lead action level for several reasons. First, it will assist systems in evaluating the effectiveness of corrosion control treatment. The rule previously allowed systems eligibility for reduced monitoring even if they exceeded the lead or copper action level if they could demonstrate their corrosion control treatment was effective by meeting the State-designated water quality parameters. However, as shown by the events in the District of Columbia and as stated above, compliance with water quality parameters alone may not always indicate that corrosion control is effective, especially after a treatment or source change. Continued exceedance of the lead action level may indicate that a particular method of corrosion control treatment is not effective for a particular system and knowledge of this continued exceedance may result in the system implementing an alternative and more effective corrosion control treatment strategy. In addition, a system must know if it continues to exceed the lead action level after installing corrosion control treatment in order to determine how long its lead service line replacement requirements remain in effect. Continued understanding of the range of lead levels detected within the system can also help the system implement an effective public education program.

Second, continued monitoring will allow primacy agencies to gain a more accurate picture of lead levels in drinking water in their States. Many systems within States share water sources, have similar treatment technologies, and have similar materials in their distribution systems. States and other primacy agencies with knowledge of effective corrosion control for one system may be able to aid other systems

within their jurisdiction in lowering lead levels in water. Having a more accurate characterization of lead levels in drinking water that is exceeding the action level will allow States and systems to better inform consumers and, thereby, create greater confidence in their efforts to reduce lead levels.

## 3. What Were the Key Issues Raised By Commenters on the Reduced Monitoring Revisions and EPA's Response to These Issues?

The majority of commenters agreed with EPA that a system must remain under the action level to continue operating on reduced monitoring. States and others supported the current requirement to allow systems that exceed the copper action level to continue on reduced monitoring if water quality parameters are met. Therefore, the Agency is not making any changes that differ from the proposal with regard to this provision.

Some commenters did feel that systems that exceed the copper action level should not be allowed to reduce their monitoring requirements. As stated in the proposal, EPA did consider requiring that all systems meet both the lead and the copper action levels as criteria for eligibility for reduced monitoring. However, the Agency determined that copper issues should be considered as part of longer term revisions to the rule. EPA also believes that adding the copper action level requirement could impose a large monitoring increase on some small and medium systems that are currently limited in their ability to reduce copper below the action level due to their source water (e.g., high alkalinity ground waters). For these systems, the States currently have flexibility in the existing rule to limit systems from proceeding to reduced lead and copper tap monitoring. Under §§ 141.86(d)(4)(ii) and 141.86(d)(4)(iii), a State may review and revise its determination to allow a system to proceed with reduced monitoring when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available. Therefore, the Agency is not requiring that systems that meet the lead action level and water quality parameter requirements must also meet the copper action level to be eligible for reduced lead and copper monitoring.

Other commenters stated that systems which make treatment changes or add new sources of water should also be required to monitor for lead and copper for two consecutive 6-month periods. Currently, § 141.86(d)(4)(vii) provides

States authority to require systems that either add a new source of water or change any water treatment to resume standard monitoring. In addition, §§ 141.81(b)(3)(iii) and 141.86(g)(4)(iii) allows the State to require any system adding a new source of water or changing any water treatment to conduct additional monitoring. EPA is not changing these requirements as part of this rule. EPA believes States should continue to have the flexibility to require systems to resume standard monitoring after making a treatment change or adding a new source of water that could impact corrosion control.

## D. Advanced Notification and Approval Requirement for Water Systems That Intend To Make Any Long-term Change in Water Treatment or Add a New Source of Water

### 1. How Is EPA Revising This Rule?

This final rule amends §§ 141.81(b)(3)(iii), 141.86(d)(4)(vii), 141.86(g)(4)(iii), and 141.90(a)(3) to require water systems to obtain prior approval by the State to add a new source of water or make any long-term change in water treatment process prior to implementation. The final regulatory language allows as much time as needed for water systems and States to consult before making these changes. To assist the State in making its determinations, EPA published a March 2007 *Simultaneous Compliance Guidance Manual for the Long Term 2 and Stage 2 DBP Rules* (US EPA, 2007b). This document will be an aid to the State in identifying those situations where optimal corrosion control can be affected by long-term changes in treatment or source water.

### 2. What Is EPA's Rationale for Advanced Notification and Approval of Long-Term Treatment Changes or Addition of New Source Revisions?

Previously, the rule required that systems notify the State within 60 days of making a change in treatment or adding a new source. EPA proposed that systems be required to provide advance notification of any change in treatment or addition of a new source and receive approval from the State prior to making the change. The final rule requires systems to provide advanced notification of any long-term change in treatment or addition of a new source and receive approval from the State before implementing the change. When a water system makes long-term changes to its treatment process or adds a new source of water, it can unintentionally affect the system's optimal corrosion control. EPA believes that State review



and approval of changes in long-term treatment or addition of a new source will provide an opportunity to minimize any potential impacts on optimal corrosion control.

For this final rule, EPA has clarified the intent of this provision by stating that it applies to long-term changes in treatment. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants (e.g., chlorine to chloramines), switching coagulants (e.g., alum to ferric chloride), and switching corrosion inhibitor products (e.g., orthophosphate to blended phosphate). Long-term changes can include dose changes to existing chemicals if the system is planning long-term changes to its finished water pH or residual inhibitor concentration. Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes.

### 3. What Were the Key Issues Raised by Commenters on the Advance Notification and Approval of Long-Term Treatment Changes or Addition of New Source Revisions and EPA's Response to These Issues?

Many commenters supported the concept of advance notification and approval of treatment changes that could affect optimal corrosion control, but were concerned that the rule language as proposed was too broad and could include daily operational changes. Commenters were concerned that review and approval of daily changes that are dictated by the raw water quality could not be done in a timely manner and could be detrimental to public health if they were covered by the advance notification and approval requirement. It was not EPA's intention to include these daily operational activities. In response, EPA has revised the final rule to require advance notification and State approval of long-term treatment changes or addition of new source. Daily dose fluctuations due to changes in raw water quality would not be considered a long-term treatment change and would not require advance notification and State approval.

EPA requested comment on whether it should revise the existing rule language on "addition of new source" to "source change," but did not propose to make this change. Many commenters stated that revising the rule to cover any source change would be too prescriptive and that this could also include daily changes. Source changes occur on a daily basis due to changes in demand

and commenters expressed concern that State review and approval of these changes could not be done in a timely manner and therefore could be detrimental to public health. EPA has retained the language of "addition of new source" in the final rule rather than use the term "source change." EPA believes that it would be difficult to define a long-term source change because the source mixture can constantly change due to demand or changes in availability of sources. EPA discussed several scenarios in the proposed rule, including switching from 100% surface water to 100% ground water, switching from 100% surface water to 50% ground water and 50% surface water, and a change in proportion of moving from 75% ground water and 25% surface water to 25% ground water and 75% surface water. EPA believes that the existing language "addition of new source" covers the first two scenarios. Notification and approval would not be necessary if the switch is repeated on an annual basis.

The optimal corrosion control treatment for systems with mixed sources (ground water and surface water) should consider the impact of changing the proportions. Section 141.87(a)(1)(i) states that the tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Both water source and water treatment methods can produce different finished water pH values or other critical water quality parameters. For example, if the finished water pH values from both the surface sources and ground water sources are very similar, then this can mitigate the impact of changing the proportions of the various sources. Systems with waters that have different finished pH values should consider monitoring at the representative sites in the distribution system after making a major change in the proportions of the sources (75% ground water to 25% ground water). EPA will provide guidance to help systems identify source water changes (such as changing the mixture) that could impact optimal corrosion control.

Some commenters stated that State approval of the treatment change or addition of a new source is not necessary and would delay changes needed by the system. EPA disagrees with these commenters. EPA believes that clarifying the revision to focus on long-term treatment changes will address concerns that this requirement

would affect a system's ability to address daily water quality treatment changes. State notification and approval of long-term treatment changes is important because these changes could adversely impact optimal corrosion control. As EPA noted in the proposed rule, this approach allows the State to evaluate the change prior to implementation and, if needed, to design a monitoring program to ensure that optimal corrosion control is maintained after the change. EPA expects that States will review and approve long-term treatment changes and additions of new sources expeditiously and will avoid unnecessary delays to long-term changes that are needed by the system.

### *E. Requirements To Provide a Consumer Notice of Lead Tap Water Monitoring Results to Consumers Who Occupy Homes or Buildings That Are Tested for Lead*

#### 1. How Is EPA Revising This Rule?

EPA is amending the public education requirements described in § 141.80(g) and is adding a new notification requirement to § 141.85(d) that will require water systems to provide consumers who occupy homes or buildings that are part of the utility's monitoring program with the testing results when their drinking water is tested for lead. EPA is also adding a reporting requirement to § 141.90(f) for systems to certify they have completed this new consumer notification requirement.

#### 2. What Is EPA's Rationale for the Consumer Notice of Lead Tap Water Monitoring Results Revisions?

Although some utilities may have provided customers with the results of analyses conducted to meet requirements of the regulations, utilities were not previously required by EPA to notify occupants of the lead levels found in their drinking water. While samples are primarily collected to evaluate the effectiveness of corrosion control or to evaluate the corrosivity of the utility's water across the entire service area, the results of lead monitoring can provide useful information to the occupants of the household from which the samples were taken. Occupants can evaluate the results of lead tests for their drinking water and use that information to inform any decisions they might make to take action to reduce their exposure to lead in drinking water.

### 3. What Were the Key Issues Raised by Commenters on the Consumer Notice of Lead Tap Water Monitoring Results Revisions and EPA's Response to These Issues?

EPA received a range of comments regarding the inclusion of the maximum contaminant level goal (MCLG) and the action level for lead, along with the definitions for these two terms from § 141.153(c) in the consumer notice of lead tap results. Some commenters stated that listing the MCLG was unnecessary and would be confusing. However, other commenters expressed that it was appropriate to include the MCLG and many commenters stated that there should be some reference to the action level. Some of these commenters stated that the consumer notice should just indicate whether the result was above or below the action level, while others stated that there should be an acknowledgment that the action level is not health-based. Still others wanted EPA to provide a level of lead that is a health concern along with information on how to interpret results.

EPA disagrees that the MCLG is unnecessary and would cause confusion, since the definition of the term in § 141.153(c)(1) clearly states that it is the level of a contaminant in drinking water below which there is no known or expected risk to health, allowing for a margin of safety. In 1991, EPA set the MCLG for lead as zero based on the following considerations: (1) The occurrence of a variety of low level health effects for which it is difficult to identify clear threshold exposure levels below which there are no risks of adverse health effects; (2) the Agency's policy goal that drinking water should contribute minimal lead to total lead exposures because a portion of the sensitive population already exceeds acceptable blood lead levels; and (3) the classification of lead as a probably human carcinogen (56 FR 26460 at 26467, U.S. EPA 1991a). EPA believes that individuals who have their homes tested for lead should be aware of the levels below which there is no known or expected risk to health and should have the knowledge that there are steps they can take to further reduce exposure. Therefore, this final rule includes the provision to include the MCLG along with its definition from § 141.153(c)(1).

EPA agrees that there should be a reference to the lead action level, since this is the level at which systems are required to take actions (e.g., public education, corrosion control treatment, lead service line replacement). This rule includes a requirement to include the

term "action level" and its definition from § 141.153(c)(3). EPA is not requiring that systems include an explicit sentence that the level is not health based, but notes that this rule does not preclude a system from adding such a statement to the notice.

In response to providing a level of lead that is a health concern, EPA believes the current MCLG is the best estimate below which there is no known or expected risk to health from lead in drinking water. EPA is currently working toward better defining the correlation between drinking water lead levels and adverse health effects. With regard to how to interpret results, EPA believes that including the required information in the consumer notice allows consumers to make informed decisions regarding their lead levels and provides actions they might take to reduce their lead exposure.

In addition, some commenters expressed confusion about who would receive the result where testing occurred in buildings with many units, such as apartment buildings. Many of these commenters cited landlord-tenant issues that may arise by sending results to all residents. EPA's intent in the proposal was that the sample results go to the individual residence where the sample was taken and this final revision clarifies the intent was not to extend notification of the result from one unit to all units in a building.

A number of commenters were concerned with the burden on non-transient non-community water systems which, they presumed, would have to notify all users of a facility. It was not EPA's intent to have these systems notify all of their users of the results of testing, but to have them post results in a public place under an alternative mechanism. In order to clarify this intent, EPA has added language to § 141.85(d)(4) that provides an example of an alternative mechanism as follows: "For example, upon approval by the State, a non-transient non-community water system could post the results on a bulletin board in the facility to allow users to review the information."

Some states were concerned about the burden associated with tracking and enforcement of this requirement. In response, EPA is requiring in this final rule that systems certify to the State that notification was sent consistent with the requirements in § 141.85(d), as part of the reporting requirements for public education in § 141.90(f).

Lastly, one commenter stated that the consumer notice requirement needed its own unique citation, because citing it under § 141.85 implied that it only applied to the public education

activities triggered by a lead action level exceedance. The proposed revisions did contain a reference to the consumer notice requirements in § 141.80, which stated that all water systems must provide a consumer notice to persons served at the sites that are tested. In addition, there is a similar statement in § 141.85. In order to clarify that all systems must complete this requirement, EPA reordered the sentences in § 141.80 and § 141.85 to state the consumer notification requirements up front. The Agency feels that this adequately clarifies that all systems must provide notification of tap results to consumers at sites that are tested.

### F. Public Education Requirements

EPA is changing the public education requirements of the Lead and Copper Rule in § 141.85. Water systems are still required to deliver public education materials after a lead action level exceedance. However, EPA is making significant modifications to the content of the written public education materials (message content) and adding a new set of delivery requirements. EPA is also making revisions to § 141.154 that will require all community water systems (CWSs) to include an educational statement about lead in their Consumer Confidence Reports.

#### 1. Message Content

##### a. How Is EPA Revising the Message Content?

EPA is changing the required content of the message provided to consumers after a lead action level exceedance by shortening and simplifying the mandatory language. Previously, § 141.85 required written materials to include mandatory language consisting of over 1,800 words describing health effects, levels of lead in drinking water, steps to reduce exposure, and how to obtain additional information. In this revision, the mandatory language will consist of an opening statement, health effects language and sources of further information. The health effects language has been revised to provide greater specificity on the health problems that can result from exposure to lead (e.g., the original health effects language indicated that lead can cause damage to the brain, while the new language specifies that this damage is associated with lower IQ in children). Although the new language includes mandatory language related to health effects, water systems will have the flexibility to tailor some of the topics of the public education message, as mentioned above, to fit their community and situation. For

example, previous public education language required water systems to instruct consumers to flush their faucet for 15–30 seconds or one minute (if the home has a lead service line) before drinking the water. This rule allows systems to tailor flushing directions to their specific situations. Water systems will have to submit the public education materials to the State for review and approval prior to the delivery to consumers. However, the State has the flexibility to not require this approval.

b. What Is EPA's Rationale for the Message Content Revisions?

During EPA's national review of the LCR, many stakeholders stated that the public education requirements needed improvement. At the 2004 EPA Public Education Expert workshop, a number of concerns were raised about the effectiveness of the existing public education language and requirements. Workshop participants stated that the mandatory language in the rule was too long, cumbersome, and complex. EPA is revising the public education requirements to ensure that the delivered information is meaningful and useful to consumers. In addition, by simplifying the language, EPA hopes that systems can more effectively convey steps to their customers that they can take to reduce their exposure to lead in drinking water.

EPA also identified compliance as an issue in its review of LCR implementation. Because many water utilities did not conduct the required public education, at-risk populations did not get information they needed to reduce their exposure from lead in drinking water (71 FR 40828 at 40835, U.S. EPA, 2006a). EPA is revising the public education requirements of the LCR in an effort to improve compliance by simplifying the mandatory language and to reduce potential adverse health effects by ensuring that consumers, specifically at-risk populations, receive the information they need in a timely manner to limit their exposure to lead in drinking water.

With some modifications, EPA has included the public education language developed by the National Drinking Water Advisory Council (NDWAC) in this rule as a replacement of the existing public education requirements of the LCR. The revised public education information is more clear and concise and also encourages the public to take an appropriate course of action to reduce their exposure to lead. The health effects language section was revised by EPA to improve consumer awareness and understanding of potential effects of exposure to lead.

c. What Were the Key Issues Raised by Commenters on the Message Content Revisions and EPA's Response to These Issues?

While most of the commenters supported the proposed flexibility in the development of public education materials, one suggested that EPA provide a template for small and medium-sized systems that may lack the expertise to draft the public education materials. EPA is in the process of developing guidance that will include templates for the public education materials. Generally, commenters did support shortening the mandatory language. While some commenters believed that the revised language is clearer and easier to understand, most commenters did not like the recommended health effects language, stating that it was too alarming and complex. A few commenters preferred the existing health effects language to what EPA proposed. EPA believes the language should convey the need for consumers to pay attention to the message and understand the risks of exposure. In addition, the new health effects language is more specific about the health effects of greatest concern than was the prior language. However, EPA agrees that the complexity of the proposed mandatory health effects language would limit its utility in conveying to the general public an understanding of the risk posed by lead in drinking water and an appropriate course of action. Therefore, the Agency revised the health effects statement in this final rule to simplify the language—to a reading level that is appropriate for the general public—while retaining its specificity regarding the health effects of greatest concern.

Some commenters believed that the health effects language should promote awareness of the potential effects of lead in drinking water and put them in context with respect to other sources of lead in the environment. EPA believes exposure of humans to lead from any source is a reason for concern and has added the following statement to the mandatory health effects language: "Lead can cause serious health problems if too much enters your body from drinking water or other sources." In addition, this rule contains a provision in § 141.85(a)(iii) that provides for an explanation of other important sources of lead exposure in the public education message.

A few commenters believed that EPA should provide scientific support for the statements about health effects in the revision to substantiate the changes to the health effects language. EPA's most

recent comprehensive analysis of lead health effects may be found in the final document, *Air Quality Criteria for Lead* (US EPA, 2006b), which provides a thorough discussion of lead health effects and includes citations for the studies that support the statements made in the public education language in this rule.

Some commenters wanted the public education materials to explain that a 90th percentile result above the action level does not mean all customers are exposed to water above the action level. EPA did not include any additional mandatory language to this effect in the revision, but believes that there is enough flexibility for a water system to include this type of language if they believe it is important.

Most commenters thought it would be a burden to require States to approve water systems' public education materials before distribution. EPA recognizes that distribution of public education materials following an action level exceedance should not be delayed if States cannot review materials in an expedient manner. Therefore, this rule allows States to determine if they will require State approval of a water system's public education materials before distribution.

EPA requested comment on whether there should be a mandatory requirement to include the contact information for the State drinking water primacy agency. Although large systems most likely will have a representative who can answer customer questions about lead in drinking water, very small systems may not have the expertise to answer all questions. In these cases it may be useful to have State contact information included in the public education materials. Most commenters did not support the addition of State contact information in the public education materials, stating this would create a burden for the States. Some commenters believed that the individual States should make the decision whether to include their State contact information in the public education materials. EPA has therefore not added a mandatory requirement for State contact information as part of the public education content, but believes there is enough flexibility in this final rule for States to make the decision whether to include it.

Two commenters suggested that, rather than using the proposed regulatory language with regard to communicating with customers in their native tongue, EPA should use the existing language in the Public Notification Rule (PNR), § 141.205(c)(2)(i). For public water

systems serving a large proportion of non-English speaking consumers, as determined by the State, the public education materials must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the public education materials or to request assistance in the appropriate language. EPA agrees with this suggestion and has changed the rule language accordingly.

## 2. Delivery

### a. How Is EPA Revising the Delivery Requirements?

EPA is revising the delivery requirement associated with public education materials. EPA is requiring water systems to deliver materials to additional organizations (e.g., licensed childcare facilities, obstetricians-gynecologists and midwives, and preschools) and to include an informational notice with the public education materials explaining the importance of sharing the information with their customers or users. Water systems are required to contact the local health agency via phone or in-person, rather than relying solely on mailing, to request their assistance in distributing information on lead in drinking water and how people can reduce their exposure to lead. Systems must contact the local public health agency even if it is located outside the service area of the water system. Furthermore, the local public health agency may provide a water system with a specific list of additional community-based organizations serving target populations, which may include organizations outside the service area of the water system. If such lists are provided, systems must deliver materials to all organizations on the provided lists.

Under the previous regulation, systems serving less than 500 people could limit their distribution to only those facilities and organizations frequented by the most vulnerable population without approval from the State, but systems serving 501–3,300 persons could only do so if they received written approval from the State. This rule allows all small systems serving 3,300 or fewer people to limit their distribution to only those places frequented by the most vulnerable populations without written approval from the State.

EPA is also requiring water systems to do additional outreach activities, but offers a list of activities from which they may choose in consultation with the

State. Systems serving more than 3,300 people are required to do three additional public education activities from this list, while systems serving 3,300 or fewer people must do one additional activity. Primacy agencies can choose to waive the mandatory press release requirement if there are no media outlets that specifically reach the target population.

In addition, this rule removes the requirement for medium and large systems to provide two public service announcements (PSAs), which differ from press releases, per year. Under this rule, all water systems must post information on water bills (no less than quarterly) and issue press releases throughout the period during which the system is exceeding the lead action level. However, EPA did add a provision which provides State discretion to allow systems to deliver the information in a separate mailing if the informational statement cannot be included on the water bill.

In addition, water systems will have to distribute two press releases as opposed to the one required by the previous Lead and Copper Rule. Larger systems (serving a population >100,000 persons) must also post and keep information on their Web site until the system tests below the action level.

### b. What Is EPA's Rationale for the Delivery Requirements Revisions?

In recognition of the importance of distributing information to the at-risk populations (e.g., pregnant women, infants, and young children) on the hazards of lead and how one can protect themselves from exposure to lead, EPA has added additional organizations (e.g., licensed childcare facilities, obstetricians-gynecologists and midwives, and preschools) to the list of organizations a water system must contact when a lead action level exceedance occurs to ensure that the information reaches all potential bill paying and non-bill paying customers. This is based on NDWAC's recommendation.

EPA believes the informational notice water systems must include, along with the public education materials explaining the importance of sharing this information with their customers/patients, will encourage the organizations that receive the information to share in the task of promoting public awareness. EPA recognizes that local health agencies play an important role in ensuring that consumers who are most vulnerable receive critical information on how one can reduce their exposure to lead. Therefore, EPA is requiring water

systems to directly contact the local health agencies via telephone or in person.

In addition, since EPA believes that communication with consumers is important in promoting public awareness, this rule requires systems to continually communicate with consumers as long as they continue to exceed the lead action level. EPA believes the additional activities required in the rule following a lead action level exceedance (e.g., including information on the water bill; two press releases per year as opposed to the current rule, which requires only one per year; posting information on systems' Web sites) will appropriately bring the seriousness of lead exposure to the attention of consumers.

To ensure that systems employ the appropriate delivery mechanism and content in terms of developing the most effective way of reaching a system's target population, water systems must work in consultation with the State, System, State and consumer representatives on the NDWAC Working Group all agreed that what works in one community does not always work best in another. In order to make the public education as effective as possible, EPA is giving systems some flexibility in how they deliver their public education materials. They are still required to disseminate information to people served by their system, but they have some flexibility in how they complete their program. For instance, a large system in an urban area may choose to use a public service announcement and paid advertisements to reach consumers, while a system in a rural area may find the best way to reach customers is through displaying information in frequently visited public areas or conducting public meetings. Realizing that small systems may have difficulty in completing these requirements, EPA offers States the option to waive the press release requirement if there are no media outlets that target the population served by the system. Furthermore, small systems (serving 3,300 or less people) may limit their distribution to those places frequented by the most vulnerable populations without written approval from the State. EPA recognizes that small systems are typically aware of the constituents in their community and often have the capability to target specific populations through personal relationships. By removing the requirement to obtain State approval, this provision allows these systems to send public education materials to their vulnerable populations as soon as

possible and reduces burden on both the system and the State.

c. What Were the Key Issues Raised by Commenters on the Delivery Requirements Revisions and EPA's Response to These Issues?

Many commenters expressed concern that it would be an implementation burden to deliver public education materials and maintain relationships with the new organizations (e.g., licensed child care facilities, obstetricians-gynecologists and midwives, and preschools). Some commenters believed that water systems should rely on local health departments to provide contact information for the new organizations. As stated in the proposal, EPA believes that the local health agencies play an important role in making sure consumers who are most vulnerable receive the information they need to reduce their exposure to lead in drinking water. However, EPA cannot mandate that health departments generate and provide contact information for the new organizations and is not assuming that local health agencies will have the contact information for these organizations readily available in all cases. As discussed below, this rule has provisions for systems to request that the local health department provide lists of the additional organizations that may or may not only be those within the water system's service area, or the system must make a good faith effort by other means to contact those organizations within their service area.

Some commenters expressed concerns with EPA's proposed regulatory language, which indicated that water systems should make a good faith effort to contact all customers who are most at risk by delivering materials to specified organizations. The commenters stated that "good faith effort" was too open-ended and difficult to enforce. EPA employed the terminology "good faith effort" to cover the unforeseen situations outside of the water system's control when they would not be able to deliver public education materials to organizations (e.g., non-cooperative organization, a new obstetrician-gynecologist office opening up after or right before public education materials are distributed by the water system, and no contact information is available) and allows States the flexibility to address the public education challenges a water system might face. Some commenters stated that requiring water systems to contact their local health agencies and rely on them to provide contact information for the new organizations would constitute a good faith effort.

EPA believes this may be considered a good faith effort but suggests that a water system attempt to find contact information for these organizations by some other means if the local public health agency cannot provide the information.

Some commenters indicated that contacting the new organizations should be in guidance and not a requirement. EPA disagrees. It is important to alert the at-risk populations of how to reduce their exposure to lead. EPA believes the addition of the new organizations to the public education requirements accomplishes two goals: (1) It increases the likelihood that information reaches the most vulnerable populations (i.e., pregnant women, infants and young children) or their caregivers; and (2) It ensures that critical information reaches not only bill paying customers, but also non-bill paying consumers. The non-bill paying consumers may be contacted through these organizations if the organizations are provided with the necessary information and encouraged to share the task of improving public awareness.

Some commenters stated that requiring distribution of material outside of the water system's service area is a burden for the water systems as well as being inconsistent with other drinking water rules. However, EPA believes that if the local public health agency can identify organizations that potentially serve target populations, then a water system should deliver public education materials to this organization even if it is not within the water system's service area. EPA believes there could also be instances where an individual does not reside within the system's service area but is served by the water system in another capacity (e.g., a child lives in another county but spends a large part of their day at a child care facility that is served by a water system with a lead action level exceedance).

Some commenters were concerned that States do not have the means to oversee or verify that systems are fulfilling the requirement to contact the new organizations. Systems that are subject to public education requirements are required as part of § 141.90(f) of this rule to send written documentation to the State that includes a demonstration that the system has delivered the public education materials that meet content requirements of § 141.85(a) and the delivery requirements in § 141.85(b). EPA believes that systems may provide a copy of the contact lists to the State as part of this requirement.

EPA also proposed that systems include a cover letter with the printed materials that they send to organizations to explain the importance of sharing this information with their customers/patients. Some commenters were concerned that this was too prescriptive. Other commenters suggested that the Agency create a template. EPA has revised this requirement to require that systems include an informational notice instead of a cover letter, since this will give systems flexibility in the exact format. In addition, EPA will provide templates as part of separate guidance.

Some States commented that the proposed new requirements were excessive, especially as compared to other rules. However, some commenters supported the requirement that water systems have to conduct the additional activities and believed that the flexibility in the selection of the public education delivery activities would enhance the effectiveness of communication with the public. EPA disagrees with commenters who believe the requirements are excessive; EPA believes these changes better ensure that at-risk populations receive information to enable them to act to reduce their exposure. In addition, the new requirements are based on recommendations from NDWAC, which are modeled after the public education requirements in two existing EPA rules: The Consumer Confidence Report Rule (63 FR 44526, August 19, 1998, U.S. EPA, 1998) and the Public Notification Rule (65 FR 25982, May 4, 2000, U.S. EPA, 2000c).

Commenters supported the revision that provides small water systems (serving 3,300 or less people) the authority to limit their public education distribution to the organizations and places frequented by the most vulnerable populations without State approval. Commenters also supported the provision that would allow States to waive the press release requirement for a small system if there were no media outlets that would reach the target population.

Many commenters thought there were logistical challenges with including an informational statement in water bills when a lead action level exceedance occurs. Some systems do not have the ability to add any information to their water bill especially where they bill using a postcard. Accordingly, EPA added a provision to this final rule which provides State discretion to allow systems to deliver the information in a separate mailing if the informational statement cannot be included on the water bill. Some commenters indicated that many systems do not bill monthly,

so those consumers will not receive the same degree of notification as customers of systems that do bill monthly. In response, EPA has added text to the provision to indicate that when systems notify customers via their water bill, they must do so no less than quarterly. While some customers might receive more notification, EPA believes that no less than quarterly is the maximum time a water system should allow to elapse between notifications during a lead action level exceedance to ensure that the issue still holds customers' attention.

### 3. Timing

#### a. How Is EPA Revising the Timing Provisions of the Rule?

EPA is requiring that water systems that exceed the lead action level conduct public education within 60 days after the end of the monitoring period in which the exceedance occurred. However, as mentioned in section III.B of this notice, States may extend the timeframe to complete the public education activities as long as a water system has started the public education activities within the 60-day period.

#### b. What Is EPA's Rationale for Revising the Timing Provisions of the Rule?

NDWAC was concerned about the lag time between testing water samples, receiving the results, calculating the 90th percentile, and finally sending out public education materials. They were concerned that an individual, particularly an infant or child, could be drinking water with high lead levels for months before the individual or caretaker knows of the problem. As a result, they recommended changes to increase the timeliness of public education on lead in drinking water. The NDWAC recommendations are, in part, modeled after the public education information under two existing EPA rules, the Consumer Confidence Report Rule (40 CFR 141, Subpart O) and the Public Notification Rule (40 CFR 141, Subpart Q). The NDWAC recommendations form the basis for the changes to § 141.85 in this final rule.

While the revision requires systems to complete public education activities within 60 days of the end of the monitoring period in which the exceedance occurred, there is flexibility for the State to allow additional time for completion of these activities. However, systems must receive State approval within the 60-day window for an extension. This ensures that the system and the State begin public education actions to reduce exposure as soon as

possible, but allows these actions to continue past the 60-day timeframe on a case-by-case basis as needed for effective implementation.

#### c. What Were the Key Issues Raised by Commenters on the Timing Provisions and EPA's Response to These Issues?

Commenters indicated that the 60-day timeframe for a system to complete public education requirements was sufficient for most but not all systems. In response, EPA has added a provision to the final rule providing that the State may extend the 60-day window under certain conditions. However, EPA believes that systems should make every effort to complete their public education activities within 60 days after the end of the monitoring period.

### 4. Consumer Confidence Reports

#### a. How Is EPA Revising CCR Requirements?

EPA is revising requirements of the Consumer Confidence Report (CCR) Rule. Previously, all community water systems (CWSs) that detected lead above the action level in more than five percent of the homes sampled and up to and including 10 percent of homes, had to include an informational statement in their CCR about lead in drinking water. EPA is now requiring that all CWSs include an informational statement about lead in their CCRs. In addition, the proposed CCR language that referred to "home plumbing" as the source of high lead levels has been broadened to include service lines, and the National Lead Information Center phone number has been replaced with the phone number for the EPA Safe Drinking Water Hotline.

#### b. What Is EPA's Rationale for the CCR Revisions?

EPA believes that exposure to lead can be a localized phenomenon and has revised the rule based on concerns that exposure to lead may be taking place, even though the action level is not exceeded; consumers, therefore, currently may not receive sufficient information on how to reduce their exposure to lead. Furthermore, in the situation where there has been a lead action level exceedance, NDWAC expressed concern that public education materials may not be delivered immediately; therefore, vulnerable populations may drink water with high levels of lead for months before knowing of the risk.

Under the previous regulations and as stated above, all water systems which detect lead above the action level in more than 5 percent of the homes sampled had to include a short

informational notice about lead in their CCR. EPA is now requiring that all community water systems provide information in their CCRs on lead in drinking water regardless if a system did or did not detect lead. This short statement will be educational in nature and help to ensure that all vulnerable populations or their caregivers receive information (at least once a year) on how to reduce their risk to lead in drinking water. In this revision, EPA is incorporating NDWAC's recommended changes to the informational notice, which would serve to clarify the risk of lead in drinking water, including basic steps on how to reduce exposure to lead in drinking water and where to go for more information. Additionally, requiring all systems to have one statement simplifies compliance with this provision of the rule for the systems and the States. The new language is intended to help consumers understand the health effects associated with lead, that lead levels can vary from home to home, that they can take steps to reduce their exposure, and where to get more information.

#### c. What Were the Key Issues Raised by Commenters on the CCR Requirements and EPA's Response to These Issues?

Most of the comments that EPA received were directed towards the proposed detection limit threshold for requiring statements about lead in the CCR. Some commenters agreed that the method detection limit for lead of 0.001 mg/L should be used as the threshold for the inclusion of the lead statement. Others suggested that requiring the lead statement should be based on the practical quantitation limit for lead of 0.005 mg/L, a 90th percentile lead action level exceedance, or a lead detection in drinking water at a level determined to have adverse health effects. Some commenters even suggested that no changes be made to the CCR requirements. EPA realizes, however, there are situations where the most vulnerable populations may be exposed to elevated levels of lead for many months before or without being notified, as can occur in the case of a system that has elevated lead levels but only in less than 10 percent of compliance samples. EPA believes, therefore, that the CCR is a good mechanism to communicate with all customers the health risks of lead in drinking water in the interest of being proactive. EPA also believes the CCR is another opportunity to remind customers that they share responsibility for reducing their exposure to lead with their water system.

Some commenters thought there should be a different information statement for water systems samples above the lead action level than for systems below the lead action level and above the MDL. Other commenters were concerned that multiple, varying notices would unduly complicate compliance tracking and enforcement of this requirement. Furthermore, a large percentage (>95%) of the water systems would have detects above the MDL and therefore be required to have an informational statement in their CCR. Because the actual level of lead exposure for drinking water varies with individual homes, EPA concluded that levels detected in the system would not necessarily reflect the risk faced by consumers. As a result, and because of the concern over the logistics of compliance and tracking multiple different lead statements in CCRs, EPA concluded that all systems should have a simple informational statement about lead in their CCR, which would be educational in nature.

Some commenters indicated that the CCR is a good way to educate the public about lead in drinking water. On the other hand, some viewed the proposed CCR requirement as redundant with the other public education requirements and not an effective way to reach populations before there is a major problem with lead in the water system. Consistent with the NDWAC recommendations, EPA believes that the combination of methods for delivering this urgent message (through public education materials, CCR, and consumer notice of tap water results) will provide a more effective way to reach the customer in a timely and appropriate basis. Some commenters thought that additional CCR language would pose an undue burden on systems that are in compliance with the LCR and that the required text would be too alarming. Some commenters believed that the CCR requirement for lead was inconsistent with the public notification regulations for other inorganic contaminants. However, while a water system may be in full compliance with the LCR, a home served by that water system may have elevated levels of lead in their tap water. Lead is unlike many other contaminants in that it is primarily introduced into drinking water as the water passes through plumbing materials from the distribution main into the household. As a result, and due to the particular concern that it is critically important to reach vulnerable populations in a timely manner to avoid as much lead exposure for those populations as possible, EPA

believes a special lead notice is appropriate.

Some commenters stated that the proposed language on the sources of lead required to be included in the Consumer Confidence Report focused too much on household plumbing materials as the source of lead exposure in drinking water and did not consider the other sources of lead in the distribution system. To address this concern, EPA has modified the text by adding "service lines" to more fully characterize sources of lead in drinking water.

### *G. Reevaluation of Lead Service Lines Deemed Replaced Through Testing*

#### 1. How Is EPA Revising This Rule?

EPA is requiring water systems to reevaluate lead service lines classified as "replaced through testing" if they resume lead service line replacement programs. This will only apply to a system that had (1) initiated a lead service line replacement program, then (2) discontinued the program, and then (3) subsequently resumed the program. When resuming the program, this system will have to reconsider for replacement any lead service lines previously deemed replaced through the testing provisions in § 141.84(c) during the initial program. This change adds a subsection to the lead service line replacement requirements in § 141.84(b) to include provisions for systems resuming lead service line replacement programs. Systems will have to update the inventory of lead service lines to include those that were classified as "replaced through testing." The system will then divide the updated number of remaining lead service lines by the number of remaining years in the program to determine the number of lines that must be replaced per year (seven percent lead service line replacement is based on a 15-year replacement program so, for example, systems resuming lead service line replacement after previously conducting two years of replacement would divide the remaining inventory by 13).

#### 2. What Is EPA's Rationale for the Reevaluation of Lead Service Lines Revisions?

Lead service line replacement is intended as an additional step to reduce lead exposure when corrosion control treatment is unsuccessful. The provision in § 141.84(c), which allows systems to leave in place an individual lead service line if the lead concentration in all service line samples from that line is less than or equal to 0.015 mg/L, is intended to maximize the exposure

reduction achieved per service line replaced by avoiding the disruption and cost of replacing lines that are not leaching elevated levels of lead. However, samples taken from a lead service line pursuant to § 141.84(c) cannot predict future conditions of the system or of the service line. Systems can discontinue a lead service line replacement program by meeting the lead action level for two consecutive 6-month monitoring periods. Therefore, EPA is requiring these systems to reconsider any lines previously determined to not require replacement if they exceed the action level again in the future and resume the lead service line replacement program.

#### 3. What Were the Key Issues Raised by Commenters on the Reevaluation of Lead Service Lines Revisions and EPA's Response to These Issues?

Commenters generally agreed that all existing lead service lines should be considered when resuming a lead service line replacement program. However, there were some commenters who had concerns with the timing and believed that the 15-year clock should be reset when resuming a replacement program. In 1991, EPA established the maximum replacement schedule of 15 years for all systems in order to ensure that public health is adequately protected (56 FR 26460 at 26507–26508, U.S. EPA, 1991a). The Agency continues to believe that systems that are exceeding the action level should have no more than 15 years to replace all of their lead service lines, as intended by the original rule. Sites that met the test-out provision would need to be re-evaluated or replaced within the remaining timeframe. This approach provides an incentive to physically replace the portion of the lead service line under the control of the system. Many lead service lines are over 70 years old and may need to be replaced soon simply based on their age.

Some commenters also recommended that flexibility be given to the State to determine when treatment or source changes are significant enough to require reevaluation of lead service lines. This rule does not change the requirements that trigger lead service line replacement. Systems that have installed optimal corrosion control and that subsequently exceed the lead action level must perform lead service line replacement. If a system makes a treatment or source change that does not affect the system's optimal corrosion control and the system continues to comply with the LCR, then it is not necessary for the system to perform lead service line replacement. If a system



makes a treatment or source change that does affect the optimal corrosion control and the system subsequently exceeds the lead action level, then the system must perform lead service line replacement. This rule does not preclude any system currently meeting the lead action level from optionally replacing lead service lines.

Some commenters expressed concern that a system could complete a 15-year lead service line replacement program and then meet the action level only to re-exceed it and be triggered into lead service line replacement. Under this scenario, there would be no time left to re-evaluate or replace lead service lines. EPA has added the following provision to address this specific situation. For those systems that have completed a 15-year lead service line replacement program, the State will determine a schedule for replacing or retesting lines that were previously tested out under the replacement program when the system re-exceeds the action level. However, once a system has been in a lead service line replacement program for more than five years, the system may want to consider physically replacing the portion of all lead service lines under their control rather than continuing to use the test-out provision. Replacing the line would eliminate the possibility of having to go back and re-evaluate it or replace it if the action level is re-exceeded. In addition, many systems currently replace lead service lines when they find them regardless of their 90th percentile.

#### *H. Other Issues Related to the Lead and Copper Rule*

##### 1. How Is EPA Revising This Rule?

EPA has decided not to make any further rule changes at this time to address the following issues that EPA requested comment on in section III.H of the proposed rule (71 FR 40828 at 40839, U.S. EPA, 2006a): Plumbing component replacement; point-of-use (POU) and point-of-entry (POE) treatment; site selection in areas with water softeners and POU treatment units; and water quality parameter monitoring.

##### 2. What Is EPA's Rationale for Not Including Any of These Other Issues in the Final Rule Revisions?

EPA concluded that sufficient flexibility exists under the current rule for small systems to utilize plumbing fixture replacement or point-of-use/point-of-entry devices to meet the action level and be deemed optimized under § 141.81(b)(1). Under the current rule, small non-transient, non-community

water systems, where 100% of the plumbing fixtures and components are directly controlled by the system, may replace them and be optimized once the system has met the action levels for two consecutive six-month monitoring periods. Small water systems may also install point-of-use (POU) devices, if they meet the SDWA requirements for their use, and be deemed optimized by meeting the action levels for two consecutive six-month monitoring periods. In the preamble to the proposed rule, EPA noted that where a State does not require a corrosion control study, systems have 24 months after an action level is exceeded before the State specifies optimal corrosion control treatment (71 FR 40828 at 40840, U.S. EPA, 2006a). The fixture replacement or POU installation would need to be completed within 12 months of exceeding the action level in order to complete two consecutive six-month monitoring periods before the State specifies optimal corrosion control. Additionally, systems will still need to recommend optimal corrosion control treatment to the State within six months of the action level exceedance. Plumbing fixture replacement may not be successful in meeting the action level or the system may be unable to secure participation from all sites under a POU approach, so the system may need to install the optimal corrosion control treatment.

There is also additional flexibility under the existing rule. States could require a corrosion control study for systems that have made progress towards completing either a plumbing replacement or POU approach. The study would need to be completed within 18 months or 30 months after the action level exceedance. This would provide an additional six-month monitoring period to meet the optimization requirement pursuant to § 141.81(b)(1), while having the system develop an optimal corrosion control recommendation if the plumbing replacement is not successful or the POU approach cannot be implemented. The State will designate optimal corrosion control six months after the completion of the corrosion control study. When a corrosion control study is required by the State, systems can have up to three years after the action level exceedance to meet the action level for two consecutive six-month monitoring periods before they would need to install the optimal corrosion control specified by the State.

EPA also requested comment on two monitoring issues. The first was whether the Lead and Copper Rule should be amended to allow sampling at

locations with POU/POE devices used to remove inorganic contaminants in exceptional cases (such as systems with a high prevalence of water softeners), and, if so, how high risk sites should be identified. The second was whether the Lead and Copper Rule should be amended to require systems to synchronize required water quality parameter sampling with lead and copper tap sampling. Due to the complexity of the issue, EPA has determined that rule changes on site selection and synchronization should be addressed as part of the broader monitoring revisions. For the POU/POE site selection issue, EPA notes that there may be additional flexibility under § 141.86(a)(5) which states: "A community water system with insufficient tier 1, tier 2, and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For the purpose of this paragraph, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system." EPA believes that the current rule provisions and guidance on this issue are sufficient at this time.

##### 3. What Were the Key Issues Raised by Commenters on These Other Issues and EPA's Response to These Issues?

EPA received a range of comments on the issue about whether there is enough flexibility under the existing rule to use plumbing replacement without specifying it as optimal corrosion control. Some commenters stated that the existing timeframes are sufficient for systems to implement plumbing replacement and that the rule should not be revised to call it an optimal corrosion control treatment. Other commenters asserted that EPA should specify plumbing replacement as optimal corrosion control treatment. As noted above, EPA believes that there is sufficient flexibility under the existing rule for a small system to pursue a fixture replacement strategy without listing it as an optimal corrosion control treatment. Because fixture replacement may not be successful in reducing lead below the action levels if some lead sources remain in the plumbing system, systems will need to prepare an optimal corrosion control treatment recommendation (either with or without a corrosion control study) and be prepared to install it if the action level is still exceeded. EPA noted in the preamble to the proposed rule that plumbing fixture replacement is not a corrosion control technique and would not have applicable water quality



parameters that could be set by the State if the system continued to exceed the action level.

EPA also received a range of comments on the issue about whether there is enough flexibility under the existing rule to use POU or POE without specifying it as corrosion control. Some commenters stated that the existing timeframes are sufficient for systems to implement a POU strategy and that the rule should not be revised to call it an optimal corrosion control treatment. Other commenters said that EPA should specify POU/POE as an optimal corrosion control treatment. As noted above, EPA believes that there is sufficient flexibility under the current rule for a small system to pursue a POU strategy without listing it as an optimal corrosion control treatment. Unless the POU option was limited to only those systems that control 100% of the distribution system (as was suggested by several commenters), the system may not be able to secure participation from all sites and may need to install corrosion control. Even if EPA limited the option to only those systems that control 100% of the distribution system, EPA does not believe that POU should be listed as an optimal corrosion control treatment. Under the existing rule, the action levels serve as screens for optimization, but systems can exceed the action levels and still be in compliance with the LCR by meeting the optimal water quality parameters specified by the State. Commenters who supported POU as an optimal corrosion control treatment did not provide any alternatives on how to demonstrate compliance with the treatment technique when the action level is exceeded. Many commenters agreed with EPA's concern that because there are lead-containing materials in plumbing after POE devices, it may not be successful in meeting the action level. EPA does not believe that POE should be listed as an optimal corrosion control treatment because of these unaddressed lead sources.

Most of the comments on the issue of sampling sites with POU and POE devices indicated that a rule change was not necessary and that the prohibition should remain in § 141.86(a)(1). EPA agrees with those commenters and does not plan to codify the guidance.

The final issue on which EPA requested comment was synchronization of water quality parameter sampling with lead and copper tap sampling. While many commenters supported the scientific rationale for this proposed change, a number of comments received expressed concern over which

synchronization timeframe would be appropriate and the feasibility of implementing a synchronized sampling approach. Several large systems noted that homeowners are the ones who collect the lead and copper tap samples and send them back to the utility. These commenters expressed that since the utility does not know the exact date that the samples will be taken by the homeowner, synchronizing water quality parameter and lead and copper tap samples would be difficult to coordinate. Some commenters noted that current water quality parameter sampling requirements for systems on reduced monitoring require these systems to take their water quality parameter samples throughout the year in order to capture seasonal variability. EPA also received input that in many States, water quality parameter sampling for small and medium systems is not started until after all tap samples are collected and the determination made that a water system does not meet the 90th percentile action level, consistent with the specific language of the LCR. Due to the complexity of issues, challenges with implementation, and potential burden, EPA has decided not to revise the LCR to require water quality parameter synchronization at this time, but will revisit this issue in future revisions to the rule.

#### *I. Compliance Dates*

##### **1. What Are the New Compliance Dates for This Rule?**

Section 1412(b)(10) of the Safe Drinking Water Act requires that a proposed national primary drinking water regulation (and any amendments) take effect on the date that is three years after the date of promulgation, unless the Administrator determines that an earlier date is practical. EPA proposed that the revisions take effect for purposes of compliance three years after the promulgation of the final rule. EPA requested comment on the practicality of implementing the following specific changes within 60 days of final rule promulgation: Minimum Number of Samples Required (III.A), Definitions for Compliance and Monitoring Periods (III.B), Consumer Notification of Lead Tap Water Monitoring Results (III.E) and Public Education Requirements (III.F). EPA also requested comment upon whether all of the proposed revisions should have an effective date earlier than three years after publication of the final rule. After reviewing comments, EPA is adopting a compliance date for all of the final rule provisions, of 180 days after publication in the **Federal Register** or the effective date of any

State program changes needed to implement the rule, whichever is later. However, EPA is also requiring an outside compliance date of two years after promulgation, which coincides with the date by which States are required to adopt and submit revised programs adopting this rule under 40 CFR 142.12. For States that adopt this rule after six months but before two years, this rule will become effective on the date that the State rule is effective, as long as it is before the date two years after promulgation of this rule.

##### **2. What Is EPA's Rationale for the Compliance Dates?**

There were several considerations behind this compliance date. First, EPA believes that States and systems will not need three years to implement any of the rule changes. These rule changes are all modifications of existing requirements and procedures under the LCR or CCR. EPA believes States and systems will not need extensive training or program development to implement these revisions. Additionally, none of the revisions require systems to undertake new capital improvements prior to implementation. Second, many of these changes are important improvements to the LCR, which should help improve critical consumer information about lead and reduce lead exposure, so they should be established as quickly as possible. Third, EPA is also aware that because many of these requirements are procedural in nature, having dual Federal and State requirements at the same time is confusing to systems, the public, and the regulators. As a result, it is important to try to make the Federal changes and State changes coincide as much as possible. Finally, EPA received helpful comments from the public urging that the requirements should take effect no earlier than six months after promulgation.

EPA therefore decided to adopt a compliance date structure that is similar to the one used for the public notification rule revisions in 2000. This rule, therefore, provides a minimum compliance date of 180 days after promulgation, after which the rule will be in effect where EPA has primacy (Wyoming, DC, and most Indian territories) and where States incorporate EPA's drinking water regulations by reference. EPA is also providing a maximum compliance date of two years after promulgation, which coincides with the date by which States are required to adopt and submit revised programs adopting this rule under 40 CFR 142.12. For States that adopt this rule after six months but before two

years, this rule will become effective on the date that the State rule is effective, as long as it is before the date two years after promulgation of this rule. This gives States the flexibility of choosing early implementation, enabling the water systems to take advantage of the efficiencies in the new regulations in less than two years, or provides States two years to accomplish the preparatory activities needed to implement the revisions.

3. What Were the Key Issues Raised by Commenters on the Compliance Dates and EPA's Response to These Issues?

Some commenters indicated that an early compliance date would impose additional burden on the States and utilities (e.g., conduct staff training, inform water systems, revise rules and

submit primacy revisions) and suggested the compliance date be three years after final rule promulgation. Some commenters had concerns about the feasibility of a 60-day effective date and proposed an effective date within 180 days of final rule promulgation. EPA agrees that 60 days may not offer States enough time to conduct training, review guidance and distribute information to water systems about the new requirements; therefore, EPA has revised the compliance date to 180 days after final rule promulgation. EPA believes there are a number of improvements in this rule that States will want to utilize and that 180 days is a feasible timeframe for the States to conduct the necessary preparatory actions. One commenter noted that EPA

should not make the requirements effective before the State has time to adopt the change to avoid complications in meeting both State and Federal requirements. EPA agrees and is revising the date to give a broad timeframe during which the State may adopt the rule (180 days to 2 years).

J. State Implementation

States with approved primacy programs under 40 CFR part 142 subpart B must revise their programs to adopt any changes to the Lead and Copper Rule that are more stringent than their approved program. The primacy revision crosswalk table lists all the provisions that States must adopt to retain primacy. Table III.1 summarizes the rule revisions.

TABLE III.1.—FINAL RULE REVISIONS

CFR citation	Is the requirement more stringent?	Revision
§ 141.80(a)(2)	No	Technical correction that deletes effective dates of the LCR which no longer apply.
§ 141.80(c)(3)(v)	No	PWS allowed by the State to collect fewer than five samples must compare the highest sample result to the action level.
§ 141.80(g)	Yes	PWSs will be required to provide consumers with the results of lead testing who are located at sites that are part of the utility's monitoring program.
§ 141.81(b)(3)(iii), § 141.86(d)(4)(vii), § 141.86(g)(4)(iii), § 141.90(a)(3).	Yes	States must approve new sources or long-term changes in water treatment before PWS implementation.
§ 141.81(e)(1)	Yes	Clarifies end of the tap sampling and timing for PWS recommending optimum corrosion treatment.
§ 141.81(e)(2)	Yes	Clarifies end of the monitoring period and timing for State requiring corrosion control studies.
§ 141.81(e)(2)(i), § 141.81(e)(2)(ii)	Yes	Clarifies end of the monitoring period and timing for State specifying optimum corrosion control treatment.
§ 141.83(a)(1)	Yes	Clarifies end of the source water monitoring period and timing for recommending source water treatment to the State.
§ 141.84(b)(1)	Yes	Clarifies beginning of the first year for lead service line replacement.
§ 141.84(b)(2)	Yes	Requires updating inventory and yearly replacement of lead lines when resuming lead service line replacement program.
§ 141.90(e)(2)(ii)	Yes	Clarifies resumption of line replacement.
§ 141.85	Yes	New public education requirements that replace the ones that exist in the current rule. New requirement for PWS to provide a notice to consumers who are part of the utility's lead testing program with sampling results. New content and delivery requirements for public education materials. New requirement for PWS to target specific audiences for increased awareness.
§ 141.88 (b), § 141.90(a)(1), § 141.90(e)(1), § 141.90(e)(2).	Yes	Clarifies end of the monitoring period.
§ 141.86(c)	No	Requires PWS to collect a specified number of samples. Allows State discretion to allow PWS to sample 100 percent of taps if there are fewer than five taps that can be used for human consumption in the system.
§ 141.86(d)(4)(i), (ii), (iii), § 141.86(d)(4)(vi)(B)(1), § 141.86(g)(4)(i), § 141.87(e)(2)(ii), § 141.88(d)(1)(i), § 141.88(d)(1)(ii), § 141.88(e)(1), § 141.88(e)(2).	Yes	Clarifies sample collection periods for reduced monitoring.
§ 141.86(d)(4)(ii) and (iii), § 141.86(d)(4)(vi)(B)	Yes	Requires all systems must meet the lead action level as a condition for reduced monitoring.
§ 141.86(d)(4)(iv)(A)	Yes	Specifies time period to resume standard tap water monitoring.

TABLE III.1.—FINAL RULE REVISIONS—Continued

CFR citation	Is the requirement more stringent?	Revision
§ 141.86(d)(4)(vi)(B) .....	Yes .....	Specifies time period to resume water quality parameter monitoring.
§ 141.86(d)(4)(ii) .....	Yes .....	Clarifies monitoring frequency.
§ 141.87(d), § 141.87(e)(2)(i) .....	Yes .....	Clarifies time period for water quality parameter monitoring.
§ 141.90 (f)(1), § 141.90 (f)(1)(i), § 141.90 (f)(3) .....	Yes .....	Revised public education program reporting requirements based on amendments to § 141.85.
§ 141.154 (d)(1) and (2) .....	Yes .....	All CWSs must include a statement about lead, health effects language and ways to reduce exposure in every CCR released to the public. Flexibility is given to CWSs to write its own educational statement, but only in consultation with the Primacy Agency.

1. How Do These Regulatory Revisions Affect a State's Primacy Program?

States must revise their programs to adopt any part of this final rule which is more stringent than the approved State program. Primacy revisions must be completed in accordance with 40 CFR 142.12 and 142.16. States must submit their revised primacy application to the Administrator for approval. State requests for final approval must be submitted to the Administrator no later than two years after promulgation of a new standard unless the State requests and is granted an additional two-year extension.

For revisions of State programs, 40 CFR 142.12 requires States to submit, among other things, any additional materials that are listed in 40 CFR 142.16 of this part for a specific EPA regulation, as appropriate 40 CFR 142.12(c)(1)(ii). For the final revisions to the lead and copper rule, EPA believes that requirements in § 142.12(c) will provide sufficient information for EPA review of the State revision. The side-by-side comparison of requirements required in § 142.12(c)(1)(i) will consist of sections revised to adopt the changes required for the revised lead and copper rule and any other revisions requested by the State. Because the rule consists of changes to an already approved Federal NPDWR in primacy States, EPA believes that the State's existing statutes and regulations will already have received extensive legal review. Under

§ 142.12 (c)(3), EPA can request supplemental information as necessary for a specific State submittal on a case-by-case basis. Therefore, the Agency is waiving the Attorney General's statement required in § 142.12(c)(1)(iii), as allowed by § 141.12(c)(2).

2. What Does a State Have To Do To Apply?

To maintain primacy for the Public Water System Supervision (PWSS) program and to be eligible for interim primacy enforcement authority for future regulations, States must adopt this final rule. A State must submit a request for approval of program revisions that adopt the regulations and implement those regulations within two years of promulgation unless EPA approves an extension under § 142.12(b). Interim primacy enforcement authority allows States to implement and enforce drinking water regulations once State regulations are effective and the State has submitted a complete and final primacy revision application. To obtain interim primacy, a State must have primacy with respect to each existing NPDWR. Under interim primacy enforcement authority, States are effectively considered to have primacy during the period that EPA is reviewing their primacy revision application.

3. How Are Tribes Affected?

At this time the Navajo Nation has primacy to enforce the PWSS program.

EPA Regions implement the rules for all the other Tribes under section 1451(a)(1) of SDWA.

IV. Economic Analysis

This section describes the estimates of annual costs for the seven regulatory changes to utilities' and States' requirements, including costs associated with administrative, monitoring, sampling, reporting, and notification activities for this final rule. One-time, upfront costs of rule review and rule implementation are also described. There are two types of annual costs that may result from the rule changes—direct and indirect. Direct costs are from those activities that are specified by the rule change, such as costs for additional monitoring or distribution of consumer notices. Indirect costs may also result when systems and States use the information generated by directly-related rule activities to modify or enhance practices to reduce lead levels. These indirect costs, and related health risk reductions, are not quantified for the purposes of this analysis, but are described qualitatively in section IV.K of this notice and in Chapter 5 of the *Economic and Supporting Analyses: Short-Term Regulatory Changes to the Lead and Copper Rule* (U.S. EPA, 2007a). Table IV.1 summarizes the expected direct and indirect cost impacts for the seven regulatory changes.

TABLE IV.1.—SUMMARY OF DIRECT AND INDIRECT IMPLICATIONS OF THE LCR SHORT TERM RULE CHANGES

Rule change	Direct cost implications	Indirect cost and health risk implications
Regulatory Change III.A (Number of samples) .....	Yes .....	Yes.
Regulatory Change III.B (Monitoring Period) .....	Unquantified .....	None.
Regulatory Change III.C (Reduced Monitoring Criteria) .....	Yes .....	Yes.
Regulatory Change III.D (Advanced Notification and Approval) .....	Yes .....	Yes.
Regulatory Change III.E (Consumer Notice of Lead Results) .....	Yes .....	Yes.
Regulatory Change III.F (Public Education) .....	Yes .....	Yes.
Regulatory Change III.G (Reevaluation of Lead Service Lines) .....	Yes .....	Yes.

### A. Direct Costs

The revisions in this final rule will result in direct costs to utilities and States from activities that are specified by rule changes, including administrative, monitoring, sampling, reporting, and notification activities. These costs will result in an increase in the overall costs associated with the LCR.

The most recent cost estimates to utilities and States of the LCR can be found in the 2004 Information Collection Request for Disinfectants/Disinfection Byproducts, Chemical, and Radionuclides Rules (Information Collection Request for Disinfection Byproducts, Chemical, and Radionuclides Rules, U.S. EPA, 2004a). The 2004 ICR estimates administrative burden and costs associated with the LCR for systems and States. System costs are estimated for community water systems and non-transient non-community water systems to perform the following activities: Monitor for water quality parameters, tap sampling of lead levels for action level compliance, review of sample data, including the calculation of lead and copper 90th percentile levels, submission to the State of monitoring data and any other documents or reports, and recording and maintaining information. In addition, some systems must submit corrosion control studies, recommend and submit information regarding the completion of corrosion control treatment (CCT) or source water treatment installation, conduct public education, or conduct lead service line (LSL) monitoring, notification, and replacement. In the 2004 ICR, the average annual cost to CWSs and NTNCWSs for the LCR requirements was estimated to be \$57.9 million (2006\$) and the burden was estimated to be 1.72 million hours for reporting (including lead service line replacement reporting), recordkeeping, and public education activities of the LCR. For States, the annual cost and burden incurred by primacy agencies for activities associated with the LCR were estimated to be \$6.8 million and 0.21 million hours, respectively.

### B. Overall Cost Methodologies and Assumptions

As part of its comprehensive review of the Lead and Copper Rule, EPA collected and analyzed new data on various aspects of LCR implementation. When available and appropriate, this new information has been used in estimating the incremental costs of this rule. If new information was not available about a cost item or

assumption, previous analyses of LCR requirements were reviewed to determine if a suitable estimate was available. The 1991 Regulatory Impact Analysis (RIA) (*Final Regulatory Impact Analysis of National Primary Drinking Water Regulations for Lead and Copper*, U.S. EPA 1991b), the 1996 RIA Addendum (*Regulatory Impact Analysis Addendum*, U.S. EPA 1996b), and the various Information Collection Requests were all used as sources of information and assumptions.

For the rule revisions that clarify the existing LCR rule language, if the costs associated with those activities were included in the original LCR cost estimates as presented in the 1991 RIA, those costs are not included in this analysis.

### C. Direct Costs Associated With Regulatory Change III.A

Regulatory Change III.A clarifies EPA's intent that a minimum of five samples must be taken when conducting compliance monitoring. If a system has fewer than the minimum number of taps required for sampling, then those systems will have to collect multiple samples on different days from the same tap so that the total number of samples per monitoring period is five. States, however, have the discretion to allow water systems with fewer than five taps for human consumption to collect one sample per tap. Under this alternate sampling schedule, the sample with the highest test result will be compared to the action level to determine compliance.

Although some systems may change the number of samples taken in response to these provisions, there is very limited available data on the number of these systems and on the frequency with which they conduct lead and copper monitoring. Because of lack of data, EPA has not quantified the annual direct costs or savings associated with Regulatory Change III.A. EPA has quantified the one-time implementation costs for water systems with fewer than five taps to request permission to collect one sample per available tap and for States to review and decide upon these requests to collect one sample per available tap. Those costs are given in section IV.K.

### D. Direct Costs Associated With Regulatory Change III.B

Regulatory Change III.B clarifies the meaning of "monitoring period" and "compliance period," addressing in particular the date on which actions are triggered by an exceedance and the timing of samples under reduced monitoring schedules. Based on the rule

change, if a system exceeds the lead action level during a monitoring period, non-compliance starts at the end of the monitoring period (for most systems on September 30). Under the previous language, it was not clear whether non-compliance began at the end of the calendar year (December 31) or at the end of the monitoring period (September 30).

As a result of this rule change, activities triggered by an action level exceedance could begin three months earlier (e.g., at the end of September versus the end of December), but the duration of these activities would not likely be longer. The net result is a change in the timing of activities, with a difference of three months having negligible, if any, impact on costs.

Regulatory Change III.B also requires that systems on reduced monitoring, such as triennially or once every nine years, must take all compliance samples within the same calendar year during the June–September monitoring period. Under the existing rule, a system could collect compliance samples over multiple calendar years, as long as they were taken during the June–September time frame and during the three-year compliance period. In addition, systems on triennial monitoring must monitor no later than every third calendar year. Similarly, systems on nine-year monitoring schedules must monitor no later than every ninth calendar year. Since this rule change does not alter the number of samples to be taken, but the timing of samples, the direct cost impact is expected to be negligible.

### E. Direct Costs Associated With Regulatory Change III.C

#### 1. Activities Resulting From Regulatory Change

As a result of Regulatory Change III.C, utilities that have 90th percentile LCR monitoring samples that exceed the lead action level, and are currently on reduced monitoring, will be required to resume standard monitoring schedules for monitoring lead at taps. In addition to monitoring activities, utilities will have to meet reporting requirements to the State/primacy agency. State/primacy agencies will be required to review utility monitoring reports.

#### 2. Costs to Utilities

The direct costs to utilities, summarized in Table IV.3, are estimated to be \$2.7 million annually including \$2.5 million in labor costs and \$0.2 million in materials costs. Detailed estimates are provided in the Economic Analysis, Appendix C.

The systems that will incur costs under this regulatory change are those systems that exceed the lead action level and that had been on reduced monitoring. The number of systems EPA estimates to exceed the lead action level

each year is 994 as shown in Table IV.2. This estimate is based upon 2003 lead action level exceedances reported by States to EPA's Safe Drinking Water Information System for systems serving more than 3,300 people. For purposes of

this analysis, EPA used this data to estimate that 1.4 percent of systems (including system serving fewer than 3,300 people) will exceed the action level each year.

TABLE IV.2.—SYSTEMS EXCEEDING THE ACTION LEVEL SINCE 2003

	<3,300 <sup>1</sup>	3,300<50,000	>50,000	Total
Number of systems above action level since 2003 .....	884	96	14	994
Total number of systems .....	64,382	7,388	819	72,589
Percent of systems with monitoring results since 2003 over AL .....	1.4%	1.3%	1.7%	1.4%

<sup>1</sup>The Estimate for systems <3,300 is based upon data from systems >3,300.

Source: For medium and large systems, January 2005 Summary of lead action level, [http://www.epa.gov/safewater/lcrmr/lead\\_data.html](http://www.epa.gov/safewater/lcrmr/lead_data.html); for small systems, Summary, lead action level exceedances for public water systems subject to the Lead and Copper Rule (For data through September 13, 2004).

The number of systems on reduced monitoring was estimated using State responses to the EPA State Implementation of the Lead and Copper Rule survey (*State Implementation of the Lead and Copper Rule*, U.S. EPA 2004b). States provided estimates of the percent of systems on reduced LCR monitoring. Based on this data, 91 percent of systems are on reduced lead and copper monitoring. This analysis assumes that systems that are likely to exceed the lead action level, and are on reduced monitoring, are likely to exceed at the same rate as all systems. Therefore, EPA assumes that 1.4 percent of the 91 percent of the systems estimated as likely to exceed the action level are on reduced monitoring and will therefore incur costs due to Regulatory Change III.C. EPA notes that this assumption likely over-estimates the number of systems that will be affected by this regulatory change because systems that are likely to have exceedances are generally less likely to be on reduced monitoring in the first place.

For the number of additional monitoring events, it is assumed that each utility will conduct five additional monitoring events in each three year period by switching from a reduced monitoring schedule (triennial) to standard tap monitoring (semi-annual). While reduced monitoring could refer to either monitoring once every year or once every three years, it is not possible to distinguish, from the State responses to the EPA survey, between systems monitoring once every year and systems monitoring once every three years. This analysis assumes that all systems on reduced monitoring are on a one sample every three years schedule, an assumption that might slightly over-estimate costs. Likewise, the number of samples collected in each monitoring period will change when the utility switches from reduced monitoring to standard monitoring. Thus, a system that was on reduced monitoring, but is placed on regular monitoring after an action level exceedance under Regulatory Change III.C, will incur an additional five monitoring events over a three year period (six monitoring events

in three years under regular monitoring instead of one monitoring event in three years under reduced monitoring), with an increased number of samples collected in each event. The required number of samples varies by system size, with the smallest systems (serving less than or equal to 100 people) required to take five samples per monitoring event under both standard and reduced monitoring, and the largest systems (serving >100,000 people) required to take 100 samples per monitoring event under standard monitoring and 50 samples per monitoring event under reduced monitoring.

3. Costs to States

Regulatory Change III.C will require States to review utility monitoring reports as a result of resuming standard monitoring schedules. The direct costs to States is estimated to be \$82,000 annually including \$81,000 in labor costs and \$1,000 in materials costs, as summarized in Table IV.3. Detailed estimates are included in the Economic Analysis, Appendix C.

TABLE IV.3.—SUMMARY OF ESTIMATED DIRECT COSTS TO SYSTEMS AND STATES ASSOCIATED WITH REGULATORY CHANGE III.C (2006 DOLLARS)

	Annual labor	Annual materials	Total annual
Costs to Systems:			
Reporting .....	\$60,000	\$1,000	\$61,000
Tap Monitoring .....	2,442,000	193,000	2,635,000
Total System Costs .....	2,502,000	194,000	2,696,000
Costs to State/Primacy Agencies:			
Review Costs .....	81,000	1,000	82,000
Total State Costs .....	81,000	1,000	82,000

### F. Direct Costs Associated With Regulatory Change III.D

#### 1. Activities Resulting From Regulatory Change

Regulatory Change III.D requires water systems to obtain prior approval by the State to add a new source of water or to make a long-term treatment change prior to implementation. New system activities will include an assessment of the implications of long-term treatment or source changes on corrosion control prior to the change and a letter to the state. New State activities will include the review of the system data on the implications of a long-term treatment or source change on corrosion control prior to a change, preparation of conclusions, and coordination with utilities. The estimated costs to the affected systems and States are summarized in Table IV.4.

#### 2. Costs to Utilities

EPA estimates that the direct costs to utilities range from \$506,000 to \$765,000 annually. These direct costs are strictly labor costs; materials costs are expected to be negligible. Detailed estimates are provided in Appendix D (Table 6.1) of the Economic Analysis.

In order to estimate the annual cost of this provision to utilities, information is needed on the number of systems that would likely implement a long-term treatment change or add a source each year, as well as the number of systems that are located in States that already have a review and approval requirement. Systems located in these States will not incur additional costs under this provision.

As determined during EPA's review of the implementation of LCR requirements by States, many States already have a review and approval process for treatment or source changes. For the purposes of this analysis, two estimates were used for the number of States that already have a review and approval process that would include information on corrosion control issues: 14 States for a high end of the cost range and 31 States for a low end. Under the alternative in which only the 14 States with explicit review and approval are excluded from the count, 53,372 systems (of 72,213 CWSs and NTNCWSs based on 4th quarter 2004 SDWIS/FED) may incur costs for the regulatory change. Under the alternative in which States with permitting and plan review are also excluded from the count, 27,615 systems may incur costs for this regulatory provision.

An estimate was also needed of the number of systems projected to

undertake a long-term treatment change or add a source annually in order to estimate the cost of this provision to utilities. Long-term treatment changes over the next several years are likely as systems will be faced with new regulatory requirements, including changes to comply with the promulgated Arsenic Rule, the Long Term 2 Surface Water Treatment Rule (LT2) and the Stage 2 Disinfectants/Disinfection Byproducts Rule (Stage 2 D/DBP). EPA estimated the number of systems that would undertake treatment changes for the following new regulatory requirements:

- Arsenic—4,100 systems (Data source: *Arsenic in Drinking Water Rule Economic Analysis*, pp. 6–25, 6–27, U.S. EPA, 2000a);
- LT2—2,882 systems (Data source: *Economic Analysis for the Final Long Term 2 Enhanced Surface Water Treatment Rule*, Exhibit 6–1, page 6–3, U.S. EPA, 2005a);
- Stage 2 D/DBP—2,261 systems (Data source: *Economic Analysis for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule*, Exhibit ES–7a, page ES–17, U.S. EPA, 2005b).

Together, these regulatory requirements are estimated to cause 9,243 systems to institute a treatment change, although not all of these treatment changes will affect corrosion control. Additionally, the compliance periods for these regulations varies. For example, the Stage 2 D/DBP and LT2 treatment changes are projected to take place within a six year compliance period for large systems (with the possibility of two-year extension) and eight years for small systems (with the possibility of two-year extension). To account for these expected treatment changes, and to account for treatment changes unrelated to the Arsenic, LT2, and Stage 2 D/DBP rules, EPA assumed (based on the projected rule-related treatment changes and expert judgment) that approximately 20 percent of the systems affected by the LCR will institute a treatment change in the next 10 years. For purposes of this analysis, it is assumed that these changes will occur uniformly over that 10-year period, so that approximately one-tenth of these systems (or two percent of the total) institute a treatment change each year.

Using the two percent estimate, 1,067 (53,372 × .02) systems each year will report a treatment change or source addition. However, systems in States that already have a permitting or plan approval process in place will not incur additional costs to report the treatment change or source addition, since their States already require them to report

treatment changes or source additions through these processes. The annual estimate of the number of systems in States that currently do not have a permitting or plan approval process in place and that will, therefore, incur costs is 552.

EPA anticipates that systems will incur additional costs under this rule change as systems and States more carefully review and consider possible corrosion impacts of treatment changes or source additions. In the absence of information on the current prevalence of these activities, EPA has used best professional judgment to estimate the range of potential activities and associated costs resulting from the review and approval process. All systems, regardless of size or complexity, are assumed to undertake additional activities related to data collection and evaluation, preparation of a submittal to the State, and coordination with the State. For small systems or systems making relatively simple changes, considering the corrosion impacts of the change may be a rather basic process of reviewing water quality data and previous lead monitoring results. For these systems, additional effort will be incurred by system staff in coordinating with State personnel to assemble water quality parameter and lead data and evaluate the potential impacts. EPA estimates the burden for this additional effort at 7.5 hours per system, at an average cost of \$231 per system. For larger or more complex systems making major treatment changes, activities would be more extensive, including conducting engineering studies to evaluate impacts on corrosion control. Based on best professional judgment, EPA estimates that between 10 percent and 20 percent of medium and large systems may need to conduct additional engineering studies on corrosion impacts at a cost of \$20,000. To some extent, systems may already evaluate the impacts of treatment or source changes on corrosion. EPA has considered these current activities in estimating the portion of systems that would require an engineering study.

#### 3. Costs to States

The direct costs to States are estimated to range from \$163,000 to \$348,000 annually. These direct costs are strictly labor costs; materials costs are expected to be negligible. Estimates are summarized in Table IV.4. Activities that States will undertake include review of system data, preparation of conclusions and letters to systems, and coordination with utilities. Because the level of effort associated with these

activities is expected to vary based on the complexity of the change and the type of submittal (amount and type of information), EPA included a range of State review time from four to eight hours.

Those States incurring additional costs due to Regulatory Change III.D are

those that do not already have a review and approval process that considers the corrosion control implications of treatment changes. For the States that will incur new costs as they review and approve changes before they are made, rather than simple review after the change has been made, which is the

existing requirement, new State activities will include review of the system data on the corrosion control implications of a long-term treatment or source change prior to a change, preparation of conclusions and coordination with utilities.

TABLE IV.4.—ESTIMATED DIRECT COSTS TO SYSTEMS AND STATE/PRIMACY AGENCIES ASSOCIATED WITH REGULATORY CHANGE III.D (2006 DOLLARS)

	Annual cost— low estimate <sup>1</sup>	Annual cost— high estimate <sup>2</sup>
Costs to Systems:		
Reporting .....	\$506,000	\$765,000
Total System Costs .....	506,000	765,000
Costs to State/Primacy Agencies:		
Review Costs .....	163,000	348,000
Total State Costs .....	163,000	348,000

Notes: 1. 10 percent medium and large systems conduct engineering study and 4 hours for State review.  
2. 20 percent medium and large systems conduct engineering study and 8 hours for State review.

G. Direct Costs Associated With Regulatory Change III.E

1. Activities Resulting From Regulatory Change

Regulatory Change III.E requires CWSs to provide written notification to each owner/occupant of the lead level found in the tap sample collected for LCR compliance monitoring. Compliance for NTNCWSs will be determined by their circumstances and may consist of posting a notice on community bulletin boards or Web sites. Systems must also prepare a letter that self-certifies that they have distributed the sampling results as appropriate and submit it to the State. While States may review sample customer letters/notices from each utility for each monitoring period, such a review is not required by the regulatory change and thus is not considered a direct cost of the

regulatory change. States will be required to review, track, and store the self-certification letters. Supporting calculations and information regarding costs to utilities and States associated with this regulatory change are included in the Economic Analysis, Appendix E.

2. Costs to Utilities

The direct costs to utilities for compliance with Regulatory Change III.E are summarized in Table IV.5 and estimated to be \$1,248,000 annually including \$1,098,000 in labor costs and \$150,000 in materials costs for envelopes and postage. This is based on an estimated 310,510 notices being provided to customers each year, with associated labor. Detailed estimates are provided in the Economic Analysis, Appendix E-2.

In order to estimate the additional costs associated with Regulatory Change III.E, an estimate is needed of the

number of systems that already notify customers of tap monitoring results. Based on feedback from participants in workshops and interactions with States, some systems already notify customers of monitoring results. These systems would not incur costs under the regulatory change. Of 72,213 CWSs and NTNCWSs (per 4th quarter 2004 SDWIS/FED) subject to the LCR, EPA estimates that approximately 11 percent of these systems are estimated to already notify owner/occupants of tap sample results. Therefore, this regulatory change will apply to the remaining 89 percent of systems.

3. Costs to States

The direct costs to States to comply with Regulatory Change III.E are presented in Table IV.5. States are required to review, track, and store the self-certification letters.

TABLE IV.5.—SUMMARY OF DIRECT COSTS ASSOCIATED WITH REGULATORY CHANGE III.E (2006 DOLLARS)

	Annual labor	Annual materials	Total annual
Costs to Systems:			
Customer Notice of Lead Results Costs and self-certification letters .....	\$1,098,000	\$150,000	\$1,248,000
Total System Costs .....	1,098,000	150,000	1,248,000
Costs to States:			
Review, track and store self-certification letters .....	163,000	.....	163,000
Total State Costs .....	163,000	.....	163,000

H. Direct Costs Associated With Regulatory Change III.F

Regulatory Change III.F changes the public education requirements of the

Lead and Copper Rule (LCR) in § 141.85. Water systems would still be required to deliver public education materials after a lead action level exceedance, but the

text of the message to be provided to consumers, how the materials are delivered to consumers, and the timeframe in which materials must be

delivered would change. The changes to the delivery requirements include additions to the list of organizations systems must partner with to disseminate the message to at-risk populations as well as changes to the media used to ensure water systems

reach consumers when there is an action level exceedance. Table IV.6 presents a summary of the additional activities for reaching at-risk populations and the associated annual costs per system.  
In addition to the changes to § 141.85 of the LCR, EPA is also revising

§ 141.154(d) of the CCR rule (40 CFR 141, Subpart O), which requires all community water systems to send an annual report to billed customers containing information relevant to the quality of the drinking water provided by the system.

TABLE IV.6.—ANNUAL COST PER SYSTEM ESTIMATE FOR ADDITIONAL ACTIVITIES TO BETTER REACH AT-RISK POPULATIONS (2006 DOLLARS)

System size category	i. Public service announcements	ii. Paid advertisements	iii. Display in public areas	iv. Internet notification	v. Public meetings	vi. Delivery to every household	vii. Targeted contact	viii. Materials directly to multi-family & institutions	Average per system all activities
25–100 .....	\$98	\$105	\$24	\$24	\$48	\$7	\$34	\$12	\$44
101–500 .....	101	105	26	26	51	30	35	15	49
501–3,300 .....	105	180	111	28	55	166	37	27	89
3.3K–10K .....	118	180	137	420	900	435	44	81	289
10K–50K .....	1,400	850	696	596	2,400	1,114	66	303	928
50K–100K .....	1,400	5,000	1,392	596	3,000	2,448	138	945	1,865
>100K .....	1,400	5,000	3,943	1,035	5,000	3,874	563	5,035	3,231

Details of how these unit costs were calculated are provided in Appendices H–6 through H–20 of the Economic Analysis for this final rule.

States are required to review the language in the utility’s notice to consumers to make sure the utility is including the required information. States are also required to consult with each system with an action level exceedance. States will no longer be required to approve a waiver for notifications for each system that exceeds the lead action level that serves a population of 501–3,300.

2. Costs to Utilities

The annual direct costs to utilities resulting from Regulatory Change III.F are estimated to be \$859,200. The

annual system labor cost is estimated to be \$837,900 and the annual system materials are estimated to cost \$21,200. Estimates of costs associated with each activity are presented in Table IV.7. Detailed estimates of costs to utilities are provided in the Economic Analysis, Appendix F.

The requirement to provide information about lead in the CCR is new only for systems that currently do not detect lead above the action level in 95 percent or more of their sites, since systems in which the 95th percentile result is above the action level are already required to provide such information. However, EPA does not have data on such systems. Rather, EPA has data on the (smaller) number of systems that currently detect lead below

the action level in 90 percent of their sites, and has subtracted this value from the universe of systems to estimate the number of systems that would incur new costs under this requirement. Underestimating the current baseline of systems that currently detect lead at the 95th percentile level, by using data on systems that detect lead at the 90th percentile level (a smaller number of systems), overestimates the remaining number of systems that do not currently report lead information in their CCR. EPA’s estimate assumes that 52,257 additional systems would have to provide information about lead in their CCR each year, with an additional associated labor of 0.25 hours per system per year.

TABLE IV.7.—SUMMARY OF COSTS TO SYSTEMS DUE TO LCR PUBLIC EDUCATION CHANGES (2006 DOLLARS)

Activity	Requirement	Annual labor	Annual materials	Total system cost
<b>a. Changes to the Mandatory Text of the Written Materials:</b>				
III.F(a)(1) .....	Customer Notification .....	\$91,400	\$0	\$91,400
<b>b. Changes to Better Reach At-Risk Populations:</b>				
III.F(b)(1) .....	Notify Additional Organizations .....	21,900	21,400	43,300
III.F(b)(2) .....	Additional Activities i–viii .....	292,700	0	292,700
III.F(b)(2) .....	Consult with State on Activities .....	33,500	300	33,700
<b>c. Changes to Help Systems Maintain Communication with Consumers Throughout the Exceedance:</b>				
III.F(c)(1) .....	Customer Bills .....	47,400	0	47,400
III.F(c)(2) .....	Post on Website .....	100	0	100
III.F(c)(3) .....	PSAs and Press Releases .....	–3,700	–500	–4,200
<b>d. Changes to the Required Timing:</b>				



TABLE IV.7.—SUMMARY OF COSTS TO SYSTEMS DUE TO LCR PUBLIC EDUCATION CHANGES (2006 DOLLARS)—  
Continued

Activity	Requirement	Annual labor	Annual materials	Total system cost
No cost impact				
<b>e. Changes to Consumer Confidence Report:</b>				
III.F(e)(1) .....	CCR Statement .....	354,600	0	354,600
<b>Total Costs to Systems for PE Requirements (III.F):</b>				
Total .....		837,900	21,200	859,200

Note: Totals may not add due to rounding.

3. Costs to States to be \$63,000. These costs are the annual State labor costs; no materials cost is expected. These costs are presented in Table IV.8. Detailed estimates of costs to States are provided in the Economic Analysis, Appendix F.

The direct costs to States as a result of Regulatory Change III.F are estimated

TABLE IV.8.—SUMMARY OF COSTS TO STATES DUE TO LCR PUBLIC EDUCATION CHANGES (2006 DOLLARS)

	Annual labor	Annual materials	Total annual
III.F Costs to States:			
Review and consultation .....	\$63,000	\$0	\$63,000
III.F Total State Costs .....	63,000	0	63,000

*I. Direct Costs Associated With Regulatory Change III.G*

1. Activities Resulting From Regulatory Change

Under this regulatory change, utilities that have 90th percentile LCR samples that exceed the lead action level will need to identify all lead service lines (LSL) that had previously been determined to be replaced via sampling. These utilities will be affected by Regulatory Change III.G if they exceed the action level again and renew a LSL replacement program. These utilities must put these “tested out” LSLs back into their inventory of lead service lines that could be considered for replacement. To estimate the impact of this change, we assume these formerly “tested out” LSLs will be retested and that some of them will exceed the lead action level. The primary activities as a result of this regulatory change include collecting and analyzing samples from these LSLs. Replacement of lines that were previously tested out may also occur as a result of this change.

2. Costs to Utilities

The direct costs to utilities as a result of Regulatory Change III.G are estimated to be \$110,000 annually, which includes \$101,000 in labor costs and \$9,000 in materials costs. Detailed estimates of costs to utilities are provided in the Economic Analysis, Appendix F.

Estimating the costs to utilities requires an estimate of the number of systems who have been involved in a lead service line replacement program, the number of systems likely to discontinue such a program due to low tested lead levels, and the fraction of those systems likely to subsequently exceed the action level and restart their lead service line replacement program.

In the responses to the 50-State survey on lead implementation (U.S. EPA, 2004b), which is available in the public docket for this rulemaking, 11 States responded that at least one system in their State has been involved in a lead service line replacement program. Six States provided sufficient information to derive the number of systems within that State required to perform lead service line replacement—a total of 28 systems. Based on an average of five systems per State for the six States that provided data, for purposes of this analysis, EPA assumes that the remaining five States have five systems, plus one system for DC (which did not respond to the survey) for a total of 54 systems that have been required to perform lead service line replacement.

Because there is insufficient information to determine how many of the 54 systems suspended their lead replacement programs, and later restarted the programs due to an exceedance, EPA assumed the worst case scenario that all of these systems

suspended their lead replacement programs and that the rate of subsequent exceedance was the same as for the universe of systems subject to the LCR, as shown in Table IV.2. Thus, EPA assumed that 1.4 percent of the 54 systems or one system will exceed the action level and will therefore be triggered back into lead service line replacement each year.

EPA does not have information on the number of systems using the test out provisions rather than physically replacing lines, so this approach likely overestimates the number of affected systems, because it assumes that all systems in a lead service line replacement program are using the test out provisions. Systems removing lead service lines are not impacted by this change. While the rate at which systems are triggered back into lead service line replacement might be higher than the initial rate, it is offset by the assumptions regarding systems using the test out provisions and the universe of systems that would stop their lead service line replacement program and later resume it because of this regulatory change. Please see the Economic Analysis for the final rule, Appendix F, for additional details on the assumptions EPA made to derive the estimated costs for this provision.

3. Costs to States

No direct costs are projected for States as a result of Regulatory Change III.G. Although the States will review utility LSL replacement program annual

reports, these costs are attributed to the 1991 LCR rather than this rule.

J. Summary of National Average Annual Direct Costs

The estimates of annual direct costs for the final regulatory changes are presented in Table IV.9.

TABLE IV.9.—SUMMARY OF ANNUAL DIRECT COSTS TO SYSTEMS AND STATES FROM ALL REGULATORY CHANGES (2006 DOLLARS)<sup>1</sup>

Regulatory change	Annual direct costs to systems				Annual direct costs to states	Total annual direct costs
	Reporting	Monitoring	Consumer notice	Total		
III.A						
III.B						
III.C	\$61,000	\$2,635,000		\$2,696,000	\$82,000	\$2,778,000
III.D Low	506,000			506,000	163,000	669,000
III.D High	765,000			765,000	348,000	1,113,000
III.E	136,000		1,112,000	1,248,000	163,000	1,411,000
III.F	34,000		825,000	859,000	63,000	922,000
III.G		110,000		110,000		110,000
Total Low	736,000			5,418,000	471,000	5,890,000
Total High	995,000	2,745,000	1,938,000	5,677,000	657,000	6,335,000

Notes: 1. Totals may not add due to independent rounding.

K. Total Upfront Costs To Review and Implement Regulatory Changes

1. Activities Resulting From Regulatory Change

Systems and States will incur one-time upfront costs associated with reviewing and implementing this rule. For systems, activities include reviewing the rule changes, training staff, and verification costs associated with Regulatory Change III.A. For States/Primacy Agencies, activities include regulation adoption, program development, and miscellaneous training.

2. Total Costs to Utilities

Direct costs to utilities are estimated to be approximately \$11 million, as summarized in Table IV.10. Detailed estimates of costs to utilities are provided in the Economic Analysis Appendix G. Direct costs to utilities are based solely on labor; no materials costs are expected for these one-time upfront costs.

3. Total Costs to States

Direct costs to the States are estimated to be \$1,650,000 as summarized in Table IV.10 and detailed in Appendix G of the Economic Analysis. Similar to the one-time costs for utilities, these direct costs are based solely on upfront labor costs. Fifty-seven States will review and implement these LCR revisions.

TABLE IV.10.—SUMMARY OF ONE-TIME DIRECT COSTS ASSOCIATED WITH RULE REVIEW AND IMPLEMENTATION (2006 DOLLARS)

	One time labor costs
Costs to Systems:	
Review & Communication	\$10,971,000
Verification (III.A)	104,000
Total System Costs:	11,075,000
Costs to State/Primacy Agencies:	
Regulation Adoption	1,488,000
Verification (III.A)	162,000
Total State Costs	1,650,000
Total Rule Implementation Costs	12,725,000

L. Indirect Costs

Previous sections focused on the direct costs of this rulemaking, costs resulting from activities specified by the rule change, such as costs for additional monitoring or distribution of consumer notices. A second type of cost, an indirect cost, may also result when systems and States use the information generated by the rule-required activities to modify or enhance practices to reduce lead levels. Indirect costs may also result if systems or States decide to undertake additional information-gathering activities not required by the rule.

The revisions will require some systems to generate new information

which, in some cases, may be provided to States and customers. The information that is generated may suggest lead and copper risks that would not otherwise have been discovered (or such risks might be discovered sooner than otherwise). Upon obtaining this information, a system itself, the State, or some of the system's customers may take actions to address these risks, incurring the costs of those actions. For example, a system may redesign a planned treatment change following State review of the planned change, or a system may replace a lead service line that was previously "tested out." System customers, upon receiving notification of the lead content of their tap samples, may take some action, and in the process, incur a cost.

It is both difficult to project what the content will be of the information generated pursuant to the regulation, and difficult to predict how systems and individuals might act in response to the new information generated as a result of these regulatory changes. Because of the uncertainty in tracing the linkages from the regulation to new information to exposure prevention measures, EPA is unable to quantify the indirect costs that might ensue from these regulatory changes.

It is also possible that some additional information-gathering activities may result from this rule. For example, a system may decide to undertake a new study of the corrosion implications of a rule change. Or a State may decide to

review sample system customer letters of notification to owner/occupants about the lead levels found in their collected tap samples. These activities would also result in indirect costs associated with this final rule.

#### M. Benefits

The intent of this rulemaking is to improve implementation of the lead and copper regulations by clarifying monitoring requirements, improving customer awareness, and modifying the lead service line test out procedure. These revisions do not affect the action levels, corrosion control requirements, lead service line replacement requirements, or other provisions in the existing rule that directly determine the degree to which the rule reduces risks from lead and copper.

However, the increase in administrative activities that will result from the revisions will generate new information (e.g., more monitoring data, some of which may show exceedances), and may prompt some systems or individuals to respond to this new information by taking measures to abate lead and copper exposures and thus reduce the associated risk. Also, the requirement that long-term treatment changes be approved by the State prior to implementation will provide an additional opportunity to identify possible adverse impacts due to treatment changes, which may lower the risk to consumers.

Because the precise impact of these revisions on the behavior of individuals and systems is not known, EPA has not quantified the changes in associated health benefits. However, EPA does expect that overall benefits from the LCR will increase as a result of the indirect effects of the revisions on the actions of individual consumers and systems.

#### N. What Were the Key Issues Raised by Commenters on the State and System Burden Estimates (Economic Analysis) and EPA's Response to These Issues?

Many commenters stated that EPA underestimated the overall burden of the proposed rule, both for systems and for States. Many commenters thought, for example, that both systems and States would need more time to read and understand the rule. EPA agrees with these commenters and has revised the burden and cost estimates for some sections of the rule, and for the implementation activities. In particular, EPA made an upward revision to the burden estimate for the larger systems, estimating that it would take them an average of 40 hours to read, understand, and communicate the rule's significance

to required personnel. EPA also reviewed and revised the State implementation burden and cost, significantly increasing these estimates (from 312 hours to 600 hours).

One commenter stated that some NTNCWSs (e.g., schools, child care centers, and small businesses) do not have staff to satisfactorily implement new drinking water rules and respond to public inquiries regarding lead in drinking water. EPA agrees with this comment and has increased the state burden assumptions for this final rule. EPA recognizes that "operators" at NTNCWSs typically have many other job functions and are often not professional water system managers, and that States, therefore, must continually educate, assist, and enforce regulations to ensure compliance. Commenters also stated that EPA underestimated the impact to States regarding the requirement to provide a consumer notice of lead tap water monitoring results. EPA agrees with this comment and has revised the consumer notice estimates to indicate that additional funding will be required for this activity.

Some commenters asserted that EPA did not address the implications for a regulatory program assigned to "approve" rather than simply "review" treatment changes, and specifically that EPA underestimated the costs of requiring advanced State approval. Commenters also thought that every PWS would need to have additional and more intensive interaction with the State prior to making any change in water treatment or source water. While the Agency agrees with this comment, EPA has narrowed the scope of this provision in the final rule to only long-term changes in treatment. Since this will considerably reduce the potential burden of the requirement by removing the daily water quality treatment changes from consideration, EPA is not revising the cost estimate for this change from the proposal.

#### V. Statutory and Executive Order Requirements

##### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action." Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

In addition, EPA has prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in the *Economic and Supporting Analyses: Short-Term Regulatory Changes to the Lead and Copper Rule* (U.S. EPA, 2007a). A copy of the analysis is available in the docket for this action and the analysis is briefly summarized in section IV of this notice.

##### B. Paperwork Reduction Act

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* The information collection requirements are not enforceable until OMB approves them.

EPA requires comprehensive and current information on lead and copper contamination and associated enforcement activities to implement its program oversight and enforcement responsibilities mandated by the Safe Drinking Water Act (SDWA). Highly publicized incidences of elevated drinking water lead levels prompted EPA to review and evaluate the implementation and effectiveness of the LCR on a national basis. As a result of this multi-part review, EPA identified seven targeted rule changes that clarify the intent of the LCR and ensure and enhance protection of public health through reduction in lead exposure. EPA will use the information collected as a result of the short-term revisions to the LCR to support the responsibilities outlined in SDWA by strengthening the implementation of the LCR in the areas of monitoring, customer awareness, and lead service line replacement. The rule revisions described in section III of this notice are intended to improve the implementation of the LCR and do not alter the original maximum contaminant level goals or the fundamental approach to controlling lead and copper in drinking water.

Section 1401(1)(D) of SDWA requires that there must be "criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels; including accepted methods for quality control and testing procedures to insure compliance with such levels and to insure proper operation and maintenance of the system \* \* \*" Furthermore, section 1445(a)(1) of SDWA requires that 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 the Administrator in establishing regulations \* \* \* in determining whether such person has acted or is acting in compliance” with this title. In addition, section 1413(a)(3) of SDWA requires States to “keep such records and make such reports \* \* \* as the Administrator may require by regulation.”

Section 1412(b) of SDWA, as amended in 1996, requires the Agency to publish maximum contaminant level goals and promulgate NPDWRs for contaminants that may have an adverse effect on the health of persons, are known to or anticipated to occur in PWSs, or, in the opinion of the Administrator, present an opportunity for health risk reduction. The NPDWRs specify maximum contaminant levels or treatment techniques for drinking water contaminants (42 U.S.C 300g.-1). Section 1412(b)(9) requires that EPA, no

less than every 6 years review, and as appropriate, revise existing drinking water standards. Promulgation of the LCR complies with these statutory requirements.

1. Burden Estimate

The universe of respondents for this ICR is comprised of 52,838 CWSs and 19,375 NTNCWSs, for a total of 72,213 systems (4th Quarter 2004 SDWIS/FED), and 57 States. The activities that take place during the 3-year period covered by the ICR will vary based on the timing of State implementation of the final rule. The rule is structured to allow for early implementation by States within 180 days of rule publication. Alternatively, States have up to 2 years to implement rule provisions as described in section III.I of this notice. Because there is some uncertainty in predicting which States will adopt early implementation versus those that will take 2 years, EPA estimates an upper

and lower bound on ICR burden and cost estimates. The upper bound estimate assumes all States will adopt early implementation while the lower bound estimate assumes States will take 2 years to implement the rule.

The total annual average respondent burden associated with this ICR is estimated to be 206,997–297,122 burden hours. The corresponding total annual average respondent costs are estimated to be \$6.4 to \$9.5 million.

EPA estimates the annual respondent burden for PWSs to be 189,369–271,997 hours. Annual respondent costs for PWSs are estimated to be \$5.6 to \$8.4 million. The Agency estimates that the annual respondent burden for States is 17,628–25,125 hours. The corresponding annual average respondent costs for States are estimated to be \$0.8 to \$1.1 million. Table V.1 presents a summary of total burden and costs for this ICR.

TABLE V.1.—BOTTOM LINE AVERAGE ANNUAL BURDEN AND COSTS UPPER AND LOWER BOUND ESTIMATES (2006 DOLLARS)

	Lower bound	Upper bound	
Number of Respondents .....	72,270 = 72,213 + 57	72,270 = 72,213 + 57	Public water systems. States.
Total Annual Responses .....	186,524 = 171,849 + 14,675	426,483 = 391,671 + 34,812	Public water system responses. State responses.
Number of Responses per PWS ..	2.4 = 171,849/72,213	5.4 = 391,671/72,213	Total annual PWS responses from above.
Number of Responses per State ..	257 = 14,675/57	611 = 34,812/57	Total public water systems from above.
Total Annual Respondent Burden Hours.	206,997 = 189,369 + 17,628	297,122 = 271,997 + 25,125	Total annual State responses from above.
Hours per System for Public Water Systems.	2.6 = 189,369/72,213	3.8 = 271,997/72,213	Total States from above.
Hours per State for States .....	309 = 17,628/57	441 = 25,125/57	Public water system hours. State hours.
Annual O&M Costs .....	\$118,717 = \$117,886 + \$831	\$295,205 = \$293,920 + \$1,284	Total PWS annual hours from above.
Total Annual Respondent Cost .....	\$6,353,532 = \$5,584,289 + \$769,243	\$9,520,866 = \$8,423,108 + \$1,097,758	Total PWS from above.
Cost Per Response .....	\$32 \$52	\$21 \$32	Total State annual hours from above.
Total Annual Hours (respondent plus Agency).	206,997 = 206,997 + 0	297,122 = 297,122 + 0	Total States from above.
Total Annual Cost (respondent plus Agency).	\$6,353,532 = \$6,353,532 + \$0	\$9,520,866 = \$9,520,866 + \$0	Public water system O&M costs. State OM costs.
			Public water system costs. State costs.
			Public water system cost. State cost.
			Total respondent hours. Total EPA hours.
			Total respondent cost. Total EPA cost.

Note: Detail may not add exactly to total due to independent rounding. EPA burden and cost estimated under PWSS program.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology

and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and

requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

**C. Regulatory Flexibility Act**

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

The RFA provides default definitions for each type of small entity. Small entities are defined under the RFA as: (1) A small business as defined by the Small Business Administration's (SBA)

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

For purposes of assessing the impacts of this rule on small entities, EPA defined small entities as public water systems serving 10,000 or fewer persons. As required by the RFA, EPA proposed using this alternative definition in the **Federal Register** (63 FR

7606, February 13, 1998), requested public comment, consulted with the Small Business Administration (SBA), and finalized the alternative definition in the Consumer Confidence Reports regulation (63 FR 44511, August 19, 1998). EPA stated in that Final Rule that it would apply the alternative definition to future drinking water regulations (including this one) as well.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This certification is based on EPA's established definition of small entities as public water systems serving 10,000 or fewer persons. The small entities directly regulated by this final rule are small public water systems serving 10,000 or fewer people on an annual basis. We have determined that 68,286 small systems may be affected by the changes to the LCR. Table V.2 provides a summary of these small systems, by size category and system type.

TABLE V.2.—THE NUMBER OF SMALL SYSTEMS AFFECTED BY THE FINAL RULE CHANGES

Size	CWS	NTNCWS	Total small
<=100 .....	13,766	9,548	23,314
101–500 .....	16,240	6,997	23,237
501–1,000 .....	5,914	1,925	7,839
1,001–3,300 .....	8,298	795	9,093
3,301–10,000 .....	4,707	96	4,803
<b>Total .....</b>	<b>48,925</b>	<b>19,361</b>	<b>68,286</b>

However, not all of these small entities will incur direct costs for all of the final regulatory changes. In many cases, only a relatively small subset of these systems will have to change practices to comply with the regulatory changes. Table V.3 provides an estimate of the number of small systems that will incur direct costs for each of the regulatory changes.

TABLE V.3.—THE NUMBER OF SMALL SYSTEMS AFFECTED BY EACH REGULATORY CHANGE

Regulatory change	Small systems impacted per year
Regulatory Change III.A .....	3,692
Regulatory Change III.B .....	(1)
Regulatory Change III.C .....	854
Regulatory Change III.D .....	1,009
Regulatory Change III.E .....	60,735
Regulatory Change III.F .....	49,337
Regulatory Change III.G .....	1

<sup>1</sup> None—Clarifications of definitions with no direct cost impact.

**Activities and Costs Associated With Rule Changes for Small Systems**

EPA has estimated the burden and costs associated with the regulatory changes, as described in the Economic Analysis for this final rule. The basis for many of these input values and assumptions are described in detail in the Economic Analysis, Section 4. The following summarizes the costs estimated for small systems.

1. One-Time Activities

All small systems subject to the Lead and Copper Rule will be expected to incur some costs to read the rule changes and communicate requirements as necessary. The level of effort associated with these activities could range from 5–8 hours for each small system. The average cost per system for these activities is estimated at \$138, for a total cost of \$9,404,000 for all 68,286 small systems. This assumes an hourly fully loaded labor cost for small system employees ranging from \$23.86 to

\$33.96 (see Appendix B of the Economic Analysis).

2. Activities for Regulatory Change III.A

Under Regulatory Change III.A, small systems with fewer than 5 taps in States that allow 1 sample per tap will prepare and submit to the State a one-time letter verifying the applicable number of taps and requesting the use of the alternative sampling. Eleven States supported the alternative sampling in their comments on the proposed rule. However, two States did not support the alternative sampling. For purposes of estimating costs, EPA assumed that the States that did not support the alternative and States that did not comment on the rule provision would not allow systems to implement the alternative since the default requirement in the rule is that systems take a minimum of 5 samples. Based on data from SDWIS/FED on these 11 States, EPA estimates that there are 3,692 systems with fewer than 5 taps. Preparing the one-time request letter results in a one time cost of \$28

per system. Total costs for all small systems likely to be affected by Regulatory Change III.A are estimated at \$104,000 per year.

3. Activities for Regulatory Change III.C

Under Regulatory Change III.C, all systems that exceed the lead action level are triggered into regularly scheduled lead tap monitoring. Additional costs are associated with taking lead samples more frequently and reporting the results to States. EPA estimates that 854 small systems exceed the lead action level each year. Changing from reduced tap monitoring to regularly scheduled tap monitoring would result in an average cost increase of \$2,258 per year per system. Total costs for all small systems likely to be affected by Regulatory Change III.C are estimated at \$1,929,000 per year.

4. Activities for Regulatory Change III.D

Small systems that are changing treatment or adding a source would incur additional costs under Regulatory Change III.D to prepare data in support of treatment changes or source addition, to submit the data to the State for review, and to coordinate with the State during the review. These activities are estimated to take an additional 7.5 hours per system for each treatment change or source addition. The cost for each small system that is changing treatment or adding a source is estimated at \$196. The total cost for all small systems likely to be affected by

Regulatory Change III.D is estimated at \$198,000 per year.

5. Activities for Regulatory Change III.E

Most small systems are expected to incur additional costs under Regulatory Change III.E when they are required to notify consumers of tap monitoring results. The activities associated with notifying customers vary based on the type and size of the system and include the effort to prepare a self-certification letter to the State. The average cost for small systems to notify customers is estimated at approximately \$17 annually. This estimate assumes one labor hour to prepare a customer notification letter per system, 0.12 hours to prepare the self-certification letter, and \$0.43 in material costs per sample for CWSs. EPA assumed one labor hour plus 0.12 hours for NTNCWSs, with negligible material costs. It is important to note that the majority of small systems are assumed to meet the lead action level and are assumed to be on triennial monitoring. Therefore, this requirement will only affect them once every three years. The total cost to all small systems likely to be affected by Regulatory Change III.E is estimated at \$1,060,000.

6. Activities for Regulatory Change III.F

Different provisions of Regulatory Change III.F apply to different subsets of systems. All small community water systems will incur costs to include a statement on lead in the Consumer

Confidence Report (CCR), at an average cost of \$7 per system, based on the assumption of 0.25 hours to add an informational statement on lead to the CCR. Small community water systems that exceed the lead action level will incur costs from a variety of public education activities, at an average cost per system of \$265. The total cost for all small systems likely to be affected by Regulatory Change III.F is estimated at \$569,000.

7. Activities for Regulatory Change III.G

Regulatory Change III.G applies to systems that had "tested out" lead service lines as part of a lead service line replacement program and then re-exceeded the action level. For the purposes of subsequent lead service line replacement efforts, the previously "tested-out" lines would go back into the inventory for possible re-testing and/or replacement. Only a handful of systems are expected to be in this situation, estimated at 1 system per year. This analysis assumes that the 1 system is not a small system. There is no evidence that small systems would be triggered into this regulatory change cost any more frequently than other systems.

8. Total Small System Costs

Table V.4 summarizes the estimated annual costs associated with all regulatory changes. Table V.5 summarizes the one-time costs to small systems.

TABLE V.4.—TOTAL ESTIMATED ANNUAL SMALL SYSTEM COSTS (2006 DOLLARS) ALL SYSTEMS SERVING LESS THAN 10,000 PEOPLE

	Annual labor	Annual materials	Total annual
Regulatory Change III.A .....	0	0	0
Regulatory Change III.B .....	0	0	0
Regulatory Change III.C .....	1,783,000	146,000	1,929,000
Regulatory Change III.D .....	198,000	0	198,000
Regulatory Change III.E .....	946,000	114,000	1,060,000
Regulatory Change III.F .....	566,000	4,000	569,000
Regulatory Change III.G .....	0	0	0
Total .....	3,492,000	264,000	3,755,000

**Note:** Detail may not add exactly to total due to independent rounding. Because this table represents annual costs, some fields include zero values. While there are regulatory costs associated with Regulatory Change III.A, these costs are one-time in nature and thus do not include any annual costs.

TABLE V.5.—TOTAL ESTIMATED ONE-TIME SMALL SYSTEM COSTS (2006 DOLLARS) ALL SYSTEMS SERVING LESS THAN 10,000 PEOPLE

	One-time costs
Regulatory Change III.A .....	\$104,000
Implementation .....	9,404,000

TABLE V.5.—TOTAL ESTIMATED ONE-TIME SMALL SYSTEM COSTS (2006 DOLLARS) ALL SYSTEMS SERVING LESS THAN 10,000 PEOPLE—Continued

	One-time costs
Total .....	9,508,000

9. Average Costs Per Small System

The estimated average compliance cost for all small systems covered by the LCR for the final rule changes is minimal: \$55 per system in annual costs. However, there is a fairly wide range in the costs that a system could face. EPA expects that all systems will incur the \$138 one-time implementation cost. The additional annual costs could

be as low as \$0 for small NTNCWSs that already notify customers of tap monitoring results. Systems that do not already notify customers of results could incur \$17 per year. EPA estimates that small CWSs will incur \$7 per year to include a statement on the CCR. The roughly 2 percent of systems that are making a treatment change or source addition are estimated to incur an additional \$196 in the year they make the change.

At the high end, if a system incurred all estimated annual costs, the total would be \$2,743 per year. As EPA estimates that only 854 small systems will exceed the lead action level, at most only 854 small systems or 1.3 percent of all small systems could potentially incur all estimated annual costs. Those systems that do not exceed the lead action level face a maximum potential annual cost of \$220.

10. Measuring Significant Economic Impact of Rule Costs

The costs to small systems are compared against average revenues for small systems from all revenue sources. Small systems can be one of three types

of small entities—small businesses, small governments, or small non-profits. The revenue estimate used for assessing impacts to small systems in this rule is derived from two sources: (1) EPA’s 2000 Community Water System Survey (CWSS) and (2) the 2002 Census of Governments. Data from these two sources are used to calculate an average revenue estimate for all small systems serving less than 10,000 customers and for each of 3 size categories: Those serving 25–500 customers, those serving 501–3300 customers, and those serving 3301–10,000 customers. Analyzing impacts separately for these 3 categories of small systems allows EPA to better identify potential impacts to the smallest systems, which tend to have the lowest revenues. Estimates of total revenue are shown in Table V.6 and reflect updates to EPA’s revenue analysis in the proposed rule. For more information on EPA’s revenue estimates for the small system size subcategories, please see the Economic Analysis for the final rule.

Using average revenues and the average cost of the regulatory changes for all small systems, the one-time costs

represent roughly 0.006 percent of annual revenues from all revenue sources. The estimated \$55 average annual compliance costs per system represent 0.003 percent of average annual revenues from all revenue sources. EPA estimates that roughly 1.3 percent of the systems serving 10,000 or less customers would incur all annual costs of \$2,743, which is approximately 0.127 percent of annual revenues from all sources.

Costs as a percentage of revenues for the 3 size categories separately are shown in Table V.6. This table compares the average costs of the regulatory changes to the average revenues. As shown in Table V.6, average economic impacts to small systems from these regulatory revisions are all less than one percent of average revenue for each of the small system size subcategories. However, as discussed in section V.C.1 of this notice, substantial data limitations exist in our revenue data which may limit our ability to accurately describe the revenues available to small water systems.

TABLE V.6.—AVERAGE COSTS PER SYSTEM AND PERCENTAGE OF REVENUE  
[All revenue sources (2006\$)]

System size	Number of systems	Average annual cost per system	Revenues per system*	Average annual cost as percentage of revenue
25–500 .....	46,551	\$41	**\$550,000	0.007
501–3,300 .....	16,932	67	1,448,000	0.005
3,301–10K .....	4,803	153	12,643,000	0.001
Aggregate: 25–10K .....	68,286	55	2,167,000	0.003

**Notes:** \*Includes water revenues and non-water related revenues (e.g., revenues related to the primary business for private entities that operate a water system to support their business or municipal general revenue for publicly owned and operated systems). \*\*Estimated Total Average Revenue per system for systems serving 25–100 is \$220,000.

In summary, the average costs for each of the small size subcategories below 10,000 represent less than 1 percent of average revenue from all sources. To provide additional information on the potential economic impacts of the LCR on small entities, EPA also examined the range of potential costs relative to revenues for the smallest system size category (those serving 25–500 people). Average total annual revenue for this system size is estimated to be \$550,000. As stated above, the maximum number of small systems (serving less than 10,000 people) that could possibly incur all annual total costs of \$2,743 is 854, those that exceed the lead action level. This maximum cost represents approximately 0.5 percent of average revenues from all sources for systems in the smallest size subcategory. However,

because of our limited data on small system revenues, we do not have the ability to develop a distribution of revenues in this subcategory for comparison. For those systems that do not exceed the lead action level, the maximum potential cost that could be incurred by systems in the smallest size category is \$220, or 0.04 percent of revenue from all sources. This analysis further supports our conclusion that this final rule will not have a significant economic impact on a substantial number of small entities.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. For Regulatory Change III.A, EPA added a provision that gives States the discretion to allow water systems with fewer than

5 taps for human consumption to collect one sample per tap. Under this alternative sampling schedule, the sample with the highest test result will be compared to the action level to determine compliance. Taking fewer than 5 samples for each monitoring event will reduce the monitoring burden for small systems while still being protective of public health. Comparing the single highest sample value does not allow water systems to ignore a potential problem by taking repeat samples at taps that have low lead results when they get a high sample result.

Regulatory Change III.C requires systems that exceed the lead action level to resume tap monitoring for lead on a regular basis, rather than on a reduced schedule. Originally EPA considered extending this requirement to both lead

and copper monitoring. Based on guidance from the work group on minimizing impacts to small systems, EPA limited the requirement to only include lead action level exceedances.

Regulatory Change III.E requires systems to provide lead monitoring results to consumers. The regulatory development work group considered including copper monitoring results in the consumer notice, but decided to defer that suggestion for consideration in future regulatory revisions, thereby limiting the increase in burden to small systems.

#### 11. What Were the Key Issues Raised by Commenters on the Regulatory Flexibility Analysis and EPA's Response to These Issues?

EPA received one comment on its Regulatory Flexibility analysis supporting the proposed rule. The commenter agreed with EPA's certification that the LCR will not have a significant economic impact on a substantial number of small entities, but recommended that EPA provide more detailed information concerning the economic impacts of these regulatory changes to subcategories of small entities. In response to this commenter, EPA provided additional information in the final rule on the potential impacts to systems in the three smallest size subcategories (those serving 25–500, 501–3,300, and 3,301 to 10,000 people) and has considered this information in evaluating impacts to small systems.

In certifying that these regulatory changes will not have a significant economic impact on a substantial number of small entities, EPA assessed the economic impacts of this final rule on small water systems by calculating an average revenue estimate for systems serving less than 10,000 customers and comparing it to an average cost estimate for systems serving less than 10,000. EPA then evaluated data on the costs and revenues per system for three small size subcategories as defined in the SDWA for affordability determinations for small systems. EPA believes that for this rule this is a reasonable way to stratify the small system universe by size for purposes of its RFA screening analysis as well. EPA is continuing to examine issues associated with the significant variety of entities that operate small water systems and how best to analyze them under the RFA, and may further refine its analytical approach for future rule makings.

EPA is also working to improve its estimation of small system revenues. The new CWSS, estimated for completion in early 2009, is expected to better enable EPA to assess the impacts

of future regulatory actions on small systems. In the new CWSS, we are taking steps to improve response rate, particularly with respect to water system revenue estimates. Examples of these steps include linking municipal government revenues to the system surveyed in that municipality, rather than reliance on the Census of Governments data; decreasing item non-response on revenue source through system site visits; and gaining a better understanding of how a water system pays for its system operations in systems that report no revenue, through an additional survey question. These improvements to the new CWSS will help EPA to gain a better understanding of the revenue sources available to small water systems and improve our ability to accurately understand the revenue streams available to these systems.

#### D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with “Federal mandates” that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal

intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and Tribal governments, in the aggregate, or the private sector in any one year. The total upfront costs of this action to States and public water systems are estimated at \$12.7 million, with estimated annual costs to States and public water systems ranging from \$5.9 to \$6.3 million. Systems and State/Primacy agencies incur one-time upfront costs associated with reviewing and implementing the overall LCR regulatory changes. For systems, activities include reviewing the rule changes and training staff. For States/Primacy agencies, activities include regulation adoption, program development, and miscellaneous training. Systems and States also incur annual costs consisting of the costs to implement the regulation. Annual costs to systems include the costs of reporting, monitoring, and public education. Annual costs to States consist of the costs of reviewing water system information. Thus, this rule is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. The rule is consistent with, and only makes revisions to, the requirements under the current NPDWR for lead and copper. The existing rule imposes requirements on PWSs to ensure that water delivered to users is minimally corrosive; the rule requires removal of lead service lines and the provision of public education where necessary to ensure public health protection. This final rule does not make any significant changes to these requirements, but makes revisions and clarifications to the rule's requirements to enhance the efficiency and effectiveness of current rule requirements.

Nevertheless, in developing this rule, EPA consulted with State and local officials (including small entity representatives) early in the process of developing the proposed regulation to permit them to have meaningful and timely input into its development. EPA held five workshops in 2004–2005 to elicit concerns and suggestions from stakeholders on various issues related to lead in drinking water. These workshops covered the topic areas of simultaneous compliance, sampling protocols, public education, lead service



line replacement, and lead in plumbing. Expert participants from utilities, academia, state governments, consumer and environmental groups, and other stakeholder groups participated in these workshops to identify issues, propose solutions, and offer suggestions for modifications and improvements to the LCR. These workshops are described in greater detail in the Economic Analysis for this final rule.

#### *E. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The rule is consistent with, and only makes revisions to, the requirements under the current NPDWR for lead and copper. The existing rule imposes requirements on PWSs to ensure that water delivered to users is minimally corrosive; the rule requires removal of lead service lines and the provision of public education where necessary to ensure public health protection. This final rule does not make any significant changes to these requirements, but makes revisions and clarifications to the rule's requirements to enhance the efficiency and effectiveness of current rule requirements. Thus, Executive Order 13132 does not apply to this rule.

Nevertheless, EPA did consult with State and local officials in developing this final rule as described in Section V.D, Unfunded Mandates Reform Act. In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicited comment on the proposed rule from State and local officials.

#### *F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." This final rule does not have tribal implications, as specified in Executive Order 13175. It does not significantly or uniquely affect the communities of Indian tribal governments, nor does it impose substantial direct compliance costs on those communities. The provisions of this final rule apply to all community and non-transient non-community water systems. Tribal governments may be owners or operators of such systems; however, nothing in this rule's provisions uniquely affects them. Thus, Executive Order 13175 does not apply to this rule.

#### *G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

While this final rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, we nonetheless have reason to believe that the environmental health or safety risk addressed by this action has a disproportionate effect on children. This final rule does not change the core LCR requirements in place to assure the protection of children from the effects of lead in drinking water; rather, these changes improve the implementation of these provisions. Moreover, EPA believes that this final rule is consistent with Executive Order 13045 because it further strengthens the protection to children from exposure to lead via drinking water as it enhances the

implementation of the LCR in the areas of monitoring, customer awareness, and lead service line replacement. This final rule also clarifies the intent of some provisions in the LCR. These changes are expected to ensure and enhance more effective protection of public health through the reduction in lead exposure.

#### *H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use*

This rule is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The rule provides clarifications and modifications to the existing LCR requirements only.

This final rule does not affect the supply of energy as it does not regulate power generation. The public and private utilities that are affected by this final regulation do not, as a rule, generate power. The revisions to the LCR do not regulate any aspect of energy distribution as the utilities that are regulated by the LCR already have electrical service. Finally, these regulatory revisions do not adversely affect the use of energy as EPA does not anticipate that a significant number of drinking water utilities will add treatment technologies that use electrical power to comply with these regulatory revisions. As such, EPA does not anticipate that this rule will adversely affect the use of energy.

#### *I. National Technology Transfer and Advancement Act*

As noted in the proposed rule, Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The final rule may involve voluntary consensus standards in that it requires

additional monitoring for lead and copper in certain situations, and monitoring and sample analysis methodologies are often based on voluntary consensus standards. However, the final rule does not change any methodological requirements for monitoring or sample analysis, only, in some cases, the required frequency and number of samples. Also, EPA's approved monitoring and sampling protocols generally include voluntary consensus standards developed by agencies such as the American National Standards Institute (ANSI) and other such bodies wherever EPA deems these methodologies appropriate for compliance monitoring.

*J. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective December 10, 2007.

**VI. References**

U.S. EPA, 1991a. **Federal Register**. Vol. 56, No. 110. Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper; Final Rule (Fri. Jun. 7, 1991), 26460–26564. (56 FR 26460).

U.S. EPA, 1991b. Final Regulatory Impact Analysis of National Primary Drinking Water Regulations for Lead and Copper. Prepared by Wade Miller Associates, Inc. (April 1991).

U.S. EPA, 1996a. **Federal Register**. Vol. 60, No. 72. Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper; Proposed Rule (Friday, April 12, 1996), 16348–16371. (60 FR 16348).

U.S. EPA, 1996b. Regulatory Impact Analysis Addendum. EPA 812–B–96–002, January 1996.

U.S. EPA, 1998. **Federal Register**. Vol. 63, No. 160. Consumer Confidence Reports (August 19, 1998) (63 FR 44526).

U.S. EPA, 2000a. Arsenic in Drinking Water Rule Economic Analysis. Office of Ground Water and Drinking Water, EPA 815–R–00–026, December 2000.

U.S. EPA, 2000b. **Federal Register**. Vol. 65, No. 8. National Primary Drinking Water

Regulations for Lead and Copper; Final Rule. (Wed, January 12, 2000), 1950–2015 (65 FR 1950).

U.S. EPA, 2000c. **Federal Register**. Vol. 65, No. 87. Public Notification of Drinking Water Violations (May 4, 2000) (65 FR 26035).

U.S. EPA, 2004a. Information Collection Request for Disinfection Byproducts, Chemical, and Radionuclides Rules. OMB Control Number: 2040–0204. EPA Tracking Number: 1896.03. Appendix H, page H–43, table entitled "Tap Monitoring for Lead & Copper—Monitoring, Burden, and Cost Assumptions." September, 2004.

U.S. EPA, 2004b. State Implementation of the Lead and Copper Rule. July, 2004.

U.S. EPA, 2005a. Economic Analysis for the Final Long Term 2 Enhances Surface Water Treatment Rule. Office of Ground Water and Drinking Water, EPA 815–R–06–001, December 2005.

U.S. EPA, 2005b. Economic Analysis for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule. Office of Ground Water and Drinking Water, EPA 815–R–05–010, December 2005.

U.S. EPA, 2006a. **Federal Register**. Vol. 71, No. 137. National Primary Drinking Water Regulations for Lead and Copper: Short-term Regulatory Revisions and Clarifications; Proposed Rule (July 18, 2006), 40828–40863 (71 FR 40828).

U.S. EPA, 2006b. EPA Air Quality Criteria for Lead (Final). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–05/144aF–bF, October, 2006.

U.S. EPA, 2007a. Economic and Supporting Analyses: Short-Term Regulatory Changes to the Lead and Copper Rule. Office of Ground Water and Drinking Water, EPA–815–R0–7022, September 2007.

U.S. EPA, 2007b. Simultaneous Compliance Guidance Manual for the Long Term 2 and Stage 2 DBP Rules. U.S. Environmental Protection Agency. EPA 815–R–07–017, March 2007.

**List of Subjects in 40 CFR Parts 141 and 142**

Environmental protection, Chemicals, Indians—lands, Intergovernmental relations, Radiation protection, Reporting and recordkeeping requirements, Water supply.

Dated: September 25, 2007.

**Stephen L. Johnson,**  
*Administrator.*

■ For the reasons set forth in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

**PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS**

■ 1. The authority citation for part 141 continues to read as follows:

**Authority:** 42 U.S.C. 300f, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–4, 300j–9, and 300j–11.

■ 2. Section 141.80 is amended by removing and reserving paragraph (a)(2), by adding paragraph (c)(3)(v), and by revising paragraph (g) to read as follows:

**§ 141.80 General requirements.**

\* \* \* \* \*

(c) \* \* \*  
(3) \* \* \*

(v) For a public water system that has been allowed by the State to collect fewer than five samples in accordance with § 141.86(c), the sample result with the highest concentration is considered the 90th percentile value.

\* \* \* \* \*

(g) *Public education requirements.*

Pursuant to § 141.85, all water systems must provide a consumer notice of lead tap water monitoring results to persons served at the sites (taps) that are tested. Any system exceeding the lead action level shall implement the public education requirements.

\* \* \* \* \*

■ 3. Section 141.81 is amended as follows by:

- a. Removing the first sentence in paragraph (b)(3)(iii) and adding in its place the following two sentences;
- b. Revising the last sentence in paragraph (e)(1);
- c. Revising the first sentence in paragraph (e)(2) introductory text;
- d. Revising paragraph (e)(2)(i); and
- e. Revising paragraph (e)(2)(ii).

**§ 141.81 Applicability of corrosion control treatment steps to small, medium-size and large water systems.**

\* \* \* \* \*

(b) \* \* \*  
(3) \* \* \*

(iii) Any water system deemed to have optimized corrosion control pursuant to this paragraph shall notify the State in writing pursuant to § 141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source as described in that section. The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system.

\* \* \*

\* \* \* \* \*

(e) \* \* \*

(1) \* \* \* A system exceeding the lead or copper action level shall recommend optimal corrosion control treatment (§ 141.82(a)) within six months after the end of the monitoring period during which it exceeds one of the action levels.

(2) Step 2: Within 12 months after the end of the monitoring period during which a system exceeds the lead or copper action level, the State may

require the system to perform corrosion control studies (§ 141.82(b)). \* \* \*

(i) For medium-size systems, within 18 months after the end of the monitoring period during which such system exceeds the lead or copper action level.

(ii) For small systems, within 24 months after the end of the monitoring period during which such system exceeds the lead or copper action level.

\* \* \* \* \*

■ 4. Section 141.83(a)(1) is revised to read as follows:

**§ 141.83 Source water treatment requirements.**

\* \* \* \* \*

(a) \* \* \* (1) Step 1: A system exceeding the lead or copper action level shall complete lead and copper source water monitoring (§ 141.88(b)) and make a treatment recommendation to the State (§ 141.83(b)(1)) no later than 180 days after the end of the monitoring period during which the lead or copper action level was exceeded.

\* \* \* \* \*

■ 5. Section 141.84 is amended as follows by:

- a. Redesignating paragraph (b) as (b)(1);
- b. Revising the last sentence in the newly designated (b)(1) and adding two sentences to the end of the paragraph;
- c. Adding paragraph (b)(2); and
- d. In paragraph (f), revise “paragraph (b)” to read “paragraph (b)(2)”.

**§ 141.84 Lead service line replacement requirements.**

\* \* \* \* \*

(b)(1) \* \* \* The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded under paragraph (a) of this section. If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the State has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.

(2) Any water system resuming a lead service line replacement program after the cessation of its lead service line replacement program as allowed by paragraph (f) of this section shall update its inventory of lead service lines to include those sites that were previously determined not to require replacement through the sampling provision under paragraph (c) of this section. The system will then divide the updated number of remaining lead service lines by the

number of remaining years in the program to determine the number of lines that must be replaced per year (7 percent lead service line replacement is based on a 15-year replacement program, so, for example, systems resuming lead service line replacement after previously conducting two years of replacement would divide the updated inventory by 13). For those systems that have completed a 15-year lead service line replacement program, the State will determine a schedule for replacing or retesting lines that were previously tested out under the replacement program when the system re-exceeds the action level.

\* \* \* \* \*

■ 6. Section 141.85 is revised to read as follows:

**§ 141.85 Public education and supplemental monitoring requirements.**

All water systems must deliver a consumer notice of lead tap water monitoring results to persons served by the water system at sites that are tested, as specified in paragraph (d) of this section. A water system that exceeds the lead action level based on tap water samples collected in accordance with § 141.86 shall deliver the public education materials contained in paragraph (a) of this section in accordance with the requirements in paragraph (b) of this section. Water systems that exceed the lead action level must sample the tap water of any customer who requests it in accordance with paragraph (c) of this section.

(a) *Content of written public education materials.* (1) Community water systems and Non-transient non-community water systems. Water systems must include the following elements in printed materials (e.g., brochures and pamphlets) in the same order as listed below. In addition, language in paragraphs (a)(1)(i) through (ii) and (a)(1)(vi) of this section must be included in the materials, exactly as written, except for the text in brackets in these paragraphs for which the water system must include system-specific information. Any additional information presented by a water system must be consistent with the information below and be in plain language that can be understood by the general public. Water systems must submit all written public education materials to the State prior to delivery. The State may require the system to obtain approval of the content of written public materials prior to delivery.

(i) **IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER.** [INSERT NAME OF WATER SYSTEM] found elevated levels of lead

in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

(ii) Health effects of lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother’s bones, which may affect brain development.

(iii) Sources of Lead.

(A) Explain what lead is.  
 (B) Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home/building plumbing materials and service lines that may contain lead.

(C) Discuss other important sources of lead exposure in addition to drinking water (e.g., paint).

(iv) Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.

(A) Encourage running the water to flush out the lead.

(B) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.

(C) Explain that boiling water does not reduce lead levels.

(D) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.

(E) Suggest that parents have their child’s blood tested for lead.

(v) Explain why there are elevated levels of lead in the system’s drinking water (if known) and what the water system is doing to reduce the lead levels in homes/buildings in this area.

(vi) For more information, call us at [INSERT YOUR NUMBER] [(IF APPLICABLE)], or visit our Web site at [INSERT YOUR WEB SITE HERE]]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA’s Web site at <http://www.epa.gov/lead> or contact your health care provider.

(2) Community water systems. In addition to including the elements specified in paragraph (a)(1) of this section, community water systems must:

(i) Tell consumers how to get their water tested.

(ii) Discuss lead in plumbing components and the difference between low lead and lead free.

(b) *Delivery of public education materials.* (1) For public water systems serving a large proportion of non-English speaking consumers, as determined by the State, the public education materials must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the public education materials or to request assistance in the appropriate language.

(2) A community water system that exceeds the lead action level on the basis of tap water samples collected in accordance with § 141.86, and that is not already conducting public education tasks under this section, must conduct the public education tasks under this section within 60 days after the end of the monitoring period in which the exceedance occurred:

(i) Deliver printed materials meeting the content requirements of paragraph (a) of this section to all bill paying customers.

(ii)(A) Contact customers who are most at risk by delivering education materials that meet the content requirements of paragraph (a) of this section to local public health agencies even if they are not located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users. The water system must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community based organizations serving target populations, which may include organizations outside the service area of the water system. If such lists are provided, systems must deliver education materials that meet the content requirements of paragraph (a) of this section to all organizations on the provided lists.

(B) Contact customers who are most at risk by delivering materials that meet the content requirements of paragraph (a) of this section to the following organizations listed in 1 through 6 that are located within the water system's service area, along with an

informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users:

(1) Public and private schools or school boards.

(2) Women, Infants and Children (WIC) and Head Start programs.

(3) Public and private hospitals and medical clinics.

(4) Pediatricians.

(5) Family planning clinics.

(6) Local welfare agencies.

(C) Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements of paragraph (a) of this section to them, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of these organizations from the local public health agencies, even if the agencies are not located within the water system's service area:

(1) Licensed childcare centers

(2) Public and private preschools.

(3) Obstetricians-Gynecologists and Midwives.

(iii) No less often than quarterly, provide information on or in each water bill as long as the system exceeds the action level for lead. The message on the water bill must include the following statement exactly as written except for the text in brackets for which the water system must include system-specific information: [INSERT NAME OF WATER SYSTEM] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information please call [INSERT NAME OF WATER SYSTEM] [or visit (INSERT YOUR WEB SITE HERE)]. The message or delivery mechanism can be modified in consultation with the State; specifically, the State may allow a separate mailing of public education materials to customers if the water system cannot place the information on water bills.

(iv) Post material meeting the content requirements of paragraph (a) of this section on the water system's Web site if the system serves a population greater than 100,000.

(v) Submit a press release to newspaper, television and radio stations.

(vi) In addition to paragraphs (b)(2)(i) through (v) of this section, systems must implement at least three activities from one or more categories listed below. The educational content and selection of these activities must be determined in consultation with the State.

(A) Public Service Announcements.

(B) Paid advertisements.

(C) Public Area Information Displays.

(D) E-mails to customers.

(E) Public Meetings.

(F) Household Deliveries.

(G) Targeted Individual Customer Contact.

(H) Direct material distribution to all multi-family homes and institutions.

(I) Other methods approved by the State.

(vii) For systems that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the State has established an alternate monitoring period, the last day of that period.

(3) As long as a community water system exceeds the action level, it must repeat the activities pursuant to paragraph (b)(2) of this section as described in paragraphs (b)(3)(i) through (iv) of this section.

(i) A community water system shall repeat the tasks contained in paragraphs (b)(2)(i), (ii) and (vi) of this section every 12 months.

(ii) A community water system shall repeat tasks contained in paragraph (b)(2)(iii) of this section with each billing cycle.

(iii) A community water system serving a population greater than 100,000 shall post and retain material on a publicly accessible Web site pursuant to paragraph (b)(2)(iv) of this section.

(iv) The community water system shall repeat the task in paragraph (b)(2)(v) of this section twice every 12 months on a schedule agreed upon with the State. The State can allow activities in paragraph (b)(2) of this section to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the State in advance of the 60-day deadline.

(4) Within 60 days after the end of the monitoring period in which the exceedance occurred (unless it already is repeating public education tasks pursuant to paragraph (b)(5) of this section), a non-transient non-community water system shall deliver the public education materials specified by paragraph (a) of this section as follows:

(i) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and

(ii) Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by

the non-transient non-community water system. The State may allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage.

(iii) For systems that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the State has established an alternate monitoring period, the last day of that period.

(5) A non-transient non-community water system shall repeat the tasks contained in paragraph (b)(4) of this section at least once during each calendar year in which the system exceeds the lead action level. The State can allow activities in (b)(4) of this section to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the State in advance of the 60-day deadline.

(6) A water system may discontinue delivery of public education materials if the system has met the lead action level during the most recent six-month monitoring period conducted pursuant to § 141.86. Such a system shall recommence public education in accordance with this section if it subsequently exceeds the lead action level during any monitoring period.

(7) A community water system may apply to the State, in writing (unless the State has waived the requirement for prior State approval), to use only the text specified in paragraph (a)(1) of this section in lieu of the text in paragraphs (a)(1) and (a)(2) of this section and to perform the tasks listed in paragraphs (b)(4) and (b)(5) of this section in lieu of the tasks in paragraphs (b)(2) and (b)(3) of this section if:

(i) The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and

(ii) The system provides water as part of the cost of services provided and does not separately charge for water consumption.

(8) A community water system serving 3,300 or fewer people may limit certain aspects of their public education programs as follows:

(i) With respect to the requirements of paragraph (b)(2)(vi) of this section, a system serving 3,300 or fewer must implement at least one of the activities listed in that paragraph.

(ii) With respect to the requirements of paragraph (b)(2)(ii) of this section, a

system serving 3,300 or fewer people may limit the distribution of the public education materials required under that paragraph to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.

(iii) With respect to the requirements of paragraph (b)(2)(v) of this section, the State may waive this requirement for systems serving 3,300 or fewer persons as long as system distributes notices to every household served by the system.

(c) *Supplemental monitoring and notification of results.* A water system that fails to meet the lead action level on the basis of tap samples collected in accordance with § 141.86 shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample, nor is the system required to collect and analyze the sample itself.

(d) *Notification of results.* (1) Reporting requirement. All water systems must provide a notice of the individual tap results from lead tap water monitoring carried out under the requirements of § 141.86 to the persons served by the water system at the specific sampling site from which the sample was taken (e.g., the occupants of the residence where the tap was tested).

(2) *Timing of notification.* A water system must provide the consumer notice as soon as practical, but no later than 30 days after the system learns of the tap monitoring results.

(3) *Content.* The consumer notice must include the results of lead tap water monitoring for the tap that was tested, an explanation of the health effects of lead, list steps consumers can take to reduce exposure to lead in drinking water and contact information for the water utility. The notice must also provide the maximum contaminant level goal and the action level for lead and the definitions for these two terms from § 141.153(c).

(4) *Delivery.* The consumer notice must be provided to persons served at the tap that was tested, either by mail or by another method approved by the State. For example, upon approval by the State, a non-transient non-community water system could post the results on a bulletin board in the facility to allow users to review the information. The system must provide the notice to customers at sample taps tested, including consumers who do not receive water bills.

■ 7. Section 141.86 is amended as follows:

■ a. In paragraph (b)(5) remove the citation “§§ 141.85(c)(7)(i) and (ii)” and add in its place “§ 141.85(b)(7)”;

■ b. In paragraph (c) introductory text by adding three sentences after the third sentence;

■ c. In paragraph (d)(4)(i) add three sentences after the last sentence;

■ d. Revising paragraph (d)(4)(ii);

■ e. Revising paragraph (d)(4)(iii);

■ f. Revising paragraph (d)(4)(iv)(A);

■ g. Revising paragraph (d)(4)(vi)(B) introductory text;

■ h. Adding a sentence to the end of paragraph (d)(4)(vi)(B)(1);

■ i. Removing the first sentence in paragraph (d)(4)(vii), and adding in its place the following two sentences;

■ j. Adding a sentence to the end of paragraph (g)(4)(i); and

■ k. Removing the first sentence in paragraph (g)(4)(iii) and adding in its place two new sentences:

**§ 141.86 Monitoring requirements for lead and copper in tap water.**

\* \* \* \* \*

(c) \* \* \* A public water system that has fewer than five drinking water taps, that can be used for human consumption meeting the sample site criteria of paragraph (a) of this section to reach the required number of sample sites listed in paragraph (c) of this section, must collect at least one sample from each tap and then must collect additional samples from those taps on different days during the monitoring period to meet the required number of sites. Alternatively the State may allow these public water systems to collect a number of samples less than the number of sites specified in paragraph (c) of this section, provided that 100 percent of all taps that can be used for human consumption are sampled. The State must approve this reduction of the minimum number of samples in writing based on a request from the system or onsite verification by the State. \* \* \*

\* \* \* \* \*

(d) \* \* \*

(4) \* \* \*

(i) \* \* \* A small or medium water

system collecting fewer than five samples as specified in paragraph (c) of this section, that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the frequency of sampling to once per year. In no case can the system reduce the number of samples required below the minimum of one sample per available tap. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.

(ii) Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal

corrosion control treatment specified by the State under § 141.82(f) during each of two consecutive six-month monitoring periods may reduce the frequency of monitoring to once per year and reduce the number of lead and copper samples in accordance with paragraph (c) of this section if it receives written approval from the State. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period. The State shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with § 141.90, and shall notify the system in writing when it determines the system is eligible to commence reduced monitoring pursuant to this paragraph. The State shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(iii) A small or medium-size water system that meets the lead and copper action levels during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years. Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f) during three consecutive years of monitoring may reduce the frequency of monitoring from annually to once every three years if it receives written approval from the State. Samples collected once every three years shall be collected no later than every third calendar year. The State shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with § 141.90, and shall notify the system in writing when it determines the system is eligible to reduce the frequency of monitoring to once every three years. The State shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(iv) \* \* \*

(A) The State, at its discretion, may approve a different period for conducting the lead and copper tap sampling for systems collecting a reduced number of samples. Such a period shall be no longer than four consecutive months and must represent

a time of normal operation where the highest levels of lead are most likely to occur. For a non-transient non-community water system that does not operate during the months of June through September, and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the State shall designate a period that represents a time of normal operation for the system. This sampling shall begin during the period approved or designated by the State in the calendar year immediately following the end of the second consecutive six-month monitoring period for systems initiating annual monitoring and during the three-year period following the end of the third consecutive calendar year of annual monitoring for systems initiating triennial monitoring.

\* \* \* \* \*

(vi) \* \* \*

(B) Any water system subject to the reduced monitoring frequency that fails to meet the lead action level during any four-month monitoring period or that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the State under § 141.82(f) for more than nine days in any six-month period specified in § 141.87(d) shall conduct tap water sampling for lead and copper at the frequency specified in paragraph (d)(3) of this section, collect the number of samples specified for standard monitoring under paragraph (c) of this section, and shall resume monitoring for water quality parameters within the distribution system in accordance with § 141.87(d). This standard tap water sampling shall begin no later than the six-month period beginning January 1 of the calendar year following the lead action level exceedance or water quality parameter excursion. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:

(1) \* \* \* This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.

\* \* \* \* \*

(vii) Any water system subject to a reduced monitoring frequency under paragraph (d)(4) of this section shall notify the State in writing in accordance with § 141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source as described in that section. The State must review and approve the addition of a new source or long-term change in water treatment

before it is implemented by the water system. \* \* \*

\* \* \* \* \*

(g) \* \* \*

(4) \* \* \*

(i) \* \* \* Samples collected every nine years shall be collected no later than every ninth calendar year.

\* \* \* \* \*

(iii) Any water system with a full or partial waiver shall notify the State in writing in accordance with § 141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source, as described in that section. The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. \* \* \*

\* \* \* \* \*

■ 8. Section 141.87 is amended as follows by:

- a. Revising paragraph (d);
- b. Revising paragraph (e)(2)(i); and
- c. Adding a sentence to the end of paragraph (e)(2)(ii).

**§ 141.87 Monitoring requirements for water quality parameters.**

\* \* \* \* \*

(d) *Monitoring after State specifies water quality parameter values for optimal corrosion control.* After the State specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under § 141.82(f), all large systems shall measure the applicable water quality parameters in accordance with paragraph (c) of this section and determine compliance with the requirements of § 141.82(g) every six months with the first six-month period to begin on either January 1 or July 1, whichever comes first, after the State specifies the optimal values under § 141.82(f). Any small or medium-size system shall conduct such monitoring during each six-month period specified in this paragraph in which the system exceeds the lead or copper action level. For any such small and medium-size system that is subject to a reduced monitoring frequency pursuant to § 141.86(d)(4) at the time of the action level exceedance, the start of the applicable six-month monitoring period under this paragraph shall coincide with the start of the applicable monitoring period under § 141.86(d)(4). Compliance with State-designated optimal water quality parameter values shall be determined as specified under § 141.82(g).

(e) \* \* \*

(2)(i) Any water system that maintains the range of values for the water quality

parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f) during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in this paragraph (e)(1) of this section from every six months to annually. This sampling begins during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f), during three consecutive years of annual monitoring under this paragraph may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in paragraph (e)(1) of this section from annually to every three years. This sampling begins no later than the third calendar year following the end of the monitoring period in which the third consecutive year of monitoring occurs.

(ii) \* \* \* Monitoring conducted every three years shall be done no later than every third calendar year.

\* \* \* \* \*

- 9. Section 141.88 is amended as follows by:
  - a. Revising paragraph (b);
  - b. Adding a sentence to the end of paragraph (d)(1)(i);
  - c. Revising paragraph (d)(1)(ii);
  - d. Revising paragraph (e)(1) introductory text; and
  - e. Revising paragraph (e)(2) introductory text.

**§ 141.88 Monitoring requirements for lead and copper in source water.**

\* \* \* \* \*

(b) *Monitoring frequency after system exceeds tap water action level.* Any system which exceeds the lead or copper action level at the tap shall collect one source water sample from each entry point to the distribution system no later than six months after the end of the monitoring period during which the lead or copper action level was exceeded. For monitoring periods that are annual or less frequent, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or if the State has established an alternate monitoring period, the last day of that period.

\* \* \* \* \*

(d) \* \* \*  
(1) \* \* \*

(i) \* \* \* Triennial samples shall be collected every third calendar year.

(ii) A water system using surface water (or a combination of surface and ground water) shall collect samples once during each calendar year, the first annual monitoring period to begin during the year in which the applicable State determination is made under paragraph (d)(1) of this section.

\* \* \* \* \*

(e) \* \* \*

(1) A water system using only ground water may reduce the monitoring frequency for lead and copper in source water to once during each nine-year compliance cycle (as that term is defined in § 141.2) provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria:

\* \* \* \* \*

(2) A water system using surface water (or a combination of surface water and ground water) may reduce the monitoring frequency in paragraph (d)(1) of this section to once during each nine-year compliance cycle (as that term is defined in § 141.2) provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria:

\* \* \* \* \*

**§ 141.89 [Amended]**

- 10. Section 141.89 is amended as follows by:
  - a. In paragraph (a)(1)(iii) remove the citation “§ 141.88(a)(1)(iii)” and add in its place “§ 141.88(a)(1)(iv)”;
  - b. In paragraph (a)(1)(iv) remove the citation “(a)(2)” and add in its place “(a)(1)”.
- 11. Section 141.90 is amended as follows by:
  - a. Removing the colon and adding a period in its place at the end of paragraph (a)(1) introductory text;
  - b. Adding a sentence to the end of paragraph (a)(1) introductory text;
  - c. In paragraph (a)(2) introductory text remove the citation “§§ 141.85(c)(7)(i) and (ii)” and add in its place “§ 141.85(b)(7)”;
  - d. Revising paragraph (a)(3);
  - e. Revising paragraph (e)(1);
  - f. Revising paragraph (e)(2) introductory text;
  - g. Revising the last sentence of paragraph (e)(2)(ii);
  - h. Revising paragraph (f)(1) introductory text;
  - i. Revising paragraph (f)(1)(i); and
  - j. Adding paragraph (f)(3).

**§ 141.90 Reporting requirements.**

\* \* \* \* \*

(a) \* \* \* (1) \* \* \* For monitoring periods with a duration less than six

months, the end of the monitoring period is the last date samples can be collected during that period as specified in §§ 141.86 and 141.87.

\* \* \* \* \*

(3) At a time specified by the State, or if no specific time is designated by the State, then as early as possible prior to the addition of a new source or any long-term change in water treatment, a water system deemed to have optimized corrosion control under § 141.81(b)(3), a water system subject to reduced monitoring pursuant to § 141.86(d)(4), or a water system subject to a monitoring waiver pursuant to § 141.86(g), shall submit written documentation to the State describing the change or addition. The State must review and approve the addition of a new source or long-term change in treatment before it is implemented by the water system. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants, switching coagulants (e.g., alum to ferric chloride), and switching corrosion inhibitor products (e.g., orthophosphate to blended phosphate). Long-term changes can include dose changes to existing chemicals if the system is planning long-term changes to its finished water pH or residual inhibitor concentration. Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes.

\* \* \* \* \*

(e) \* \* \*

(1) No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in § 141.84(a), the system must submit written documentation to the State of the material evaluation conducted as required in § 141.86(a), identify the initial number of lead service lines in its distribution system at the time the system exceeds the lead action level, and provide the system’s schedule for annually replacing at least 7 percent of the initial number of lead service lines in its distribution system.

(2) No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in § 141.84(a), and every 12 months thereafter, the system shall demonstrate to the State in writing that the system has either:

\* \* \* \* \*

(ii) \* \* \* In such cases, the total number of lines replaced and/or which meet the criteria in § 141.84(c) shall



equal at least 7 percent of the initial number of lead lines identified under paragraph (e)(1) of this section (or the percentage specified by the State under § 141.84(e)).

\* \* \* \* \*

(f) \* \* \* (1) Any water system that is subject to the public education requirements in § 141.85 shall, within ten days after the end of each period in which the system is required to perform public education in accordance with § 141.85(b), send written documentation to the State that contains:

(i) A demonstration that the system has delivered the public education materials that meet the content requirements in § 141.85(a) and the delivery requirements in § 141.85(b); and

\* \* \* \* \*

(3) No later than 3 months following the end of the monitoring period, each system must mail a sample copy of the consumer notification of tap results to the State along with a certification that the notification has been distributed in a manner consistent with the requirements of § 141.85(d).

\* \* \* \* \*

■ 12. Section 141.154 is amended by revising paragraph (d) to read as follows:

**§ 141.154 Required additional health information.**

\* \* \* \* \*

(d) Every report must include the following lead-specific information:

(1) A short informational statement about lead in drinking water and its effects on children. The statement must include the following information:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

(2) A system may write its own educational statement, but only in consultation with the State.

\* \* \* \* \*

**PART 142—NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION**

■ 13. The authority citation for part 142 continues to read as follows:

**Authority:** 42 U.S.C. 300f, 300g-1, 300g-2, 300g-3, 300g-4, 300g-5, 300g-6, 300j-4, 300j-9, and 300j-11.

■ 14. Section 142.14 is amended by revising paragraph (d)(8)(xi) to read as follows:

**§ 142.14 Records kept by States.**

\* \* \* \* \*

(d) \* \* \*

(8) \* \* \*

(xi) Section 141.86(b)(5)—system-specific determinations regarding use of non-first-draw samples at non-transient non-community water systems, and community water systems meeting the criteria of § 141.85(b)(7)(i) and (ii) of this chapter, that operate 24 hours a day;

\* \* \* \* \*

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