

## CHAPTER

## 4

## Chapter 4 Lead/Copper Rule

The Lead and Copper Rule requires water suppliers to deliver water that is minimally corrosive, thereby reducing the likelihood that lead and copper will be introduced into the drinking water from the corrosion of customer lead and copper plumbing materials. In addition, it requires water suppliers to educate their customers about specific measures that can be used to reduce lead levels in home drinking water caused by lead in household plumbing materials — the primary source of lead in drinking water. This Chapter is divided into three sections which detail requirements related to the Lead and Copper Rule and its revisions.

### Section 1: Monitoring for Lead and Copper

### Section 2: Action Level (AL) Exceedance Requirements

### Section 3: Notifying Customers of Test Results

#### Illinois EPA Assistance

In many cases, as a requirement approaches for a community water system (CWS), the Illinois EPA will send reminder notifications that detail the requirement and specific timeline which these requirements must be completed. Please remember that these are reminder notifications and does not relieve the CWS in meeting statutory deadlines. If a CWS is unsure of its schedule or timeframes described in any Illinois EPA notification, it is very important that the CWS contact the Drinking Water Compliance Unit Lead/Copper Coordinator at 217/785-0561 for clarification. All lead and copper correspondence should be sent to:

Lead/Copper Coordinator  
 Illinois EPA /BOW/CAS #19  
 1021 North Grand Avenue East  
 P.O. Box 19276  
 Springfield, IL 62794-9276  
 Telephone: 217-785-0561  
 Fax 217-557-1407

#### Sample Bottles

If your supply participates in the Community Water Supply Testing Fund (CWSTF), all sample containers will be sent to your supply prior to the monitoring period. If your supply does **not** participate in the CWSTF, it is your responsibility to have all testing completed by an Illinois EPA certified laboratory and submitted on the correct reporting forms. All necessary laboratory reporting forms are included in **Appendix A**. These forms must be submitted within 10 days after the end of a monitoring period.

## Contents of Chapter 4

### SECTION 1

Selecting Sampling Locations.....	Page 3
Exceeding an Action Level Definition.....	Page 4
Collecting Additional Samples.....	Page 4

### SECTION 2

Action Level Exceedance .....	Page 5
Milestone 1: Collection of Water Quality Samples.....	Page 6
Milestone 2: Submittal of Source Water Treatment Recommendation.....	Page 7
Milestone 3: Submittal of Optimal Corrosion Control Recommendation.....	Page 8
Milestone 4: Establishment of Water Quality Parameter (WQP) Ranges.....	Page 9
Milestone 5: Public Education for Lead Action Level .....	Page 11
Milestone 6: Lead Service Line Replacement.....	Page 13

### SECTION 3

Notifying Customers of Test Results.....	Page 15
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### APPENDICES

Appendix A - Laboratory Reporting Forms.....	Page A-1
Appendix B - Sample Site Plans.....	Page B-1
Appendix C - Interpretation of Results (90 <sup>th</sup> percentile calculations).....	Page C-1
Appendix D - Source Water Treatment Recommendation.....	Page D-1
Appendix E - Optimal Corrosion Control Treatment Recommendation (OCCT).....	Page E-1
Appendix F - OCCT Verification Form.....	Page F-1
Appendix G - Water Quality Parameter (WQP) Compliance.....	Page G-1
Appendix H - Lead Public Education (PE) Program.....	Page H-1
Appendix I - Lead Service Line Replacement.....	Page I-1
Appendix J - Notifying Customers of Test Results.....	Page J-1

## Section 1

# Monitoring for Lead and Copper

The Lead and Copper Rule requires water suppliers to deliver water that is minimally corrosive, thereby reducing the likelihood that lead and copper will be introduced into the drinking water from the corrosion of customer lead and copper plumbing materials. In addition, the Rule requires water suppliers to educate their customers about specific measures that can be used to reduce lead levels in home drinking water caused by lead in household plumbing materials — the primary source of lead in drinking water.

Every community water supply (CWS) must collect samples for lead and copper. Samples are collected at locations on the distribution system approved by the Illinois EPA following specific Lead and Copper Rule criteria. The total number of samples required during each monitoring period is dependant on population served and past monitoring results. Initial monitoring periods are six months and can reduce to every three years with continued compliance.

### Selecting Sampling Locations

Prior to the first monitoring period, the CWS is required to complete a lead and copper site plan. As part of the plan, distribution system locations are selected for collection of samples. The site plan must include a set number of primary sites (see population chart, Appendix B-3) and may include an unlimited number of alternate sites. The CWS must submit their completed site plan to the Illinois EPA for review and assignment of sample site numbers. During each monitoring period, samples are collected from the primary sites.

Instructions for completing the initial sample site plan are located in Appendix B. In addition, Appendix B includes the "Lead and Copper Sample Site Data Input" form that may be submitted when making any changes or additions to existing site plans.

There are three tiers of sampling sites, which are described below. All sites must be Tier 1, if possible. If all of the sites are not Tier 1 sites, the CWS must submit a letter along with the site plan explaining why Tier 2 or Tier 3 sites were chosen.

Sampling sites to choose from:

**Tier 1** includes single-family structures that contain copper pipes with lead solder installed after 1982; lead pipes; or are served by a lead service line. When multi-family residences comprise at least 20% of the structures served by a water system, this type of structure may be included.

**Tier 2** includes buildings including multi-family residences that contain copper pipes with lead solder installed after 1982; lead pipes; or are served by a lead service line. (Can be used only if insufficient Tier 1 sites are available.)

**Tier 3** includes single-family structures that contain copper pipes with lead solder installed before 1983. If it can be documented that not enough Tier 1, 2, or 3 sites are available, then random sites may be selected. (Can only be used if insufficient Tier 1 and 2 sites are available.)

Once sites are chosen and approved by the Illinois EPA, only the primary sites should be sampled. Unlike the Total Coliform Rule where systems are encouraged to sample alternate sample sites as well as primary sites; this is not the case for lead and copper monitoring. For every sample period, the same primary sites must be used. **In the event a primary site can no longer be used, a written request (including justification) must be submitted to the Illinois EPA for approval to switch sample locations to an approved alternate location.**

It is recommended that prior to each sampling period; each active site is evaluated to determine whether or not it's still viable as a sampling location and get the Illinois EPA approval for any changes. Once the switch is approved, samples must always be collected at the new site in all subsequent monitoring periods.

After samples are collected and the CWS receives the results from the laboratory, the CWS is required to notify each homeowner of the result for that specific sampling location. **Section 3** of this Chapter explains this requirement.

It is very important to know how to calculate the 90<sup>th</sup> percentile as results are received from the laboratory. If you calculate an AL exceedance, it is strongly recommended to contact the Lead/Copper Coordinator at 217/785-0561 for immediate instructions on your next step.

### **Exceeding an “Action Level” (AL)**

If more than 10% (for example 2 of 10, 3 of 20, etc.) of the samples exceed lead concentrations of 0.015 milligrams per liter (mg/l) or copper concentrations of 1.3 mg/l during any monitoring period, an “action level” (AL) exceedance is triggered and the CWS must undertake a number of additional actions to control corrosion. Exceeding an AL is not a violation; however, failure to initiate the additional requirements may trigger a violation. **Section 2** of this Chapter details the additional actions required as a result of an AL exceedance (including lead public education requirements).

Interpretation of sample results including instructions for calculating compliance (the 90% value) can be found in **Appendix C**.

### **Collecting Additional Samples**

Collecting additional samples during a monitoring period may have advantages. Any water system may collect **more** lead and copper distribution tap samples during any monitoring period than required by the regulations. The additional sample results are combined with the required routine sample results to recalculate the ninetieth percentile. For example, if your supply collects 20 routine lead/copper samples, and three are over the lead level of 0.015 mg/l, an additional 10 more samples may be collected. The ninetieth percentile would then be calculated on 30 samples, thus allowing three high sample results. It's important to know that the additional samples must be collected during the same monitoring period.

If you are considering collecting additional samples, prior to collecting the additional samples, it is strongly recommended that the CWS call the Lead/copper Coordinator at 217-785-0561 for further instructions (including additional special sample site location requirements). The system must submit all additional sample results, and not only the sample results that meet the action level.

Note; the Illinois EPA laboratory will not analyze “additional” samples as part of the Community Water Supply Test Fund (CWSTF) program since these extra samples are not required by regulation (but by CWS choice). Additional samples must be analyzed at another certified laboratory at your expense.

## Section 2

### Action Level Exceedance

Every public community water supply (CWS) must collect samples for lead and copper. Samples are collected at locations approved by the Illinois EPA following specific Lead and Copper Rule guidelines (see **Appendix B**). After samples are collected and analyzed, no more than 10% of the samples can exceed 0.015 mg/l for lead or 1.3 mg/l for copper during the monitoring period. In the event that more than 10% exceed, the system is triggered into additional requirements. This is termed “action level (AL) exceedance”. Exceeding an AL may indicate that lead and/or copper is leaching from customer water pipes and/or faucets as a result of corrosive water. **It is the responsibility of the CWS to optimize corrosion control treatment to the best of their ability to minimize the amount of lead and copper leaching from the service line between the water- main and the building and/or household plumbing/faucets.**

Once an AL is triggered, the CWS must complete a series of requirements or “milestones”. They are:

- 1) Collection of Water Quality Samples (WQS)
- 2) Submittal of Source Water Treatment Recommendation (Collection of Source Sample)
- 3) Submittal of Optimal Corrosion Control Treatment (OCCT) Recommendation and Installation
- 4) Establishment of Water Quality Parameter Ranges
- 5) Public Education (require for lead AL only)
- 6) Lead Service Line Removal (require for lead AL only after OCCT is installed)

To very briefly summarize, when a CWS has an action level exceedance, the CWS is required to take “action” to reduce the amount of lead and copper leaching into the water from the different plumbing materials/fixtures. This “action” normally involves the installation of treatment that will optimize corrosion control (OCCT) thus reducing lead/copper levels. In order for the CWS to determine what treatment is needed, they must collect water quality samples, evaluate all result data, conduct pilot studies (when applicable), examine water chemistry, and lastly make a treatment recommendation to the Illinois EPA for their approval. Once their treatment option is approved and a construction permit is issued, the CWS must install the treatment, collect more water quality and lead/copper samples, and lastly evaluate the result data to determine whether treatment is indeed optimal. After optimal treatment is reached, the Illinois EPA will set water quality parameter ranges. The CWS must operate treatment within these ranges to ensure that corrosion control treatment remains optimal on a daily basis. In addition, for a lead AL, there are public education notifications the CWS must distribute to its consumers. In the event the lead action level continues to be exceeded after OCCT is installed, the CWS will be required to initiate lead service line replacement.

The following pages in this Section detail these six AL Milestones.

## Milestone 1: Collection of Water Quality Samples (WQS)

WQS are used to determine the corrosivity of the water, and if needed, to help the Illinois EPA to determine the type of corrosion control that a system should install and how the treatment should be operated. For most water systems that require treatment, corrosion control treatment is the primary mechanism for reducing their lead and copper levels.

**If your water system serves more than 50,000 people**, you were required to conduct WQP monitoring during the same two consecutive six-month monitoring periods as initial tap monitoring.

**If your water system serves 50,000 or fewer people**, and exceeds either AL, you must monitor before the end of the six-month initial tap monitoring period(s) during which the action level is exceeded. Because WQS must be collected in the same monitoring period in which you exceed an action level, you should collect lead and copper tap water samples early in the monitoring period. If you exceed during initial tap monitoring, you are immediately triggered into corrosion control treatment requirements. Small and medium supplies that are on reduced (annual or triennial) lead/copper monitoring may have up to a 60 day extension to the end of the reduced monitoring period (or November 30<sup>th</sup>) to collect WQS.

WQS will be used to measure:

- **pH** (field and lab measurement)
- **alkalinity** (lab measurement)
- **calcium** (lab measurement)
- **conductivity** (lab measurement)
- **water temperature** (field measurement)
- **if a corrosion inhibitor is being used, orthophosphate or silica** (lab)

***SPECIAL NOTE:** Unlike the lead and copper distribution samples, WQS do not need to be analyzed by a certified laboratory. However, it is strongly recommended a certified laboratory be used.*

WQS must be collected at each entry point into the distribution system (normally collected at water plant or well house following all treatment) **and** throughout the distribution system.

Distribution WQS can be collected at coliform sampling sites throughout the distribution system.

Number of Distribution WQS Samples		
System Size	No. of Sites	No. of Samples (2 per site*)
>100,000	25	50
10,001 to 100,000	10	20
3,301 to 10,000	3	6
501 to 3,300	2	4
=<500	1	2
* It is recommended that samples be collected 30 to 90 days apart (not collected on the same day)		

In addition to WQS, if on reduced annual or triennial lead/copper monitoring, the CWS will be returned to routine lead/copper monitoring. Routine monitoring is the full number of required lead/copper samples collected every six months.

## Milestone 2: Submittal of Source Water Treatment Recommendation

For the lead/copper program, source water is the finished water collected at the entry point into the distribution system. After an AL exceedance as described under Milestone 1, all supplies, including those that purchase water from another CWS, must collect at least one source water (entry point to the distribution system) sample per treatment plant AND recommend source water treatment to the Illinois EPA based from the results of the source water sample(s). This must be completed within six months of the AL exceedance.

If the results of source water testing exceed the detection limit of 5 ug/l (0.005 mg/l) for lead and 100 ug/l (0.100 mg/l) for copper, the supply may take a confirmation sample. The results of the initial and confirmation sample shall be averaged to determine the source water level.

### Source Water Treatment Recommendation

**Appendix D** contains the Source Water Treatment Recommendation (SOWT) forms that must be used to summarize your lead/copper entry point/source water results.

There are two options to choose from when submitting your SOWT. Only one option needs to be submitted.

#### OPTION 1

Most supplies will choose this option. Supplies having all lead/copper entry point **sample results equal to or below the detection limit**, will make a recommendation of "no treatment" to the source water.

#### OPTION 2

Supplies with **any source water sample results exceeding the detection limit** must complete the Option 2 form. The supply may specify a type of treatment, or no treatment, based on the source water sample results and any additional documented findings.

Supplies that are required to install source water treatment must do so within twenty-four months of Illinois EPA source water treatment approval. After completion of source water treatment, the system has 12 months to collect follow-up samples. Based on these results, a Maximum Permissible Level (MPL) will be set by the Illinois EPA.

### Maximum Permissible Level (MPL) Monitoring of the Source Water

For all supplies having a lead/copper source water sample which did not exceed the detection limit, the Maximum Permissible Level (MPL) at the entry point will be set at 0.005mg/l for lead and 0.200 mg/l for copper. For all other supplies, a MPL will be specified by the Illinois EPA and the supply will be notified.

Once the maximum permissible level (MPL) is established by the Illinois EPA, supplies must monitor the source water for compliance with the MPL. Groundwater systems must collect one source water sample per distribution entry point during the effective three-year compliance period. Such systems shall collect samples once during each subsequent three-year compliance period. Surface water systems must collect one source water sample per entry point during each year. The first annual sample will be on the date that the Illinois EPA determination is made. An exceedance of the MPL will result in a treatment technique violation, which requires a public notice be issued.

## Milestone 3: Submittal of Optimal Corrosion Control Treatment (OCCT) Recommendation and Installation

### Pre OCCT Installation

All medium and small sized (serving less than 50,000 customers) CWSs that exceed an AL must submit to the Illinois EPA an optimal corrosion control treatment (OCCT) recommendation. This must be completed within six months after the end of the monitoring period which it exceeded one of the AL. Large systems that serve 50,000 or more will be required to conduct an OCCT study prior to submittal of their OCCT recommendation. Specific OCCT study requirements can be obtained by calling the Illinois EPA Lead/Copper Coordinator (217-785-0561). The CWS should at this time also apply for a construction permit for the OCCT.

**The CWS should thoroughly evaluate all sample data, water chemistry and plumbing materials before submitting their OCCT recommendation. A OCCT recommendation template can be found in Appendix E.**

*Note: once OCCT approval is given, the OCCT must be installed and properly operated on a daily basis; therefore, be sure to evaluate long-term operating cost.*

The Illinois EPA will review each OCCT recommendation and will either approve the OCCT recommendation or request additional information. This determination will be made in writing. If further studies are needed, small and medium CWSs will have 18 months to conduct such studies and make a second OCCT recommendation.

### OCCT Installation

Once the OCCT recommendation is approved, OCCT must be installed and properly operating within 24 months of the Illinois EPA approval date. Before the end of the 24 month deadline, the system must submit an OCCT Verification Form (located in **Appendix F**) to the Illinois EPA. This form certifies that OCCT has been installed and is being properly operated.

### Post OCCT Installation

The CWS must collect another two consecutive six-month monitoring rounds of lead/copper and WQS samples. These monitoring periods are termed **Follow-up Monitoring**. The frequency and number of samples required will depend on the population served, source of water, and the type of OCCT. The Illinois EPA will send notification of these requirements once the OCCT Verification Form is received from the CWS. Follow-up monitoring verifies the relationship between water quality parameters and levels of lead and copper in drinking water as specified by the OCCT Recommendation. After follow-up monitoring, the Illinois EPA will set specific WQP ranges for the CWS (see Milestone 4).

The United States Environmental Protection Agency (USEPA) has prepared several related reference documents and are available at: <http://www.epa.gov/dwreginfo/lead-and-copper-rule>

If you have any questions about corrosion control studies, treatment, or optimization, please contact the Division of Public Water Supplies at 217/782-1724.



## Milestone 4: Establishment of Water Quality Parameter (WQP) Ranges

The purpose of measuring water quality parameters (WQP) is to determine whether or not a system is operating optimal corrosion control treatment (OCCT) at a level that most effectively minimizes the lead and copper concentrations at consumers' faucets. To accomplish this, the Illinois EPA is required to establish WQP ranges individually for each supply. The WQP ranges are established by using the data provided in the supply's OCCT recommendation, follow-up compliance monitoring, correspondence from the CWS, and any open literature.

After ranges are set, the CWS must operate OCCT within these WQP ranges or minimums. The actual parameters that are set are dependent upon the type of OCCT used by the CWS. In most cases, the WQPs include one or more of the following: **pH, calcium, orthophosphate, alkalinity, and/or hardness.**

Satellite systems that have experience AL exceedances will also have ranges set regardless of whether or not OCCT is directly being added by their CWS or by a parent CWS. The location or source of OCCT addition does not matter. If OCCT is being added at some point in the chain by either the parent supply or satellite, WQP ranges will be set by the Illinois EPA for all applicable CWS.

### Determining Compliance with the Water Quality Parameter Ranges

Large systems (>=50,000 pop served) must measure **daily** if they are a source water system and **bi-weekly** if they are a satellite system whose parent supply has installed OCCT. **Small and Medium systems (<50,000) must only measure WQP if they exceed the lead or copper AL.** For small and medium CWS required to measure WQP due to AL exceedance, measurements must be collected **daily** if they are a source water systems and **bi-weekly** if they are a satellite system whose parent supply has installed OCCT. Regardless of whether or not the CWS is required to measure WQP, once OCCT is installed, WQP ranges will be set.

For the systems required to measure WQPs, compliance with the WQP ranges is calculated at the end of each six-month period even though measurements are being collected daily or bi-weekly. If measurements are outside the established ranges for more than a total of **nine days** during a six-month monitoring period, a treatment technique violation will be recorded. In this case, the CWS must issue public notification to water consumers. In addition to public notification, if a CWS was on a reduced lead and copper monitoring frequency, the CWS would return to "routine" lead/copper monitoring for a minimum of two-consecutive six-month periods.

For the CWS required to measure WQP, distribution WQP must be measured every three months (quarterly). The number of samples or measurements required every three months depends on the population served. All CWS will have only one distribution WQP range: a pH range of 7.0 or greater. This range must be maintained at all distribution sampling points. Any range exceedances are added to the total number of entry point exceedances for each six-month period. Again, the CWS is only allowed nine excursions during each six-month monitoring period.

Detailed instructions on measuring WQPs, examples of compliance calculations, and required Illinois EPA WQP reporting forms can be found in **Appendix G**.

**Key points concerning WQP:**

1. Sending WQP samples to a laboratory (Illinois EPA or certified) will not allow the CWS enough time to collect additional samples due to the laboratory turn-around-time. Since WQP monitoring is an ongoing process, the Illinois EPA feels that the up-front monetary cost to purchase field equipment will actually save money in the long run. **Appendix G** lists some locations where this type of equipment may be purchased.

*For example: A CWS is monitoring bi-weekly for orthophosphate and is sending the sample to a laboratory for analysis. Most likely, it would be over two weeks before the sample collector knows the test results. If an excursion has occurred, at least 14 days would have elapsed, therefore, the CWS would have 14 daily value excursions. The CWS would have incurred a treatment technique violation.*

2. Know how to determine compliance and review results as the samples are collected and measured. Not understanding what to do if a daily value is outside the established ranges result in a treatment technique violation in a very short amount of time. If your CWS is on reduced lead/copper monitoring frequency and incurs a treatment technique violation, the CWS must return to routine (full) lead/copper monitoring for a minimum of two-consecutive six-month monitoring periods. No exceptions.
3. WQP distribution and entry point range worksheets enclosed in **Appendix G** are intended for your own personal use. These reports should be completed daily and kept on file by the water supply. These worksheets are not required to be submitted to the Illinois EPA; however, the CWS is required to maintain accurate data. The Illinois EPA reserves the right to request this information at any given time and/or may be reviewed during your engineering evaluation (sanitary survey).

## Milestone 5: Public Education (required for Lead AL only)

When a CWS exceeds the **lead AL**, a Public Education (PE) program must be delivered to all customers and sensitive groups within 60 days after the end of the monitoring period in which the lead action level was exceeded. After initial PE delivery, the PE program must continue every 12 months as long as the lead AL is exceeded.

The PE program is very comprehensive and will require a substantial amount of work to ensure that a satisfactory, understandable, and educational program is delivered to all targeted groups. At a minimum, a CWS must:

- Deliver printed materials (pamphlets and brochures) to all bill paying customers and put new mandatory language on or in water bills.
- Deliver printed materials to local public health agencies, even if they are not located within its distribution system. The printed materials should include an “informational notice” to encourage the local health agencies to distribute materials to any potentially affected customers; or CWS users.
- Contact its local health agencies via phone or in person to obtain a list of additional community-based organizations that serve target populations and deliver public education materials to these organizations.
- Contact at-risk customers by delivering printed materials to public and private schools or school boards; Women, Infants and Children (WIC), and head start programs; public and private hospitals and medical clinics; pediatricians; family planning clinics; and local welfare agencies. The printed materials should include the “informational notice” described above.
- Make a good faith effort to locate and deliver printed materials to licensed childcare centers, public and private pre-schools, and obstetricians-gynecologists and midwives. The printed materials should include the “informational notice” described above.
- Post the printed material content on its website if it serves more than 100,000 people.
- Submit a press release to newspaper, television, and radio stations.
- Implement activities from the following: public service announcements, paid advertisements, public area informational displays, e-mails to customers, public meetings, household deliveries, targeted individual customer contact, direct material distribution to all multi-family homes and institutions, or other method approved by your State.

Most public education requirements must be repeated annually until the system no longer exceeds the lead action level. Some activities must be conducted more frequently are as follows:

- CWSs must provide the mandatory informational statement on or in water bills with each billing cycle but no less frequently than quarterly;
- CWSs must deliver press releases twice every 12 months on a schedule agreed upon with the State; and
- CWSs serving more than 100,000 people must retain material on their publicly-accessible website for as long they have an action level exceedance.

To assist CWS in preparation and delivery of its PE program, **Appendix H** offers step by step in-depth directions, detailed PE requirements, and advice including example templates. When reading this document, please pay special attention to the mandatory information that must be included in the PE program. Failure to include all mandatory information and follow delivery instructions will result in the CWS not receiving credit for issuing a satisfactory program and possible PE treatment technique violation.

**Appendix H** includes the required Illinois EPA “PE Summary Reporting Form” that must be submitted to the Illinois EPA immediately following the completion of the CWS PE program. When submitting this PE Summary Report form, the CWS must also include copies of their PE materials.

Supplies exceeding **only** the copper action level do **NOT** have to distribute this public education program.

Once a CWS meets the lead action level during any monitoring period, the public education program may be discontinued. However, should the supply again exceed the lead action level, public education must recommence within 60 days following all the guidelines in **Appendix H**.

One newly added requirement to the Lead and Copper Rule is that a copy of your PE materials must be submitted to the Illinois EPA prior to distribution. **However, you do not need pre-approval before distributing the materials to your customers.**

**Appendix H** includes a self-assessment form that must be completed and submitted along with a copy of your PE materials prior to distribution.

## Milestone 6: Lead Service Line Replacement (LSLR)

Lead service line replacement (LSLR) is intended as an additional step to reduce lead exposure when corrosion control treatment is unsuccessful. You must begin replacing lead service lines if you continue to exceed the lead action level after installing corrosion control treatment and/or source water treatment. The Illinois EPA can also require you to begin lead service line replacement if you are required to install corrosion control treatment and/or source water treatment and have not installed such treatment(s).

The first year of lead service line replacement begins on the first day following the end of the monitoring period in which you exceed the lead action level in tap samples collected after installing corrosion control or source water treatment, whichever is later, or as specified by the Illinois EPA. For systems on reduced monitoring, it is September 30 of the calendar year in which the sampling occurs.

As mentioned, LSLR must continue until you no longer exceed the lead action level during two consecutive monitoring periods.

Once LSLR is triggered for the first time (continuing to exceed the lead action level after installing corrosion control treatment), the CWS must:

- Submit a materials evaluation that identifies the initial number of lead service lines in your distribution system at the time your replacement program begins.
- Submit an overall schedule for annually replacing at least 7 percent each year of the initial number of lead service lines in your distribution system.
- Submit a letter\* stating for the previous year:
  - the number of lines scheduled to be replaced;
  - the number and location of lines actually replaced; and
  - if measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.
- Provide this information no later than 12 months after the end of the monitoring period in which you were first triggered into lead service line replacement.

*\*This letter is due every 12 months until you complete lead service line replacement or no longer exceed the lead action level during two consecutive rounds of tap monitoring.*

If LSLR is triggered, you will be required to replace at least 7 percent of the initial number of lead service lines in your distribution system each year. The initial number of lead service lines is the number in place at the time the replacement program began. You must continue replacing the required percentage of lead service lines each year until you no longer exceed the lead action level during two consecutive monitoring periods or have replaced all your lead service lines. You are required to replace only the portion of the lead service line owned by the CWS. You are not required to replace the customer owned portion of the lead service line.

Replacement does not always mean actual physical removal. If a sample collected from a lead service line does not have lead concentrations of more than 0.015 mg/L, it does not have to be physically replaced and it will count towards the annual 7 percent replacement total. This monitoring is optional, but it may save you the expense of replacing a lead service line.

If you are trying to replace lead service lines through testing, you should collect your lead service line samples early enough in the 12-month replacement period to allow the time needed to physically replace a line should your test results be greater than 0.015 mg/L.

The LCR requires you to replace only the portion of the lead service line that you own. In those instances where you do not own the entire lead service line up to the building inlet, you must offer to replace the owner's portion of the line at his/her expense unless your local or State law precludes this replacement. In addition, you are not required to replace the privately-owned portion of the line if the owner chooses not to pay the cost of replacing the privately-owned portion. In those instances where you do not replace the privately-owned portion of the line (referred to as "partial lead service line replacement"), you must:

- Notify all residents served by the line you are replacing at least 45 days prior to partial replacement. The notice should indicate that a temporary increase in lead levels may occur and that a sample will be collected within 72 hours of replacing part of the line. The Illinois EPA can allow you to provide less advanced notice if the line is being replaced in conjunction with emergency repairs.
- Collect at your expense one representative service line sample for each partially replaced lead service line within 72 hours of removing the line.
- Report sample results to the building owner(s) and the resident(s) served by the partially replaced line within three business days of receiving these results. You must notify residents by mail. However, for multi-family dwellings you can post the notification in a conspicuous common-use area of the building.

This sample is not required if you replace the entire lead service line, or if you only replace a gooseneck, pigtail, or other fittings and these are the only lead components in your service line.

You must again start lead service line replacement again if you subsequently exceed the lead action level during any monitoring period. In addition, the Short-Term Revisions require you to reconsider any lines previously determined to not require replacement (i.e., "replaced through testing") if you exceed the action level again in the future and resume the lead service line replacement program. Specifically, you must update your inventory of lead service lines to include those that were classified as "replaced through testing." You will not be required to resubmit the materials evaluation.

**Appendix I** includes detailed LSLR requirements, service line sampling instructions, and the Illinois EPA reporting forms.

## Section 3

# Notifying Customers of Test Results

As a result of the October 10, 2007 revisions to the Lead and Copper Rule, CWS are now required to send a copy of the test result along with an Informational Notice to every site that was sampled during the monitoring period. Only the analysis results collected from that specific location must be enclosed with the Informational Notice. The CWS does not have to send copies of “all” the results to each sampling location.

**Notifying customers of test results must be done regardless of whether or not you have a lead or copper AL exceedance.**

The Information Notice must include the results of lead tap water monitoring, an explanation of the health effects of lead, identify steps consumers can take to reduce exposure to lead in drinking water, and contact information for the water utility. Some suggested language is as follows:

*“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/dwreginfo/lead-and-copper-rule>.”*

The notice must also provide the maximum contaminant level goal (MCLG) and the action level (AL) for lead and the definitions for these two terms.

After the CWS receives the test results from the laboratory, they have 30 days to send the results along with the Informational Notice to the sample location’s homeowner or residence. A delivery certification form along with a sample copy of the CWS’s Informational Notice must be sent to the Illinois EPA no later than 3 months following the end of the monitoring period.

### *Example*

*A CWS is on reduced monitoring during the June 1, 2009 through September 30, 2009 monitoring period. They must sample from 30 locations. They collect all their samples during August 2009. They receive the last of the 30 results from the laboratory on September 25, 2009. Both ALs were met. This CWS must notify the 30 homeowners of the results for their house and include the Informational Notice by October 25, 2009. The CWS must also submit the certification form along with a sample Informational Notice to the Illinois EPA by January 10, 2010.*

**Appendix J** includes the Illinois EPA delivery certification form along with several Informational Notice templates. There are 5 different templates to choose from. The one the CWS will use will depend on the actual individual test result and the 90<sup>th</sup> percentile value.