



Lead in Drinking Water Regulation: Public Education Guidance

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Disclaimer

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Objective and Organization

We, the Environmental Protection Agency (EPA), first issued this guidance document in July 1992. Since that time, we published minor revisions to the National Primary Drinking Water Regulations (NPDWRs) for lead and copper on January 12, 2000 (65 *FR* 1950). The Lead and Copper Rule Minor Revisions (LCRMR) incorporate several comments received from systems and States based on their experience implementing or overseeing a public education program. These revisions impact the mandatory language and delivery requirements, especially for smaller systems, and change the deadline for systems to report compliance with their public education requirements to the State. A summary of the revised public education requirements is provided in Table 1 in Section I.

This guidance document explains the revised public education requirements, describes a practical approach for successfully carrying out a public education program on lead in drinking water, and continues to serve as a tool to assist water suppliers with conducting a community-based, public education program on lead in drinking water. The program described here is based on our NPDWRs for lead and copper, practical experience gained from implementing the public education requirements of the Lead and Copper Rule (LCR), and experience gained from an earlier pilot public education program on lead in drinking water conducted by EPA in cooperation with Raleigh, North Carolina.

We recognize that many systems have already developed public education programs but believe that systems will find this document useful in understanding the modifications to the public education requirements resulting from the LCRMR.

The guidance manual is divided into the following sections:

- **Introduction** provides a discussion of the health effects of lead, a brief history of the lead and copper rule regulations, and a short discussion of the pilot public education program that was conducted in Raleigh, North Carolina.
- **Section I: Summary of Program Requirements** summarizes public education program requirements that water suppliers must meet to comply with the Federal regulations and how the LCRMR have impacted these requirements.
- **Section II: Developing an Action Plan** suggests one approach to developing a public education program through development of an action plan.
- **Section III: Working with a Task Force** discusses how a community-based task force can assist you with conducting your public education program.
- **Section IV: Preparing Public Education Materials** describes practical tips for implementing the program.

This document also contains eight appendices:

- **Appendix A: Summary of the Public Education Requirements for Community Water Systems Serving 3,300 or Fewer People** provides a summary of the public education requirements, in a question and answer format, for smaller community water systems.
- **Appendix B: Lead in Drinking Water Action Plan** contains a sample action plan.
- **Appendix C: Water Testing Information Materials** provides two examples of information materials that address water testing.
- **Appendix D: Public Education Brochures** contains sample brochures for community and non-transient, non-community water systems.
- **Appendix E: Public Education Posters** provides sample posters that can be adapted for use by non-transient, non-community water systems.
- **Appendix F: Lead in Drinking Water Public Service Announcement** provides a sample public service announcement.
- **Appendix G: Lead and Copper Rule Minor Revisions that Relate to Public Education Requirements** contain the federal regulatory language, as modified by the LCRMR, that pertains to your public education requirements
- **Appendix H: Information Sources** provide a listing of other information sources that you can reference to learn more about lead and its health effects.

Introduction

Human exposure to lead has long been an important public health issue. Exposure can occur from many sources, including old lead-based paint and contaminated dust and soil (from the disintegration of lead-based paint or from past deposits of gasoline emissions). Lead exposure has long been known to cause neurological impairment, altered physical development and blood chemistry, and adverse effects on the cardiovascular system. Health experts now recognize that exposure to even small amounts of lead poses a potentially significant health risk, especially in infants and young children. In response, EPA has taken a number of actions to limit our total exposure to lead, such as phasing out the use of lead in gasoline. As a result of EPA's actions and those of other government agencies, total exposure to lead is much lower today than in the late 1970s.

For many communities, however, lead in drinking water remains a widespread, controllable source of lead and, as such, the Federal government has focused significant attention on its reduction. For instance, the use of lead distribution pipes and lead solder, once a common practice, is now prohibited.

On June 7, 1991, EPA promulgated revisions to the maximum contaminant level goals (MCLGs) and NPDWRs for controlling lead and copper in drinking water (*Federal Register*, Vol. 56, No. 110, pp. 26460-26564). We modified this rule with three technical amendments that were published in the *Federal Register* on July 15, 1991 (56 FR 32113), June 29, 1992 (57 FR 28786), and June 30, 1994 (59 FR 33860). On January 12, 2000, we published the minor revisions which we also refer to as the LCRMR. The LCR and its revisions require 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 lead and copper plumbing materials. In addition, they require water suppliers to educate their customers about specific measures that can be used to reduce lead levels in home drinking water caused by lead household plumbing materials — the primary source of lead in drinking water.

These rules specify that a water system must conduct a public education program on lead in drinking water if during a monitoring period, more than 10 percent of the tap water samples collected in accordance with §141.86 of the regulations (*i.e.*, the 90th percentile lead level) exceed the EPA "action level" of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Specific requirements regarding the content and delivery of this public education program are contained in §141.85 of the regulation. This guidance discusses these requirements, as amended by the LCRMR, and suggests a practical approach for successfully carrying out a public education program on lead in drinking water. ○ Please note that the citations contained in this guidance document (*e.g.*, §141.85) correspond to the Federal version of the lead and copper rule regulations.

In 1989, EPA conducted a pilot public education program on lead in drinking water in Raleigh, North Carolina to determine the level of effort required to implement such a program and to identify the types of information materials and distribution methods that are most effective in

reaching consumers. EPA developed and implemented the pilot program in cooperation with the City of Raleigh, Wake County, and North Carolina State authorities as well as civic and business interests.

The Raleigh pilot program confirmed that a community-wide public education program describing the potential risks of lead in drinking water and detailing practical methods of reducing lead ingestion can successfully reduce exposure to lead in drinking water. As indicated by the extensive evaluation of the pilot program, the best way to ensure that community members take action to reduce their risk of exposure to lead is to *provide for substantial repetition of messages using a variety of media*. In keeping with the results of the Raleigh pilot program, the lead and copper regulations require substantial repetition of public education messages using a variety of media.

The pilot program also demonstrated the importance of securing assistance from the community to implement the public education program. *Involving a number of community organizations, as well as experts who are knowledgeable about such relevant issues as health effects of lead and community and media relations, serves to distribute the workload and improve the quality of the program*. Raleigh effectively used this community-based approach to both develop and carry out the pilot program. This guidance presents lessons learned from the EPA/Raleigh pilot program, and from the actual implementation of the public education requirements of the LCR and is designed to assist water systems in developing and carrying out a community-based education program on lead in drinking water.

Section I

Summary of Program Requirements

This document provides guidance to you, the public water suppliers regarding the public education requirements of the LCR, as amended by the LCRMR. Section 141.85 of the lead and copper rule regulations contain specific requirements regarding the content and delivery of your public education program. Section 141.90(f) explains the information that you must provide to your State to show that you have complied with your public education requirements. Table 1, below, highlights the revisions to the public education requirements contained in §§141.85 and 141.90(f) (*refer to Appendix G for a copy of the Federal regulatory language contained in these sections*). A detailed discussion of these requirements is provided following this table.

Table 1: Changes in the Public Education Requirements Resulting from the Lead and Copper Rule Minor Revisions		
Revision:	Applies to:	Require State Approval before Implementing:
<i>Content of Materials¹</i>		
May delete information pertaining to lead service lines from mandatory language	All water systems with no lead service lines or lead goosenecks in the water system service area	Yes
May modify language regarding availability of building permit records and consumer access to these records	All water systems that do not have such information available	Yes
May use alternate mandatory language designed for non-transient, non-community water systems (NTNCWSs) and some community water systems (CWSs)	All NTNCWSs	No
	CWSs that: 1) cannot make improvements to systems or install treatment devices (<i>e.g.</i> , prisons or hospitals); <i>and</i> 2) provide water as part of the cost of services provided (<i>also referred to as "Special-case" CWSs</i>)	Yes
<i>Delivery of Public Education Materials¹</i>		
May mail public education bill materials separately from water bill	CWSs that do not have a billing cycle within 60 days of exceeding the lead action level or cannot insert notice with water bill	No
May provide alert on the outside of the envelope or in package (<i>versus printing it on water bill</i>)	CWSs	No
May use of electronic transmission (<i>i.e.</i> , e-mail) instead of or in combination with printed materials	NTNCWSs	No
	"Special-case" CWSs	Yes

Section I: Summary of Program Requirements

Table 1: Changes in the Public Education Requirements Resulting from the Lead and Copper Rule Minor Revisions		
Revision:	Applies to:	Require State Approval before Implementing:
May omit newspaper notification and public service announcements, and may limit coverage area receiving brochures/pamphlets to facilities and organizations <i>serviced by system</i> that are most likely to be regularly visited by pregnant women and children (<i>unless State requests wider distribution</i>)	CWSs serving 500 or fewer people	No
	CWSs serving 501 - 3,300 people	Yes
Public Education Program Reporting Requirements²		
Must send documentation to State within 10 days after end of each period in which public education is required to be performed (<i>previous requirement was to provide this letter by the end of each calendar year in which public education was delivered</i>)	All water systems	Not Applicable
Must include certification that content and delivery requirements were met as part of documentation	All water systems	Not Applicable
May omit list of organizations/ facilities receiving public education materials from documentation to State <i>if list was previously submitted, is unchanged, and not required by State</i>	All water systems	No
<p>¹ Before implementing any of the revisions listed under <i>Content of Materials</i> or <i>Delivery of Public Education Materials</i> listed here in Table 1, check with your State to determine whether these revisions have been adopted into its regulation. These requirements are less stringent than the LCR and you may not be able to implement them until the provisions are incorporated into your State's regulations.</p> <p>² You must follow the requirements listed under <i>Public Education Program Reporting Requirements</i>, even if your State has not yet adopted these revisions.</p>		

Content of Public Education Materials

Section 141.85(a) provides specific language that should be used in all printed materials developed under the lead public education program and requires all materials to be readily understandable by the layperson. This language describes the potential health effects of excess exposure to lead and the reasons why lead in drinking water is of particular concern. It also provides step-by-step instructions for water testing and follow-up actions that can be taken to reduce both short-term and long-term exposure to lead in drinking water.

The LCRM have divided §141.85(a) into two sections to provide separate mandatory language for community water systems (CWSs) and non-transient, non-community water systems (NTNCWSs). Section 141.85(a)(1) contains the language for CWSs and §141.85(a)(2) contains this language for NTNCWSs. NTNCWSs have the option of continuing to use the original language now contained in §141.85(a)(1) or to use this alternative language.

With State approval, a CWS may follow the NTNCWS public education requirements if the system serves a facility, such as a hospital or prison, where the population served has no control over plumbing or treatment *and* where water is provided as part of the cost of overall services, rather than as a separate and distinct charge (*i.e.*, a "special-case" CWS). The system must apply to the State in writing to use the alternative language, unless the State has waived requirements for prior approval. † It is best to check with the State to determine if this approval is needed.

We modified the language for NTNCWSs based on concerns raised by some EPA Regions and States that the required public education material, while appropriate for CWSs that serve water to residential customers, may not be appropriate for NTNCWSs and even some small CWSs such as prisons and hospitals. This revised language contained in §141.85(a)(2) provides more relevant and helpful information for persons consuming water in such systems than the existing language. We replaced phrases such as "some homes in the community" with "some drinking water samples taken from this facility." We also deleted the reference to having water tested for lead because customers of a NTNCWS are unlikely to have this test conducted as they tend to consume the water for only a short period of time and have little or no control over the water in the distribution system. For similar reasons, we replaced references to home treatment devices with a suggestion for the use of bottled water. Further, we simplified the discussion of flushing because people being served by NTNCWSs are unlikely to know the nature of the plumbing as they would in their own home. This language has been simplified to recommend a 15 to 30 second flush, which should clear any water with high lead levels that come from the faucet. A copy of the alternative NTNCWS language is provided in the sample public education materials in Appendices D and E and in the federal regulatory language presented in Appendix G of this document.

The LCRM allow two other instances where language may be deleted or modified to avoid unnecessary concern or confusion. CWSs or NTNCWSs may delete or modify information pertaining to lead service lines, if approved by the State, and if no lead service lines or lead goosenecks exist in their systems. CWSs also may omit or modify the information contained in §§141.85(a)(1)(iv)(B)(5) and (a)(1)(iv)(D)(2) regarding building permit record availability and

Section I: Summary of Program Requirements

consumer access to these records, if approved by the State.¹ This provision does not affect NTNCWSs because the language for these systems does not contain reference to building permit records. Appendix D provides examples of brochures for CWSs and NTNCWSs with and without language related to lead service lines and/or building permits. Appendix E, which contains sample posters for NTNCWSs, includes a version with lead service line language and one without this language.

Section 141.85(b) provides specific language for water systems to use in all public service announcements (PSAs) and broadcast materials developed as part of this program. The LCRMR do not change the content of this language, but no longer require CWSs serving 3,300 people or fewer to issue these announcements. You should first check with your State to determine if they still require PSAs. Appendix F contains an example of a PSA that you can adapt for your use.

Delivery of Public Education Materials

According to §141.85(c) of the regulation, your public education program must be delivered to your entire service area and targeted to high-risk segments of the population (*i.e.*, community members who are either more susceptible to the adverse effects of lead or who are at greater known risk of exposure to lead in drinking water). If your system serves a significant proportion of non-English speaking persons, §141.85(c) of the regulation requires that the information materials be available in the appropriate languages to ensure that non-English speaking customers and members of the public understand the information.

Requirements for Community Water Systems

According to §141.85(c), CWSs that exceed the lead action level, on the basis of tap water samples collected in accordance with §141.86, must carry out the following four public education activities within 60 days from the time the lead action level is exceeded (except as permitted under the LCRMR). ***First check with your State to make sure you can take advantage of these LCRMR provisions.***

1. Distribute informational notices in water utility bills, along with a special alert (*shown in the box below*). If your billing cycle is not within 60 days of exceeding the lead action level or the format of your water bill does not allow materials to be included (*e.g.*, postcard format or computer-generated self-mailers), the LCRMR allow you to mail the notices separately. In addition, some systems may not have room on their water bill to include the alert. The LCRMR also permit you to include the alert on the outside of the envelope or inside the package versus printing it on the actual water bill.

¹Section 141.85(a) has undergone substantial renumbering as part of the rule revisions. Previously, §141.85(a)(1)(iv)(B)(5) and §141.85(a)(1)(iv)(D)(2) were §141.85(a)(4)(ii)(E) and §141.85(a)(4)(iv)(B), respectively.

Section I: Summary of Program Requirements

SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION.

2. Submit informational notices in major local newspapers. The LCRMR eliminate this requirement for systems serving 500 or fewer people. Systems serving 501 to 3,300 people may omit this notification but must first obtain permission from their States.
3. Deliver pamphlets or brochures to specified facilities and organizations, including: public schools and/or local school boards; city or county health departments; Women, Infants, and Children (WIC) and/or Head Start programs (if available); public and private hospitals or clinics; family planning clinics; and local welfare agencies. Under the LCRMR, systems serving 3,300 or fewer may limit distribution of these materials to those facilities and organizations *in their service area* that are most likely to be regularly visited by pregnant women and children. Systems serving 501 to 3,300 people must first obtain approval from the State before limiting this distribution. *Note: You are not required to distribute pamphlets or brochures if you do not provide water to any of these types of facilities or organizations, and your State has adopted this LCRMR provision.*
4. Submit PSAs to at least five radio and five television stations with the largest audiences that broadcast to the community served by the water system. If you are a CWS that serves 3,300 or fewer people, the LCRMR do not require you to deliver this notification.

We limited the delivery requirements for systems serving 3,300 or fewer people because of past confusion and burden it imposed on these systems. For some small systems, especially those providing water to a small number of people in a larger urban or suburban area, these requirements have created unintended consequences. Some systems were flooded with calls from individuals who were not served by the system but had heard or read these announcements. The requirement to distribute materials to locations visited frequently by pregnant women and children similarly imposes a significant burden on these systems since it may involve a large number of locations if the system is near an urban or suburban area.



REMEMBER: Special-case CWSs can use the alternative mandatory language and delivery requirements that are specified for a NTNCWS. However, the State may require them to receive prior State approval.

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For as long as you continue to exceed the lead action level, you must:

Every 12 months:

- i Mail informational notices to your users,
- i Submit informational notices in major local newspapers*
- i Deliver pamphlets or brochures*

*(*except for CWSs serving 3,300 or fewer as discussed on the previous page).*

O Note: You can use the Consumer Confidence Report (CCR) in place of a notice to satisfy the annual delivery requirements for those customers that receive water bills if you meet the following §141.85 requirements: 1) you include the mandatory public education language in your CCR; 2) you print the public education alert language on the front page of the CCR; and 3) the CCR is delivered no later than 12 months from the last time you provided public education.

Every 6 months:

- i Submit PSAs, except if you are a CWSs serving 3,300 or fewer people and your State regulation allows you to forego delivering PSAs.



You can STOP delivering public education materials whenever your 90th percentile monitoring results are below the lead action level for ONE monitoring period.



REMEMBER: If you exceed the lead action level again, the cycle starts over. Your initial delivery must be within 60 days of the exceedance and must be repeated once every 6 months for PSAs (if required), and every 12 months for all other forms of delivery for as long as the exceedance continues.

Section I: Summary of Program Requirements

Table 2, below, summarizes the timing of the various public education activities.

Table 2: Schedule of Public Education Activities for Community Water Systems¹					
Public Education Requirement	Bill Insert	Pamphlet & Brochure	Newspaper Notification	PSAs	Compliance Letter to State
Within 60 days of the exceedance ²	T	T	T	T	
Every 6 months for as long as exceedance occurs				T	
Every 12 months for as long as exceedance occurs	T	T	T		
Within 10 days after the end of each period in which public education was required					T
¹ Please note exceptions that have been summarized in the above section. ² Applies first time action level is exceeded, and applies any subsequent time that a system exceeds the lead action level when it is not already providing public education.					

~ If a State adopts all the public education LCRMR provisions, a CWS that serves 3,300 or fewer people may only be required to distribute informational notices in water utility bills, along with the special alert. These systems would not be required to provide notification to newspapers or PSAs. They also would not be required to distribute pamphlets or brochures if they do not provide water to any facilities or organizations that are likely to be regularly visited by pregnant women or children.~

Requirements for Non-transient, Non-community Water Systems and Special-case Community Water Systems

Within 60 days of exceeding the lead action level, a NTNCWS or special-case CWS must deliver public education materials as follows:

- i Display informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and
- i Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the system.

Section I: Summary of Program Requirements

A NTNCWS or special-case CWS must repeat these actions *at least once during each calendar year* in which it exceeds the EPA lead action level.



REMEMBER: You if you are a NTNCWS, you have the option of using the alternative mandatory language provided in §141.85(a)(2) or using the original language now contained in §141.85(a)(1). You do not need State approval before using this alternative language. If you are a special-case CWS, your State may require you to receive approval before using the alternative mandatory language and delivery requirements specified for a NTNCWS.

The revised rule allows NTNCWSs, or special-case CWSs with *State approval* to:

- i Further modify the language to omit information pertaining to lead service lines if no lead service lines or lead goosenecks exist.
- i Distribute public education information electronically instead of or in combination with printed materials, as long as you are reaching the same audience.



You can STOP delivering public education materials whenever your 90th percentile monitoring results are below the lead action level for ONE monitoring period.

REMEMBER: If you exceed the lead action level again, the cycle starts over. Your initial delivery must be within 60 days of the exceedance and must be repeated every 12 months for as long as the exceedance continues.

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Table 3, below, illustrates the timing of these activities.

Table 3: Schedule of Public Education Activities for Non-transient, Non-community Water Systems or Special-Case Community Water Systems			
Public Education Requirement	Poster	Pamphlet	Compliance Letter to State
Within 60 days of the exceedance ¹	T	T	
Every 12 months for as long as exceedance occurs	T	T	
Within 10 days after the end of each period in which public education was required			T
¹ Applies first time action level is exceeded, and applies any subsequent time that a system exceeds the lead action level when it is not already providing public education.			

Reporting to the State

CWSs and NTNCWSs must also submit a letter to the State demonstrating that their water system has delivered the public education materials that meet the regulation’s content and delivery requirements. The LCRMR have modified the date this letter is due and the contents of the letter. Previously, this letter was due by December 31 of each year in which public education was conducted. Now, this letter must be submitted within 10 days after the end of *each* period in which public education is required. The rationale for accelerating the public education reporting requirement is to provide States and EPA with information in a manner timely enough to oversee systems’ compliance with the public education requirements. If you are required to deliver PSAs (which is a semi-annual requirement), you will be required to submit two letters to the State during a calendar year instead of a single letter as was previously required.

Under the LCRMR, the letter must contain a certification that all public education materials meet the written content requirements in §141.85(a), broadcast content requirements in §141.85(b), *if applicable*, and the delivery requirements in §141.85(c). Due to the change in the reporting deadline, the content of the letter has changed from reporting activities conducted in the previous year to those conducted during the most current period in which public education was required. The LCRMR no longer require you to resubmit your distribution list if you are able to certify that the list has not changed and the State does not require this information. If you are a CWS and have a change in your distribution list and/or the State requires you to submit this information, you must include a list of all newspapers, radio and television stations, facilities, and organizations to which you have delivered public education materials. If you are a CWS that is not required to deliver public education materials to newspapers, radio stations, and/or television stations, the letter would contain a listing of the facilities and organizations receiving such materials. If you are a NTNCWS,

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the letter would include a list of the facilities and organizations to which the public education materials were distributed or posted.

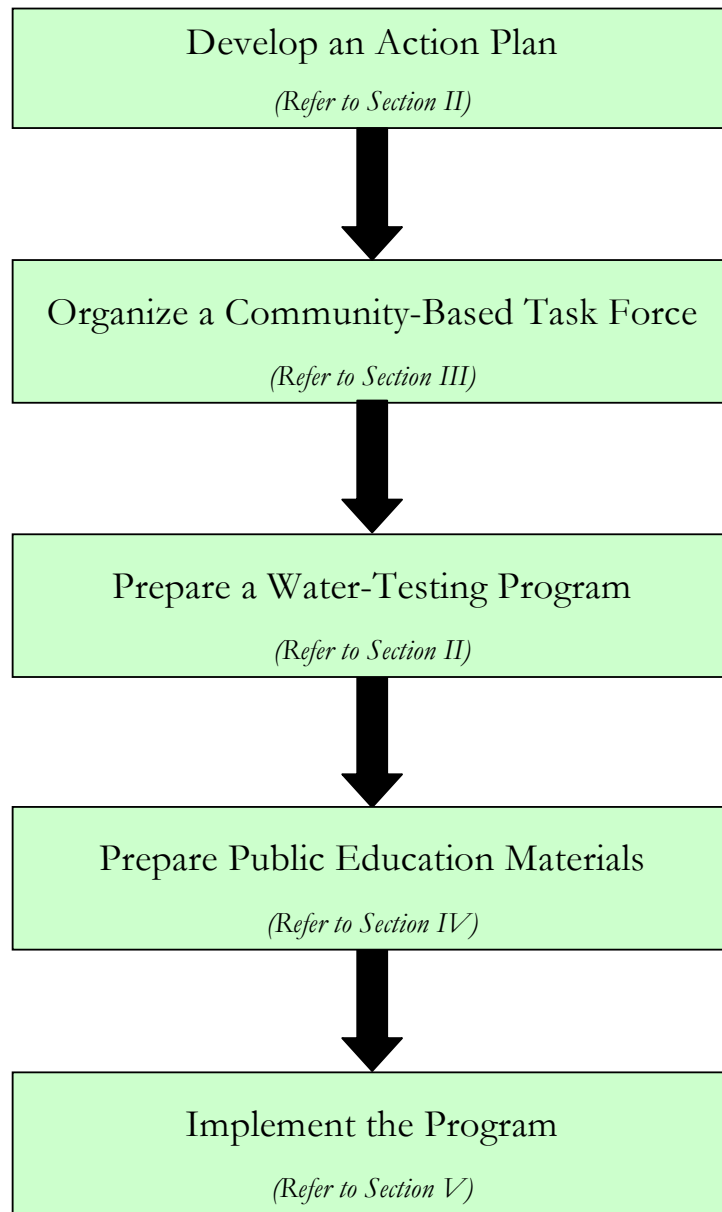
Water Testing

As part of the public education program, §141.85(d) requires water systems to provide tap water sampling to any customer who requests it. You can conduct the sampling and analysis yourself, arrange for a certified laboratory to perform the testing, or provide your customers with the names of laboratories that can perform this service. At a minimum, you must publish the names and phone numbers of at least two laboratories in the area that customers can call to have their water tested for lead. This information must be published in the required water bill inserts, newspaper notices, and pamphlets and/or brochures. The required PSA (if applicable) must provide the phone number of the city or water system for customers who wish to obtain information on testing. You are not required to pay for the cost of the analysis. If your water system conducts the sampling and analysis, you can charge for this service.

Section I: Summary of Program Requirements

The remaining Sections II through V suggest one possible approach to complying with the public education regulatory requirements through the five key steps that we have found through our experience can help produce a successful public education plan.

Figure 1: Key Steps in Conducting a Public Education Program on Lead in Drinking Water



Section I: Summary of Program Requirements

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Section II

Developing an Action Plan

What is an Action Plan?

As the water supplier, you are **responsible for conducting the education program on lead in drinking water. This is a large task.** If your system is a CWS that serves more than 3,300 people, the regulations require you to distribute information to customers, the media, public schools, the city or county health department, and a number of public and private community organizations. If you are a smaller CWS, the regulations may allow you to omit delivery to the media and to some of these organizations and facilities. Regardless, EPA recommends (but does not require) that you develop an action plan for carrying out the program. The action plan is a tool to assist you in organizing and implementing the various activities included in your education program. In addition, the action plan should describe the resources (funding as well as professional and volunteer support) that will be needed to implement the program. A sample action plan is provided at the end of this document as Appendix B. You may begin by using this generic plan to design a public education program specific to your community.

O Note: Although this section of the document and the action plan is more specific to CWSs, NTNCWSs may find some of this information useful in organizing their public education programs.

What to Include in Your Action Plan

An action plan should achieve four basic objectives:

1. Define the program audience;
2. Outline a customer water testing program for lead;
3. Identify the types of education materials that will be used; and
4. Determine how and when to best deliver the information to your audience.

Defining Your Program Audience

Identifying your audience is one of the first and most important decisions that you should make concerning your program. The size, location, and cultural composition of the audience will have a direct effect on the design of your program — from the educational materials you use to how you distribute information. Following is a brief description of the types of audiences your education program must target.

General Public/Customers. Your service area includes everyone who receives water from your distribution system. Obviously, your customers include a wide variety of people who live in different locations and types of residences and who represent different age groups, socioeconomic levels, and family sizes and compositions.

High-risk Groups. A high-risk group is a specific group of people who may be more adversely affected by high levels of lead than others. Examples of groups that are at particular risk to lead include pregnant women, infants, and children. Therefore, you will want to distribute information materials through agencies and organizations that serve these high-risk groups.

Non-English Speaking Public. If a significant proportion of the population in your community speaks a language other than English, the regulations require that the education materials on lead in drinking water also be prepared in the appropriate language(s) to ensure that non-English speaking persons have access to this information.

Providing Water Testing Services

Providing water testing services is a key component of your program. You need to develop a process for conducting and analyzing the samples and reporting results or arrange to have these services provided by a local laboratory or water testing company. There are four key elements of a water testing program:

- i Providing a way for people to request water testing;
- i Conducting the tests in a timely manner;
- i Ensuring that the tests are conducted properly; and
- i Providing the test results along with additional follow-up information.

Appendix C provides two examples of water testing informational materials.



REMEMBER: You are not required to analyze the sample yourself or to pay for the analysis. At a minimum, you must provide the names of laboratories that can conduct these services.

Identifying the Types of Education Materials that Will Be Used

Pamphlets or brochures, posters, bill inserts, news releases, and PSAs are the types of materials you may be required to distribute as part of your public education program. Examples of these materials are included in Appendices D through F. Community members can assist you in preparing, printing, and distributing these materials.

Determining How and When to Distribute Information

To reach the largest and most diverse audience possible, it is important to use a variety of communication methods. For CWSs, methods of communicating information include *distribution through government agencies, schools, public and private health care and day-care providers, community organizations, and the media*. Pamphlets or brochures on lead in drinking water should be distributed directly to parents and children through school teachers and day-care, health care, and community service providers. Notices must be mailed to customers as a separate mailer or in their water bills. In addition, larger CWSs (and smaller CWSs, if required by the State) must submit notices to local newspapers and deliver PSAs to radio and television stations.

NTNCWSs must display informational posters in a public place or common area in each of the buildings served by the system and distribute pamphlets or brochures to each person served by the system. We recognize that NTNCWSs may be able to effectively disseminate the information contained in the brochures and pamphlets electronically. The LCRMR allow for the distribution of this information electronically as long as it achieves the same coverage as delivery using printed materials. The system may also use a combination of the two methods. Systems using electronic means of distribution must still display the informational posters. Posting and electronic distribution can also be used by special-case CWSs with approval from the State.

It will be helpful to devise a schedule for implementing the water testing program, developing education materials, and distributing them to the public and targeted groups.

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Section III

Working With a Task Force

Organizing a Task Force

Once you have given some initial thought to planning and organizing your education program, we encourage you to seek assistance from a variety of community organizations. Organize a task force or committee comprised of community members representing the public, private, and civic sectors to assist you in organizing and implementing a public education program on lead in drinking water. For NTNCWSs, this task force will most likely be comprised of individuals from your system. Task force members can help you with all aspects of the program, from developing the action plan to preparing or printing education materials and implementing the program.

Who To Include on Your Task Force

It is important to establish a task force whose members will voice the concerns and provide the expertise of a variety of local organizations and interests. A diverse task force will provide you with access to a wide range of community resources. We recommend including representatives from the following community groups:

- i City, county, and State government officials (*e.g.*, representatives of the city, county, or municipal council; the mayor's, city administrator's, or county commissioner's office);
- i City or county government agencies (*e.g.*, the human resources, public affairs, health, and environmental protection or water quality departments; and agencies responsible for administering lead screening programs);
- i Representatives of the local public school system;
- i Representatives of public hospitals and/or clinics;
- i Members of active community service organizations (such as the Head Start Program; the Women, Infants, and Children's Nutrition Program; family planning clinics; and local welfare agencies);
- i Civic groups (for instance, the Chamber of Commerce, neighborhood associations, and local chapters of organizations like the League of Women Voters and the Sierra Club); and
- i Private sector (day-care centers, pediatricians, health care facilities or clinics, and hospitals).

Each of these groups has a unique and important contribution to make to the program. Government officials lend credibility and authority, and, as a result, can draw attention to the program. Government agencies offer an array of specialized services and technical expertise from mobilizing community resources and media involvement, to providing expertise on the health effects of lead.

Section III: Working With a Task Force

Schools represent the largest gathering of children in any community. Therefore, schools can be an important conduit for delivering information on lead in drinking water to the public. As education experts, public school officials and teachers can provide valuable support to the program.

In addition, community service organizations can distribute information to high-risk targeted groups; civic groups can offer valuable volunteer assistance; and the private sector can underwrite program costs as well as distribute information to high-risk targeted groups.

Some communities may decide to invite a media representative to serve on the task force. If you choose to do so, you may want to involve someone at the supervisory level rather than a general reporter. Such a task force member could serve as an advisor on how to best involve the media to foster constructive, widespread publicity for your program. If you feel uncomfortable involving the media in this capacity, designate one member of the task force as a media "liaison" with special responsibilities related to media coverage of the program. In Raleigh, a representative from the City's Public Affairs Department served in this capacity. Regardless of the extent to which you decide to involve the media, establish contact with local media representatives *before* the official "kick-off" of the program.

As you solicit the help of different organizations, it is important for you to define each organization's role in your program. It is also important to gauge the level and type of commitment that the group or representative is willing to give to the project. You will find that some individuals and organizations are able to commit a great deal of time and resources to the program, because it will directly affect issues or other programs in which they are involved. Others will only be interested in taking on an advisory role. Your action plan should provide you with a general sense of how much help you will need to complete the tasks associated with the project.

Using the Task Force to Help You Conduct a Successful Public Education Program

After you have formed a community-based task force, we encourage you to organize a meeting to review and refine the action plan. Schedule your meeting with as much advance notice as possible in order to allow task force members time to review the draft plan and arrange their schedules to attend the meeting.

The purpose of this meeting is to solicit input from task force members on those aspects of the action plan where they have particular expertise and to obtain their commitment to carry out specific activities identified in the plan. Their involvement is likely to be most useful in designing materials to appeal to particular groups, reviewing draft information materials to ensure that they are targeted properly and that they clearly present the program's message, and in distributing materials through their organizations.

Supplement 1A to this section describes the roles various city and county organizations played in the Raleigh pilot. Supplement 1B describes the role of the Raleigh Department of Public Utilities in planning and implementing the program.

Supplement 1A The Role of the Community

Dempsey Benton, City Manager of Raleigh, discusses the roles that City of Raleigh personnel played in developing the pilot program.

Participating in EPA's pilot education program on lead in drinking water was a learning experience for many people involved in City of Raleigh government. Four City departments, Public Affairs, Parks and Recreation, Human Resources, and Public Utilities, were involved in the program.

The responsibilities taken on by these organizations varied widely. The Public Affairs Department prepared press releases, helped schedule the "kick-off" press conference, and made media contacts. The Parks and Recreation Department's responsibilities included distributing information materials at its community centers throughout the City. These community centers also served as collection points for water samples taken by citizens for analysis by the Public Utilities Department. The Human Resources Department coordinated with the Raleigh Citizens Advisory Councils (neighborhood associations formally recognized by the City); the Head Start Program; Women, Infants, and Children Program; and day-care facilities to assist with the distribution of information materials.

The Department of Public Utilities was the main participant in the program. Staff members were responsible for coordinating with the EPA, talking to citizens about the project, contacting the media with updates throughout the program, participating in meetings with different citizens' groups, and working closely with the Wake County Public School System to determine if there were any lead problems in the local schools. In addition, the Utilities Department analyzed the 969 water samples that were submitted for lead tests during the program.

Finally, a word must be said about volunteers. In order to take on this pilot project, the City had to rely on the efforts of many volunteers from different civic organizations and other public agencies. The Raleigh Citizens Advisory Councils, the Capital Area Sierra Club, the League of Women Voters, and the St. Raphael's Young Mothers Group, all contributed to the program. In addition, the Wake County Public School System, the Wake County Health Department, the North Carolina Department of Human Resources, and the Raleigh Chamber of Commerce all provided insight and assistance in a variety of ways. Each of these organizations was instrumental in carrying out the goals of the program.

The City of Raleigh's participation in EPA's pilot education program helped us to better inform our customers about the potential problems associated with lead in drinking water and prepared us to deal effectively with other drinking water issues that may arise in the future.

Supplement 1B The Role of the Water System

Carl Simmons, Director of the City of Raleigh Department of Public Utilities, discusses his department's role in developing and conducting the pilot public education program in Raleigh.

The staff of the Raleigh Department of Public Utilities learned a great deal about preparing a public education program through its participation in EPA's pilot public education program on lead in drinking water. One of the key things we learned is that developing such a program consumes a significant amount of staff time. However, during the course of the program, we also realized that drawing on the expertise and distribution systems of other organizations eased the burden somewhat and provided expertise that did not exist in the department. Prior to getting involved in this program, I was unaware of County and State programs that dealt with lead issues. Water suppliers need to seek out these diverse sources of expertise because citizens have numerous questions regarding the health consequences of elevated lead levels in their drinking water that you may not be able to answer completely.

We also learned it is very important to make contact with local media representatives in advance of your program in order to acquaint them with its goals and objectives. In Raleigh, radio and TV stations, as well as local newspapers were receptive to our information and helped present the program in a positive and upbeat manner.

The largest impact of the program on the Raleigh Public Utilities staff was the City's commitment to provide its customers with free water tests. The number of requests for water tests increased tremendously throughout the program due to media coverage. During the four-month period of our program, we received 969 requests for lead analyses. Doing that volume of work with our existing staff was a real challenge. Other utilities departments should be prepared for a similar response if they decide to offer water tests and be ready to commit a significant amount of staff time to dealing with these requests.

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Section IV

Preparing Public Education Materials

There are a number of different types of information materials and promotional tools that you may develop for your education program. They can be broadly categorized into two groups: printed materials and tools for promoting media coverage. EPA has developed some of the required materials for you to copy or adapt for your community. These are available electronically at the EPA Office of Ground Water and Drinking Water Web Site: www.epa.gov/safewater/lcrmr/implement.html or can be obtained by calling the Safe Drinking Water Hotline at 800-426-4791.

Using a variety of materials and communication methods will help ensure that you reach all sectors of your community. Make sure to address all of the content and delivery requirements designated in the regulations and outlined in Section I of this manual.

This section describes the required education materials and discusses communication methods for each of these versatile tools.

Printed Materials

Pamphlets, Brochures, Mailers, and Posters

Content. Section 141.85(a)(1) of the regulation specifies the minimum content of the printed public education materials delivered to customers served by CWSs. Section 141.85(a)(2) contains the language developed under the LCRM for NTNCWSs. This language can also be used by special-case CWS with approval from the State. CWSs and NTNCWSs can delete information pertaining to lead service lines, if approved by the State, and if no lead service lines or lead goosenecks exist anywhere in the water system service area. CWSs can also modify the language regarding building permit record availability and consumer access to these records, if approved by the State. Further, with State approval, water suppliers can add or modify language, as long as it does not contradict the minimum required information. Appendix D provides template pamphlets with the mandatory language that CWSs and NTNCWSs must provide to their customers. Please note that these sample materials contain all of the required language, but some of the information is slightly reorganized to provide customers with the key information on the front fold. Customers who are interested in more detailed information may read the foldout pages. State and local telephone numbers for additional assistance are displayed prominently on the back panel. Finally, the pamphlets have several blank places for the water supplier to add specific information regarding treatment schedules, home sample collection (for CWSs), and telephone numbers. Please be sure to provide this information, where indicated. Note that electronic versions of these materials are available on the internet at www.epa.gov/safewater/lcrmr/implement.html to those that have the computer capabilities to update and customize the documents with their system-specific information. Alternatively, hard copies of the materials are available by calling the Safe Drinking Water Hotline at 800-426-4791 for those who prefer to write in their system-specific information.

Section IV: Preparing Public Education Materials

Format. It is important that your information materials be attractive, "eye-catching", and easy to read. The physical presentation and readability of your materials are as important as the accuracy of the information presented. You are encouraged to use short, catchy, and colorful pamphlets, which are typically more effective in capturing the readers' attention. Your budget will likely dictate your use of graphics, quality of the paper, and the number of colors of ink you use to print your materials. (Remember to use your task force — some members may have access to low-cost printing or reproduction facilities, or may be willing to donate or incur the cost of printing.)

Delivery Methods. Note that many CWSs periodically enclose special information notices or inserts in their customers' water bills. If you already provide this service, you may choose to dedicate a particular notice to the topic of lead in drinking water. Bill inserts are relatively inexpensive to produce — especially if you already have a regular notice service. If you do not currently provide such a service, you can use the pamphlet provided in Appendix D. Remember that people who live in apartment complexes or other housing units where the water bill is paid by a landlord or a supervisor will not be on your mailing list. The landlord or supervisor for such buildings should be mailed extra bill inserts for distribution to residents. For NTNCWSs, the LCRM allow you to deliver public education information electronically to each person you serve in place of or in combination with printed materials. It is best to check with your State to be sure it allows electronic delivery.

Information can also be distributed via government agencies, schools, community service programs, and health care providers. Teachers, day-care providers, pediatricians, and doctors in hospitals and health clinics can be valuable resources for distributing information materials, especially to high-risk groups, such as pregnant women and families with children and infants. Various community service programs such as the Women, Infants, and Children Nutrition Program (WIC); Head Start (a pre-school education program for economically disadvantaged children); and child lead screening programs should be targeted to distribute educational materials to their clients.

Furnish information materials in display racks in both public and private facilities. A display consisting of a poster and pamphlets is useful for communicating with target audiences, such as pregnant mothers and families with infants and children, as well as with the general public. Consider exhibiting posters and providing pamphlets for display racks of private facilities, such as day-care centers and doctors' offices, as well as in public places, such as the local water utility, health department, and community centers. Day-care centers, libraries, and churches may be particularly helpful in smaller communities without many large public agencies.

Tools and Methods for Promoting Mass Media Coverage

The media can be a powerful tool for providing information to a large audience at low cost. Media attention builds upon itself. A story about lead in drinking water in one newspaper may inspire a competing newspaper to look into the issue further or a radio or television station to do a feature in an upcoming broadcast. Stories in the national news or in well known publications also can inspire local media sources to examine the issue more closely.

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It is important that you provide reporters with direct, easy to understand, and complete information regarding monitoring results, the sources of lead in your community's drinking water, and the treatment and educational programs you are implementing to remedy the problem. In order to develop an effective media strategy for your program, it is important to obtain expert assistance from your municipality's public affairs office or a public relations expert. According to residents, the media campaign proved to be the most effective source of information in the Raleigh pilot program. Supplement 2 describes the Raleigh media campaign.

News Releases or Media Notices

Format. News releases are brief informational notices that are distributed to local press representatives. Always include the name and phone number of an informed contact so that media representatives can obtain more information and cover the issue more fully than presented in a news release.

Delivery Method

Local Newspapers. CWSs must deliver information every 12 months to editorial departments of the major daily and weekly newspapers circulated throughout the community. Newspapers are always in search of newsworthy items and will often publish feature articles based on a news release or coverage of a press conference. You should use all major daily or weekly newspapers to get your message delivered. It is recommended that you meet with the managing editors of the major newspapers early in the project to solicit their support.



REMEMBER: The LCRMR allow CWSs serving 500 or fewer people to omit newspaper notification. Systems serving 501 to 3,300 people may omit this notification with prior State approval. However, it is best to check with your State to be sure that they do not require newspaper notification for all CWSs.

Radio and Television Stations. Radio and television stations are a prime source of information for most people. Radio and television news programs often feature brief spots based on a news release or coverage of a press conference. The stations also broadcast brief PSAs as a community service. In addition, they feature news briefs, special interest features, and talk shows on local issues of interest. Larger CWSs should promote radio and television coverage of the lead in drinking water issue as the best way to get the message delivered to a mass audience at no cost.

Public Service Announcements

Format. Section 141.85(b) of the regulation specifies the minimum content of the public education language to be broadcast to customers. This language has not been modified from the original rule. A PSA can be broadcast on either radio or television. A PSA is very brief (*e.g.*, 20 seconds) and can provide far-reaching, low-cost publicity for your program. A pre-taped or written announcement

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can be provided to radio stations; the text for a video spot or an actual videotaped message can be provided to television stations. Appendix F provides a sample PSA.

Delivery Methods

Local Radio and Television Stations. The regulations require CWSs to submit PSAs to five of the radio and five television stations with the largest audiences in the community. These announcements must be repeated every six months for as long as the system continues to exceed the lead action level.



REMEMBER: Under the LCRMR, CWSs serving 3,300 or fewer people are no longer required to deliver PSAs. However, first check with your State to be sure that you are exempt from this requirement.

Supplement 2 Making the Most of Media Coverage

Jade Jurek of the Raleigh Department of Public Affairs and member of the task force for the EPA/Raleigh Pilot Program offers her views on the importance of utilizing the media and how to work most effectively with the media.

The support of the mass media — radio, television, newspapers, and magazines — is essential to the success of any public education program. The media is one of the most effective means of reaching a large number of people with information they can readily understand and use.

Public officials and community organizers are often wary about inviting media attention to an issue of public concern for fear that the reporting will be inaccurate or unjustly critical. To the contrary, being proactive — by initiating discussions about the issue — rather than being reactive with the media will yield substantial control and advantage in what is reported.

Water suppliers who are required to develop lead in drinking water public education programs in their communities are encouraged to involve the local media at the outset of the program. Widespread media involvement, initiated and directed by the local task force, can produce very effective educational results. In Raleigh, the Public Utilities Department, with the assistance of the Public Affairs Department, made contact with media representatives on a personal basis. (It is important to contact *all* major media serving the community — this will ensure more widespread coverage of the issue and eliminate any notions of bias or favoritism on the part of the water utility.) At these meetings, media representatives were informed about the lead in drinking water issue, and the commencement of a city-wide education program. All members of the press were invited to a press conference and were asked to provide public service support throughout the education program.

These meetings should be attended by the director of the water utility, the director's key staffer assisting with this effort, and one or two other members of the local task force. This will demonstrate the local water supplier's commitment to the issue. The meetings should be held with the news director or someone with decision-making authority within the media organization. In addition, it is important to be specific about what you are requesting (*i.e.*, please consider airing public service announcements, please provide periodic coverage of the issue throughout the education program). It is also important to provide media representatives with the name and phone number of a contact person whom they can call to obtain more information.

To ensure responsible and accurate coverage of the lead in drinking water issue, provide the media with background information on the subject as well as prepared news releases. In addition, keep media representatives informed about program activities and address their questions and concerns speedily at all times. Information should always be presented to the media fairly and accurately; in turn, the media can be expected to report on issues in the same manner. For instance, if a community has a lead in drinking water problem, such as lead distribution lines or lead contamination in school water fountains, the media should be encouraged to report fairly on the situation and, more importantly, to explain what is being done in response to the problem.

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Section V

Practical Tips for Implementing the Program

Once you have developed an action plan, established a task force, set up or arranged for a customer water testing program for lead, and designed and printed your education materials, you are ready to implement the program. Conducting the program involves completing all of the tasks outlined in the action plan. Implementation should flow smoothly if you have organized and planned your efforts efficiently. In addition to the guidance contained in previous sections, some practical tips for implementing your program are provided below.

Pacing Program Activities

It is important to remember that an education program can only be effective if it is administered over a period of time. Competing demands for people's attention (*i.e.*, information overload) can be a significant communication impediment. Therefore, it is suggested that you pace outreach activities over several months to ensure that people are given several opportunities to receive the message. For example, the regulation requires that you deliver bill inserts, pamphlets or brochures, and newspaper announcements every 12 months. You may decide to distribute pamphlets, display posters, send notices to newspapers a few months later, and then follow-up with a mailer or water bill insert the following quarter.

Some program activities must precede others to ensure a successful approach. For example, information materials should be ready for distribution prior to issuing a news release or PSA. Also, all elements of a water testing program must be in place before information materials advertising the program are distributed or the program is announced by the media.

You should also be sensitive to the potential effects of the program on local agencies, such as the local health department, a child lead screening program, or the public school system. For example, you should coordinate with the local health department and the child lead screening program to ensure that they are prepared to handle public inquiries about the health effects of lead or requests for blood lead screening tests. You should involve the local schools at the start of the program to ensure that education officials are not blind-sided by publicity about the issue of lead in drinking water stemming from your public education program. Schools represent the largest gathering of children in any community, and school drinking fountains and plumbing systems are a potential source of lead in drinking water. Therefore, it is prudent to test schools' water supplies and remedy any problems prior to launching a public education program on lead in drinking water, both from a public health as well as a public relations standpoint. A guidance document explaining how to test water in schools for lead, identify potential problems, and take corrective action is available by visiting the EPA Office of Ground Water and Drinking Water Web Site: www.epa.gov/safewater/lcrmr/implement.html or can be obtained by calling the Safe Drinking

Section V: Practical Tips for Implementing the Program

Water Hotline at: 800-426-4791. See Appendix H: Information Sources for a list of other useful references that can provide you with information on lead. Supplement 3 outlines the testing program undertaken by the Wake County Public Schools Department as part of the Raleigh pilot project.

Providing Water Tests or Information on Water Testing

If you decide to provide water tests to your customers, you should plan for this aspect of your program well in advance of offering the service. Keep in mind that you may get a significant number of requests for this service, particularly at times when your program is especially visible. Be prepared to respond to all of these requests as promptly as possible. Arrange to have adequate staff support and laboratory assistance to carry out your water testing program. You will also need to prepare instructions for collecting water samples at the tap. Your instructions should be as clear and simple as possible in order to prevent misinterpretation. A pictorial explanation of the process instead of or in addition to a written explanation will probably be the most useful to members of your community. Appendix C contains sampling instructions that you can provide to those customers who want to have their water tested, and also includes an example of how one water system presented this information to their customers. You will also need to decide how to obtain the samples from your customers and manage sampling data. In addition, you must prepare "notification of results" letters. Your letter of notification should give residents detailed technical results as well as a clear explanation of the different levels of lead contamination.

If you choose instead to provide only information on water testing to your customers, research the services that are available in your area and give community members instructions on how to arrange for a water test (names and telephone numbers of local services) as well as information on how much the test will cost. Make it as easy as possible for customers to obtain the services they need.

Responding to Public Inquiries

It is important to provide people with an opportunity to ask questions or obtain further information about the issue of lead in drinking water. The simplest way to provide this service is to publish phone numbers of organizations that can respond to public inquiries about lead in drinking water. In Raleigh, the Department of Public Utilities responded to questions on the quality of public water supplies, general questions about lead in drinking water, and the water testing program. The Wake County Health Department and the North Carolina Lead Screening Program served as clearinghouses for inquiries about the health effects of lead and child lead screening services. Information materials used in the pilot program also listed several local laboratories for citizens using private wells. EPA strongly encourages you to provide similar services as part of your education program. *Be sure that each organization listed as a source for additional information in your education materials has informed all staff who answer the phone to expect inquiries about lead in drinking water and has instructed its staff on how to answer or refer such calls.* Also, consider keeping track of phone inquiries as a way to gauge the progress and effectiveness of your program.

Supplement 3 Testing Water in the Schools

Riley Refiner, Director of Operations of the Wake County Public Schools, discusses the importance of testing drinking water in the schools.

The local school superintendent and appropriate staff should be invited to participate in the planning process for conducting a public education program on lead in drinking water. Schools represent the largest gathering of children in any community; thus, water quality in the schools is likely to be the focus of public scrutiny on the issue of lead in drinking water.

Prior to any public announcement about lead in drinking water or the start of an education program, drinking water sources throughout the school system should be screened for lead. Testing drinking water in schools prior to starting the public education program enables school officials to deal proactively with any potential problems rather than react to public scrutiny.

Most school systems' budgets are stretched to the limit. Thus, a cooperative arrangement between the municipal water supplier and the school system is important to conducting a cost efficient lead testing program in the schools. Commercial labs may charge from \$18 to \$25 to analyze each sample. Given the number of fountains found in most schools, the costs for lead testing could rapidly become prohibitive.

In Raleigh, the Department of Public Utilities developed the sampling protocols and provided personnel and laboratory analyses services to the school system. School personnel collected the samples; recorded the make, type, and age of the water fountains; and packaged the samples for delivery to the lab. The sampling techniques worked well and provided the school system with relevant information to address public questions before the public education program on lead in drinking water was announced.

Most school systems are concerned that fixtures and pipes in the plumbing system are the major contributors to high lead levels in the drinking water. In many cases, however, isolated drinking water fountains are the source of the problem, and problem fountains can be replaced without incurring a large expense. If a problem attributable to the plumbing system is found, flushing the system each school day may provide the most cost-effective solution.

The focus of any education program on lead revolves around the potential harm posed to infants and children. The schools can be a valuable asset to a community awareness program on the issue of lead in drinking water. The fear of discovering a major problem should not deter school officials from participating in the education program. It is much better to actively and responsibly address problems associated with lead in drinking water in the schools through a self-administered testing and remediation program than to be forced to react to public pressure.

Appendices

- i Appendix A: Summary of the Public Education Requirements for Community Water Systems Serving 3,300 or Fewer People
- i Appendix B: Lead in Drinking Water Action Plan
- i Appendix C: Water Testing Information Materials
- i Appendix D: Public Education Brochures
- i Appendix E: Public Education Posters
- i Appendix F: Lead in Drinking Water Public Service Announcement
- i Appendix G: Lead and Copper Rule Minor Revisions that Relate to Public Education Requirements
- i Appendix H: Information Sources

Appendix A

Summary of the Public Education Requirements for Community Water Systems Serving 3,300 or Fewer People

1. What Are My Public Education Requirements If My CWS Serves 3,300 or Fewer People?

Your requirements fall into three categories:

1. Providing public education information on lead;
2. Offering water testing to the people you serve, if requested; and
3. Providing documentation to the State that shows you met your public education requirements.

A comparison of these requirements under the original LCR and the LCRMR are provided in Table A-1 below.

Table A-1: Differences in Public Education Requirements Before and After the LCRMR	
<i>Requirements Under the Original LCR</i>	<i>Requirements Under the LCRMR</i>
Public Education Delivery	
Mail informational notices <ul style="list-style-type: none"> - must be in water bill - special alert must be printed on water bill Newspaper notification <ul style="list-style-type: none"> - must submit informational notices to major local newspapers Deliver pamphlets or brochures <ul style="list-style-type: none"> - must deliver pamphlets or brochures to specified facilities and organizations that provide services to children and pregnant women Deliver public service announcements <ul style="list-style-type: none"> - must deliver PSAs to at least 5 radio & 5 TV stations that broadcast to largest audiences in community served by CWS 	Mail informational notices <ul style="list-style-type: none"> - can be in water bill or mailed separately - special alert must be included but does not have to be printed on water bill Newspaper notification <ul style="list-style-type: none"> - not required for CWSs serving #500 people - not required for CWSs serving 501 to 3,300 with State permission Deliver pamphlets or brochures <ul style="list-style-type: none"> - can limit delivery to facilities/organizations <i>in CWSs's service area</i> most likely to be regularly visited by pregnant women and children but must also distribute notices to every household it serves Deliver public service announcements <ul style="list-style-type: none"> - not required for CWSs serving 3,300 or fewer people, unless required by State

Table A-1: Differences in Public Education Requirements Before and After the LCRMR	
<i>Requirements Under the Original LCR</i>	<i>Requirements Under the LCRMR</i>
Water Testing	
Must offer to sample tap water of any customer who requests it. System is not required to pay for or analyze the sample or to collect and analyze the sample itself.	Requirement is the same under the LCRMR.
Reporting Compliance to the State	
<p>Must provide a letter to the State by the end of the calendar year in which public education was delivered</p> <p>No requirement to provide certification that content and delivery requirements were met</p> <p>Must provide public education distribution list</p>	<p>Must submit written documentation to the State, that demonstrates compliance with public education requirements, within 10 days of the end of each period in which public education tasks were required</p> <p>Must send certification that content and delivery requirements were met as part of documentation</p> <p>Not required to submit public education distribution list, <i>if</i> list was previously submitted, system certifies that list has not changed, <i>and</i> State does not require this information</p>

2. How Do I Know If I Should Follow the Delivery Requirements of the Original LCR or the LCRMR?

The delivery requirement under the LCRMR are less stringent than the original LCR (*i.e.*, they eliminate newspaper notification, PSAs, and limit those facilities/organizations to which you provide pamphlets). Therefore, your State may first need to incorporate these LCRMR provisions into its State regulation before you can take advantage of them. In addition, your State can decide not to adopt some of the "less stringent" provisions of the LCRMR. You should check with your State regarding your specific delivery requirements.

3. How Do I Know If I Should Follow the Reporting Requirements of the Original LCR or the LCRMR?

You must follow the reporting requirements as revised under the LCRMR because these revised requirements are more stringent than the original LCR. The one exception is whether your State will require you to resubmit your distribution list if you are able to certify that the list has not changed. You should check with your State regarding the need to resubmit this list.

4. What Is the Timing of My Public Education Requirements?

Within 60 days from the time the lead action level is exceeded (or if you again exceed the lead action level after having monitoring period(s) at or below the lead action level), you must:

- i Mail informational notices in or separately from water utility bills, along with a special alert in large print;
- i Submit informational notices in major local newspapers (if applicable);
- i Deliver pamphlets or brochures to relevant facilities and organizations; and
- i Submit PSAs to radio and television stations (if applicable).

For as long as you continue to exceed the lead action level, you must:

Every 6 months:

- i Submit PSAs (if applicable).

Every 12 months:

- i Mail informational notices to your users;
- i Submit informational notices in major local newspapers (if applicable); and
- i Deliver pamphlets or brochures.

Within 10 days after the end of *each* period in which public education is required:

- i A letter to the State that demonstrates that you met your public education requirements.

5. What If I Do Not Provide Water to Any Facilities or Organizations that Typically Provide Services to Pregnant Woman or Children?

The LCRMR allow CWSs that serve 3,300 or fewer people to limit distribution of brochures and pamphlets to those facilities and organizations *in their service area* that are most likely to be regularly visited by pregnant women and children. You are not required to distribute pamphlets or brochures if you do not provide water to these types of facilities or organizations *and* your State has adopted this LCRMR provision.

6. What If My Water System Provides Water Only to A Hospital or Prison?

The LCRMR recognizes that some CWSs are more similar to NTNCWSs (*i.e.*, "special-case" CWSs). With State approval, a CWS may use the NTNCWS-tailored language and delivery requirements if the CWS serves a facility, such as a hospital or prison, where the population served has no control over plumbing or treatment *and* where water is provided as part of the cost of overall services, rather than as a separate and distinct charge. The public education requirements for these systems would be as follows:

Within 60 days from the time the lead action level is exceeded (or if you again exceed the lead action level after having monitoring period(s) at or below the lead action level), you must:

- i Display informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and
- i Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the system. Your State may allow you to distribute these materials electronically instead of or in combination with printed materials, as long as you reach the same audience.

Repeat these actions *at least once during each calendar year* in which you exceeds the EPA lead action level.

7. Do I Really Need An Action Plan?

The regulations do not require you to develop an action plan. However, a plan can help you to define the program audience; outline a customer water testing program for lead; identify the types of education materials that will be used; and determine how and when to best deliver the information to your audience. We have provided an example action plan in Appendix B. This sample action plan is geared toward larger CWSs and therefore, include some activities that may not apply to you (such as newspaper notification and PSA).

Appendix B

Lead in Drinking Water Action Plan

Strategy for Implementing the Lead in Drinking Water Public Education Program

Identify Your Audience

- i General public
- i Water customers
- i High-risk groups (pregnant women, infants, and children)
- i Non-English speaking customers and public

Organize a Task Force

Coordinate with local authorities, community organizations, and specialists who will be impacted by this education program and who can provide you access to a wide range of community resources:

- i City, County, and State government officials (*i.e.*, representatives of the city, county, or municipal council; the Mayor's, City Administrator's, or County Commissioner's office);
- i City or county government agencies (*i.e.*, the human resources, public affairs, health, and environmental protection or water quality departments; and agencies responsible for administering lead screening programs);
- i Representatives of the local public school system;
- i Representatives of public hospitals and/or clinics;
- i Members of active community service organizations (such as the Head Start Program; the Women, Infants, and Children's Nutrition Program; family planning clinics; and the local welfare agencies);
- i Civic groups (for instance, the Chamber of Commerce, neighborhood associations, and local chapters of organizations like the League of Women Voters and the Sierra Club); and
- i Private sector (day-care centers, pediatricians, health care facilities or clinics, and hospitals).

Develop a Media Relations Program

- i Identify contacts at local daily and weekly newspapers to whom you will send news releases;
- i Identify contacts at local radio and television stations to whom you will send PSAs; and
- i Identify a specialist in media relations to facilitate your media relations program (perhaps a representative of your city public affairs department can assist you).

Develop a Water Testing Program

- i Offer to sample, or arrange for a certified laboratory to sample, the tap water of any customer who requests it. You are not required to conduct or pay for the sampling and analysis. However, you must publish the names and phone numbers of at least two laboratories in the area that customers can call to have their water tested for lead. This information must be published in the required water bill inserts, newspaper notices, and pamphlets and/or brochures. The required PSA (if applicable) must provide the phone number of the city or water system for customers who wish to obtain information on testing. These customers must be informed of the results of the testing.

Develop the Required Public Education Materials

- i Water testing information materials (see Appendix C)
- i Information materials: mailer or bill insert, pamphlet and/or brochure, notice in local newspapers (see Appendix D)
- i Posters (see Appendix E)
- i PSA (see Appendix F)

Deliver Required Education Materials to Targeted Members of Your Audience Within 60 Days of Exceeding the EPA Lead Action Level

Community Water Systems

General Public

- i ***Every 12 months***, submit the specified information to the editorial departments of the major daily and weekly newspapers circulated throughout the community served by your water system. This requirement under the LCRMR has been eliminated for CWSs serving 500 and fewer people. CWSs serving 501 to 3,300 people must first obtain permission from the State before omitting this notification. ***First check with your State to see if this requirement still applies to you.***
- i ***Every six months***, submit the specified PSA to at least five of the radio and five television stations with the largest audiences that broadcast to the community served by your water system (unless you serve 3,300 and fewer people and the State has eliminated this requirement as allowed under the LCRMR). ***First check with your State to see if you are required to deliver PSAs.***

Customers

- i **Every 12 months**, send notices to each customer containing the specified information with the special alert in large print. The LCRMR allow these notices to be mailed separately from the water bill if the format of your bill does not allow materials to be included (e.g., postcard format or computer-generated self-mailers). The LCRMR also add flexibility for the alert to be printed on the outside of the envelope or in the package if you do not have adequate space on the water bill. ***First check with your State to see if can take advantage of these new LCRMR provisions.***

High-risk Groups

- i **Every 12 months**, deliver pamphlets and/or brochures that contain the specified information to community facilities and organizations that serve pregnant women, infants, and children:
 - ý Public schools and/or local school boards;
 - ý City or county health departments;
 - ý Women, Infants, and Children and/or Head Start Programs (if available);
 - ý Public and private hospitals and clinics;
 - ý Pediatricians;
 - ý Family planning clinics; and
 - ý Local welfare agencies.

CWSs serving 3,300 or fewer people may limit this delivery to those facilities in their immediate service area that are most likely to be visited by pregnant women and children if they also distribute notices to every household they serve and the State has not notified them in writing that broader distribution is required. CWSs serving 501 to 3,300 people must obtain State approval prior to limiting delivery. ***First check with your State to determine your specific requirements.***



REMEMBER: With State approval, a CWS may follow the NTNCWS public education requirements if the CWS serves a facility, such as a hospital or prison, where the population served has no control over plumbing or treatment *and* where water is provided as part of the cost of overall services, rather than as a separate and distinct charge.

Non-transient, Non-community Water Systems and "Special-case" CWSs

- i Display informational posters in a public place or common area in each of the buildings you serve.

Appendix B: Lead in Drinking Water Action Plan

- i Provide informational pamphlets or brochures to each individual served by your system. The LCRMR allow you to use hand delivery, electronic mail, or a combination of the two. ***First check with your State to determine if they allow electronic delivery.***

Non-English Speaking Customers and Members of Public

- i If a significant proportion of the people you serve are non-English speaking persons, translate all public education materials into the appropriate languages to ensure that these individuals and members of the public understand the information.

Fulfill Reporting Requirements to the State

- i ***Within 10 days after the end of each period in which public education is required (§141.90(f))***, submit written documentation to the State demonstrating that public education materials meeting the content and delivery requirements of the regulation have been delivered to the appropriate audiences. For CWSs, this letter must include a list of all newspapers, radio and television stations (*if applicable*), facilities, and organizations which have received the specified public education materials during the most recent period in which public education was delivered. For NTNCWSs, include a list of the facilities and organizations to which the brochures/pamphlets were distributed and the location of the places where the information was posted.

All systems must include a certification that all public education materials met the content and delivery requirements, as specified in the regulation. The LCRMR no longer require you to send a list of organizations/facilities receiving public education materials to the State if this list was previously submitted, is unchanged, and is not required by the State.

Deliver the Public Education Program for as Long as Your System Exceeds the Lead Action Level

- i Continue delivery of the public education program for as long as your water system exceeds the lead action level of 15 ppb, or 0.015 mg/L, as identified by tap water samples collected in accordance with §141.86 of the regulations.
- i You may discontinue delivery of public education materials if your water system is at or below the EPA lead action level during the most recent six-month monitoring period conducted in accordance with §141.86 of the regulations.

Appendix C

Water Testing Information Materials

This Appendix provides two examples of information materials that address water testing. EPA developed the first example — Appendix C.1 — which provides systems with the basic required language that they can provide to customers that need to take water samples.

The second example, in Appendix C.2, was developed by the Clean Water Fund of North Carolina to address both copper and lead testing and is included here to provide systems with one example of how the information materials can be presented to customers. The Clean Water Fund protocol was also designed to determine the impact of flushing and provides collection procedures for first-draw samples (discussed as Procedure 1) as well as purged-line samples (described under Procedure 2). The lead and copper regulations only require you to collect first-draw samples. For the purposes of a water testing program, you only need to consider those portions of the Clean Water Fund protocol that apply to lead testing and first-draw samples.

Appendix C.1 Suggested Protocol for Homeowner Tap Water Sample Collection

These samples are being collected to determine lead and copper levels in your tap water. This sampling effort is required by the Environmental Protection Agency and is being accomplished through the cooperation of homeowners and residents.

Collect samples after your pipes have been unused for a minimum of six hours. Because of this requirement, the best time to collect samples is either early in the morning or in the evening upon returning from work. Be sure to use taps that have been in general use by your household for the past few months. The collection procedure is described in more detail below.

1. Make arrangements in advance to set dates for sample kit delivery and pick-up by water department staff.
2. Allow for a minimum period of 6-8 hours during which there is no water use prior to sampling. The water department recommends that either early mornings or evenings upon returning home are the best sampling times to ensure that the necessary stagnant water conditions exist. Avoid collecting samples from taps that have been unused for extended periods of time, such as several weeks or months.
3. Use kitchen or bathroom cold-water faucet for sampling. Place the opened sample bottle below the faucet and gently open the cold water tap. Fill the sample bottle to the line marked "1000-mL" and turn off the water.
4. Tightly cap the sample bottle and place it in the sample kit provided. Please review the sample kit label to ensure that all information contained on the label is correct.
5. If any plumbing repairs or replacement have been done in the home since the previous sampling event, note this information on the label, in the space provided.
6. Place the sample kit outside of the residence in the same location where the kit was delivered in order that department staff may pick up the sample kit.
7. Results from this monitoring effort will be provided to participating customers when reports are generated for the State unless excessive lead and/or copper levels are found. In those cases, immediate notification will be provided (usually 10 working days from the time of sample collection).

Call _____ at _____ if you have any questions regarding these instructions.

SAMPLE LABEL: TO BE COMPLETED BY RESIDENT		
Water was last used:	Time: _____	Date: _____
Sample was collected:	Time: _____	Date: _____
I have read the above directions and have taken a tap sample in accordance with these directions.		
_____ Signature	_____ Date	

Appendix C.2

Municipal Lead and Copper Testing Lead Service Line Protocol from Clean Water Fund of North Carolina

Dear Friend:

Congratulations on your decision to have your tap water tested for lead and copper. As you may be aware, lead contamination is the most widespread health threat from U.S. drinking water supplies because of the large amounts of lead commonly used in pipe and solder.

Recent studies indicate that lead is even more harmful than previously believed to the brain and the rest of the nervous system (especially for young children but in adults as well). Fortunately, however, most lead contamination problems in drinking water can be alleviated simply by purging the plumbing line before drawing water for drinking or cooking. This is why we require two samples (FIRST DRAW and PURGED LINE) as part of our water testing service. Copper is also a toxic metal for which EPA has set a health advisory "action level" of 1300 parts per billion. Excessive copper intake has been linked with enzyme imbalances and degenerative spinal conditions.

In addition to testing your water for lead and copper, it is important to ensure that any plumbing repairs or new plumbing in your home do not expose you to lead contamination. We have found that some plumbing supply stores continue to sell lead solder without labels warning against its use on drinking water pipes despite the fact that the U.S. Environmental Protection Agency has banned it for use with public water systems. If you are having repair work done, we suggest you instruct your plumber in writing to use lead-free materials, and check to see those instructions are followed.

Enclosed are two sample bottles for collecting your tap water. First, you must decide which of your taps you want tested (bathroom or kitchen). Second, fill in your name and address on the labels provided. These labels will identify your sample and will be used as address labels for sending your results, so please print carefully. Please follow the procedures given below for collecting the samples.

Procedure 1: First-Draw Sample

This sample should be taken from the cold water tap sometime when the water has been standing in the plumbing lines for at least six hours and before the toilet is flushed or water is run for shaving or showering. Place a one-liter (or one-quart) container (preferably a plastic one, but glass is acceptable) under the faucet, and turn on the cold water to a slow trickle. When the container is full, turn off the tap and leave it off until you are ready to collect the second sample in Procedure 2. Now, stir the water in the container briefly with a plastic (NOT METAL) spoon or other stirrer. Pour water from the container into the *small sample bottle*. Be sure to fill the bottle to the very top so that little or no air will be present when the cap is screwed back on. Dry the outside of the bottle. Immediately attach the "First-Draw" label to the sample bottle. (Make sure the bottle is dry or the label won't stick well.)

Appendix C: Water Testing Information

Procedure 2: Purged Line Sample for Testing Lead Service Lines

This sample should be taken after standing water between the tap and the lead service line has been purged through the plumbing system. Fully open the enclosed collapsible one-liter plastic container. Run the cold water tap at a high rate until there is a significant change in the temperature of the water. Then reduce the flow. Fill the one liter container. When it is full, replace the cap. Dry the outside of the container. Now, use the gummed label with the words "Purged Line" to label this bottle.

Enclosed is *UNC-A Lead and Copper Analyzes Form*. YOU MUST FILL OUT ALL STARRED ITEMS FOR YOUR SAMPLES TO BE ACCEPTED BY THE LAB. Location where collected and location code may have been filled out by your water utility. If those lines are blank, you should put your street address and the room in your home where you took the sample (for example: *000 Wberever Rd, kitchen tap*). By location code copy the number located on the top line of the bottle labels provided with your kit.

Now, take the two labeled bottles and place them in the box in which they arrived along with the *UNC-A Lead and Copper Analyzes Form*. Be sure to fill out and enclose the questionnaire. PLEASE LEAVE BOTH LABELS WITH YOUR ADDRESS ON THEM STAPLED TO THE QUESTIONNAIRE. They will be the mailing labels used by UNCA to return your results to you. This will help ensure proper identification of your samples. Place the label saying "Lead and Copper Testing, Environmental Studies Program UNC-A, Asheville, NC 28804-3299" on the outside of the box.

Unless you have been instructed otherwise by your water utility, seal the box, apply postage, and drop it in the mail. (First class postage costs under \$5.00. Generally Parcel Post is considerably cheaper but costs vary according to your location.) The laboratory results will be sent back to you within two to five weeks of receipt, along with information on what the results mean and whether further action beyond line purging is recommended. If you have any questions about how to take these samples or fill out the forms, please call your local water utility.

You have just taken an important step toward protecting your family's health, and your participation in this project will help determine the extent of the lead and copper problem in your community.

Thanks for your interest.

Ginny Lindsey
Asheville Office

Appendix D

Public Education Brochures

Appendix D provides template mailers/brochures for CWSs and NTNCWSs in PDF format. Systems have the option of writing in their system-specific information or downloading these documents from EPA Web site at www.epa.gov/safewater/lcrmr/implement.html. We are offering several versions of these mailers/brochures because the LCRMR language can vary for water systems that do not have lead service lines and/or building permit records available (*i.e.*, systems may be able to omit the public education language that pertains to these subjects). The different versions of the mailers/brochures are summarized in Table D-1 below.

Table D-1: List of Available Pamphlets and Brochures
For use by CWSs that have lead service lines (LSLs) and access to building permit records.
For use by CWSs that have LSLs but do not have building permit records available.
For use by CWSs that have no LSLs but have building permit records available.
For use by CWSs that have neither LSLs nor building permit records available.
For use by NTNCWSs or "special-case" CWSs that have LSLs.
For use by NTNCWSs or "special-case" CWSs that do not have LSLs

When folding the two-sided page into a pamphlet, be sure that the cover page ("Lead in Drinking Water") is on top so that your customers will see this page first. In addition, four of the pamphlets contain a blank panel and can be used as self-mailers. Due to the public education language that must be included for CWSs that have LSLs, the pamphlets/brochures described in rows 1 and 2 of Table D-1 do not have adequate space to provide a blank panel.

The United States Environmental Protection Agency (EPA) and [insert name of water supplier here] are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system].

This program includes:

1. Corrosion control treatment (treating the water to make it less likely that lead will dissolve into the water);
2. Source water treatment (removing any lead that is in the water at the time it leaves our treatment facility); and
3. A public education program.

We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number here].

This brochure also explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

HEALTH EFFECTS OF LEAD

Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and

pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body.

Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

LEAD IN DRINKING WATER

Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. EPA estimates that drinking water can make up 20% or more of a person's total exposure to lead.

HOW LEAD ENTERS OUR WATER

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead.

Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the bottom of this brochure. For more information on having your water tested, please call [insert phone number of water system].

If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:

1. FLUSH YOUR SYSTEM.

Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. Flushing usually uses less than one or two gallons of water and costs less than [insert a cost estimate based on flushing two times a day for 30 days] per month.

To flush, let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15 - 30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking.

To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash dishes or water plants.

If you live in a high-rise building, letting the water flow before using it may not lessen your risk from lead. This is because high rise plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

2. USE ONLY COLD WATER FOR COOKING AND DRINKING.

Try not to cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.



3. REMOVE LOOSE SOLDER AND DEBRIS FROM PLUMBING MATERIALS.

Remove loose solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced. To do this, remove the faucet strainers from all taps and run the water from 3 - 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

4. IDENTIFY AND REPLACE LEAD SOLDER.

If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify your State [insert name of department responsible for enforcing the Safe Drinking Water Act in your State] about the violation.

5. FIND OUT WHETHER YOUR SERVICE LINE IS MADE OF LEAD.

Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the city's record of building permits which should be maintained in the files of the [insert name of department that issues building permits].

A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the portion of the line we own. If the line is only partially owned by the [insert the name of the city, county, or water system that owns the line], we are required to provide the owner of the privately-owned portion of the line with information on how to replace the privately-owned portion of the service line, and offer to replace that portion of the line at the owner's expense. If we replace only the portion of the line that we own, we also are required to notify you in advance and provide you with information on the steps you can take to



minimize exposure to any temporary increase in lead levels that may result from the partial replacement; to take a follow-up sample at our expense from the line within 72 hours after the partial replacement; and to mail or otherwise provide you with the results of that sample within three business days of receiving the results. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

6. HAVE AN ELECTRICIAN CHECK YOUR WIRING.

If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

IF LEAD LEVEL PERSISTS

The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

7. PURCHASE OR LEASE A HOME TREATMENT DEVICE.

Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap. However, all lead reduction claims should be investigated. Be sure to check the actual performance of a specific treatment device before and after installing the unit.

8. PURCHASE BOTTLED WATER FOR DRINKING AND COOKING



FOR MORE INFORMATION

You can consult a variety of sources for additional information:

Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.

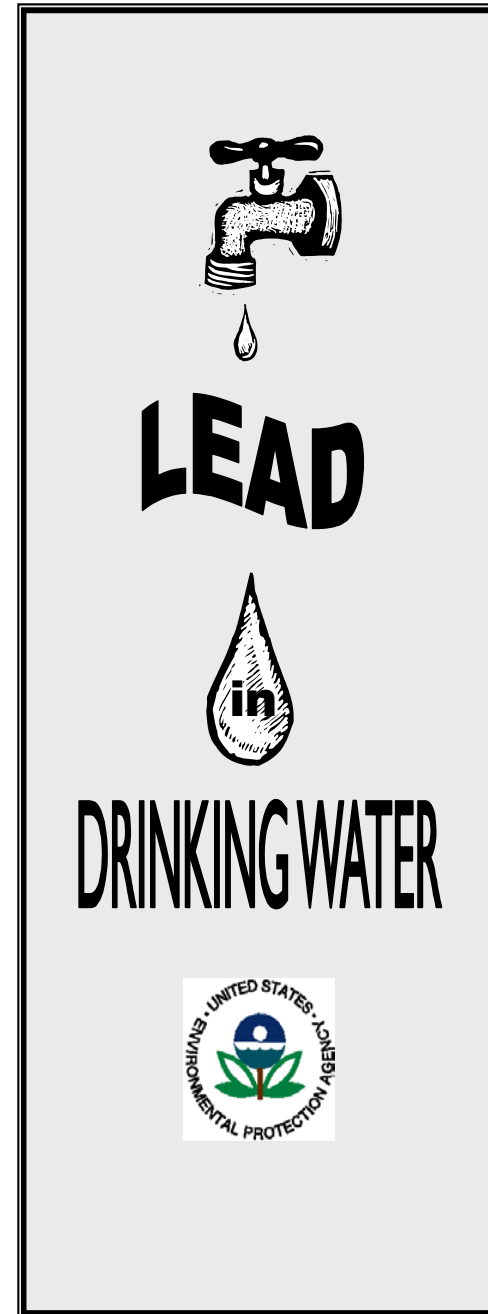
State and local government agencies that can be contacted include:

[insert the name of city or county department of public utilities] at **[insert phone number]** can provide you with information about your community's water supply, and a list of local laboratories that have been certified by EPA for testing water quality.

[insert the name of city or county department that issues building permits] at **[insert phone number]** can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and

[insert the name of the State Department of Public Health] at **[insert phone number]** or the **[insert the name of the city or county health department]** at **[insert phone number]** can provide you with information about the health effects of lead and how you can have your child's blood tested.

The following is a list of some State approved laboratories in your area that you can call to have your water tested for lead. **[insert names and phone numbers of at least two laboratories]**



The United States Environmental Protection Agency (EPA) and [insert name of water supplier here] are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system].

This program includes:

1. Corrosion control treatment (treating the water to make it less likely that lead will dissolve into the water);
2. Source water treatment (removing any lead that is in the water at the time it leaves our treatment facility); and
3. A public education program.

We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number here].

This brochure also explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

HEALTH EFFECTS OF LEAD

Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery

porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body.

Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

LEAD IN DRINKING WATER

Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. EPA estimates that drinking water can make up 20% or more of a person's total exposure to lead.

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When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the

bottom of this brochure. For more information on having your water tested, please call [insert phone number of water system].

If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:

1. FLUSH YOUR SYSTEM.

Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. Flushing usually uses less than one or two gallons of water and costs less than [insert a cost estimate based on flushing two times a day for 30 days] per month.

To flush, let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15 - 30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking.

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If you live in a high-rise building, letting the water flow before using it may not lessen your risk from lead. This is because high rise plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

2. USE ONLY COLD WATER FOR COOKING AND DRINKING.

Try not to cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.



3. REMOVE LOOSE SOLDER AND DEBRIS FROM PLUMBING MATERIALS.

Remove loose solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced. To do this, remove the faucet strainers from all taps and run the water from 3 - 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

4. IDENTIFY AND REPLACE LEAD SOLDER.

If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify your State [insert name of department responsible for enforcing the Safe Drinking Water Act in your State] about the violation.

5. FIND OUT WHETHER YOUR SERVICE LINE IS MADE OF LEAD.

Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the city's record of building permits which should be maintained in the files of the [insert name of department that issues building permits].

A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the portion of the line we own. If the line is only partially owned by [insert the name of the city, county, or water system that owns the line], we are required to provide the owner of the privately-owned portion of the line with information on how to replace the privately-owned portion of the service line, and offer to replace that portion of the line at the owner's expense. If we replace only the portion of the line that we own, we also are required to notify you in advance and provide you with information on the steps you can take to minimize exposure to any temporary increase in lead levels that may result from the partial replacement; to take a follow-up sample at our expense from the line within 72 hours after the partial replacement; and to mail or otherwise provide you with the results of that sample within three business days



of receiving the results. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

6. HAVE AN ELECTRICIAN CHECK YOUR WIRING.

If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

IF LEAD LEVEL PERSISTS

The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

7. PURCHASE OR LEASE A HOME TREATMENT DEVICE.

Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap. However, all lead reduction claims should be investigated. Be sure to check the actual performance of a specific treatment device before and after installing the unit.

8. PURCHASE BOTTLED WATER FOR DRINKING AND COOKING



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FOR MORE INFORMATION

You can consult a variety of sources for additional information:

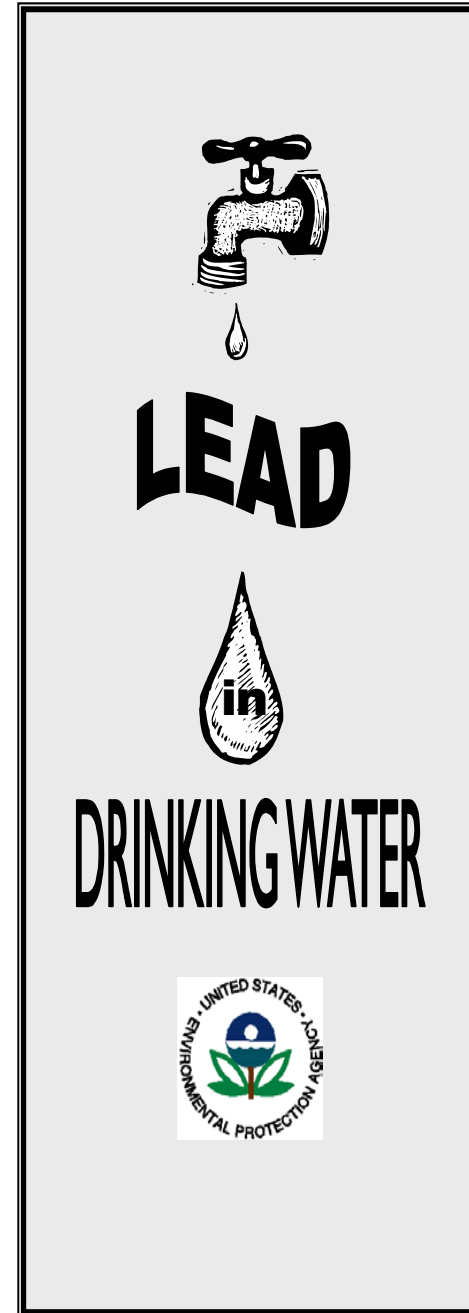
Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.

State and local government agencies that can be contacted include:

[insert the name of city or county department of public utilities] at **[insert phone number]** can provide you with information about your community's water supply, and a list of local laboratories that have been certified by EPA for testing water quality; and

[insert the name of the State Department of Public Health] at **[insert phone number]** or the **[insert the name of the city or county health department]** at **[insert phone number]** can provide you with information about the health effects of lead and how you can have your child's blood tested.

The following is a list of some State approved laboratories in your area that you can call to have your water tested for lead. **[insert names and phone numbers of at least two laboratories]**



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Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

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If you live in a high-rise building, letting the water flow before using it may not lessen your risk from lead. This is because high rise plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for

help in locating the source of the lead and for advice on reducing the lead level.

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5. HAVE AN ELECTRICIAN CHECK YOUR WIRING.

If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. **DO NOT** attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

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This program includes:

1. Corrosion control treatment (treating the water to make it less likely that lead will dissolve into the water);
2. Source water treatment (removing any lead that is in the water at the time it leaves our treatment facility); and
3. A public education program.

If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at **[insert water system's phone number here]**.

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FOR MORE INFORMATION

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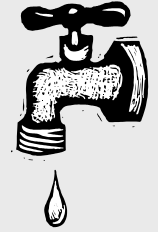
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[insert the name of city or county department that issues building permits] at **[insert phone number]** can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and

[insert the name of the State Department of Public Health] at **[insert phone number]** or the **[insert the name of the city or county health department]** at **[insert phone number]** can provide you with information about the health effects of lead and how you can have your child's blood tested.

The following is a list of some State approved laboratories in your area that you can call to have your water tested for lead. **[insert names and phone numbers of at least two laboratories]**



LEAD



DRINKING WATER



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This program includes:

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3. **USE BOTTLED WATER.** The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.



FOR MORE INFORMATION

You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.

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[insert the name or title of facility official if appropriate] at [insert phone number] can provide you with information about your facility's water supply; and



[insert the name or title of the State Department of Public Health] at [insert phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead.



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HOW LEAD ENTERS OUR WATER

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

1. **FLUSH YOUR SYSTEM.** Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in plumbing the more lead it may contain. Flushing the tap means running the cold water faucet for about 15-30 seconds. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for

drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one or two gallons of water.

2. **USE ONLY COLD WATER FOR COOKING AND DRINKING.** Do not cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and then heat it.

3. **USE BOTTLED WATER.** The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.



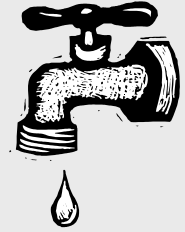
FOR MORE INFORMATION

You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.

State and local government agencies that can be contacted include:

[insert the name or title of facility official if appropriate] at [insert phone number] can provide you with information about your facility's water supply; and

[insert the name or title of the State Department of Public Health] at [insert phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead.



LEAD



DRINKING WATER



Appendix E

Public Education Posters

This Appendix provides two versions of the poster for NTNCWSs. The first is for systems with lead service lines. The second poster, for systems that do not have lead service lines, contains no language pertaining to lead service lines. These posters are available electronically from EPA's website at www.epa.gov/safewater/lcrmr/implement.html.

Where system-specific information should be added, letters are provided that correspond to the letter-key in Table E-1, below. The system-specific information that should be provided is described in this table.

Table E-1: Key to Letter Inserts for Public Education Posters

<i>Replace the letter . . .</i>	<i>With . . .</i>
(a)	The name of your water system
(b)	The date when corrosion control will be completed for your system
(c)	Your water system's phone number
(d)	The name or title of your facility official if appropriate
(e)	The phone number of your facility official
(f)	The name of the State Department of Public Health
(g)	The phone number of the State Department of Public Health
(h)	The name of the city or county health department
(i)	The phone number of the city or county health department

LEAD in Drinking Water

HEALTH EFFECTS OF LEAD

Lead is found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body.

Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.



LEAD IN DRINKING WATER

Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) and (a)

are concerned about lead in your drinking water. Some drinking water samples taken from this facility have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by (b)

This program includes:

- 1) Corrosion control treatment (treating the water to make it less likely that lead will dissolve into the water);
- 2) Source water treatment (removing any lead that is in the water at the time it leaves our treatment facility); and
- 3) A public education program.

We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please call us at (c)

This poster also explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

HOW LEAD ENTERS OUR WATER

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join

copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect houses and buildings to water mains (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn

from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

STEPS YOU CAN TAKE to Reduce Exposure to Lead in Drinking Water

1. **FLUSH YOUR SYSTEM.** Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in plumbing the more lead it may contain. Flushing the tap means running the cold water faucet for about 15-30 seconds. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one to two gallons of water.

2. **USE ONLY COLD WATER FOR COOKING AND DRINKING.** Do not cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and then heat it.

3. **USE BOTTLED WATER.** The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.



FOR MORE INFORMATION

YOU CAN CONSULT a variety of sources for additional information:

Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

- (d) at (e) can
 - provide you with information about your facility's water supply; and
 - (f) at (g) or the
 - (h) at (i) can
- provide you with information about the health effects of lead.

LEAD in Drinking Water

HEALTH EFFECTS OF LEAD

Lead is found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body.

Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.



LEAD IN DRINKING WATER

Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) and (a)

are concerned about lead in your drinking water. Some drinking water samples taken from this facility have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by (b)

This program includes:

- 1) Corrosion control treatment (treating the water to make it less likely that lead will dissolve into the water);
- 2) Source water treatment (removing any lead that is in the water at the time it leaves our treatment facility); and
- 3) A public education program.

If you have any questions about how we are carrying out the requirements of the lead regulation please call us at (c)

This poster also explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

HOW LEAD ENTERS OUR WATER

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join

copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect houses and buildings to water mains (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn

from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

STEPS YOU CAN TAKE to Reduce Exposure to Lead in Drinking Water

1. **FLUSH YOUR SYSTEM.** Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in plumbing the more lead it may contain. Flushing the tap means running the cold water faucet for about 15-30 seconds. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one to two gallons of water.

2. **USE ONLY COLD WATER FOR COOKING AND DRINKING.** Do not cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and then heat it.

3. **USE BOTTLED WATER.** The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.



FOR MORE INFORMATION

YOU CAN CONSULT a variety of sources for additional information:

Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

- (d) at (e) can provide you with information about your facility's water supply; and
- (f) at (g) or the
- (h) at (i) can provide you with information about the health effects of lead.

Appendix F

Lead in Drinking Water

Public Service Announcement

Section 141.85(b) of the rule specifies that a water system must include the following language in all public service announcements submitted to television and radio stations for broadcasting as part of a public education program on lead in drinking water. The LCRMR have not modified the content of this broadcast language, but no longer requires systems serving 3,300 or fewer people to deliver these announcements, if this provision has been included in the State's regulation.

Why should everyone want to know the facts about lead and drinking water? Because unhealthy amounts of lead can enter drinking water through the plumbing in your home. That's why I urge you to do what I did. I had my water tested for *(insert free or \$ per sample)*. You can contact the *(insert the name of the city or water system)* for information on testing and on simple ways to reduce your exposure to lead in drinking water.

To have your water tested for lead, or to get more information about this public health concern, please call *(insert the phone number of the city or water system)*.

Lead and Copper Rule Minor Revisions that Relate to Public Education Requirements

Lead and Copper Rule Minor Revisions that Relate to Public Education Requirements

§141.85: *The following section spells out the general public education requirements for water systems. This section was NOT amended by the LCRMR. It is included here for your convenience.*

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 paragraphs (a) and (b) of this section in accordance with the requirements in paragraph (c) of this section.

§141.85(a)(1): *The following section contains the mandatory language for written public education materials for community water systems.*

(a) *Content of written public education materials.* (1) *Community water systems.* A community water system shall include the following text in all of the printed materials it distributes through its lead public education program. Systems may delete information pertaining to lead service lines, upon approval by the State, if no lead service lines exist anywhere in the water system service area. Public education language at paragraphs (a)(1)(iv)(B)(5) and (a)(1)(iv)(D)(2) of this section may be modified regarding building permit record availability and consumer access to these records, if approved by the State. Systems may also continue to utilize pre-printed materials that meet the public education language requirements in 40 CFR 141.85, effective November 6, 1991 and contained in 40 CFR, Parts 100 - 149 additionally revised as of July 1, 1991. Any additional information presented by a system shall be consistent with the information below and be in plain English that can be understood by lay people.

(i) *Introduction.* The United States Environmental Protection Agency (EPA) and [insert name of water supplier] are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system]. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number]. This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

(ii) *Health effects of lead.* Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with

**Lead and Copper Rule Minor Revisions that Relate to
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sources of lead contamination--like dirt and dust--that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

(iii) *Lead in drinking water.* (A) Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

(B) Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

(C) When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

(iv) *Steps you can take in the home to reduce exposure to lead in drinking water.* (A) Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this booklet. For more information on having your water tested, please call [insert phone number of water system].

(B) If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:

(1) Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15-30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one or two gallons of water and costs less than [insert a cost estimate based on flushing two times a day for 30 days] per month. To conserve water, fill a couple of bottles for drinking

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water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live in a high-rise building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

(2) Try not to cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.

(3) Remove loose lead solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced, by removing the faucet strainers from all taps and running the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

(4) If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify your State [insert name of department responsible for enforcing the Safe Drinking Water Act in your State] about the violation.

(5) Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the city's record of building permits which should be maintained in the files of the [insert name of department that issues building permits]. A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the portion of the line we own. If the line is only partially owned by the [insert the name of the city, county, or water system that owns the line], we are required to provide the owner of the privately-owned portion of the line with information on how to replace the privately-owned portion of the service line, and offer to replace that portion of the line at the owner's expense. If we replace only the portion of the line that we own, we also are required to notify you in advance and provide you with information on the steps you can take to minimize exposure to any temporary increase in lead levels that may result from the partial replacement, to take a follow-up sample at our expense from the line within 72 hours after the partial replacement, and to mail or otherwise provide you with the results of that sample within three business days of receiving the results. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

(6) Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

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(C) The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

(1) Purchase or lease a home treatment device. Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters *may* reduce lead levels at the tap, however all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit.

(2) Purchase bottled water for drinking and cooking.

(D) You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

(1) [insert the name of city or county department of public utilities] at [insert phone number] can provide you with information about your community's water supply, and a list of local laboratories that have been certified by EPA for testing water quality;

(2) [insert the name of city or county department that issues building permits] at [insert phone number] can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and

(3) [insert the name of the State Department of Public Health] at [insert phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead and how you can have your child's blood tested.

(E) The following is a list of some State approved laboratories in your area that you can call to have your water tested for lead. [Insert names and phone numbers of at least two laboratories].

§141.85(a)(2): *The following section contains the mandatory language for written public education materials for non-transient, non-community water systems.*

(2) *Non-transient non-community water systems.* A non-transient non-community water system shall either include the text specified

**Lead and Copper Rule Minor Revisions that Relate to
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in paragraph (a)(1) of this section or shall include the following text in all of the printed materials it distributes through its lead public education program. Water systems may delete information pertaining to lead service lines upon approval by the State if no lead service lines exist anywhere in the water system service area. Any additional information presented by a system shall be consistent with the information below and be in plain English that can be understood by lay people.

(i) *Introduction.* The United States Environmental Protection Agency (EPA) and [insert name of water supplier] are concerned about lead in your drinking water. Some drinking water samples taken from this facility have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system]. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number]. This brochure explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

(ii) *Health effects of lead.* Lead is found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

(iii) *Lead in drinking water.* (A) Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

(B) Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect houses and buildings to water mains (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

(C) When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

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(iv) *Steps you can take to reduce exposure to lead in drinking water.* (A) Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in plumbing the more lead it may contain. Flushing the tap means running the cold water faucet for about 15-30 seconds. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one gallon of water.

(B) Do not cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and then heat it.

(C) The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.

(D) You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

(1) [insert the name or title of facility official if appropriate] at [insert phone number] can provide you with information about your facility's water supply; and

(2) [insert the name or title of the State Department of Public Health] at [insert phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead.

§141.85(b): *The following section specifies the required content of broadcast materials. This section was NOT amended by the LCRMR. It is included here for your convenience.*

(b) *Content of broadcast materials.* A water system shall include the following information in all public service announcements submitted under its lead public education program to television and radio stations for broadcasting:

(1) Why should everyone want to know the facts about lead and drinking water? Because unhealthy amounts of lead can enter drinking water through the plumbing in your home. That's why I urge you to do what I did. I had my water tested for [insert free or \$ per sample]. You can contact the [insert the name of the city or water system] for information on testing and on simple ways to reduce your exposure to lead in drinking water.

Appendix G: LCRMR Relating to Public Education

Lead and Copper Rule Minor Revisions that Relate to Public Education Requirements

(2) To have your water tested for lead, or to get more information about this public health concern, please call [insert the phone number of the city or water system].

§141.85(c): The following section requires public education to be communicated in languages other than English, where appropriate. This section was NOT amended by the LCRMR. It is included here for your convenience.

(c) *Delivery of a public education program.* (1) In communities where a significant proportion of the population speaks a language other than English, public education materials shall be communicated in the appropriate language(s).

§§141.85(c)(2) & (3): The following sections specify the delivery requirements for community water systems.

(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 repeating public education tasks pursuant to paragraph (c)(3), (c)(7), or (c)(8), of this section, shall, within 60 days:

(i) Insert notices in each customer's water utility bill containing the information in paragraph (a)(1) of this section, along with the following alert on the water bill itself in large print: "SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION." A community water system having a billing cycle that does not include a billing within 60 days of exceeding the action level, or that cannot insert information in the water utility bill without making major changes to its billing system, may use a separate mailing to deliver the information in paragraph (a)(1) of this section as long as the information is delivered to each customer within 60 days of exceeding the action level. Such water systems shall also include the "alert" language specified in this paragraph.

(ii) Submit the information in paragraph (a)(1) of this section to the editorial departments of the major daily and weekly newspapers circulated throughout the community.

(iii) Deliver pamphlets and/or brochures that contain the public education materials in paragraphs (a)(1)(ii) and (a)(1)(iv) of this section to facilities and organizations, including the following:

(A) Public schools and/or local school boards;

(B) City or county health department;

(C) Women, Infants, and Children and/or Head Start Program(s) whenever available;

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(D) Public and private hospitals and/or clinics;

(E) Pediatricians;

(F) Family planning clinics; and

(G) Local welfare agencies.

(iv) Submit the public service announcement in paragraph (b) of this section to at least five of the radio and television stations with the largest audiences that broadcast to the community served by the water system.

(3) A community water system shall repeat the tasks contained in paragraphs (c)(2) (i), (ii) and (iii) of this section every 12 months, and the tasks contained in paragraphs (c)(2)(iv) of this section every 6 months for as long as the system exceeds the lead action level.

§§141.85(c)(4) & (5): The following sections specify the delivery requirements for non-transient, non-community water systems.

(4) Within 60 days after it exceeds the lead action level (unless it already is repeating public education tasks pursuant to paragraph (c)(5) of this section), a non-transient non-community water system shall deliver the public education materials specified by paragraph (a)(1) of this section or the public education materials specified by paragraph (a)(2) 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.

(5) A non-transient non-community water system shall repeat the tasks contained in paragraph (c)(4) of this section at least once during each calendar year in which the system exceeds the lead action level.

§141.85(c)(6): The following section explains the conditions under which a system is no longer required to deliver public education and when it must recommence delivery. This section was NOT amended by the LCRMR. It is included here for your convenience.

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(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.

§141.85(c)(7): The following section identifies which community water systems can request permission to use the content and delivery requirements specified for a non-transient, non-community water system.

(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 the text specified in paragraph (a)(2) of this section in lieu of the text in paragraph (a)(1) of this section and to perform the tasks listed in paragraphs (c)(4) and (c)(5) of this section in lieu of the tasks in paragraphs (c)(2) and (c)(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.

§141.85(c)(8)(i): The following section explains public education tasks that may be omitted by small community water systems.

(8)(i) A community water system serving 3,300 or fewer people may omit the task contained in paragraph (c)(2)(iv) of this section. As long as it distributes notices containing the information contained in paragraph (a)(1) of this section to every household served by the system, such systems may further limit their public education programs as follows:

(A) Systems serving 500 or fewer people may forego the task contained in paragraph (c)(2)(ii) of this section. Such a system may limit the distribution of the public education materials required under paragraph (c)(2)(iii) of this section to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children, unless it is notified by the State in writing that it must make a broader distribution.

(B) If approved by the State in writing, a system serving 501 to 3,300 people may omit the task in paragraph (c)(2)(ii) of this section and/or limit the distribution of the public education materials required under paragraph (c)(2)(iii) of this section to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.

(ii) A community water system serving 3,300 or fewer people that delivers public education in accordance with paragraph (c)(8)(i) of this section shall repeat the required public education tasks at least once during each calendar year in which the system exceeds the lead action level.

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§141.85(d): *The following section explains the system's sampling responsibilities to its customers should the system exceed the lead action level. This section was NOT amended by the LCRMR. It is included here for your convenience.*

(d) *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.

§141.90(f): *The following section explains a water system's reporting requirements to the State.*

(f) *Public education program reporting requirements.* (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 tasks in accordance with §141.85(c), 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 (b) and the delivery requirements in §141.85(c); and

(ii) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the system delivered public education materials during the period in which the system was required to perform public education tasks.

(2) Unless required by the State, a system that previously has submitted the information required by paragraph (f)(1)(ii) of this section need not resubmit the information required by paragraph (f)(1)(ii) of this section, as long as there have been no changes in the distribution list and the system certifies that the public education materials were distributed to the same list submitted previously.

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Appendix H

Information Sources

- "Lead and Your Drinking Water: Actions You Can Take to Reduce Lead in Drinking Water." U.S. Environmental Protection Agency, Office of Water, Washington, DC. June 1993, EPA 810-F-93-001. This document is available in English and Spanish at www.epa.gov/safewater/Pubs/lead1.html.
- "Lead in Drinking Water in School and Non-residential Buildings" U.S. Environmental Protection Agency, Office of Water, Washington, DC. April 1994, EPA 812-B-94-002. This document is available at www.epa.gov/safewater/consumer/leadinschools.html.
- "Water on Tap: A Consumer's Guide to the Nation's Drinking Water." U.S. Environmental Protection Agency, Office of Water, Washington, DC. May 1997. EPA 810-F-97-001. This document is available at www.epa.gov/safewater/wot/wot.html.
- Environmental Protection Agency, 40 CFR 141 and 142 - Drinking Water Regulations; Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper; Final Rule (56 FR No. 110, June 7, 1991). This Federal Register notice is available at www.epa.gov/safewater/leadcop.html.
- Environmental Protection Agency, 40 CFR 141 and 142 - Drinking Water Regulations; Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper; Final Rule (65 FR 1950, January 12, 2000). This Federal Register notice is available at www.epa.gov/safewater/leadfr.html.
- "Lead in Your Home: A Parent's Reference Guide." U.S. Environmental Protection Agency, Prevention, Pesticides, and Toxic Substances, Washington, DC. June 1998, EPA 747-B-98-002. www.epa.gov/lead/leadrev.pdf
- "Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials." Center for Disease Control, Atlanta, GA. November 1997. This document is available at www.cdc.gov/nceh/lead/guide/guide97.htm.
- "Drinking Water and Health: What You Need to Know." U.S. Environmental Protection Agency, Office of Water, Washington, DC. May 1997. EPA 810-F-97-001. This document is available in English and Spanish at www.epa.gov/safewater/dwhealth.html.
- "Children and Drinking Water Standards." U.S. Environmental Protection Agency, Office of Water, Washington, DC. May 1997. EPA 810-F-97-001. This document is available in English and Spanish at www.epa.gov/safewater/kids/health.html.