



Sample Collector's Handbook



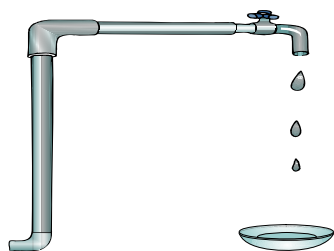
SAMPLE COLLECTOR'S HANDBOOK

Illinois Environmental Protection Agency
Bureau of Water
Division of Public Water Supplies
Compliance Assurance Section

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Introduction



In order for a public water supply to provide a safe, clean, adequate supply of water to the consumer, it must be properly constructed, operated and maintained. However, proper construction, operation and maintenance alone cannot document the safety or quality of the water. To develop and maintain a record of water quality, it is necessary to collect representative samples of the water and have them analyzed by a certified laboratory on a routine basis. Sampling, combined with proper operation, operational testing and record keeping with periodic facility inspection, is an effective means of documenting the safety and quality of the water reaching the consumer.

It is critical that each sample collector understand sample collection requirements specified in each approved drinking water test method. Sampling location and sampling technique vary and failure to follow the proper procedures may result in re-sampling or violations.

We are pleased to publish this *Sample Collector's Handbook*. This *Handbook* should assist public water supplies in implementing the requirements of the Illinois Environmental Protection Agency's drinking water regulations.

We intend to update this *Handbook* periodically as the United States Environmental Protection Agency (USEPA) and subsequently the Illinois Pollution Control Board promulgates and the Illinois EPA publishes new and revised drinking water regulations. Each public water supply must be aware of these changes and make any necessary modifications to its sample collection procedures. It is advisable for a water operator to periodically obtain the most current version of this *Handbook* (via hard copy request or Illinois EPA web site download).

General Information

Sample Collector's Handbook Updates

<http://www.epa.state.il.us/water/compliance/drinking-water/collectors-handbook/index.html>

Title 35: Subtitle F: Chapters I Part 611: *Illinois Primary Drinking Water Standards* and Chapter II can be found on Illinois EPA's web page at:

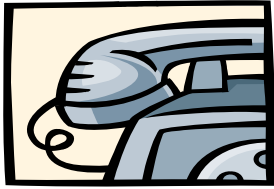
<http://www.epa.state.il.us/water/rules-regulation.html>

Illinois EPA Drinking Water Compliance Assurance Section (CAS) documents can be found on the Illinois EPA web page:

<http://www.epa.state.il.us/water/forms.html#compliance-and-enforcement-drinking-water>

USEPA Regulations and Guidance Documents can be found on the USEPA web page:

<http://www.epa.gov/safewater/topics.html>



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Boil Order Questions / Results	Regional Offices (next page)
Changes in Ownership/ROINC	217/785-0561
Cross Connections	217/782-1020
Capacity Development	217/782-1020
Fluoride Compliance IDPH- Dental Health	217/785-4899
Lab Fee Program, Billing/Payment	217/785-0561
Operator Certification	217/785-0561
Water Supply Customer Complaints	Regional Offices (next page)
Water System Inspections/Sanitary Surveys	Regional Offices (next page)
Permits, Construction or Operating	217/782-1724
Groundwater Protection Program	217/785-4787
Emergency Response	217/782-3637
24-Hour Emergency Telephone	800/782-7860
USEPA Safe Drinking Water Hotline	800/426-4791

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ACRONYMS

CCR	Consumer Confidence Report
CWS	Community Water System
DBP	Disinfection Byproduct
HPC	Heterotrophic Plate Count
IESWTR	Interim Enhanced Surface Water Treatment Rule
Illinois EPA	Illinois Environmental Protection Agency
IOC	Inorganic Chemical
LCR	Lead and Copper Rule
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
NPDWR	National Primary Drinking Water Regulations
NTNCWS	Non-Transient Non-Community Water System
NTU	Nephelometric Turbidity Units
OGWDW	USEPA, Office of Ground Water and Drinking Water
OW	USEPA, Office of Water
PN	Public Notification
PWS	Public Water Supply
SDWA	Safe Drinking Water Act
SMCL	Secondary Maximum Contaminant Level
SOC	Synthetic Organic Chemical
SWTR	Surface Water Treatment Rule
TCR	Total Coliform Rule
TT	Treatment Technique
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Chemical

Overview of Drinking Water Monitoring Requirements

Community water supply (CWS) monitoring requirements will vary based on the source of water, population served, and their specific water quality/chemistry. Violation of regulations, new regulations, and/or contaminant detections may trigger additional monitoring requirements or change the monitoring frequency.

A CWS can download their most current monitoring schedules at:

<http://www.epa.state.il.us/water/compliance/drinking-water/sdwis/index.html>

It is recommended that each CWS operator or sample collector periodically (at least quarterly) download a new schedule since monitoring schedules can change frequently. If you have any questions or need more detail, call the Drinking Water Compliance Unit at 217/785-0561.

The following is a very brief overview of the different monitoring programs.

Coliform Monitoring

The requirements for this program are detailed in **Chapter 3** of this Handbook.

All water supplies are required to monitor the distribution system at least monthly for coliform bacteria. The number of samples required is based on the population served. Chlorine exempt facilities are required to monitor twice a month or bi-weekly. The Field Operations Section (FOS) determines the frequency and number of finished samples at the time of the Engineering Evaluation. In addition to the distribution system and finished samples, raw water samples are required to be tested for total coliform and *E. coli* monthly from each well.

Lead and Copper Monitoring

The requirements for this program are detailed in **Chapter 4** of this Handbook.

All supplies must collect lead and copper samples from distribution locations that have been approved by the IEPA. All samples must be collected from the consumer's kitchen or bathroom tap. The frequency and number of samples is determined by the population served and past sample results.

Routine distribution and entry point water quality samples (WQS) monitoring is required if a supply has installed corrosion control treatment for lead and copper and have had a past action level exceedance. The frequency and number of samples is determined by the population served, source of water, type of treatment, and past sample results. Those supplies required to monitor WQS must follow Illinois EPA approved sample protocol which is system specific.

Disinfectants and Disinfection Byproducts Rules

The requirements for this program are detailed in **Chapter 10** of this Handbook.

This rule includes monitoring requirements for Total Trihalomethanes (TTHMs), Haloacetic Acids (HAAs), Bromate, Bromite, Chlorite, and Chlorine dioxide. The number and type of samples are based on water source, type of disinfectant used, and the population served. The frequency and sampling duration is also determined by the actual test result/contaminant concentrations.

Surface water supplies are also required to monitor for Total Organic Carbon (TOC) and Alkalinity. Initially, one “paired” (one raw and one finished) TOC/alkalinity sample is required per plant per month. After two years, the system may qualify for reduced monitoring depending on the levels found.

Surface Water Treatment Rules

This Chapter of the Handbook is not yet completed.

Turbidity monitoring and residual disinfectant monitoring are required for all surface water supplies. Sampling locations and frequency are determined by a system specific sampling protocol approved by the Illinois EPA.

Inorganic Chemicals (IOCs) Monitoring

The requirements for this program are detailed in **Chapter 7** of this Handbook.

All surface and mixed supplies must monitor annually each entry point. All groundwater supplies must monitor each entry point triennially. The following is the current list of IOCs that require monitoring:

Asbestos Monitoring

The requirements for this program are detailed in **Chapter 7** of this Handbook.

Supplies that have asbestos-cement pipe within the distribution system and have an aggressive water quality index less than 12 must monitor once every nine years. Quarterly monitoring will be required if any sample result exceeds 7 million fibers per liter.

Fluoride Monitoring

The requirements for this program are detailed in **Chapter 7** of this Handbook.

All supplies that add fluoride are required to monitor at each entry point daily using an approved test kit. On a monthly basis, a split sample is to be collected. One portion of the split sample is to be analyzed by a certified laboratory, while the other portion is to be analyzed on site using an approved test kit. Supplies with naturally occurring fluoride must monitor annually.

Nitrate/Nitrite Monitoring

The requirements for this program are detailed in **Chapter 7** of this Handbook.

Initially, all surface supplies are required to collect four consecutive nitrate quarterly samples per entry point. If any of the four results exceed one-half of the MCL, quarterly sampling must continue. If all of the four results are below one-half of the MCL, sampling will be reduced to annual monitoring. Each year, all ground water supplies must collect one nitrate sample per entry point. If the sample result exceeds one-half of the MCL, quarterly sampling will be required until it is determined the contaminant is reliably and consistently below the MCL.

Surface and ground water supplies must collect one **nitrite** sample per entry point every three years. If the sample result exceeds one-half of the MCL, quarterly sampling will be required until it is determined the contaminant is reliably and consistently below the MCL.

Synthetic Organic Chemicals (SOCs) Monitoring

The requirements for this program are detailed in **Chapter 6** of this Handbook.

Initial SOC monitoring requires collection of four consecutive quarterly samples at each entry point for all surface and ground water supplies. For surface supplies with no SOC detections, sampling is reduced to one annual spring (April - June) sample per entry point. For groundwater supplies serving 3,300 people or less with no SOC detections, sampling is reduced to one sample per entry point every three years. Sampling is reduced to two samples per entry point every three years for supplies serving more than 3,300 people. If at any time an SOC is detected, quarterly monitoring must be resumed at that entry point until it is determined the contaminant is reliably and consistently below the MCL. Ground water supplies that qualify for a vulnerability waiver may further reduce monitoring. Surface supplies cannot qualify for a SOC vulnerability waiver.

Volatile Organic Chemicals (VOCs) Monitoring

The requirements for this program are detailed in **Chapter 5** of this Handbook.

Initial SOC monitoring requires collection of four consecutive quarterly samples at each entry point for all surface and ground water supplies. If no VOCs are detected, sampling is reduced to annually. After the three annual samples, supplies may further reduce to once every three years. If at any time a VOC is detected, quarterly monitoring will be initiated until it is determined the entry point is reliably and consistently below the MCL. Ground water supplies that qualify for a vulnerability waiver may further reduce monitoring. Surface supplies cannot qualify for a VOC vulnerability waiver.

Radionuclide Monitoring

The requirements for this program are detailed in **Chapter 8** of this Handbook

Initially, both surface and ground water supplies must monitor quarterly for combined radium and gross alpha for a year (in some cases, this can be reduced). Follow-up monitoring frequency is dependent on the results of initial samples.

Most drinking water sources have very low levels of radioactive contaminants ("radionuclides"), most of which are naturally occurring, although contamination of drinking water sources from human-made nuclear materials can also occur. Most radioactive contaminants are at levels that are low enough to not be considered a public health concern. At higher levels, long-term exposure to radionuclides in drinking water may cause cancer. In addition, exposure to uranium in drinking water may cause toxic effects to the kidney.

To protect public health, USEPA has established drinking water standards for several types of radioactive contaminants combined radium 226/228 (5 pCi/L); beta emitters (4 mrem/year); gross alpha particle (15 pCi/L); and uranium (30 µg/L).

Unregulated Contaminant Monitoring Rule (UCMR)

This Chapter of the Handbook is not yet completed.

All large water systems (serves > 10,000 people) that have their own source of water AND a USEPA randomly-selected number of small systems that have their own source of water are required to periodically monitor for a set list of contaminants that are not yet regulated. With each UCMR cycle of monitoring, the contaminants change.

USEPA uses the UCMR to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act (SDWA). Every five years EPA reviews the list of contaminants, largely based on the Contaminant Candidate List and determines whether or not additional monitoring or studies are needed.

Groundwater Rule (GWR)

The requirements for this program are detailed in **Chapter 9** of this Handbook.

The U.S. Environmental Protection Agency (EPA) published the Ground Water Rule (GWR) on November 8, 2006. One goal of the GWR is to provide increased protection against microbial pathogens, specifically bacterial and viral pathogens, in public water systems that use ground water. Instead of requiring enhanced disinfection for all ground water systems (GWSs), the GWR establishes a risk-targeted approach to identifying GWSs that are susceptible to fecal contamination. GWS currently monitor each well once a month for total coliform and *E. coli*.

Operator Certification (OpCert)

The requirements for this program are detailed in **Chapter 14** of this Handbook.

Drinking water operator certification is critical for the protection of public health and the maintenance of safe, optimal, and reliable operations of water treatment and distribution facilities. In order to safeguard the health and well being of the populace, every community water supply in Illinois must have on its operational staff at least one person “certified” as competent as a water supply operator under the provisions of the Public Water Supply Operations Act. This Chapter discusses the certification process.

Protecting Drink Water – The Multiple Barrier Approach

Drinking water professionals have long known that the most effective way to protect consumers from the risk of contamination and waterborne disease is through a multiple barrier approach. This approach sets up a series of technical and managerial barriers that ensure a safe drinking water supply and guard against waterborne disease outbreaks.

For each of these barriers, you can choose from a number of options to improve your system and further protect the health of your customers. Your best option will depend on the unique challenges and opportunities facing your system.

The multiple barrier approach provides “defense in depth” against waterborne pathogens and chemical contaminants that can cause a variety of illnesses and conditions, some of them potentially fatal. By erecting barriers against these contaminants at each step in the process from raw, untreated source water to the delivery of treated finished water, system owners and operators can protect the health and well being of the people who rely on them for potable water.

- (1) Source Water Barriers: Selecting and protecting the best source of supply.
- (2) Treatment Barriers: Installing treatment methods, implemented by a certified operator, that will improve the quality of the source water.
- (3) Storage and Distribution Barriers: Constructing, operating, and maintaining well-engineered storage facilities and distribution systems.
- (4) Monitoring and Public Information Barriers: Providing consumers with information on water quality and health effects.

Small Systems and the Multiple Barrier Approach

Small systems face many challenges in providing safe, reliable, and affordable drinking water. Implementation of effective multiple barriers of protection will require technical, financial, and managerial resources which some systems may lack. Such systems will benefit from State “Capacity Development” programs. Through these programs systems will have access to assistance in developing the financial capabilities and the institutional knowledge and structures to reliably and consistently apply multiple barriers of protection.

State and Federal Regulated Contaminants

USEPA has set drinking water standards or Maximum Contaminant Levels (MCLs) for more than 80 contaminants. The standards limit the amount of each substance allowed to be present in drinking water. A process called risk assessment is used to set drinking water quality standards. When assessing the cancer and non-cancer risks from exposure to a chemical in drinking water, the first step is to measure how much of the chemical could be in the water. Next, scientists estimate how much of the chemical the average person is likely to drink. This amount is called the exposure. In developing drinking water standards, USEPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. Risks are estimated separately for cancer and non-cancer effects. For cancer effects, a risk assessment estimates a measure of the chances that someone may get cancer because they have been exposed to a drinking water contaminant.

USEPA generally sets MCLs at levels that will limit an individual's risk of cancer from that contaminant to between 1 in 10,000 and 1 in 1,000,000 over a lifetime. For non-cancer effects, the risk assessment estimates an exposure level below which no adverse effects are expected to occur. MCLs are set based on known or anticipated adverse human health effects, the ability of various technologies to remove the contaminant, their effectiveness, and cost of treatment. All MCLs are set at levels that protect public health. The limit for many substances is based on lifetime exposure so, for most potential contaminants, short-term exceedances pose a limited health risk. The exceptions are the standards for coliform bacteria and nitrate, for which exceedances can pose an immediate threat to health. To comply with MCLs, public water systems may use any state-approved treatment. When it is not economically or technologically feasible to set an MCL for a contaminant—for example, when the contaminant cannot be easily measured—USEPA may require use of a particular treatment technique instead. The technique specifies the design for part of the drinking water treatment process.

Illinois has adopted all federal MCLs and also has adopted several state-only drinking water standards (no federal MCL). These state-only regulated contaminants are identified as “*state only*” on the following tables.

Table Definitions

mg/L	Milligrams per Liter (unit of measure). Milligrams are equivalent to parts per million (ppm)
NTU	Nephelometric Turbidity Units (unit of measure)
MFL	Million Fibers per Liter (unit of measure)
pCi/L	Picocuries per Liter (a measure of radioactivity)
AL	Action Level: The concentration of a contaminant that triggers treatment or other required actions by the water supply.
MCL	Maximum Contaminant Level: The MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. If a facility exceeds the MCL, the facility must immediately investigate treatment options to reduce the level of the contaminant in the water supply.
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
TT	Treatment Technique: For some contaminants, a TT is established rather than an MCL. TT is a required process intended to reduce or control the level of a contaminant in drinking water.
PHG (MCLG)	Public Health Goal (MCL Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health.

State and Federal Regulated Contaminants

MICROBIAL CONTAMINANTS

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL	Public Health Goal
Total Coliform Bacteria (including fecal coliform and <i>E. coli</i>)	5.0%	Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present.	<p>Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.</p> <p>Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.</p>	Zero
	No more than 5.0% samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or <i>E. coli</i> if two consecutive TC-positive samples, and one is also positive for <i>E. coli</i> fecal coliforms, system has an acute MCL violation.			

The Surface Water Treatment Rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- **Cryptosporidium (as of 1/1/02 for systems serving >10,000 and 1/14/05 for systems serving <10,000) 99% removal.**
- **Giardia lamblia: 99.9% removal/inactivation**
- **Viruses: 99.99% removal/inactivation**
- **Legionella: No limit, but USEPA believes that if Giardia and viruses are removed/inactivated, Legionella will also be controlled.**
- **Turbidity: At no time can turbidity (cloudiness of water) go above 1 NTU; systems that filter must ensure that the turbidity go no higher than 1 NTU (0.3 NTU for conventional or direct filtration) in at least 95% of the daily samples in any month.**
- **HPC: No more than 500 bacterial colonies per milliliter**
- **Filter Backwash Recycling: The Filter Backwash Recycling Rule requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.**

See next page(TT*)

State and Federal Regulated Contaminants

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL	Public Health Goal
Turbidity	TT*	Soil runoff	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing micro-organisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Increased risk of cancer, kidney toxicity	n/a
<i>Cryptosporidium</i>	TT*	Human and animal fecal waste	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Zero
<i>Giardia lamblia</i>	TT*	Human and animal fecal waste	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Zero
Heterotrophic plate count (HPC)	TT*	HPC measures a range of bacteria that are naturally present in the environment	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	n/a
<i>Legionella</i>	TT*	Found naturally in water; multiplies in heating systems	Legionnaire's Disease, a type of pneumonia	Zero
Viruses (enteric)	TT*	Human and animal fecal waste	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Zero

* See Previous Page Surface Water Treatment Rules

INORGANIC CONTAMINANTS

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Antimony	0.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Increase in blood cholesterol; decrease in blood sugar	0.006
Arsenic	0.010	Erosion of natural deposits; runoff from orchards, runoff from glass & electronics production wastes	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Zero
Asbestos (fibers >10 micrometers)	7 MFL	Decay of asbestos cement water mains; erosion of natural deposits	Increased risk of developing benign intestinal polyps	7 MFL
Barium	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Increase in blood pressure	2

State and Federal Regulated Contaminants

INORGANIC CONTAMINANTS (continued)

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Beryllium	0.004	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	Intestinal lesions	0.004
Cadmium	0.005	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	Kidney damage	0.005
Chromium (total)	0.1	Discharge from steel and pulp mills; erosion of natural deposits	Allergic dermatitis	0.1
Copper	TT; AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits	Short term exposure: Gastrointestinal distress. Long term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	1.3
Copper is regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L.				
Cyanide (as free cyanide)	0.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	Nerve damage or thyroid problems	0.2
Fluoride	4.0	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	Bone disease (pain and tenderness of the bones); Children may get mottled teeth	4.0
Iron (state only)	1.0 (state only)	Erosion from naturally occurring deposits	Excessive iron in water may cause staining of laundry & plumbing fixtures & may accumulate as deposits in the distribution system.	n/a
Lead	TT; AL=0.015	Corrosion of household plumbing systems; erosion of natural deposits	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Zero
Lead is regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For lead, the action level is 0.015 mg/L.				
Manganese (state only)	0.15 (state only)	Erosion of naturally occurring deposits	Excessive manganese in the water may cause staining of plumbing fixtures and laundry. It may also produce an unpleasant taste in beverages, including coffee & tea.	n/a

State and Federal Regulated Contaminants

INORGANIC CONTAMINANTS (continued)

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Mercury (inorganic)	0.002	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	Kidney damage	0.002
Nitrate (measured as Nitrogen)	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Immediate Health Effects: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	10
Nitrite (measured as Nitrogen)	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Immediate Health Effects: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	1
Total Nitrate and Nitrite	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Immediate Health Effects: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	10
Selenium	0.05	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	0.05
Sodium	n/a	Erosion of naturally occurring deposits; used in water softener regeneration	n/a	n/a
	Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician.			
Thallium	0.002	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	Hair loss; changes in blood; kidney, intestine, or liver problems	0.0005
Zinc (state only)	5.0 (state only)	Naturally occurring; discharge from metal factories	Some people who drink water containing excessive zinc may experience toxic effects to the blood & cardiovascular systems, damage may occur to the skin, respiratory system, developmental system, reproductive system, and it may weaken the immune system.	n/a

State and Federal Regulated Contaminants

Synthetic Organic Contaminants (SOCs) including Pesticides and Herbicides

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
2,4-D <i>(State has imposed a more stringent MCL)</i>	0.01 <i>(State MCL)</i> 0.07 <i>(Federal MCL)</i>	Runoff from herbicide used on row crops	Kidney, liver, or adrenal gland problems	0.07 <i>(Federal)</i>
2,4,5-TP (Silvex)	0.05	Residue of banned herbicide	Liver problems	0.05
Alachlor	0.002	Runoff from herbicide used on row crops	Eye, liver, kidney or spleen problems; anemia; increased risk of cancer	zero
Aldrin (state only)	0.001 <i>(state only)</i>	Runoff from use as an insecticide, not used since 1987	May experience problems with their liver, nervous system, weakened immune system, fetal damage may occur in pregnant women, and may have an increased risk of getting cancer.	n/a
Atrazine	0.003	Runoff from herbicide used on row crops	Cardiovascular system or reproductive problems	0.003
Benzo(A)pyrene (PAH)	0.0002	Leaching from linings of water storage tanks and distribution lines	Reproductive difficulties; increased risk of cancer	zero
Carbofuran	0.04	Leaching of soil fumigant used on rice and alfalfa	Problems with blood, nervous system, or reproductive system	0.04
Chlordane	0.002	Residue of banned termiticide	Liver or nervous system problems; increased risk of cancer	zero
Dalapon	0.2	Runoff from herbicide used on rights of way	Minor kidney changes	0.2
Total DDT (state only)	0.05 <i>(state only)</i>	Runoff from use as a contact insecticide	Some people who drink water containing excessive DDT may experience problems with their reproductive or developmental systems, and may have an increased risk of getting cancer.	n/a

State and Federal Regulated Contaminants

Synthetic Organic Contaminants (SOCs) including Pesticides and Herbicides (cont.)

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Di(2-ethylhexyl) Adipate	0.4	Discharge from chemical factories	Weight loss, live problems, or possible reproductive difficulties	0.4
Di(2-ethylhexyl) Phthalate	0.006	Discharge from rubber and chemical factories	Reproductive difficulties; liver problems; increased risk of cancer	zero
Dibromochloropropane (DBCP)	0.0002	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Reproductive difficulties; increased risk of cancer	zero
Dieldrin (state only)	0.001 (state only)	Runoff from use as an insecticide, not used since 1987	Liver, nervous system, weakened immune system, fetal damage may occur in pregnant women, and may have an increased risk of getting cancer	n/a
Dinoseb	0.007	Runoff from herbicide used on soybeans and vegetables	Reproductive difficulties	0.007
Diquat	0.02	Runoff from herbicide use	Cataracts	0.02
Dioxin (2,3,7,8-TCDD)	0.00000003	Emissions from waste incineration and other combustion; discharge from chemical factories	Reproductive difficulties; increased risk of cancer	zero
Endothall	0.1	Runoff from herbicide use	Stomach and intestinal problems	0.1
Endrin	0.002	Residue of banned insecticide	Liver problems	0.002
Ethylene Dibromide	0.00005	Discharge from petroleum refineries	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	zero
Glyphosate	0.7	Runoff from herbicide use	Kidney problems; reproductive difficulties	0.7
Heptachlor <i>(State has imposed a more stringent MCL)</i>	0.0001 (State MCL) 0.0004 (Federal MCL)	Residue of banned termiticide	Liver damage; increased risk of cancer	zero

State and Federal Regulated Contaminants

Synthetic Organic Contaminants (SOCs) including Pesticides and Herbicides (continued)

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Heptachlor Epoxide <i>(State has imposed a more stringent MCL)</i>	0.0001 <i>(State MCL)</i> 0.0002 <i>(Federal MCL)</i>	Breakdown of heptachlor	Liver damage; increased risk of cancer	zero
Hexachlorobenzene	0.001	Discharge from metal refineries and agricultural chemical factories	Liver or kidney problems; reproductive difficulties; increased risk of cancer	zero
Hexachlorocyclopentadiene	0.05	Discharge from chemical factories	Kidney or stomach problems	0.05
Lindane	0.0002	Runoff/leaching from insecticide used on cattle, lumber, gardens	Liver or kidney problems	0.0002
Methoxychlor	0.04	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Reproductive difficulties	0.04
Oxamyl (Vydate)	0.2	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	Slight nervous system effects	0.2
PCBs (Polychlorinated Biphenyls)	0.0005	Runoff from landfills; discharge of waste chemicals	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	zero
Pentachlorophenol	0.001	Discharge from wood preserving factories	Liver or kidney problems; increased cancer risk	zero
Picloram	0.5	Herbicide runoff	Liver problems	0.5
Simazine	0.004	Herbicide runoff	Problems with blood	0.004
Toxaphene	0.003	Runoff/leaching from insecticide used on cotton and cattle	Kidney, liver, or thyroid problems; increased risk of cancer	zero

State and Federal Regulated Contaminants

Volatile Organic Contaminants (VOCs)

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Benzene	0.005	Discharge from factories; leaching from gas storage tanks and landfills	Anemia; decrease in blood platelets; increased risk of cancer	zero
Carbon tetrachloride	0.005	Discharge from chemical plants and other industrial activities	Liver problems; increased risk of cancer	zero
Chlorobenzene	0.1	Discharge from chemical and agricultural chemical factories	Liver or kidney problems	0.1
o-Dichlorobenzene	0.6	Discharge from industrial chemical factories	Liver, kidney, or circulatory system problems	0.6
p-Dichlorobenzene	0.075	Discharge from industrial chemical factories	Anemia; liver, kidney or spleen damage; changes in blood	0.075
1,2-Dichloroethane	0.005	Discharge from industrial chemical factories	Increased risk of cancer	zero
1,1-Dichloroethylene	0.007	Discharge from industrial chemical factories	Liver problems	0.007
cis-1,2-Dichloroethylene	0.07	Discharge from industrial chemical factories	Liver problems	0.07
trans-1,2-Dichloroethylene	0.1	Discharge from industrial chemical factories	Liver problems	0.1
Dichloromethane	0.005	Discharge from drug and chemical factories	Liver problems	zero
1,2-Dichloropropane	0.005	Discharge from industrial chemical factories	Increased risk of cancer	zero
Ethylbenzene	0.7	Discharge from petroleum refineries	Liver or kidneys problems	0.7
Styrene	0.1	Discharge from rubber and plastic factories; leaching from landfills	Liver, kidney, or circulatory system problems	0.1
Tetrachloroethylene	0.005	Discharge from factories and dry cleaners	Liver problems; increased risk of cancer	zero

State and Federal Regulated Contaminants

Volatile Organic Contaminants (cont.)

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
1,2,4-Trichlorobenzene	0.07	Discharge from textile finishing factories	Changes in adrenal glands	0.07
1,1,1-Trichloroethane	0.2	Discharge from metal degreasing sites and other factories	Liver, nervous system, or circulatory problems	0.2
1,1,2-Trichloroethane	0.005	Discharge from industrial chemical factories	Liver, kidney, or immune system problems	0.003
Trichloroethylene	0.005	Discharge from metal degreasing sites and other factories	Liver problems; increased risk of cancer	zero
Toluene	1	Discharge from petroleum factories	Nervous system, kidney, or liver problems	1
Vinyl Chloride	0.002	Leaching from PVC pipes; discharge from plastic factories	Increased risk of cancer	zero
Xylenes (total)	10	Discharge from petroleum factories; discharge from chemical factories	Nervous system damage	10

Other Organic Contaminants

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Acrylamide	TT	Added to water during sewage/wastewater increased risk of cancer treatment	Nervous system or blood problems and may have increased risk of getting cancer	zero
Epichlorohydrin	TT	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	Increased cancer risk, and over a long period of time, stomach problems	zero

Each water system must certify, to the state (using third-party or manufacturers certification) that when it uses acrylamide and/or epichlorohydrin to treat water, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows: Acrylamide = 0.05% dosed at 1 mg/L (or equivalent); Epichlorohydrin = 0.01% dosed at 20 mg/L (or equivalent).

State and Federal Regulated Contaminants

Radiological Contaminants

Contaminant	MCL	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Alpha emitters	15 pCi/L	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	Increased risk of cancer	zero
Beta particles and photon emitters	4 millirems per year	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation	Increased risk of cancer	zero
Combined Radium (Radium 226 & Radium 228)	5 pCi/L	Erosion of natural deposits	Increased risk of cancer	zero
Uranium	0.03 mg/L	Erosion of natural deposits	Increased risk of cancer, kidney toxicity	zero

Disinfection / Disinfectant By-Products

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Bromate	0.010	Byproduct of drinking water disinfection	Increased risk of cancer	zero
Chlorite	1.0	Byproduct of drinking water disinfection	Anemia; infants & young children: nervous system effects	0.8
Haloacetic acids (HAA5)	0.060	Byproduct of drinking water disinfection	Increased risk of cancer	n/a
Although there is no collective MCLG for this contaminant, there are individual MCLGs for some of the individual contaminants: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)				

State and Federal Regulated Contaminants

Disinfection / Disinfectant By-Products (cont.)

Contaminant	MCL (mg/L)	Common Sources of Contamination in Drinking Water	Potential Health Effects from Exposure above the MCL (based on consumption in excess of MCL for many years unless otherwise noted)	Public Health Goal
Total Trihalomethanes (TTHMs)	0.080	Byproduct of drinking water disinfection	Liver, kidney or central nervous system problems; increased risk of cancer	n/a
Although there is no collective MCLG for this contaminant, there are individual MCLGs for some of the individual contaminants: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)				
Chlorine (as Cl₂)	MRDL=4.0	Water additive used to control microbes	Eye/nose irritation; stomach discomfort	MRDLG=4
Chloramines (as Cl₂)	MRDL=4.0	Water additive used to control microbes	Eye/nose irritation; stomach discomfort	MRDLG=4
Chlorine dioxide (as ClO₂)	MRDL=0.8	Water additive used to control microbes	Anemia; infants & young children: nervous system effects	MRDLG=0.8
Maximum Residual Disinfectant Level (MRDL)—The highest level of a disinfectant allowed in drinking water. Maximum Residual Disinfectant Level Goal (MRDLG)—The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.				

National Secondary Drinking Water Standards

National Secondary Drinking Water Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. USEPA recommends secondary standards to water systems but does not require systems to comply.

Contaminant	Secondary Standard	Contaminant	Secondary Standard
Aluminum	0.05 to 0.2 mg/l	Chloride	250 mg/L
Color	15 (color units)	Copper	1.0 mg/L
Corrosivity	Noncorrosive	Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L	Iron	0.3 mg/L
Manganese	0.05 mg/L	Odor	3 threshold odor number
pH	6.5-8.5	Silver	0.10 mg/L
Sulfate	250 mg/L	Total Dissolved Solids	500 mg/L
Zinc	5 mg/L		

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CHAPTER

1

Public Notification (PN)

Public notification is designed to protect public health. As a public water supplier, you are required by law to prepare and distribute public notification to consumers. One of the best ways water systems can contribute to community health is to make sure people within a service area know about water quality issues and how to protect themselves from potential risks. Public notification of drinking water violations and other situations provides a way to educate the public, protect public health, build trust with consumers through open and honest sharing of information, and establish an ongoing, positive relationship with your community. The greater the effort your water system makes to reach and inform everyone in your service area using your system, the more they will trust your commitment to delivering safe water and protecting public health.

Illinois EPA Assistance

Illinois EPA staff is always willing to assist water supply officials when writing a public notice. However, due to all the different circumstances involved (i.e., type of violation, corrective actions taken by the CWS, etc.), the Illinois EPA staff cannot write a public notice for you. You will need to know the basic PN requirements listed in this Chapter before you begin writing a good public notice. Most of your questions will be answered in this Chapter.

For assistance or questions concerning Public Notification, please contact:

PN Coordinator
Illinois EPA /BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794
Telephone: 217-785-0561
Fax 217-557-1407

Please remember there are no short-cuts. Failure to know all the PN requirements may result in your CWS being required to issue a second notice. Additionally, in the event a problem does occur, educated consumers are more likely to understand the problem and support the actions a water utility must take. Many consumer concerns and resulting angry telephone calls can be prevented.

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Public Notice Tier by Violation Type and Delivery Requirements



Each violation and situation requiring public notice has been assigned to one of three categories, or tiers, based on the risk of adverse health effects.

If you are faced with a violation or situation requiring public notification, you must provide the notice to persons served by your system. This means you must take all reasonable steps to inform people if they would not be reached by the most commonly used methods of notification. This does not mean that every person in the area served by the system must be notified (this may be impossible), but you must identify different types of consumers and make an effort to reach them. Additionally, every new billing customer or unit must be notified of any ongoing violations or situations for which notice has previously been issued. Remember that the most effective public notices—those that protect public health and build consumer understanding and trust—reach the largest possible group of people.

For example, if a community water system mails a notice to its billing customers only, people who do not receive water bills, such as tenants whose utilities are included in their rent or people who work in the area served by the system but live elsewhere, would not receive a notice. Publishing a notice in the newspaper and providing copies of the notice to landlords to distribute to their tenants would help reach those people.

Things to keep in mind:

- As you prepare your PN, you **must** complete a self-assessment to ensure all PN requirements are met (see Appendix F).
- Newspaper notices are not allowed as a primary means of notification, unless newspaper notices are directly mailed or hand delivered to each bill paying unit.
- The notification clock starts when the violation is “known” by the public water supply. Examples of “known” would include, but are not limited to: 1) receipt of a non-compliance advisory or violation notice, 2) notification by the Illinois EPA Regional Office, or 3) receipt of sample results that indicate an exceedance.
- Repeated notices are required if the violation or situation persists, unless otherwise directed by the Illinois EPA.

Use the charts on the following pages to determine timing requirements for each violation type.

TIER 1

Tier 1 violations may result in an immediate adverse health problem for some consumers.

Applicable Violations or Other Situations (Tier 1)

- Violation of the MCL for total coliform, when *fecal coliform or E. coli* are present in the water distribution system, or failure to test for fecal coliform or E. coli when any repeat sample tests positive for coliform.
- Violation of the MCL for *nitrate or nitrite*, or when a confirmation sample is not taken within 24 hours of the system's receipt of the first sample showing exceedance of the nitrate or nitrite MCL.
- Violations of the MRDL for *chlorine dioxide* when one or more of the samples taken in the distribution system on the day after exceeding the MRDL at the entrance of the distribution system or when required samples are not taken in the distribution system.
- Violation of the *turbidity* MCL of 5 NTU, where the primacy agency determines after consultation that a Tier 1 notice is required or where consultation does not occur in 24 hours after the system learns of violation.
- Violation of the *treatment technique* requirement resulting from a single exceedance of the maximum allowable turbidity limit, where the Illinois EPA determines after consultation that a Tier 1 notice is required or where consultation does not take place in 24 hours after the system learns of violation.
- Occurrence of a *waterborne disease outbreak*, as defined in 611.101, or other *waterborne emergency*.
- Detection of *E. coli, enterococci, or coliphage* in a ground water source sample.
- Other violations or situations with significant potential for serious adverse effects on human health as a result of short term exposure, as determined by the Illinois EPA either in its state regulations or on a case-by-case basis.

Timing / Distribution Notice Requirements (Tier 1)

Within 24 hours - As soon as practical but within 24 hours of learning of a violation or situation, you must:

- Issue a public notice.
A CWS is required to use, at a minimum, one or more of the following methods (intent is to **immediately** reach all customers):
-Appropriate broadcast media (radio or television)
-Posting and/or Hand Delivery
-Another delivery method approved in writing by the Illinois EPA
- Initiate consultation with the Illinois EPA Regional Field Operations Staff within 24 hours (Weekends--Illinois EPA Emergency Response Unit 800/782-7860).

The consultation with the Illinois EPA is independent of the public notice itself. You must issue the notice within 24 hours, even if you are unable to contact anyone at the Illinois EPA. You may be directed to issue repeat notices for continuing violations or situations, "problem corrected" notices, or, if the initial notice does not meet the requirements, another notice. You must also notify new billing customers of ongoing violations or situations for which you've previously provided notice

REPEAT notices are only required as directed by the Illinois EPA.

TIER 2

Applicable Violations or Other Situations (Tier 2)

- All violations of the *MCL, MRDL, and treatment technique* requirements EXCEPT where Tier 1 notice is required.
- A violation of *monitoring requirements where the primacy agency determines that a Tier 2* public notice is required, taking into account potential health impacts and persistence of the violation.
- Failure to comply with the terms and conditions of any variance or exemption in place.
- For ground water systems providing 4-log treatment, failure to *maintain required treatment* for more than 4 hours.
- Failure to take any required corrective action or be in compliance with a *corrective action plan* for *E. coli positive* source water sample.
- Failure to take any required corrective action or be in compliance with a *corrective action plan* for a *significant deficiency* (after a specified amount of time) under the Ground Water Rule.
- Special public notice for repeated failure to conduct *monitoring for Cryptosporidium*.
- Violation of the treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit, if determined by Illinois EPA on a case by case basis.

NOTE: Systems with turbidity MCL violations based on the average of samples collected over two days or with turbidity single exceedance treatment technique violations must consult with the applicable Illinois EPA Regional Field Operations Staff within 24 hours after learning of the violation (Weekends--Illinois EPA Emergency Response Unit 800/782-7860).

Timing / Distribution Notice Requirements (Tier 2)

Within 30 days of learning of a violation. Notice must be issued notice by:

- direct mail or hand delivery AND
- Another method as needed to reach consumers not likely to receive a notice from methods noted above

REPEAT notices are required **every 3 months** (if the violation or situation persists)

TIER 3

Applicable Violations or Other Situations (Tier 3)

- **Monitoring violations**, except where Tier 1 or Tier 2 notice is required or the Illinois EPA determines that the violation requires a Tier 2 notice.
- **Failure to comply with an established testing procedure**, except where Tier 1 notice is required or the Illinois EPA determines that the violation requires a Tier 2 notice.
- **Operation under a variance** granted under 611.111 or exemption granted under 611.112 of the Safe Drinking Water Act.
- Availability of **unregulated contaminant** monitoring results.
- Exceedance of the secondary maximum contaminant level for **fluoride**.

Timing / Distribution Notice Requirements (Tier 3)

Within 1 year of learning of a violation. Notice must be issued by:

- direct mail or hand delivery (public notice delivery may be provided by CCR if one year requirement is met) AND
- Another method as needed to reach consumers not likely to receive a notice from methods noted above

REPEAT notices are required **annually** (if the violation or situation persists)

Additional Delivery Requirements for all Tier Types

If you are faced with a violation or situation requiring public notification, please remember:

- 1) You must provide the notice to persons served by your water supply.
- 2) You must identify different types of consumers and make an effort to reach each.
- 3) Every new billing customer or unit must be notified of any ongoing violations or situations for which notice has been issued.
- 4) **Everyone in the distribution system must receive the public notice.**

Mandatory Elements of a Public Notice

Your public notice must include specific information in order to be considered complete or satisfactory. You will NOT get credit for issuing PN unless the PN is complete and the Self-assessment Form is submitted. The PN must be clear and readily understandable. **The Public Notice Rule requires the PN to include each of the following ten elements:**

1. Who to contact regarding additional information about the Notice (the name, business address, and phone number of the water system owner, operator, or designee of the public water system as a source of additional information concerning the notice);
2. What happened to make the Notice necessary (violation, variance, exemption or situation, including the contaminants of concern and the contaminant level, as applicable);
3. When the event occurred (when violation or situation occurred);
4. Health significance that may adversely impact consumers (any potential adverse health effects from drinking water, using the mandatory language described in Appendix B);
5. Population at risk including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;
6. Whether alternative public water supplies should be used;
7. What actions, if any, the consumers should take, including when they should seek medical advice or help, if known (a description of any precaution or action such as boiling the water that can be taken by the consumers);
8. What the water supplier is doing to correct the violation or situation;
9. When the water supplier expects to return to compliance or resolve the situation;
10. A statement encouraging the notice recipients to distribute the public notice to other persons served using the following standard language:



Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Certification/Self-Assessment Form

As you prepare your PN, you **must** complete a certification and self-assessment. After you issue your PN, the self-assessment must be signed and submitted to the Illinois EPA along with your PN copy (see “Reporting to the Illinois EPA”, page 11).

The self-assessment is a “check list” of the mandatory PN elements as described on the previous page. Failure to complete a self-assessment prior to issuing public notice may result in not receiving credit for issuing a satisfactory notice and may require the water supplier to issue PN a second time. Please see Appendix F for template/reporting form.

Mandatory Language

Public Notices must include:

- 1) Language to encourage distribution of the notice to all persons served. You must include the following language in all notices where applicable. There are situations where this may not apply—for example this language would probably not be necessary on a posted notice, since posting makes the notice available to everyone who passes by. It would also not be needed for a notice provided by broadcast and print media. Use of this language does not relieve you of your obligation to notify persons served:

“Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.”

- 2) Health Effects language for MCL and MDRL violations, treatment technique violations, and violations of the conditions of a variance or exemption. (See Appendix B for health effects language); and
- 3) For all monitoring and testing procedure violations. You must include the following language for all monitoring and testing procedure violations:

“We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we [‘did not monitor or test’ or ‘did not complete all monitoring or testing’] for [contaminant(s)], and therefore cannot be sure of the quality of your drinking water during that time.”

Special Notices

There are special notices required to be issued for:

- Requirements for **fluoride secondary MCL** exceedances,
- repeated **failure to conduct required Cryptosporidium monitoring**
- failure to **calculate bin classification** or mean Cryptosporidium level
- availability of **unregulated contaminant monitoring** data, and
- failure to conduct and operation under a **variance or exemption**.

Fluoride Secondary MCL Exceedance

Public water supplies that exceed the secondary maximum contaminant level of 2 mg/l for fluoride but do not exceed the MCL of 4 mg/l must include the special fluoride language. An example template and instructions for completion can be found in Appendix E. You must provide notice as soon as practical but no later than 12 months after you learn of the exceedance and repeat the notice annually as long as the exceedance persists.

Repeated Failure to Conduct Required Cryptosporidium Monitoring

Surface water systems that incur a violation for failure to take 3 or more Cryptosporidium samples required under LT2ESWTR are required to issue a Tier 2 special notice. The notice must include required language shown in Appendix D as well as a description of what the system is doing to correct the violation, when the system expects to return to compliance or resolve the violation. The notice must contain the 10 required elements.

Failure to Calculate Bin Classification or Mean Cryptosporidium Level

Surface water systems that incur a violation for failure to calculate their bin classification or mean Cryptosporidium after completing source water monitoring required under LT2ESWTR are required to issue a Tier 2 special notice. The notice must include required language shown in Appendix D as well as a description of what the system is doing to correct the violation, when the system expects to return to compliance or resolve the violation. The notice must contain the 10 required elements.

Availability of Unregulated Contaminant Monitoring Data

If a public water supplier is required to monitor for unregulated contaminants under the Unregulated Contaminant Monitoring Rule, public notice must be issued stating that the results of the monitoring are available and including a telephone number to call for those results. The 10 elements of a public notice do not need to be included, but the water supply must follow the Tier 3 schedule to issue a public notice no later than 12 months after the monitoring results are known. Public water supplies also have the option to include this information in an annual notice for Tier 3 situations and violations.

PN for Operating under a Variance or Exemption

Notices for operating under a variance or exemption have different content requirements than notices for the violations and situations. If you are operating under a variance or exemption, the water supply must notify consumers within one year of obtaining the variance or exemption and repeat the notice annually for as long as the variance or exemption exists. You must include the following in your notice:

- 1) An explanation of the reason(s) for the variance or exemption;
- 2) The date on which the variance or exemption was issued;
- 3) A brief status report on the steps you are taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and
- 4) A notice of any opportunity for public input in the review of the variance or exemption.

PN Formatting Requirements



All public notices must meet certain formatting standards. These requirements help prevent the notice from being “buried” in a newspaper and help ensure that consumers can easily read and understand the notice.

Notices must:

- 1) Be displayed in a conspicuous way (where printed or posted);
- 2) Not contain overly technical language or very small print;
- 3) Not be formatted in a way that defeats the purpose of the notice;
- 4) Not contain language that nullifies the purpose of the notice; and
- 5) **Newspaper notices are not allowed as a primary means of notification, unless the newspaper is directly mailed or hand delivered to each bill-paying unit.**

PN in Languages other than English

If a large proportion of the population you serve does not speak English, you must provide multilingual notices. To assist in determining if you have a large number of non-English speaking consumers visit <http://www.factfinder.census.gov>

Selling / Purchasing Water

The obligation to notify persons served includes notifying owners or operators of other public water supplies that buy or otherwise obtain water from your water supply. The owners or operators of purchased public water supplies are responsible for notifying their customers within the appropriate deadline, with the “clock” starting when the purchasing water supply learns of the violation or situation from you.

Reporting to Illinois EPA



Public water supplies, **within 10 days** of completing the public notification requirements for the initial public notice and any repeat notices, a public water supplier **must** submit the following items:

- 1) Certification and Self-Assessment form stating that the PN has fully complied with the public notification regulations pertaining to the specific violation or situation (Appendix F Certification & Self-Assessment Form); and
- 2) A representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and to the media (e.g. newspaper article, press release to TV/radio, mail notices).

By signing the PN certification and self-assessment form, the water supplier is also stating that future requirements for notifying new billing units of the violations or situation will be met. Please use the certification and self-assessment form or equivalents provided in Appendix F. **MAIL PUBLIC NOTICE and PN CERTIFICATION FORM/ SELF-ASSESSMENT TO:**

PN Coordinator
 Illinois EPA /BOW/CAS #19
 P.O. Box 19276
 Springfield, IL 62794

Failure to Provide Public Notice

Any public water supplier that is required to issue public notice and fails to do so within the time frames required may be issued a formal violation notice pursuant to Section 31(a)(1) of the Illinois Environmental Protection Act.

PN Templates

Templates for Tier 1 violations are provided in Appendix C. Templates for Tier 2 violations are provided in Appendix D. Templates for Tier 3 violations are provided in Appendix E. Along with each template are instructions, including the required method of delivery and instructions for completing individual sections of the notice.

Public water suppliers have the option of providing an annual notice listing all Tier 3 violations occurring during the previous 12 months, as long as the water supplier makes certain that the annual notice is distributed no later than one year after the earliest of the included violations.

For systems with multiple monitoring violations, the advantages of using an annual notice instead of individual notices for every violation are compelling, both in terms of reduced cost and in terms of effective communication with the consumers.

Further, public water suppliers, if appropriate, may use the annual Consumer Confidence Report (CCR) as the vehicle for giving initial public notice for violations occurring during the previous 12 months. However, the use of the CCR as a vehicle for the annual public notice has strict limitations: the CCR can only be used if the CCR meets the timing, content, and distribution requirements required under the Public Notification Rule.

Since the vast majority of the violations require a Tier 3 public notice, the burden on public water supplies with multiple Tier 3 violations would be dramatically reduced through use of an annual notice and, where possible, the CCR. For example, if you were notified of a monitoring violation April 1, 2001, and you were planning to use the CCR, the violation must be identified in the July 1, 2001, CCR. Likewise, if you were notified of a monitoring violation August 1, 2001, and you were planning to use the CCR, the violation must be identified in the July 1, 2002, CCR.

Using the CCR for Tier 3 Public Notices

The Consumer Confidence Report (CCR) may be used for Tier 3 notices. Unlike a separate annual notice, however, using the CCR to meet the public notification obligation requires that you tailor the release of your CCR to meet the unique PN requirements. Using the CCR may reduce some production costs and may reduce redundancy since the violations and situations requiring public notice must also eventually be included in the CCR.

Including your Tier 3 public notice as part of the CCR could also provide the context that more accurately describes what has happened. Before you decide, however, remember that the timing and delivery requirements for CCRs differ from those for PNs. If you use the CCR for public notification, be very careful to adhere to the PN requirement that public notice for Tier 3 violations be completed no later than 12 months from the date the violation occurred. In addition, if you use the CCR, it must be provided to persons served that are not necessarily only the billing customers who would receive the CCR. Keep in mind, small community water systems that have a mailing waiver for CCR will not satisfy PN delivery requirements.

Be Prepared

Problems or emergency situations can arise at any time. Advance preparation can make your job easier in the event your water supply is required to issue public notice. Keep public notice requirements in an easily accessible area and notify key staff of the location. Use this *Handbook* and associated documents. Use the USEPA PN Handbook and other USEPA PN documents found at <http://www.epa.gov/safewater/pn.html>. Eventually this handbook and associated documents will be posted on the Illinois EPA DWCU web site at

www.epa.state.il.us/water/forms.html. Determine who your spokesperson will be that will respond to consumer calls or media questions, and be sure the spokesperson is aware of all circumstances pertinent to the Public Notice.

The following steps should be considered when preparing public notice:

1. Identify the Illinois EPA contact person, contact numbers, and preferred method of contact.
2. Prepare a Tier 1 public notice template and keep hard and electronic copies in easily accessible locations. Notify key staff of the locations. See Appendix C.
3. Print hard copies of PN templates for storage in an easily accessible location. Eventually this handbook and associated documents will be posted on the Illinois EPA DWCU web at www.epa.state.il.us/water/forms.html Bookmark <http://www.epa.gov/safewater/pn.html> to obtain an electronic versions of templates. See also Appendices C-E for hard copies.
4. Discuss multilingual considerations.
5. Develop a Key Contact List for both internal personnel and consultants, and for external interests. This should include government and PWS external company contacts such as hospitals, nursing homes, healthcare facilities, food processors and bottlers, restaurants, and other establishments that depend on delivery of safe water. Include phone, fax, and cellular phone numbers, as well as e-mail addresses. Keep this list easily accessible.
6. Where possible, work with a local health agency or a medical professional to establish emergency contact procedures for Tier 1, 2 or 3 violations.
7. Assemble a list of local printers and emergency contact numbers, where possible, in the event a Tier 1 public notice must be issued. Make arrangements for billing, paper stock, ink color and printing quantity, in advance if possible. Similar arrangements may be helpful with a graphic designer if your organization uses logos in publicly-distributed documents.
8. Store a hard copy of the PN Certification Self-assessment Form in an easily accessible location. See Appendix F.

APPENDIX A

Specific Violations and Other Situations Requiring Public Notice

This appendix details the specific drinking water Violation Type(s) and the associated Public Notice Tier(s)

Appendix A

Specific Violations and Other Situations Requiring PN

Contaminant	MCL/MRDL/TT ¹ Violations: Tier of Public Notice Required	Monitoring and Testing Procedure Violations: Tier of Public Notice Required
Microbiological Contaminants		
Total coliform	2	3
Fecal coliform/ <i>E. coli</i>	1	1, 3 ²
Turbidity MCL	2	3
Turbidity MCL (average of 2 days samples >5 NTU)	2, 1 ³	3
Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	2, 1 ⁴	3
Surface Water Treatment Rule violations, other than violations resulting from single exceedance of maximum allowable turbidity level (TT)	2	3
Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of maximum turbidity level (TT) ⁵	2	3
Inorganic Chemicals (IOCs)		
Antimony	2	3
Arsenic	2	3
Asbestos (fibers >10 µm)	2	3
Barium	2	3
Beryllium	2	3
Cadmium	2	3
Chromium (total)	2	3
Cyanide	2	3
Fluoride	2	3
Mercury (inorganic)	2	3
Nitrate	1	1, 3 ⁶
Nitrite	1	1, 3 ⁶
Total Nitrate and Nitrite	1	3
Selenium	2	3
Thallium	2	3

Appendix A

Specific Violations and Other Situations Requiring PN

Contaminant	MCL/MRDL/TT ¹ Violations: Tier of Public Notice Required	Monitoring and Testing Procedure Violations: Tier of Public Notice Required
Lead and Copper Rule (Action Level for lead is 0.015 mg/L, for copper is 1.3 mg/L)		
Lead and Copper Rule (TT)	2	3
Synthetic Organic Chemicals (SOCs)		
2,4-D	2	3
2,4,5-TP (Silvex)	2	3
Alachlor	2	3
Atrazine	2	3
Benzo(a)pyrene (PAHs)	2	3
Carbofuran	2	3
Chlordane	2	3
Dalapon	2	3
Di (2-ethylhexyl) adipate	2	3
Di (2-ethylhexyl) phthalate	2	3
Dibromochloropropane	2	3
Dinoseb	2	3
Dioxin (2,3,7,8-TCDD)	2	3
Diquat	2	3
Endothall	2	3
Endrin	2	3
Ethylene dibromide	2	3
Glyphosate	2	3
Heptachlor	2	3
Heptachlor epoxide	2	3
Hexachlorobenzene	2	3
Hexachlorocyclopentadiene	2	3
Lindane	2	3
Methoxychlor	2	3
Oxamyl (Vydate)	2	3
Pentachlorophenol	2	3
Picloram	2	3
Polychlorinated biphenyls (PCBs)	2	3
Simazine	2	3
Toxaphene	2	3

Appendix A

Specific Violations and Other Situations Requiring PN

Contaminant	MCL/MRDL/TT ¹ Violations:	Monitoring and Testing Procedure Violations:
	Tier of Public Notice Required	Tier of Public Notice Required
Volatile Organic Chemicals (SOCs)		
Benzene	2	3
Carbon tetrachloride	2	3
Chlorobenzene (monochlorobenzene)	2	3
<i>o</i> -Dichlorobenzene	2	3
<i>p</i> -Dichlorobenzene	2	3
1,2-Dichloroethane	2	3
1,1-Dichloroethylene	2	3
<i>cis</i> -1,2-Dichloroethylene	2	3
<i>trans</i> -1,2-Dichloroethylene	2	3
Dichloromethane	2	3
1,2-Dichloropropane	2	3
Ethylbenzene	2	3
Styrene	2	3
Tetrachloroethylene	2	3
Toluene	2	3
1,2,4-Trichlorobenzene	2	3
1,1,1-Trichloroethane	2	3
1,1,2-Trichloroethane	2	3
Trichloroethylene	2	3
Vinyl chloride	2	3
Xylenes (total)	2	3
Radioactive Contaminants		
Beta/photon emitters	2	3
Alpha emitters (gross alpha)	2	3
Combined radium (226 and 228)	2	3
<p>Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals: Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). USEPA set standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs).⁷</p>		
Total trihalomethanes (TTHMs)	2	3
Haloacetic Acids (HAAs)	2	3
Bromate	2	3
Chlorite	2	3

Appendix A

Specific Violations and Other Situations Requiring PN

Contaminant	MCL/MRDL/TT ¹ Violations:	Monitoring and Testing Procedure Violations:
	Tier of Public Notice Required	Tier of Public Notice Required
Chlorine (MRDL)	2	3
Chloramine (MRDL)	2	3
Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	2 ⁸ , 3
Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	1 ⁹	1
Control of DBP precursors--TOC (TT)	2	3
Bench marking and disinfection profiling	N/A	3
Development of monitoring plan	N/A	3
Other Treatment Techniques		
Acrylamide (TT)	2	N/A
Epichlorohydrin (TT)	2	N/A
Unregulated contaminants ¹⁰	N/A	3
Nickel	N/A	3
Operation under a variance or exemption	3	N/A
Violation of conditions of a variance or exemption	2	N/A
Fluoride secondary maximum contaminant level (SMCL) exceedance	3	N/A
Exceedance of nitrate MCL for non-community systems, as allowed by primacy agency	1	N/A
Availability of unregulated contaminant monitoring data	3	N/A
Waterborne disease outbreak	1	N/A
Other waterborne emergency ¹¹	1	N/A

Appendix A

Specific Violations and Other Situations Requiring PN

Appendix A Footnotes

¹MCL - Maximum contaminant level, MRDL - Maximum residual disinfectant level, TT - Treatment technique

²Failure to test for fecal coliform or *E. coli* is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3.

³Systems that violate the turbidity MCL of 5 NTU based on an average of measurements over two consecutive days must contact and discuss the problem and proposed solution with the Illinois EPA Regional Field Operations Staff within 24 hours after learning of the violation. Based on this consultation, the Illinois EPA may subsequently decide to elevate the violation to Tier 1. **If a water supply is unable to make contact with the EPA Regional Field Operations staff in the 24-hour period, the violation is automatically elevated to Tier 1.**

⁴Systems with treatment technique violations involving a *single* exceedance of a maximum turbidity limit under the Surface Water Treatment Rule (SWTR) or the Interim Enhanced Surface Water Treatment Rule (IESWTR) are required to contact and discuss the problem and proposed solution with the Illinois EPA Regional Field Operations Staff within 24 hours after learning of the violation. Based on this consultation, the Illinois EPA may subsequently decide to elevate the violation to Tier 1. **If a system is unable to make contact with the Illinois EPA Regional Field Operations staff in the 24-hour period, the violation is automatically elevated to Tier 1.**

⁵Most of the requirements of the Interim Enhanced Surface Water Treatment Rule become effective January 1, 2002 for surface water systems and ground water systems under the direct influence of surface water serving at least 10,000 persons. The Surface Water Treatment Rule remains in effect for systems serving at least 10,000 persons even after 2002; the Interim Enhanced Surface Water Treatment Rule adds additional requirements and may in some cases require that new compliance actions be taken.

⁶Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are Tier 3.

⁷Surface public water supplies and ground public water supplies under the influence of surface water serving 10,000 or greater must comply with new DBP MCLs, disinfectant MRDLs, and related monitoring requirements beginning January 1, 2002. All other public water supplies must meet the MCLs and MRDLs beginning January 1, 2004. Surface public water supplies and ground public water supplies under the influence of surface water, transient non-community systems serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. ⁷Surface public water supplies and ground public water supplies under the influence of surface water, transient non-community systems serving fewer than 10,000 persons and using only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

⁸Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL at the entrance to the distribution system is a Tier 2 violation.

⁹If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and one or more samples taken in the distribution system the next day exceed the MRDL, Tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers Tier 1 notification.

¹⁰Some water systems must monitor for certain unregulated contaminants.

Appendix A

Specific Violations and Other Situations Requiring PN

Appendix A Footnotes

¹¹Other waterborne emergencies require a Tier 1 public notice for situations that do not meet the definition of a waterborne disease outbreak : “the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system (PWS) that is deficient in treatment, as determined by the appropriate local or State agency” but still have the potential to have serious adverse effects on health as a result of short-term exposure. These could include outbreaks not related to treatment deficiencies, as well as situations that have the potential to cause outbreaks, such as failures or significant interruption in water treatment processes, natural disasters that disrupt the water supply or distribution system, chemical spills, or unexpected loading of possible pathogens into the source water.

APPENDIX B

Standard Language to Include in Public Notices

This appendix details the specific regulated drinking water contaminants and the associated health effects language, MCLs and MCLGs

Appendix B

Standard Language to Include in Public Notices

State and Federal Regulated Contaminants

KEY

AL	Action Level	MRDLG	Maximum Residual Disinfectant Level Goal	mg/L	Milligrams per Liter
MCL	Maximum Contaminant Level	MFL	Million Fibers per Liter	pCi/L	Picocuries per Liter (a measure of radioactivity)
MCLG	Maximum Contaminant Level Goal	NTU	Nephelometric Turbidity Units	mrem/yr	Millirems per year (a measure of radiation absorbed by the body)
MRDL	Maximum Residual Disinfectant Level	TT	Treatment Technique		

TABLE DEFINITIONS

MCL in mg/L	The MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. If a facility exceeds the MCL, the facility must immediately investigate treatment options to reduce the level of the contaminant in the water supply.
MCLG in mg/L	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MRDL in mg/L	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG in mg/L	Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
TT	Treatment Technique: For some contaminants, a TT is established rather than an MCL. TT is a required process intended to reduce or control the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant that triggers treatment or other required actions by the water supply.

Units Conversion Examples:

If you receive a sample result equal to 42 ug/L Iron and you want to convert to units of mg/L:

$$\frac{42 \text{ ug (micrograms)}}{\text{L (Liter)}} \times \frac{1 \text{ mg}}{1000 \text{ ug}} = .042 \text{ mg/L Iron}$$

If you receive a sample result equal to .042 mg/L Iron and you want to convert to units of ug/L:

$$\frac{.042 \text{ mg}}{\text{L (Liter)}} \times \frac{1000 \text{ ug}}{1 \text{ mg}} = 42 \text{ ug/L Iron}$$

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i>MICROBIAL CONTAMINANTS</i>			
TOTAL COLIFORM BACTERIA	MCL: presence of coliform bacteria in >5% of monthly samples <i>Footnote 1</i>	Zero	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
FECAL COLIFORM and E. COLI	MCL: a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E.coli</i> positive	Zero	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
TURBIDITY (SWTR) <i>Footnote 2</i>	TT	N/A	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
TURBIDITY (IESWTR) <i>Footnote 3</i>	TT	N/A	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Appendix B Footnotes

¹For public water supplies analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For public water supplies analyzing fewer than 40 samples per month, no more than one sample per month may be positive for total coliforms.

²There are various regulations that set turbidity standards for different types of public water supplies, the 1989 SWTR and the 1998 IESWTR. Public water supplies subject to the SWTR (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered public water supplies, no more than 5% of samples may exceed 0.5 NTU in systems using conventional or direct filtration and must not exceed 1 NTU in public water supplies using slow sand or diatomaceous earth filtration or other filtration technologies approved by the Illinois EPA.

³There are various regulations that set turbidity standards for different types of public water supplies including the 1989 SWTR and the 1998 IESWTR. For public water supplies subject to the IESWTR (systems serving at least 10,000 people, using surface water or ground water under the direct influence of surface water), that use conventional filtration or direct filtration, the turbidity level of a water supply's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a water supply's combined filter effluent must not exceed 1 NTU at any time. Public water supplies subject to the IESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the Illinois EPA.

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<u><i>SURFACE WATER TREATMENT RULE (SWTR) AND INTERIM ENHANCED SURFACE WATER TREATMENT RULE (IESWTR)</i></u>			
Cryptosporidium (IESWTR), Giardia Lamblia (SWTR/IESWTR), Heterotrophic plate count bacteria (HPC) (SWTR/IESWTR) <i>Footnote 5,</i> Legionella (SWTR/IESWTR), Viruses (SWTR/IESWTR)	As of 01/01/02: TT <i>Footnote 4</i>	As of 01/01/02: Zero	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Appendix B Footnotes

⁴SWTR and IESWTR treatment technique violations that involve turbidity exceedances may use the Potential Health Effects from exposure above the MCL for turbidity instead.

⁵The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful. HPC is simply an alternative method of determining disinfectant residual levels. The number of such bacteria is an indicator of whether there is enough disinfectant in the distribution system.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i><u>RADIONUCLIDE CONTAMINANTS</u></i>			
URANIUM	As of 12/8/03 0.03	As of 12/8/03 Zero	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
BETA/PHOTON EMITTERS	4 mrem/yr	None As of 12/8/03 Zero	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
ALPHA EMITTERS	15 pCi/l	None As of 12/8/03 Zero	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
COMBINED RADIUM (Ra-226 and Ra-228)	5 pCi/L	None as of 12/8/03 Zero	Some people who drink water containing radium-226 or radium-228 in excess of the MCL over many years may have an increased risk of getting cancer.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i>INORGANIC CONTAMINANTS</i>			
ANTIMONY	0.006	0.006	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
ARSENIC	0.010	None	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
ASBESTOS (fiber >10 micrometers)	7 MFL	7 MFL	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
BARIUM	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
BERYLLIUM	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
CADMIUM	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
CHROMIUM (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
COPPER	AL=1.3mg/L	1.3	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal physician. [Wilson's Disease is a hereditary, genetic disease which can be complicated by ingesting drinking water which contains higher levels of copper]
CYANIDE	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i>INORGANIC CONTAMINANTS</i>			
FLUORIDE	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth, before they erupt from the gums.
IRON	1.0 <i>Footnote 6</i>	N/A	Excessive iron in water may cause staining of laundry & plumbing fixtures & may accumulate as deposits in the distribution system.
LEAD	AL=0.015 mg/L	Zero	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
MANGANESE	0.15 <i>Footnote 6</i>	N/A	Excessive manganese in the water may cause staining of plumbing fixtures and laundry. It may also produce an unpleasant taste in beverages, including coffee & tea.
MERCURY (INORGANIC)	0.002	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
NITRATE (measured as Nitrogen)	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
NITRITE (measured as Nitrogen)	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
TOTAL NITRATE AND NITRITE	10	10	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
SELENIUM	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

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Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i>INORGANIC CONTAMINANTS</i>			
SODIUM	<i>Footnote 7</i>	N/A	Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician.
THALLIUM	0.002	0.0005	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
ZINC	5.0 <i>Footnote 6</i>	N/A	Some people who drink water containing excessive zinc may experience toxic effects to the blood and cardiovascular systems, damage may occur to the skin, respiratory system, developmental system, reproductive system, and it may weaken the immune system.

Appendix B Footnotes

⁶This contaminant is only regulated by the State. No federal MCL exists.

⁷There is no state or federal MCL for sodium.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i>SYNTHETIC ORGANIC CONTAMINANTS including PESTICIDES and HERBICIDES</i>			
2,4-D	Federal 0.07 State 0.01 <i>Footnote 8</i>	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [SILVEX]	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
ALACHLOR	0.002	Zero	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
ALDRIN	0.001 <i>Footnote 6</i>	N/A	Some people who drink water containing excessive aldrin over a long period of time may experience problems with their liver, nervous system, weakened immune system, fetal damage may occur in pregnant women, and may have an increased risk of getting cancer.
ATRAZINE	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or have reproductive difficulties.
BENZO(A)PYRENE [PAHs]	0.0002	Zero	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
CARBOFURAN	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, nervous or reproductive systems.
CHLORDANE	0.002	Zero	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.

Appendix B Footnotes

⁶This contaminant is only regulated by the State. No federal MCL exists.

⁸The State has imposed a more stringent MCL than the federal MCL.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i><u>SYNTHETIC ORGANIC CONTAMINANTS including PESTICIDES and HERBICIDES</u></i>			
DALAPON	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
DDT	0.05 <i>Footnote 6</i>	N/A	Some people who drink water containing excessive DDT may experience problems with their reproductive or developmental systems, and may have an increased risk of getting cancer.
DI(2-ETHYLHEXYL) ADIPATE	0.4	0.4	Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience weight loss, liver enlargement or possible reproductive difficulties.
DI(2-ETHYLHEXYL) PHTHALATE	0.006	Zero	Some people who drink water containing di(2-ethylhexyl)phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
DIBROMOCHLOROPROPANE (DBCP)	0.0002	Zero	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
DIELDRIN	0.001 <i>Footnote 6</i>	N/A	Some people who drink water containing excessive dieldrin over a long period of time may experience problems with their liver, nervous system, weakened immune system, fetal damage may occur in pregnant women, and may have an increased risk of getting cancer
DINOSEB	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
DIQUAT	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
DIOXIN [2,3,7,8-TCDD]	3×10^{-8}	Zero	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.

Appendix B Footnotes

⁶This contaminant is only regulated by the State. No federal MCL exists.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i><u>SYNTHETIC ORGANIC CONTAMINANTS including PESTICIDES and HERBICIDES</u></i>			
ENDOTHALL	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
ENDRIN	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
ETHYLENE DIBROMIDE	0.00005	Zero	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
GYLPHOSATE	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
HEPTACHLOR	Federal 0.0004 <i>State 0.0001 Footnote 8</i>	Zero	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
HEPTACHLOR EPOXIDE	Federal 0.0002 <i>State 0.0001 Footnote 8</i>	Zero	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
HEXACHLOROBENZENE	0.001	Zero	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
HEXACHLOROCYCLO-PENTADIENE	0.05	0.05	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
LINDANE	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
METHOXYCHLOR	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.

Appendix B Footnotes

⁸The State has imposed a more stringent MCL than the federal MCL.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i><u>SYNTHETIC ORGANIC CONTAMINANTS including PESTICIDES and HERBICIDES</u></i>			
OXAMYL [VYDATE]	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs-POLYCHLORINATED BIPHENYLS	0.0005	Zero	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
PENTACHLOROPHENOL	0.001	Zero	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
PICLORAM	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
SIMAZINE	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
TOXAPHENE	0.003	Zero	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<u>VOLATILE ORGANIC CONTAMINANTS</u>			
BENZENE	0.005	Zero	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
CARBON TETRACHLORIDE	0.005	Zero	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
CHLOROBENZENE	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
o-DICHLOROBENZENE	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
p-DICHLOROBENZENE	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-DICHLOROETHANE	0.005	Zero	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-DICHLOROETHYLENE	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
CIS-1,2-DICHLOROETHYLENE	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
TRANS-1,2-DICHLOROETHYLENE	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
DICHLOROMETHANE	0.005	Zero	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-DICHLOROPROPANE	0.005	Zero	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<u>VOLATILE ORGANIC CONTAMINANTS</u>			
ETHYLBENZENE	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
STYRENE	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
TETRACHLOROETHYLENE	0.005	Zero	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
1,2,4-TRICHLOROBENZENE	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-TRICHLOROETHANE	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-TRICHLOROETHANE	0.005	0.003	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
TRICHLOROETHYLENE	0.005	Zero	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
TOLUENE	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
VINYL CHLORIDE	0.002	Zero	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
XYLENES (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<i>DISINFECTION / DISINFECTANT BY-PRODUCTS (*as of 01/01/02)</i>			
TOTAL TRIHALOMETHANES (TTHMs)	0.10 *0.080 <i>as of 01/01/02</i>	None *N/A <i>Footnote 9</i>	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
HALOACETIC ACIDS (HAAs)	*0.060	*N/A <i>Footnote 9</i>	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
BROMATE	*0.010	*Zero	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
CHLORITE	*1.0	*0.8	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
CHLORINE	*4.0 (MRDL)	*4.0 (MRDLG)	Some people who use drinking water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
CHLORAMINES	*4.0 (MRDL)	*4.0 (MRDLG)	Some people who drink water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
CHLORINE DIOXIDE	*0.8 (MRDL)	*0.8 (MRDLG)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
ACRYLAMIDE	TT	Zero	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.

Appendix B

Standard Language to Include in Public Notices

Contaminant	MCL in mg/L	MCLG in mg/L	Potential Health Effects from exposure above the MCL
<u>DISINFECTION / DISINFECTANT BY-PRODUCTS (*as of 01/01/02)</u>			
EPICHLOROHYDRIN	TT	Zero	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Appendix B Footnotes

¹For public water supplies analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For public water supplies analyzing fewer than 40 samples per month, no more than one sample per month may be positive for total coliforms.

²There are various regulations that set turbidity standards for different types of public water supplies, the 1989 SWTR and the 1998 IESWTR. Public water supplies subject to the SWTR (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered public water supplies, no more than 5% of samples may exceed 0.5 NTU in systems using conventional or direct filtration and must not exceed 1 NTU in public water supplies using slow sand or diatomaceous earth filtration or other filtration technologies approved by the Illinois EPA.

³There are various regulations that set turbidity standards for different types of public water supplies including the 1989 SWTR and the 1998 IESWTR. For public water supplies subject to the IESWTR (systems serving at least 10,000 people, using surface water or ground water under the direct influence of surface water), that use conventional filtration or direct filtration, the turbidity level of a water supply's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a water supply's combined filter effluent must not exceed 1 NTU at any time. Public water supplies subject to the IESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the Illinois EPA.

⁴SWTR and IESWTR treatment technique violations that involve turbidity exceedances may use the Potential Health Effects from exposure above the MCL for turbidity instead.

⁵The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful. HPC is simply an alternative method of determining disinfectant residual levels. The number of such bacteria is an indicator of whether there is enough disinfectant in the distribution system.

⁶This contaminant is only regulated by the State. No federal MCL exists.

⁷There is no state or federal MCL for sodium.

⁸The State has imposed a more stringent MCL than the federal MCL.

APPENDIX C

Tier 1

Public Notice Templates and Instructions

The templates in this Appendix are designed to help operators create public notices for a variety of violations. However, it is important to note that the templates included here are not inclusive and may not be appropriate for all violations and situations. Depending on the severity of your violation or situation, it may be necessary to modify the instructions you give to consumers or to change the timing of the notice.

- ***Nitrate*** (Page 2)
- ***Nitrite*** (Page 4)
- ***Fecal Coliform or E. Coli*** (Page 6)
- ***Waterborne Disease Outbreak*** (Page 8)
- **IESWTR or LT1 CFE Maximum Turbidity Exceedance, or Turbidity Single Exceedance as Tier 1 Notice** (Page 10)
- ***Chlorine Dioxide Maximum Residual Disinfectant Level (MRDL)*** (Page 12)
- **GWR Fecal Indicator-Positive Source Sample Notice** (Page 14)
- ***Tier 1 Problem Corrected*** (Page 16)

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Appendix C

Tier 1 Public Notice Templates

Nitrate: Instructions and Template

Instructions for Nitrate Notices

Exceeding the nitrate maximum contaminant level is a Tier 1 violation. You must provide public notice to persons served as soon as practical but within 24 hours after you learn of the violation. During this time period, you must also contact your Illinois EPA Regional Office. You should also coordinate with your local health department. **This template is also applicable to nitrite and total nitrate and nitrite violations.** You must use one or more of the following methods to deliver the notice to consumers:

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings); since notice must be provided in a manner reasonably calculated to reach all persons served.

The notice on the next page is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice. If you do, you must still include all required elements and leave the health effects language in italics unchanged. This language is mandatory. If you post or hand deliver, print your notice on letterhead, if available.

Alternative Sources of Water

If you are providing alternative sources of water for infants, your notice should say where it can be obtained. Remember that bottled water can also be contaminated. If you are providing bottled water, make sure it meets the standard for nitrates by contacting the bottler and asking for the most recent test results.

Repeat Notices

If this is a repeat notice, or if your system's nitrate levels fluctuate around the MCL, you may wish to include an explanation similar to the following:

You were initially notified of high nitrate levels on [date]. Since that time we have been monitoring the nitrate concentration every three months. Seasonal fluctuations in nitrate concentrations have been observed, due to nitrates contained in fertilizer. It appears that high nitrates occur during late summer and fall. Note that prior to [year] we were meeting drinking water standards for nitrate.

Corrective Action

In your notice, describe corrective actions you are taking. The bullet below describes one action commonly taken by water systems with nitrate/nitrite violations. Use this language, if appropriate, or develop your own:

- We are investigating water treatment and other options. These may include drilling a new well, mixing the water with low-nitrate water from another source, or buying water from another water system.

After Issuing the Notice

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

Nitrate Template

DRINKING WATER ALERT

[System] water has high levels of nitrate

DO NOT GIVE THE WATER TO INFANTS UNDER 6 MONTHS OLD OR USE IT TO MAKE INFANT FORMULA

Water sample results received [date] showed nitrate levels of [level and units]. This is above the nitrate standard, or maximum contaminant level (MCL), of 10 mg/L. Nitrate in drinking water is a serious health concern for infants less than six months old.

What should I do?

- **DO NOT GIVE THE WATER TO INFANTS.** *Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.* Blue baby syndrome is indicated by blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.
- Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.
- **DO NOT BOIL THE WATER.** Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.
- Adults and children older than six months can drink the tap water (nitrate is a concern for infants because they can't process nitrates in the same way adults can). However, if you are pregnant or have specific health concerns, you may wish to consult your doctor.

What happened? What is being done?

Nitrate in drinking water can come from natural, industrial, or agricultural sources (including septic systems and runoff). Levels of nitrate in drinking water can vary throughout the year. [We'll let you know when the amount of nitrate is again below the limit].

[Describe corrective action, seasonal fluctuations, and when system expects to return to compliance.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system].

Water System ID# _____

Date distributed _____

Nitrite: Instructions and Template

Instructions for Nitrite Notices

Exceeding the nitrate maximum contaminant level is a Tier 1 violation. You must provide public notice to persons served as soon as practical but within 24 hours after you learn of the violation. During this time period, you must also contact your Illinois EPA Regional Office. You should also coordinate with your local health department. **This template is also applicable to nitrite and total nitrate and nitrite violations.** You must use one or more of the following methods to deliver the notice to consumers:

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings); since notice must be provided in a manner reasonably calculated to reach all persons served.

The notice on the next page is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice. If you do, you must still include all required elements and leave the health effects language in italics unchanged. This language is mandatory. If you post or hand deliver, print your notice on letterhead, if available.

Alternative Sources of Water

If you are providing alternative sources of water for infants, your notice should say where it can be obtained. Remember that bottled water can also be contaminated. If you are providing bottled water, make sure it meets the standard for nitrates by contacting the bottler and asking for the most recent test results.

Repeat Notices

If this is a repeat notice, or if your system's nitrate levels fluctuate around the MCL, you may wish to include an explanation similar to the following:

You were initially notified of high nitrite levels on [date]. Since that time we have been monitoring the nitrite concentration every three months. Seasonal fluctuations in nitrite concentrations have been observed, due to nitrites contained in fertilizer. It appears that high nitrites occur during late summer and fall. Note that prior to [year] we were meeting drinking water standards for nitrite.

Corrective Action

In your notice, describe corrective actions you are taking. The bullet below describes one action commonly taken by water systems with nitrite violations. Use this language, if appropriate, or develop your own:

- We are investigating water treatment and other options. These may include drilling a new well, mixing the water with low-nitrite water from another source, or buying water from another water system.

After Issuing the Notice

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

Nitrite MCL Template

DRINKING WATER ALERT

[System] water has high levels of nitrite

DO NOT GIVE THE WATER TO INFANTS UNDER 6 MONTHS OLD OR USE IT TO MAKE INFANT FORMULA

Water sample results received [date] showed nitrite levels of [level and units]. This is above the nitrite standard, or maximum contaminant level (MCL), of 1 milligram per liter (mg/L). Nitrite in drinking water is a serious health concern for infants less than six months old.

What should I do?

- **DO NOT GIVE THE WATER TO INFANTS.** *Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. Blue baby syndrome is indicated by blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.*
- Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrites should be used for infants until further notice.
- **DO NOT BOIL THE WATER.** Boiling, freezing, filtering, or letting water stand does not reduce the nitrite level. Excessive boiling can make the nitrites more concentrated, because nitrites remain behind when the water evaporates.
- Adults and children older than six months can drink the tap water (nitrite is a concern for infants because they can't process nitrites in the same way adults can). However, if you are pregnant or have specific health concerns, you may wish to consult your doctor.

What happened? What is being done?

Nitrite in drinking water can come from natural, industrial, or agricultural sources (including septic systems and run-off). Levels of nitrite in drinking water can vary throughout the year. [We'll let you know when the amount of nitrite is again below the limit].

[Describe corrective action, seasonal fluctuations, and when system expects to return to compliance.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Fecal Coliform or E. Coli: Instructions and Template

Instructions for Fecal Coliform or *E. Coli* Notice

Since exceeding the fecal coliform or *E. coli* maximum contaminant level is a Tier 1 violation, you must provide public notice to persons served as soon as practical but within 24 hours after you learn of the violation. During this time, you must also contact your Illinois EPA Regional Office. You should also coordinate with your local health department. You may also have to modify the template if you also have high nitrate levels or other coliform MCL violations. You must use one or more of the following methods to deliver the notice to consumers:

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, food service businesses or apartment buildings), since notice must be provided in a manner reasonably calculated to reach all persons served.

The template on the next page is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice. If you do, you must still include all required elements and leave the health effects language in italics unchanged. This language is mandatory. If you post or hand deliver, print your notice on letterhead, if available.

Population Served

Make sure it is clear who is served by your water system--you may need to list the areas you serve. Be sure to notify any other public water supply that purchases drinking water from your public water supply. Notify the local health department.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with fecal coliform or *E. coli* violations. Use one or more of the following actions, if appropriate, or develop your own:

- We are chlorinating and flushing the water system.
- We are switching to an alternate drinking water source.
- We are increasing sampling for coliform bacteria to determine the source of the contamination.
- We are repairing the wellhead seal.
- We are repairing the storage tank.
- We are restricting water intake from the river/lake/reservoir to prevent additional bacteria from entering the water system and restricting water use to emergencies.

After Issuing the Notice

Send a copy of each type of notice and a certification that you have met all the public notice requirements to the Illinois EPA within 10 days from the time you issue the notice.

It is recommended that you notify health professionals in the area of the violation. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately. In addition, notify health professionals, including dentists, which use tap water during their procedures and need to know of contamination so they can use bottled water.

Fecal Coliform or *E. Coli* Template

DRINKING WATER ALERT

[System] water is contaminated with [fecal coliform] or [*E. coli*]

BOIL YOUR WATER BEFORE USING

Fecal coliform [or *E. coli*] bacteria were found in the water supply on [date]. These bacteria can make you sick, and are a particular concern for people with weakened immune systems.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for 3-5 minutes, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.
- *Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.*
- The symptoms above can result from many causes other than being caused by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

What happened? What is being done?

Bacterial contamination can occur when increased run-off enters the drinking water source (for example, following heavy rains). It can also happen due to a break in the distribution system (pipes), a failure in the water treatment process, or through a cross-connection.

[Describe corrective action.] We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Waterborne Disease Outbreak Instructions and Template

Instructions for Waterborne Disease Outbreak Notice

Since a waterborne disease outbreak is a Tier 1 situation, you must provide public notice to persons served as soon as practical but within 24 hours after you learn of the situation. You must also contact your Illinois EPA Regional Office during this time. You should coordinate with your local health department as well. **You must also issue a public notice if you are experiencing a waterborne emergency other than a waterborne disease outbreak, such as one caused by flooding or treatment failure. In such cases, you may be able to modify this template to apply to your situation.** Check with Illinois EPA for more direction. More information on waterborne disease outbreaks and emergencies is available from the Centers for Disease Control and Prevention (www.cdc.gov/health/diseases.htm, 1 (800) 311-3435). For a waterborne disease outbreak or other emergency, you must use one or more of the following methods to deliver the notice to consumers:

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, food service businesses or apartment buildings), since notice must be provided in a manner reasonably calculated to reach all persons served. If you post or hand deliver, print your notice on letterhead, if available. The notice on the next page is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio, TV notice, or posting.

Describing the Outbreak

If known, list any organisms detected, the number of affected people, any water treatment problems contributing to the waterborne disease outbreak, and any sources of contamination, such as flooding.

Potential Health Effects

No mandatory health effects language exists for waterborne disease outbreaks. You may wish to use the sentence below, if appropriate, or contact Illinois EPA or health department. These symptoms are common to many diseases caused by microscopic organisms:

- Symptoms may include nausea, cramps, diarrhea, jaundice, and associated headaches and fatigue.

Population at Risk

Some people who contract waterborne diseases can be affected more severely than others, as described on the next page. The specific language on the reverse is not mandatory, but you must provide information on the population at risk. In addition, make sure it is clear who is served by your water system--you may need to list the areas you serve. Be sure to notify any other public water supply that purchases drinking water from your public water supply. Notify the local health department.

Corrective Action

In your notice, describe the corrective actions you are taking. Listed below are some steps commonly taken by water systems with waterborne disease outbreaks. Use one or more of the following actions, if appropriate, or develop your own:

- We are repairing our filtration system.
- We are increasing sampling for disease-causing organisms.

Make sure to send a copy of each type of notice and a statement certifying that you've met all public notification requirements to the Illinois EPA within 10 days after issuing the notice.

It is recommended that you notify health professionals in the area of the outbreak. People may call their doctors with questions about how the situation may affect their health, and the doctors should have information in order to respond appropriately. In addition, notify health professionals, including dentists that use tap water during their procedures and need to know of contamination so they can use bottled water.

Waterborne Disease Outbreak Template

DRINKING WATER ALERT

BOIL YOUR WATER BEFORE USING

Disease-causing organisms have entered [system's] water supply.

These organisms are causing illness in people served by [system]. We learned of a waterborne disease outbreak from [agency] on [date].

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for 3-5 minutes, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice. Boiling kills bacteria and other organisms in the water.
- [Describe symptoms of the waterborne disease.] If you experience one or more of these symptoms and they persist, contact your doctor. People with severely compromised immune systems, infants, and some elderly persons may be at increased risk. These people should seek advice about drinking water from their health care providers.

What happened? What is being done?

[Describe the outbreak, corrective action, and when the outbreak might end.]

[We will inform you when you no longer need to boil your water.]

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system].

Water System ID# _____

Date distributed _____

IESWTR or LT1 CFE Maximum Turbidity Exceedance, or Turbidity Single Exceedance as Tier 1 Notice

Instructions for IESWTR or LT1 CFE Max Turbidity Exceedance, or Turbidity Single Exceedance as Tier 1

If Illinois EPA has designated this turbidity single exceedance as a Tier 1 violation, you must provide public notice to persons served within 24 hours after it has been designated Tier 1. Turbidity violations are Tier 2 by default, but may frequently be elevated to Tier 1 by Illinois EPA. In addition, violations are automatically elevated if you are unable to consult with your Illinois EPA Regional Office within 24 hours. **In such cases, you must issue a notice within the next 24 hours.** You may elevate the violation to Tier 1 yourself as well. You should also coordinate with your local health department. One or both agencies should tell you whether to instruct consumers to boil water. You must use one or more of the following methods to deliver the notice to consumers:

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings), since notice must be provided in a manner reasonably calculated to reach all persons served. If you post or hand deliver, print your notice on letterhead, if you have it.

The notice on the next page is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice or posting. If you modify the notice, you must leave the health effects language in italics unchanged. This language is mandatory.

Population Served

Make sure it is clear who is served by your water system--you may need to list the areas you serve. Be sure to notify any other public water supply that purchases drinking water from your public water supply. Notify the local health department.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with turbidity single exceedance. Use one or more of the following actions, if appropriate, or develop your own:

- We are adding chemicals that reduce turbidity.
- We are sampling both untreated and treated water for the presence of coliform bacteria.
- We are monitoring chlorine levels and will adjust them as needed to compensate for filtration problems.
- We are inspecting and cleaning the filters.

Source of the Problem

If you know why the turbidity is high, explain it in your notice. For instance, unusual conditions, such as heavy rains and flooding, can overburden the water plant, and treated water may therefore not meet the standards. In addition, run-off from parts of the watershed could contain increased concentrations of sediment and animal waste.

After Issuing the Notice

Send a copy of each type of notice and a certification that you have met public notice requirements to the Illinois EPA within ten days after you issue the notice. It is a good idea to issue a "problem corrected" notice when the violation is resolved.

It is recommended that you notify health professionals in the area of the violation. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately. In addition, notify health professionals, including dentists that use tap water during their procedures and need to know of potential microbiological contamination so they can use bottled water.

IESWTR or LT1 CFE Maximum Turbidity Exceedance, or Turbidity Single Exceedance as Tier 1 Notice

DRINKING WATER ALERT

[system] has high turbidity levels

BOIL YOUR WATER BEFORE USING

We routinely monitor your water for turbidity (cloudiness caused by suspended particles). This tells us whether we are effectively filtering the water supply. A water sample taken [date] showed turbidity levels of [number] turbidity units. This is above the standard of [standard] turbidity units. Because of these high levels of turbidity, there is an increased chance that the water may contain disease-causing organisms.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for 3-5 minutes, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation until further notice
- *Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.* People with severely compromised immune systems, infants, and some elderly persons may be at increased risk. These people should seek advice about drinking water from their health care providers.
- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

[Describe reason for the high turbidity, corrective action, and when the system expects to return to compliance.]

[We will inform you when turbidity returns to appropriate levels and when you no longer need to boil your water.]

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Chlorine Dioxide MRDL: Instructions and Template

Instructions for Chlorine Dioxide MRDL Notice

Since exceeding the chlorine dioxide MRDL when one or more of the samples taken *in the distribution system* on the day after exceeding the MRDL at the entrance of the distribution system or when *required samples are not taken* in the distribution system is a Tier 1 violation, you must provide public notice to persons served as soon as practical but within 24 hours after you learn of the violation. (Exceeding the chlorine dioxide MRDL *at the entry point to the distribution system only* is a Tier 2 violation.) You must also contact your Illinois EPA Regional Office within 24 hours of learning of the violation or situation. You should also coordinate with your local health department. You must use one or more of the following methods to deliver the notice to consumers:

- Radio
- Television
- Hand or direct delivery
- Posting in conspicuous locations

You may need to use additional methods (e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings), since notice must be provided in a manner reasonably calculated to reach all persons served. If you post or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice. If you do, you must still include all required elements and leave the health effects language in italics unchanged. This language is mandatory.

Alternative Sources of Water

If you are selling or providing bottled water, your notice should say where it can be obtained. Remember that bottled water can also be contaminated or be high in chlorine dioxide if the bottler uses municipal water. Make sure the bottled water meets the standard by contacting the bottler and asking for the most recent test results.

Population at Risk

The language below lists young children as one of the groups at increased risk. Because the potential health effects of chlorine dioxide are based on tests on laboratory animals, there is no way to determine at exactly what age the water is safe to drink. If your consumers have questions, encourage them to err on the side of caution. Be sure to notify any other public water supply that purchases drinking water from your public water supply. Notify the local health department.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with chlorine dioxide violations. Use one or more of the following actions, if appropriate, or develop your own:

- We are resetting the generator to generate the correct amount of chlorine dioxide.
- We are repairing the generator.
- We have already fixed the problem but it will take additional time for the extra chlorine dioxide to be flushed from the distribution system (pipes).

After Issuing the Notice

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all the public notice requirements within 10 days after issuing the notice.

It is recommended that you notify health professionals in the area of the violation. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately.

Chlorine Dioxide MRDL Template

DRINKING WATER ALERT

**PREGNANT WOMEN AND YOUNG CHILDREN
SHOULD NOT DRINK THE WATER**

Sampling results received [date] showed chlorine dioxide levels of [level and units]. This is above the standard, or maximum residual disinfectant level (MRDL) of 0.8 milligrams per liter. Chlorine dioxide is used for disinfection, but too much of it over a short period of time may harm the development of children, infants, and fetuses.

What should I do?

- **DO NOT USE THIS WATER IF YOU ARE PREGNANT. DO NOT GIVE IT TO YOUNG CHILDREN.** Bottled water should be used until further notice. *Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant mothers who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.*

The chlorine dioxide violations reported today include exceedances of the EPA standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure. There are no obvious symptoms, but chlorine dioxide can affect development of the nervous system.

- Water, juice, and formula for young children and for pregnant women should not be prepared with tap water.
- Adults who are not pregnant and older children can drink the tap water because their nervous systems are already developed. However, if you have specific health concerns, you may wish to consult your doctor.

What happened? What is being done?

Chlorine dioxide is used in small amounts every day to kill bacteria and other organisms that may be in your drinking water. A problem occurred with our chlorine dioxide generator, and too much chlorine dioxide was released. [Describe corrective action and when you expect to return to compliance.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Instructions for GWR E. coli Indicator-Positive Source Sample Notice

Instructions for GWR Fecal Indicator-Positive Source Sample Notice Tier 1

Since detection of a fecal indicator (*E. coli*, enterococci or coliphage) in a ground water source sample is a situation requiring Tier 1 notice, you must provide public notice to persons served as soon as practical but no more than 24 hours from learning of the violation. During this time, you must also contact the Illinois EPA. You should also coordinate with your local health department. You may also have to modify the template if you also have high nitrate levels or other coliform MCL violations. You must use one or more of the following methods to deliver the notice to consumers:

- Radio
- Television
- Hand or Direct Delivery
- Posting in conspicuous locations

You may need to use additional methods [e.g., newspaper, delivery of multiple copies to hospitals, clinics, or apartment buildings] since notice must be provided in a manner reasonably calculated to reach all persons served.

The notice on the reverse is appropriate for hand delivery or a newspaper notice. However, you may wish to modify it before using it for a radio or TV notice. If you do, you must still include all required elements and leave the health effects language in italics unchanged. This language is mandatory. If you post or hand delivers, print your notice on letterhead, if you have it.

Population Served

Make sure it is clear who is served by your water system—you may need to list the areas you serve.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems that have detected a fecal indicator in their ground water source. You can use one or more of the following actions, if appropriate, or develop your own:

- We are increasing sampling at our sources to determine the source of the contamination.
- We are working with the State Department of Health to implement corrective actions to ensure water supplies are protected against contamination.
- We are providing water from an alternative source until the problem is resolved.
- We have discontinued use of the contaminated well and will rely on our other sources to meet demand.
- We are abandoning the contaminated well and will replace it with a well constructed to standards.
- We are pursuing treatment options for disinfection of the water from this source.

After Issuing the Notice

Send a copy of each type of notice and a certification that you have met all public notice requirements to the Illinois EPA within ten days from the time you issue the notice.

It is recommended that you notify health professionals in the area of the violation. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately. In addition, health professionals, including dentists, use tap water during their procedures and need to know of contamination so they can use bottled water.

It is a good idea to issue a “problem corrected” notice when the violation is resolved.

DRINKING WATER WARNING
[System]’s [Source] Tested Positive for Fecal Contamination
BOIL YOUR WATER BEFORE USING

Our water system recently detected a fecal indicator [(e.g., E. coli, enterococci, coliphage)] in [source]. As our customers, you have a right to know what happened and what we are doing to correct this situation. On [give date], we collected a sample from [source]. The sample tested positive for [(contaminant, e.g., E. coli, enterococci, coliphage)].

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a rolling boil, let it boil for one minute, and let it cool before using it. Boiling kills bacteria and other organisms in the water. You may also use bottled water. Use boiled or bottled water for drinking, preparing infant formula, making ice, preparing food, and washing dishes until further notice.**
- **If you have a severely compromised immune system, have an infant, or are elderly, you may be at increased risk and should seek advice about drinking water from your health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA’s your doctor. We are also providing regular updates on this situation on [TV station] or [radio station] and our Web site at www.ourwatersystem.com.**

Instructions for GWR Fecal Indicator-Positive Source Sample Notice Tier 1

What does this mean?

Inadequately treated or protected water may contain disease causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches. Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What is being done?

[Describe corrective action.] We will inform you when tests show no [(contaminant, e.g., E. coli, enterococci, coliphage)] and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____. Date distributed: _____.

Tier 1 Problem Corrected: Instructions and Template

Instructions for Tier 1 Problem Corrected Notice

It is a good idea to issue a notice when a serious violation or situation has been resolved. You should coordinate with your local health department as well. Below are some recommended methods for a problem-corrected notice. You should use the same delivery methods you used for the original notice.

- Radio
- Television
- Newspaper
- Hand or direct delivery
- Posting in conspicuous locations

You may wish to use additional methods (e.g., delivery of multiple copies to hospitals, clinics, or apartment buildings) if necessary to reach all persons served. If you post or hand deliver, print your notice on letterhead, if available.

The notice below is very general and can be used for any violation or situation. However, to help restore consumers' confidence in the water system, you should modify the notice to fit your situation. Although the public should have seen your initial notice, there may be additional information you learned after the notice was issued. Therefore, you should describe the violation or situation again and discuss how the problem was corrected.

Tier 1 Problem Corrected Template

DRINKING WATER PROBLEM CORRECTED

Customers of [system] were notified on [date] of a problem [describe] with our drinking water and were advised to [describe recommended action]. We are pleased to report that the problem has been corrected and that it is no longer necessary to [describe recommended action]. We apologize for any inconvenience and thank you for your patience.

[Add further details here when appropriate.]

As always, you may contact [contact name] at [phone number] or [mailing address] with any comments or questions.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

APPENDIX D

Tier 2

Public Notice Templates and Instructions

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Appendix D

Tier 2 Public Notice Templates

Unresolved Total Coliform: Instructions and Template

Instructions for Unresolved Total Coliform Notice

Since exceeding the total coliform bacteria maximum contaminant level is a Tier 2 violation, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. Persistent total coliform problems can be serious. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for hand delivery or mail. If you modify the notice, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Description of the Violation

The description of the violation and the MCL vary depending on the number of samples you take. The following table should help you complete the second paragraph of the template.

If You Take Less Than 40 Samples a Month

State the number of samples testing positive for coliform. The standard is that no more than one sample per month may be positive.

If You Take More Than 40 Samples a Month

State the percentage of samples testing positive for coliform. The standard is that no more than 5 percent of samples may test positive each month.

Corrective Action

In your notice, describe corrective actions you are taking. If you know what is causing the coliform problem, explain this in the notice. Listed below are some steps commonly taken by water systems with total coliform violations. Use one or more of the following actions, if appropriate, or develop your own:

- We are chlorinating and flushing the water system.
- We are increasing sampling for coliform bacteria.
- We are investigating the source of contamination.
- We are repairing the wellhead seal.
- We are repairing the storage tank.
- We will inform you when additional samples show no coliform bacteria.

Make sure to send a copy of each type of notice and a certification that you have met all the public notice requirements to the Illinois EPA within ten days after issuing the notice.

Unresolved Total Coliform Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Tests Show Coliform Bacteria in [System] Water

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. We took [number] samples for coliform bacteria during [month]. [Number/percentage] of those samples showed the presence of coliform bacteria. The standard is that no more than [one sample per month/5 percent of our samples] can contain this indicator bacteria.

What should I do?

- **You should continue to boil your water or take other corrective actions until this problem is solved.** However, if you have specific health concerns, consult your doctor.

- People with severely compromised immune systems, infants, and some elderly persons may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What does this mean?

This is not an emergency. If it had been you would have been notified immediately. Total coliform bacteria are generally not harmful themselves. *Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.*

Usually, coliforms are a sign that there could be a problem with the treatment or distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or *E. coli*, are present. **We did not find any of these bacteria in our subsequent testing.** If we had, we would have notified you immediately. However, we are still finding coliforms in the drinking water.

What happened? What is being done?

[Describe corrective action.]

We are still detecting coliform bacteria. We will inform you when our sampling shows that no bacteria are present. We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, restaurants and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Resolved Total Coliform: Instructions and Template

Instructions for Resolved Total Coliform Notice

Since exceeding the total coliform bacteria maximum contaminant level is a Tier 2 violation, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. Some states have more stringent requirements for coliform violations.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Description of the Violation

Make sure that the notice is clear about the fact that the coliform problem has been resolved, and there is no current cause for concern. The description of the violation and the MCL vary depending on the number of samples you take. The following table should help you complete the second paragraph of the template.

If You Take Less Than 40 Samples a Month

State the number of samples testing positive for coliform. The standard is that no more than one sample per month may be positive.

If You Take More Than 40 Samples a Month

State the percentage of samples testing positive for coliform. The standard is that no more than 5 percent of samples may test positive each month.

Corrective Action

In your notice, describe corrective actions you have taken. Listed below are some steps commonly taken by water systems with total coliform violations. Use one or more of the following actions, if appropriate, or develop your own:

- We have increased sampling for coliform bacteria to catch the problem early if it recurs.
- The well and/or distribution system has been disinfected and additional samples do not show presence of coliform bacteria.
- A cross-connection has been found in the distribution system and backflow protection has been installed to prevent any future contamination.

After Issuing the Notice

Make sure to send a copy of each type of notice along with a certification that you have met all the public notice requirements to the Illinois EPA within ten days after issuing the notice.

Resolved Total Coliform Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Tests Showed Coliform Bacteria in [System] Water

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

We routinely monitor for drinking water contaminants. We took [number] samples to test for the presence of coliform bacteria during [month]. [Number/percentage] of our samples showed the presence of total coliform bacteria. The standard is that no more than [one sample per month/5 percent of samples] can contain this indicator bacteria.

What should I do?

- **You do not need to boil your water or take other corrective actions.** However, if you have specific health concerns, consult your doctor.
- People with severely compromised immune systems, infants, and some elderly persons may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA’s Safe Drinking Water Hotline at 1 (800) 426-4791.

What does this mean?

This is not an emergency. If it had been, you would have been notified immediately. Coliform bacteria are generally not harmful themselves. *Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.*

Usually, coliforms are a sign that there could be a problem with the system’s treatment or distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or *E. coli*, are present. **We did not find any of these bacteria in our subsequent testing, and further testing shows that this problem has been resolved.**

What happened? What was done?

[Describe corrective action.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Chemical or Radionuclide MCLs Notice: Instructions and Template

Instructions for Chemical and Radionuclide MCLs Notice

Since exceeding chemical or radiological maximum contaminant levels (MCLs) is a Tier 2 violation, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on next page is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and you may not modify the mandatory health effects language.

Corrective Action

In your notice, describe corrective actions you are taking. Do not use overly technical terminology when describing treatment methods. Listed below are some steps commonly taken by water systems with chemical or radiological violations. Use one or more of the following actions, if appropriate, or develop your own:

- We are working with [local/state agency] to evaluate the water supply and researching options to correct the problem. These options may include treating the water to remove [contaminant] or connecting to [system]'s water supply.
- We have stopped using the contaminated well. We have increased pumping from other wells, and we are investigating drilling a new well.
- We will increase the frequency at which we test the water for [contaminant].
- We have since taken samples at this location and had them tested. They show that we meet the standards.

Repeat Notices

If this is an ongoing violation and/or you fluctuate above and below the MCL, you should give the history behind the violation, including the source of contamination, if known. List the date of the initial detection, as well as how levels have changed over time. If levels are changing as a result of treatment, you can indicate this.

After Issuing the Notice

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all public notification requirements within 10 days after issuing the notice.

Chemical and Radionuclide MCLs Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Has Levels of [Contaminant] Above Drinking Water Standards

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results we received on [date] show that our system exceeds the standard, or maximum contaminant level (MCL), for [contaminant]. The standard for [contaminant] is [MCL]. The average level of [contaminant] over the last year was [level]. *or* [contaminant] was found at [level].

What should I do?

- **You do not need to use an alternative (e.g., bottled) water supply.** However, if you have specific health concerns, consult your doctor.

What does this mean?

This is not an immediate risk. If it had been, you would have been notified immediately. However, [Insert relevant health effects language from Appendix B].

What happened? What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Fluoride MCL: Instructions and Template

Instructions for Fluoride MCL Notice

Since exceeding the fluoride maximum contaminant level (MCL) is a Tier 2 violation, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists. **If you exceed the secondary maximum contaminant level of 2 milligrams per liter but not the MCL of 4 milligrams per liter, you must issue a special notice with different health effects language. See page 5 of this handbook.**

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and you may not modify the mandatory health effects language.

Corrective Action

In your notice, describe corrective actions you are taking. Do not use overly technical terminology when describing treatment methods. Listed below are some steps commonly taken by water systems with fluoride violations. Use one or more of the following actions, if appropriate, or develop your own:

- We are working with [local/state agency] to evaluate the water supply and researching options to correct the problem. These options may include treating the water to remove fluoride or connecting to [system]'s water supply.
- We have stopped using the contaminated well. We have increased pumping from other wells, and we are investigating drilling a new well.
- We will increase the frequency at which we test the water for fluoride.
- We have since taken samples at this location and had them tested. They show that we meet the standards.

Repeat Notices

If this is an ongoing violation and/or you fluctuate above and below the MCL, it is a good idea to give the history behind the violation. You should list the date of the initial detection, as well as how levels have changed over time. If levels are changing as a result of treatment, you should indicate that fact.

After Issuing the Notice

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all public notification requirements within 10 days after issuing the notice.

Fluoride MCL Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Has Levels of Fluoride Above Drinking Water Standards

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results we received on [date] show that our system exceeds the standard, or maximum contaminant level (MCL), for fluoride. The average level of fluoride in samples taken during the last year was [level and units]. The standard for fluoride is that the average of samples taken over the last year may not exceed [MCL].

What should I do?

- Children under the age of nine should use an alternative source of water that is low in fluoride. In addition, you may want to consult your dentist about whether to avoid dental products containing fluoride. Adults and children over age nine should consult their dentist or doctor and show him/her this notice to determine if an alternate source of water low in fluoride should be used.

What does this mean?

This is not an emergency. If it had been, you would have been notified immediately. Fluoride in small amounts helps prevent tooth decay. However, some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or greater may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Although it takes many years of exposure to fluoride for bone disease to develop, mottling can occur after a relatively short period of exposure.

What happened? What is being done?

Fluoride contamination is rarely due to human activity. Fluoride occurs naturally in some areas and is found in high concentrations in our source water. [Describe corrective action.] We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

SWTR Turbidity Monthly Exceedance Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Does Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did to correct this situation.

We routinely monitor your water for turbidity (cloudiness), caused by suspended particles. This tells us whether we are effectively filtering the water supply. Water samples for [month] showed that [percentage] percent of turbidity measurements were over 0.3 turbidity units. The standard is that no more than 5 percent of samples may exceed 0.3 turbidity units per month. The turbidity levels are relatively low. However, their persistence is a concern. Normal turbidity levels at our plant are [number] units.

What should I do?

- **You do not need to boil your water or take other actions.** We do not know of any contamination, and none of our testing has shown disease-causing organisms in the drinking water.
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What does this mean?

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

A problem occurred with the treatment system at the water plant. [Describe the reason for high turbidity, corrective actions, and when the system returned or expects to return to compliance.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system].

Water System ID#

Date distributed

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SWTR Failure to Filter: Instructions and Template

Instructions for SWTR Failure to Filter Notice

Since surface water treatment technique violations are included in Tier 2, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with surface water treatment technique violations. Use one or more of the following actions, if appropriate, or develop your own:

- Our filtration system needs upgrades to meet the requirements.
- We are installing filtration. We expect that the filtration system will be operational by [month, year].
- We are monitoring for turbidity (cloudiness due to suspended particles), disinfectant levels, and the presence of bacteria. We continue to meet the standards for these measurements.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are making progress in installing filtration, describe it. Alternatively, if funding or other issues are delaying installation, let consumers know.

After Issuing the Violation

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met the public notice requirements within 10 days after you issued the notice.

SWTR Failure to Filter Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Does Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this situation does not require that you take immediate action, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

On [date], the Illinois EPA ordered us to filter the water in addition to disinfecting. We are required to install this filtration because we do not have an adequate watershed control program in place. However, we have not yet installed a filtration system.

What should I do?

- You do not need to boil your water. However, if you have specific health concerns, consult your doctor. A home filter will not necessarily solve the problem, because not all home filters protect against parasites. These filters must be properly maintained if installed to ensure your drinking water is safe. Call NSF International at 1(800) NSF-8010 or the Water Quality Association at 1(800) 749-0234 for information on appropriate filters if you are considering installing one.
- People with severely compromised immune systems, infants, and some elderly persons may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1(800) 426-4791.

What does this mean?

This is not a situation requiring that you take immediate action. If it had been you would have been notified immediately. We do not know of any cases of contamination. However, until improvements are made, there is an increased chance that disease-causing organisms could contaminate the water supply.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms, however, are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

Filtration is the best method for removing these organisms. [Describe corrective action.]

We anticipate resolving the problem within [estimated time frame]. Until filtration is installed, you will receive a notice similar to this every three months. For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

SWTR Turbidity Exceedance Notice: Instructions and Template

Instructions for SWTR Turbidity Exceedance Notice

Since surface water treatment filtration treatment technique violations are included in Tier 2, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. This template may also be adapted for use with turbidity MCL violations.

For Exceedances of Single Turbidity Limits

You must consult with your Illinois Environmental Protection Agency, Regional Field Operation Staff as soon as practical but within 24 hours of learning of the violation.

During the consultation, the Illinois EPA may choose to elevate your turbidity exceedance to Tier 1. If consultation does not occur, the violation is automatically elevated to Tier 1. For a Tier 2 notice, describe your violation as follows in the second paragraph of the notice:

Normal turbidity levels at our plant are [number] turbidity units. A water sample taken [date] showed a level of [number] turbidity units. This was above the standard of [standard] units. Because of these high levels, there is an increased chance that the water may contain disease-causing organisms.

For Exceedances of Monthly Turbidity Limits

Use the following language to describe your violation and insert into the second paragraph of the template:

Water samples for [month] showed that [percentage] percent of turbidity measurements were over [standard] turbidity units. The standard is that no more than 5 percent of samples may exceed [standard] turbidity units per month. The turbidity levels are relatively low. However, their persistence is a concern. Normal turbidity levels at our plant are [number] units.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with filtration treatment technique violations. Use one or more of the following actions, if appropriate, or develop your own:

- We added chemicals that reduce turbidity.
- We sampled both untreated and treated water for the presence of coliform bacteria.
- We monitored chlorine levels and adjusted them as needed to compensate for the filtration problems.
- We inspected and cleaned the filters.

Make sure to send a copy of each type of notice and a certification that you have met all public notice requirements to the Illinois EPA within 10 days after issuing the notice.

SWTR Turbidity Exceedance Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Does Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did to correct this situation.

We routinely monitor your water for turbidity (cloudiness due to suspended particles). This tells us whether we are effectively filtering the water supply. [Insert appropriate description of the violation from instructions.]

What should I do?

- You do not need to boil your water or take other actions. We do not know of any contamination, and none of our testing has shown disease-causing organisms in the drinking water.
People with severely compromised immune systems, infants, and some elderly persons may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What does this mean?

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

A problem occurred with the treatment system at the water plant. [Describe the reason for high turbidity, corrective actions, and when the system returned or expects to return to compliance.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, restaurants and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Inadequate DBP Precursor Template

Inadequate DBP Precursor Removal Template	
IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER	
[System] Does Not Meet Treatment Requirements	
Our water system recently violated a drinking water standard. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation. Surface water systems (or groundwater under the influence of surface water) using conventional filtration treatment (enhanced coagulation or enhanced precipitative softening) must demonstrate that Total Organic Carbon (TOC) removals are in compliance with either the Step 1 TOC removal requirements or meet the requirements of alternative compliance criteria. Our supply was unable to meet the requirements during the [monitoring period].	
What should I do?	
<ul style="list-style-type: none">• You do not need to use an alternative (e.g., bottled) water supply. However, if you have specific health concerns, consult your doctor.	
What does this mean?	
This is not an immediate risk. If it had been, you would have been notified immediately. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.	
What happened? What is being done?	
[Describe the reason for not meeting Step 1 Removal, corrective actions, and when the system returned or expects to return to compliance.] For more information, please contact [name of contact] at [phone number] or [mailing address]. <i>Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.</i>	
This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____	

Intentionally Blank

SWTR Disinfection Treatment Notice: Instructions and Template

Instructions for SWTR Disinfection Treatment Notice

Since surface water treatment disinfection treatment technique violations are included in Tier 2, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. Some disinfection problems may be serious.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available. If you modify the notice, you must leave the mandatory health effects language in italics unchanged.

The notice on the next page is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Description of the Violation

Choose from the following descriptions of violations, and modify to fit your situation.

Contact Time - In order to ensure proper disinfection, water in the treatment plant must be in contact with chlorine or a similar disinfectant for a minimum amount of time. On [date], this did not occur.

Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. For this reason, water needs to mix with chlorine for a longer time period to kill such organisms. The amount of time necessary, or the contact time, depends on the amount of disinfectant in the water and the temperature of the water.

Disinfectant Residual - We routinely monitor for disinfectant residual in the distribution system. This measurement tells us whether we are effectively disinfecting the water supply. Disinfectant residual is the amount of chlorine or related disinfectant present in the pipes of the distribution system. If the amount of disinfectant is too low, organisms could grow in the pipes.

Monthly exceedance - During the months of _____, disinfectant residual was undetectable in more than 5 percent of samples. The standard is that disinfectant may be undetectable in no more than 5 percent of samples each month for two months in a row.

Single exceedance - On [date], disinfectant levels dropped below 0.2 milligrams per liter for ___ hours. The standard is that levels may not drop below 0.2 for more than four hours.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with disinfection treatment technique violations. Use one or more of the following actions, if appropriate, or develop your own:

- We are sampling/we sampled both untreated and treated water for the presence of coliform bacteria.
- We are sampling/we sampled disinfectant levels and will adjust/adjusted the amount of disinfectant added as necessary to maintain adequate levels.

Make sure to send a copy of each type of notice and a certification that you have met all the public notice requirements to the Illinois EPA within ten days after issuing the notice.

SWTR Disinfection Treatment Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Does/Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation. Surface water systems (or groundwater under the influence of surface water) to ensure proper disinfection, the water in the treatment plant must be in contact with chlorine or a similar disinfectant for a minimum amount of time. Our supply was unable to meet the requirements during the [monitoring period].

What should I do?

- **You do not need to boil your water or take other corrective actions.** However, if you have specific health concerns, consult your doctor.
- People with severely compromised immune systems, infants, and some elderly persons may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What does this mean?

This is not a situation requiring immediate action. If it had been, you would have been notified immediately. Tests taken during this same time period did not indicate the presence of bacteria in the water.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

[Describe why the violation occurred and corrective action.]

[Disinfectant residual levels/contact times] so far this month have met all requirements.

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system].

Water System ID# _____

Date distributed _____

LCR Failure to Install Corrosion Control Notice: Instructions and Template

Instructions for LCR Failure to Install Corrosion Control Notice

Since lead and copper treatment technique violations are included in Tier 2, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Explaining the Violation

If the delay in installation is related to outside circumstances, such as funding, you should explain these. Consumers may be more supportive of rate increases or may pressure local authorities to provide funds if they understand the circumstances.

This template is written for systems that are required to install corrosion control after exceeding lead action levels. The Lead and Copper Rule requires some large systems to install corrosion control even if they have never exceeded the lead action level. You may need to modify the template if this applies to you. The following may help you explain the violation:

- This is a treatment violation, but it does not mean there is lead in your drinking water. However, it is important that we take measures to control lead levels in the water, because ingesting lead can cause serious health consequences.

Corrective Action

In your notice, describe corrective actions you are taking. Use the following language, if appropriate, or develop your own:

- We conducted a lead public education program in [month, year]. You should have received a brochure explaining in more detail steps you can take to reduce exposure until corrosion control is in place.

If consumers ask for information on testing their water, you should have on hand the names of laboratories consumers can call. Tell consumers to call NSF International at 1(800) NSF-8010 or the Water Quality Association at 1(800) 749-0234 for information on appropriate filters. For more information on lead, have consumers call the EPA Safe Drinking Water Hotline at 1(800) 426-4791 or the National Lead Information Center Hotline 1(800) LEAD-FYI.

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all the public notice requirements within 10 days after issuing the notice.

LCR Failure to Install Corrosion Control Template

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Water Contains High Levels of Lead

Our water system recently violated a drinking water standard. Even though this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely sample water at consumers' taps for lead. The tests show lead levels in the water above the limit, or action level, so we are required to install corrosion control treatment. This treatment helps prevent lead in the pipes from dissolving into the water. Corrosion control should have been installed by [date], but installation is incomplete.

What should I do?

Listed below are some steps you can take to reduce your exposure to lead:

- Call us at the number below to find out how to get your water tested for lead.
- Find out whether your pipes contain lead or lead solder.
- Run your water for 15-30 seconds or until it becomes cold before using it for drinking or cooking. This flushes any standing lead from the pipes.
- Don't cook with or drink water from the hot water tap; lead dissolves more easily into hot water.
- **Do not boil your water to remove lead.** Excessive boiling water makes the lead more concentrated. The lead remains when the water evaporates.

What does this mean?

Typically, lead enters public water supplies by leaching from lead or brass pipes and plumbing components. New lead pipes and plumbing components containing lead are no longer allowed for this reason; however, many older homes may contain lead pipes. Your water is more likely to contain high lead levels if water pipes in or leading to your home are made of lead or contain lead solder.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

[Describe corrective action.]

This is not an emergency. If it had been, you would have been notified immediately. Corrosion control will be in place by [date].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Instructions for LT2ESWTR Failure to Conduct Source Water Monitoring (Initial or Second Round) Notice

Template on Reverse

A system's failure to conduct an initial or second round of *Cryptosporidium* monitoring by the required date is a monitoring violation that requires Tier 2 notification. You must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists. Your primacy agency may have more stringent requirements for this monitoring violation; e.g., it may require you to provide water from an alternate source. Check with your agency to make sure you meet all requirements.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with LT2ESWTR monitoring violations. You can use one or more of the following actions, if appropriate, or develop your own:

- We will begin collecting the required source water monitoring samples on [give date].
- We have since taken the required samples for source water monitoring.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are making progress in installing treatment, describe it. Alternatively, if funding or other issues are delaying installation of treatment, let consumers know.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

LT2ESWTR Failure to Conduct Source Water Monitoring (Initial or Second Round) Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring and Reporting Requirements Not Met for [Name of System]

We are required to monitor the source of your drinking water for *Cryptosporidium*. Results of the monitoring are to be used to determine whether [name of treatment plant] is sufficient to adequately treat the water for *Cryptosporidium*. We are required to complete this monitoring and make this determination by [give date]. We did not monitor or test on schedule and, therefore, we may not be able to determine by the required date what treatment modifications, if any, must be made. Missing this deadline may, in turn, jeopardize our ability to have the required treatment modifications, if any, completed by the deadline required, [give date].

What should I do?

There is nothing you need to do. You do not need to boil your water or take other corrective actions. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an emergency. If it had been, you would have been notified within 24 hours. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

What is being done?

[Describe corrective action.]

For more information, please contact [provide contact name] at [provide contact phone number] or write to [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for LT2ESWTR Filtered System Failure to Determine Bin Classification Notice

Template on Reverse

A filtered system's failure to determine bin classification by the required date is a treatment technique violation that requires Tier 2 notification. You must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists. Your primacy agency may have more stringent requirements for this monitoring violation; e.g., it may require you to provide water from an alternate source. Check with your agency to make sure you meet all requirements.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with LT2ESWTR treatment technique violations. You can use one or more of the following actions, if appropriate, or develop your own:

- We determined our bin classification on [give date] and have notified the state.
- We are in the process of determining our bin classification and will notify the state upon completion.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are making progress in installing treatment, describe it. Alternatively, if funding or other issues are delaying installation of treatment, let consumers know.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

LT2ESWTR Filtered System Failure to Determine Bin Classification Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did (are doing) to correct this situation.

We are required to monitor the source of your drinking water for *Cryptosporidium* in order to determine by [give date] whether water treatment at the [provide treatment plant name] is sufficient to adequately remove *Cryptosporidium* from your drinking water. We have not made this determination by the required date. Our failure to do this may jeopardize our ability to have the required treatment modifications, if any, completed by the required deadline of [give date].

What should I do?

There is nothing you need to do. You do not need to boil your water or take other corrective actions. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an emergency. If it had been, you would have been notified within 24 hours. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

What is being done?

[Describe corrective action.]

For more information, please contact [provide contact name] at [provide contact phone number] or write to [provide address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for LT2ESWTR Failure to Install Treatment Notice

Template on Reverse

A filtered system's failure to provide the level of treatment appropriate for its LT2ESWTR bin classification by the required treatment date is a treatment technique violation and requires Tier 2 notification. You must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists. Your primacy agency may have more stringent requirements for treatment technique violations; e.g., it may require you to provide water from an alternate source. Check with your agency to make sure you meet all requirements.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with LT2ESWTR treatment technique violations. You can use one or more of the following actions, if appropriate, or develop your own:

- We will install treatment by [provide date] that will satisfy this requirement.
- We are currently working with state health department officials and our engineers to finalize plans for additional water treatment that will satisfy this requirement once it is installed.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are making progress in installing treatment, describe it. Alternatively, if funding or other issues are delaying installation of treatment, let consumers know.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

LT2ESWTR Failure to Install Treatment Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[Name of System] Failed to Provide the Appropriate Level of Treatment Within Required Time Frame.

Our water system [give system name] was required to provide additional treatment for *Cryptosporidium* by [provide date]. *Cryptosporidium* is a disease-causing microorganism that may occur in our raw water source.

We failed to provide the required treatment by the required date. Although this situation is not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

What should I do?

There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791. If you have specific health concerns, consult your doctor.

You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an emergency. If it had been, you would have been notified within 24 hours.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What is being done?

[Describe corrective action.] We expect to have the additional treatment installed by [give date].

For more information, please contact [name] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for Stage 1 DBPR TTHM or HAA5 MCL Violation Notice

Template on Reverse

If your system's running annual average for Total Trihalomethanes (TTHM) exceeds the MCL of 0.080 mg/L or the running annual average of Haloacetic Acid 5 (HAA5) exceeds the MCL of 0.060 mg/L, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Actions

In your notice, describe corrective actions you took or are taking. Listed below is a step commonly taken by water systems with TTHM or HAA5 MCL violations. You can use the following action, if appropriate, or develop your own:

- We are pilot testing [name treatment type] treatment to ensure it will reduce concentrations of [Contaminant, i.e., Total Trihalomethanes or Haloacetic Acid 5] in our finished water. Testing will be completed by [provide date] at which time we will evaluate effectiveness and begin installation.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are making progress in installing treatment, describe it. Alternatively, if funding or other issues are delaying coverage, let consumers know.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

Stage 1 DBPR TTHM or HAA5 MCL Violation Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[Contaminant, i.e., Total Trihalomethanes or Haloacetic Acid 5] MCL Violation at [System]

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did (are doing) to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results from [date range] show that our system exceeds the standard, or maximum contaminant level (MCL), for [contaminant]. The standard for [contaminant] is [MCL]. It is determined by averaging all samples collected by our system for the last 12 months. The level of [contaminant] averaged at our system for [date range] was [level].

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

[People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.]

Or

[People who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.]

What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for Stage 2 DBPR TTHM or HAA5 MCL Violation Notice

Template on Reverse

If your system's locational running annual average for Total Trihalomethanes (TTHM) exceeds the MCL of 0.080 mg/L or the locational running annual average for Haloacetic Acid 5 (HAA5) exceeds the MCL of 0.060 mg/L at one or more sampling locations, you must provide the public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Actions

In your notice, describe corrective actions you took or are taking. Listed below is a step commonly taken by water systems with TTHM or HAA5 MCL violations. You can use the following action, if appropriate, or develop your own:

- [TTHM are four volatile chemicals] [HAA5 are five haloacetic acid compounds] which form when disinfectants react with natural organic matter in the water. We are working to minimize the formation of [TTHM or HAA5] while ensuring we maintain an adequate level of disinfectant. We have taken additional samples at this location and throughout the system to determine if our efforts have been effective. The samples show that we now meet the standards.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are making progress in installing treatment, describe it. Alternatively, if funding or other issues are delaying coverage, let consumers know.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

Stage 2 DBPR TTHM or HAA5 MCL Violation Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[Contaminant, i.e., Total Trihalomethanes or Haloacetic Acid 5] MCL Violation at [System]

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did (are doing) to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results from [date range] show that our system exceeds the standard, or maximum contaminant level (MCL), for [contaminant]. The standard for [contaminant] is [MCL]. It is determined by averaging all samples collected at each sampling location for the past 12 months. The level of [contaminant] averaged at one of our system's locations for [date range] was [level].

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

[People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.]

Or

[People who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.]

What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for LT2ESWTR Filter Backwash Recycling Rule Treatment Technique Violation Notice

Template on Reverse

Since failure to recycle spent filter backwash, thickener supernatant, and liquids from dewatering processes before all processes of the direct filtration treatment train, failure to obtain state approval for the use of an alternative recycle location, or failure to pursue capital improvements is a Tier 2 violation, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists. Your primacy agency may have more stringent requirements for treatment technique violations; e.g., it may require you to provide water from an alternative source. Check with your agency to make sure you meet all requirements.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Do not use overly technical terminology when describing treatment methods. You can use one or more of the following actions, if appropriate, or develop your own:

- As of [give date, we will no longer recycle our filter backwash and will not be in violation of this standard.
- As of [give date], the filter backwash will be piped to the beginning of our water treatment process and we will no longer be in violation of this standard
- As of [give date], the filter backwash and all other current recycle flows will be discharged to waste as approved by the primacy agency.

Repeat Notices

If this is an ongoing violation, you should give the history behind the violation, if known

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

Filter Backwash Recycling Rule Treatment Technique Violation Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did (are doing) to correct this situation.

The Filter Backwash Recycling Rule requires water systems that recycle liquids used for water treatment to recycle these liquids through the system's existing filtration system, or to an alternate location approved by the state. Our system did not return its water treatment recycle flows to the required location or a state-approved location by the required date of [give date].

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791. If you have specific health concerns, consult your doctor.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an immediate risk. If it had been an emergency, you would have been notified immediately.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for GWR Failure to Take Corrective Action Within Required Time Frame Notice

Template on Reverse

A system's failure to take corrective action for a significant deficiency identified by the primacy agency or a fecal indicator-positive source sample within a required time frame established by the primary agency is a treatment technique violation and requires Tier 2 notification. You must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists. Your primacy agency may have more stringent requirements for treatment technique violations. Check with your agency to make sure you meet all requirements.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with Ground Water Rule treatment technique violations. You can use one or more of the following actions, if appropriate, or develop your own:

- Although we did not meet our deadline, we are now in consultation with the State to develop a corrective action plan.
- The [source of contamination/significant deficiency] has been identified and addressed.
- We have implemented a short term plan to address the immediate issue while we pursue the long-term solution.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are making progress with correcting the significant deficiency or source of fecal contamination, describe it. Alternatively, if funding or other issues are delaying corrective action, let consumers know.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

GWR Failure to Take Corrective Action Within Required Time Frame Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Failed to Correct a Significant Deficiency (Fecal Contamination) Within Required Time Frame.

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened, and what we did (are doing) to correct this situation.

[A routine inspection conducted on [give date] by the [insert primacy agency] found [describe significant deficiency in our water system]] **OR** [Sampling conducted at our groundwater source on [given date(s)] found indication of fecal contamination of our source(s)]. As required by Environmental Protection Agency's (EPA's) Ground Water Rule, we were required to take action to correct this [deficiency/contamination]. However, we failed to take this action by the deadline established by [insert primacy agency name].

What should I do?

There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791. If you have specific health concerns, consult your doctor.

You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an immediate risk. If it had been an emergency, you would have been notified immediately.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame] (or the problem was resolved on [give date]).

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for GWR Failure to Maintain 4-log Treatment of Viruses Notice

Template on Reverse

A ground water system's failure to maintain required 4-log treatment of viruses for a period greater than 4 hours is a treatment technique violation and requires Tier 2 notification. You must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation. You must issue a repeat notice every three months for as long as the violation persists. Your primacy agency may have more stringent requirements for treatment technique violations. Check with your agency to make sure you meet all requirements.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with Ground Water Rule treatment technique violations. You can use one or more of the following actions, if appropriate, or develop your own:

- We are increasing disinfection to maintain our proper residual levels.
- We are pursuing improvements to our treatment system so that we can maintain required treatment at all times.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. If you are taking steps to ensure you are maintaining 4-log treatment for viruses, describe them. Alternatively, if you are having issues maintaining 4-log treatment, let consumers know.

After Issuing the Notice

Send a copy of each type of notice and a certification that you have met all the public notice requirements to your primary agency within ten days from the time you issue the notice.

GWR Failure to Maintain 4-Log Treatment of Viruses Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Failure to Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened, and what we did (are doing) to correct this situation.

We are required to [treat/disinfect] our drinking water source [name source]. From [give date] to [give date] we did not meet one or more of our treatment requirements [provide sufficient levels of disinfectant/provide adequate contact time/meet alternative criteria] due to [describe issue, e.g., malfunctioning equipment].

What should I do?

There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791. If you have specific health concerns, consult your doctor.

You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. While we have not detected any evidence of contamination in, or other health threats to, our source water we are still committed to restoring the required level of treatment to the water from [source] to eliminate the threat of contamination.

What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame] (or the problem was resolved on [give date]).

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for Failure to Comply with the Conditions of an Exemption Notice

Template on Reverse

Since failure to comply with the conditions of an exemption requires Tier 2 notification, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation . You must issue a repeat notice every three months for as long as the violation persists. Your primacy agency may have more stringent or alternative requirements for exemption violations; e.g., it may require you to provide water from an alternative source. Check with your agency to make sure you meet all requirements

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below is an example of a step that might be taken in response to this violation. You can use the following action, if appropriate, or develop your own:

- We have agreed upon a new deadline of [give date] to secure the funding needed in order to purchase [containment] removal treatment equipment. Once we have secured funding, we will purchase and begin installation of the selected treatment technology by [estimated time frame].

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out the previous notice. Include updated information regarding meeting the measures and schedules in your corrective action plan. Alternatively, if funding or other issues are delaying your progress, let consumers know.

After Issuing the Notice

Make sure to send your primacy agency a copy of each type of notice and a certification that you have met the public notice requirements within ten days after you issued the notice.

Failure to Comply with the Conditions of an Exemption Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Failed to Meet the Conditions of a [contaminant] Exemption.

Our water system recently violated one of the conditions of our [contaminant] exemption. An exemption allows eligible systems additional time to build capacity in order to comply with a drinking water standard. [Name of system] was granted an exemption for the [contaminant] standard so that we could raise funds for a new treatment process to remove [contaminant]. As a condition of the exemption, we agreed to secure funding by [give date]. We did not meet this deadline.

What should I do?

- There is nothing you need to do. You do not need to boil your water or take other corrective actions. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information]. We will also post this information on our website at www.ourwatersystem.com.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

(Example language provided for arsenic. Enter appropriate language for your specific contaminant.)

[Some people who drink water containing arsenic in excess of the MCL over many years may have an increased risk of getting cancer.]

What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame] (or the problem was resolved on [give date]).

For more information, please contact [name of contact] at [phone number] or [mailing address]. You can also visit our web site at www.ourwatersystem.com.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for Monitoring Violation Elevated to Tier 2 Notice

Template on Reverse

If your primacy agency has designated a failure to monitor as a Tier 2 violation, you must provide public notice to persons served within 30 days after it has been designated Tier 2. Monitoring violations are Tier 3 by default, but may be elevated to Tier 2 by your primacy agency. You may elevate the violation to Tier 2 yourself as well. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following methods:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for hand delivery or mail. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects language in italics unchanged. This language is mandatory.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with monitoring violations. You can use the following action, if appropriate, or develop your own:

- We have since taken the required samples, as described in the last column of the table above. The samples showed we are meeting drinking water standards.
- We have since taken the required samples, as described in the last column of the table above. The sample for [contaminant] exceeded the limit. [Describe corrective action; use information from public notice prepared for violating the limit.]
- We plan to take the required samples soon, as described in the last column of the table above.

Repeat Notices

If this is an ongoing violation, you should give the history behind the violation, if known.

After Issuing the Notice

Make sure to send your primacy agency a copy of each type of notice and a certification that you have met the public notice requirements within ten days after you issued the notice.

Monitoring Violation Elevated to Tier 2 Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for [System]

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

During [compliance period] we [‘did not monitor or test’ or ‘did not complete all monitoring or testing’] for [contaminant(s)] and, therefore, cannot be sure of the quality of our drinking water during that time. Even though this is not an emergency, as our customers, you have a right to know what happened and what we did (are doing) to correct this situation.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for, how often we are supposed to sample for [this contaminant/these contaminants] and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required Sampling Frequency	Number of Samples Taken	When Samples Should Have Been Taken	When Samples Were Taken
Nitrate (example)	One sample annually	0	2006	February 2007

What is being done?

[Describe corrective action.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

APPENDIX E

Tier 3

Public Notice Templates and Instructions

The templates in this Appendix are designed to help operators create public notices for a variety of violations. However, it is important to note that the templates included here are not inclusive and may not be appropriate for all violations and situations. Depending on the severity of your violation or situation, it may be necessary to modify the instructions you give to consumers or to change the timing of the notice.

- ***Monitoring Violations Annual Notice A*** (Page 2)
- ***Monitoring Violations Annual Notice B (Bromate Example)*** (Page 4)
- ***Failure to Comply with a Testing Procedure*** (Page 6)
- ***Special Notice of Availability of Unregulated Contaminants*** (Page 8)
- ***Fluoride Secondary MCL*** (Page 10)
- ***Failure to Develop a Profile or Calculate a Benchmarking Notice*** (Page 12)

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Appendix E

Tier 3 Public Notice Template

Monitoring Violations Annual Notice

Instructions for Monitoring Violations Annual Notice

Since most monitoring violations are included in Tier 3, you must provide public notice to persons served within one year after you learn of the violation. Multiple monitoring violations can be serious.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, public water supplies must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you post the notice, it must remain posted until the violation is resolved. If the violation has been resolved, you must post the notice for at least one week. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for insertion in an annual notice or the CCR, as long as public notification timing and delivery requirements are met. You may need to modify the template for a notice for individual monitoring violations. This example presents violations in a table; however, you may write out an explanation for each violation if you wish. For any monitoring violation for volatile organic compounds (VOCs) or other groups, you may list the group name in the table, but you must provide the name of every chemical in the group on the notice, e.g., in a footnote.

You may need to modify the notice if you had any monitoring violations for which analyses later showed a maximum contaminant level or other violation. In such cases, you should refer to the public notice you issued at that time.

Include in your notice the standard language for monitoring and testing procedure violations in *italics*. If you modify the notice, you may not alter this mandatory language.

Corrective Actions

In your notice, describe corrective actions you took or are taking. Listed below are some steps commonly taken by water systems with monitoring violations. Choose the appropriate language, or develop your own:

- We have since taken the required samples, as described in the last column of the table above. The result(s) showed we are meeting drinking water standards.
- We have since taken the required samples, as described in the last column of the table above. The result(s) for [contaminant] exceeded the limit. [Describe corrective action; use information from public notice prepared for violating the limit.]
- We plan to take the required samples soon, as described in the last column of the table above.

After Issuing the Notice

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all the public notice requirements within 10 days after issuing the notice.

Monitoring Violations Annual Notice Template A

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for [System]

Our water system violated several drinking water standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During [compliance period] we ['did not monitor or test' or 'did not complete all monitoring or testing'] for [contaminant(s)] and therefore cannot be sure of the quality of our drinking water during that time.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for [this contaminant/these contaminants], how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been taken	When samples were or will be taken
VOCs ¹ (example)	1 sample every three years	0	1996-1998	February 1999

What happened? What is being done?

[Describe corrective action.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

¹VOCs, also known as volatile organic compounds, are tested by collecting one sample and testing that sample for all the VOCs. VOCs are commonly used in industrial and manufacturing processes. VOCs include benzene, carbon tetrachloride, chlorobenzene, o-dichlorobenzene, p-dichlorobenzene, 1,2-dichloroethane, cis-dichloroethylene, trans-dichloroethylene, dichloromethane, 1,2-dichloropropane, ethylbenzene, styrene, tetrachlorethylene, 1,1,1-trichloroethane, trichloroethylene, toluene, 1,2,4-trichlorobenzene, 1,1-dichloroethylene, 1,1,2-trichloroethane, vinyl chloride, and xylene.

Instructions for Monitoring Violations Annual Notice B

Template on Reverse

The template on reverse is another example of a monitoring violation. The example in this template is for Bromate under the Stage 2 DBPR. All instructions of previous template apply.

Monitoring Violations Annual Notice B

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for [System]

On [give date] we became aware that our system recently failed to collect the correct number of drinking water samples. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did (are doing) to correct this situation.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During [compliance period] we [‘did no monitor or test’ or ‘did not complete all monitoring or testing’] for **bromate** and therefore cannot be sure of the quality of our drinking water during that time. We were allowed to take 1 sample per quarter rather than 1 sample per month. In [give date], we no longer qualified for reduced quarterly bromate monitoring. Beginning in [give date], we failed to begin monitoring monthly for bromate.*

What should I do?

There is nothing you need to do. You do not need to boil your water or take other corrective actions. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information]. We will also post this information on our web site at www.ourwatersystem.com.

What is being done?

[Describe corrective action.] We began monitoring monthly for **bromate** on [give date] and will continue monitoring on this schedule until (unless) we qualify for reduced monitoring.

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for Failure to Comply with a Testing Procedure Notice

Template on Reverse

Failure to comply with a testing procedure requires Tier 3 notification. You must provide public notice to persons served within one year after you learn of the violation. Multiple testing violations can be serious, and your primary agency may have more stringent requirements. Check with your primary agency to make sure you meet its requirements.

Community systems must use one of the following :

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you post the notice, it must remain posted until the violation is resolved. If the violation has been resolved, you must post the notice for at least seven days. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for insertion in an annual notice or the Consumer Confidence Report (CCR), as long as public notification timing and delivery requirements are met.

This example is for a holding time violation. It will need to be modified for other types of testing violations. However, you must include in your notice the standard language for monitoring and testing procedure violations. If you modify the notice, you may not alter this mandatory language.

Corrective Actions

In your notice, describe corrective actions you took or are taking. Listed below is a step commonly taken by water systems with a holding time violation. You can use the following language, if appropriate, or develop your own that is specific to your testing violation:

- On (date) we collected (will collect) a new sample of our finished water in order to have it analyzed for (contaminant). We sent (will sent) the sample to the certified laboratory via courier to ensure that the sample arrived within the allowed holding time.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice .

Failure to Comply with a Testing Procedure Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Failure to Comply With a Testing Procedure

Our water system [name of system] recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During [compliance period] we did not complete all monitoring or testing for [contaminant(s)] and therefore cannot be sure of the quality of our drinking water during that time. Any sample we collect must be sent and analyzed by a certified laboratory within a specified amount of time. We collected the sample on [give date], but did not get our sample to the laboratory within the allowed holding time.

What should I do?

There is nothing you need to do. You do not need to boil your water or take other corrective actions. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information]. We will also post this information on our web site at www.ourwatersystem.com.

What is being done?

On (date) we collected (will collect) a new sample of our finished water in order to have it analyzed for (contaminant). We sent (will send) the sample to the certified lab via courier to ensure that the sample arrived within the allowed holding time. (The sample was analyzed and (contaminant) was not found at detectable levels.)

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Instructions for Special Notice for Availability of Unregulated Contaminant Monitoring Data

Template on Reverse

If you are required to monitor under 141.40 for unregulated contaminants, you must provide Tier 3 notification to persons served within one year after you receive the monitoring results. Check with your primary agency to make sure you meet its requirements.

Community systems must use one of the following:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following :

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method . Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for insertion in an annual notice or the Consumer Confidence Report (CCR), as long as public notification timing and delivery requirements are met.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

Special Notice for Availability of Unregulated Contaminant Monitoring Data

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Availability of Monitoring Data for Unregulated Contaminants for [System]

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have drinking water standards set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available. If you are interested in examining the results, please contact [name of contact] at [phone number] or [mailing address].

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

Fluoride Secondary MCL Notice

Instructions for Fluoride Secondary MCL Notice

For any exceedance of the fluoride secondary maximum contaminant level (SMCL), you must provide public notice to persons served as soon as practical but within 12 months after you learn of the exceedance, using the provided mandatory language and filling in the blanks. Because fluoride at levels above the SMCL can permanently discolor children's teeth, you are urged to issue this notice as soon as practical. Non-community systems that monitor for fluoride (federal law does not require non-community systems to monitor) are encouraged to notify their consumers if they exceed the SMCL, especially at water systems serving children. If you exceed the MCL of 4 mg/l this is a Tier 2 violation and you must provide notice within 30 days of learning of the violation.

Community systems must use one of the following methods:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

In addition, you must use *another* method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you post the notice, it must remain posted until the exceedance is resolved. If the exceedance has been resolved, you must post the notice for at least one week. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the next page is appropriate for insertion in an annual notice or the CCR, as long as public notification timing and delivery requirements are met, as well as for a separate individual notice. The language on the template is mandatory and may not be modified, although you may add to the notice, as suggested below.

Explaining the Situation

Use the following language, if applicable:

- Fluoride occurs naturally in some areas and is found in high concentrations in the aquifer in our source water.

If the fluoride levels in the water have returned to below the SMCL, be sure to make this clear in your notice.

Corrective Actions

In your notice, you should describe corrective actions you took or are taking, if any.

After Issuing the Notice

Make sure to send the Illinois EPA a copy of each type of notice and a certification that you have met all the public notice requirements within 10 days after issuing the notice.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER
Elevated Fluoride Levels Detected

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [name] has a fluoride concentration of [insert value] mg/L.

Dental fluorosis in its moderate or severe forms may result in a brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use of fluoride-containing products for young children. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

For more information, please call [name of water system contact] of [name of community water system] at [phone number]. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Instructions for Failure to Develop a Profile or Calculate a Benchmark Notice

Template on Reverse

Failure to develop a disinfection profile for *Giardia lamblia* and viruses (a profile for viruses may be applicable under LT1ESWTR and is required under LT2ESWTR) or calculate a benchmark prior to making a significant change to your disinfection practice requires Tier 3 notification. You must provide public notice to persons served within one year after you learn of the violation. Failure to develop a profile or calculate a benchmark can be serious and your state may have more stringent requirements. Check with your state to make sure you meet all requirements.

Community systems must use one of the following:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Non-community systems must use one of the following:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and non-community systems must use another method reasonably calculated to reach others if they would not be reached by the first method. Such methods could include newspapers, e-mail, or delivery to community organizations. If you post the notice, it must remain posted until the violation is resolved. If the violation has been resolved, you must post the notice for at least seven days. If you mail, post, or hand deliver, print your notice on letterhead, if available.

The notice on the reverse is appropriate for insertion in an annual notice or the Consumer Confidence Report (CCR), as long as public notification timing and delivery requirements are met.

Include in your notice the standard language for monitoring and testing procedure violations in *italics* with blanks filled in. If you modify the notice, you may not alter this mandatory language.

Corrective Actions

In your notice, describe corrective actions you took or are taking. Listed below is a step commonly taken by water systems with a profiling and benchmarking violation. You can use the following language, if appropriate, or develop your own that is specific to your violation:

- We are in the process of developing our disinfection profile and will calculate a benchmark as soon as the profile is complete.

After Issuing the Notice

Make sure to send your primary agency a copy of each type of notice and a certification that you have met all the public notice requirements within ten days after issuing the notice.

Failure to Develop a Profile or Calculate a Benchmark Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring requirements not met for [system]

We violated a drinking water requirement. Even though this is not an emergency, as our customers, you have the right to know what happened and what we are doing to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During [compliance period] we did not complete all monitoring or testing for [contaminant(s)] and therefore cannot be sure of the quality of our drinking water during that time

We did not develop a year-long profile of our disinfection system to determine our inactivation levels for certain pathogenic organisms. Since we made (are making) a change to our disinfection practice, we are (were) also required to calculate a benchmark to determine our lowest monthly inactivation level over the year. We did not calculate a benchmark.

What should I do?

- There is nothing you need to do. You do not need to boil your water or take other corrective actions. You may continue to drink the water and use it for cooking and bathing. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. We will announce any emergencies on [give TV and/or radio stations where they can get additional information].

What is being done?

[Describe corrective action.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. State Water System ID#: _____.

Date Distributed: _____.

APPENDIX F

Public Notice Certification & Self-Assessment Form

As you prepare your PN, you **must** complete a certification and self-assessment form. After you issue your PN, the Public Notice Certification/Self-assessment form must be signed and submitted to the Illinois EPA along with a copy of the issued PN.

The certification is verification that the PN was issued as required by regulation. The self-assessment portion of the certification is a “check list” of the mandatory PN elements. Failure to complete the self-assessment **PRIOR** to issuing public notice may result in not receiving credit for issuing a satisfactory notice and may require the water supplier to issue PN a second time.

Public water supplies, **within 10 days** of completing the public notification requirements for the initial public notice and any repeat notices, **must** submit a completed and signed PN Certification/Self-Assessment Form and a copy of the public notice to the Illinois EPA.

Please mail to: PN Coordinator
 Illinois EPA /BOW/CAS #19
 P.O. Box 19276
 Springfield, IL 62794



Illinois EPA Public Notice Certification and Self-Assessment

This form is required to be submitted as a means to certify that your Public Notice (PN) met all state and federal requirements. The owner, administrative contact, or responsible operator in charge must sign this certificate of acceptance acknowledging compliance with Illinois Environmental Protection Agency's Primary Drinking Water Standards found in Part 611 Subpart V: Public Notification of Drinking Water Violations.

Please complete the self-assessment and delivery certification, sign, and return it along with a copy of the issued public notice to the Illinois EPA, Public Notification Coordinator, BOW/CAS #19, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276.

PWS ID No.: _____ Name: _____

PN Self-Assessment

This section must be completed **PRIOR** to issuing your public notice

Violation description: _____ (e.g., *Coliform Monitoring*)

Date violation occurred or Monitoring Period, if applicable: _____ (e.g. *July 2010*)

Please certify completion of each public notice requirement by <u>checking each box</u> . Failure to certify completion of each requirement may result in no credit for issuing a satisfactory public notice and additionally may result in a Public Notice Violation.	
<u>Check Each Box to Acknowledge Fulfillment of PN Requirement or if statement is Not Applicable, enter "NA"</u>	
<input type="checkbox"/>	PN includes a description of the violation or situation, including the contaminants of concern, and (as applicable) the contaminant levels
<input type="checkbox"/>	PN includes when the violation or situation occurred
<input type="checkbox"/>	PN includes all potential adverse health effects from the violation or situation.
<input type="checkbox"/>	PN includes the population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water
<input type="checkbox"/>	PN includes information as to whether alternative water supplies should be used
<input type="checkbox"/>	PN includes what actions consumers should take, including when they should seek medical help, if known
<input type="checkbox"/>	PN includes what the supplier is doing to correct the violation or situation
<input type="checkbox"/>	PN includes when the water supplier expects to return to compliance or resolve the situation
<input type="checkbox"/>	PN includes the name, business address, and phone number of the water system owner, operator, or designee of the public water system who can provide additional information concerning the notice
<input type="checkbox"/>	PN includes the following statement to encourage the notice recipient to distribute the public notice to other persons served, using this standard language (where applicable): <i>"Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail."</i>
<input type="checkbox"/>	If PN resulted from a MCL, MRDL, or treatment technique violation, the standard health effects language as specified in the Sample Collector's Handbook, Chapter 2 PN Appendix B is included. Enter "NA" if not applicable
<input type="checkbox"/>	If PN resulted from a monitoring violation or testing procedure, our PN includes the following statement: <i>"We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During (compliance period), we "did not monitor or test" or "did not complete all monitoring or testing" for (contaminants), and therefore cannot be sure of the quality of your drinking water during that time."</i> Enter "NA" if not applicable
<input type="checkbox"/>	PN was displayed in a conspicuous way. It did not contain overly technical language or very small print; was not formatted in a way that defeats the purpose of the notice; and did not contain language that nullifies the purpose of the notice.

PN Delivery Certification

This section must be completed **AFTER** your public notice is issued to consumers

Under certain situations, i.e., acute violations, immediate consultation with the Illinois EPA Regional Field Operations Staff was required at the time. **If this is applicable**, list who and date of contact.

Contacted: _____ (IEPA contact name) on _____ (date)

Method of Distribution

Check all that are applicable

Date Issued

<input type="checkbox"/>	Direct mailed to each bill paying customer	
<input type="checkbox"/>	Distributed using a circular/shopper/newsletter that is sent to each bill paying customer via direct mail (<i>free of charge</i>)	
<input type="checkbox"/>	List Publication Name Here: _____	
<input type="checkbox"/>	PN was Hand Delivered to each bill paying customer	

Signature of Owner, Administrative Contact, or Responsible Operator in Charge

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

I _____ (print name), hereby certify that the public water system indicated on page 1 hereby affirms that public notice has been provided to consumers in accordance with the delivery, content, and format requirements and deadlines in the Illinois Environmental Protection Agency's Primary Drinking Water Standards found Part 611 SubPart V: Public Notification of Drinking Water Violations.

Signature _____ Date _____

Title _____ Telephone (____) _____

This Agency is authorized to require this information under 415 ILCS 5/17.5. Failure to disclose this information may result in a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This has been approved by the Forms Management Center.

IL532-2626

PWS266 Revised (3/11)

CHAPTER

2

Consumer Confidence Report (CCR)

The guiding principle behind consumer confidence reports (CCRs), also known as the Annual Drinking Water Quality Report, is that all people have the right to know what is in their drinking water and where it comes from. The CCRs provide an opportunity for water suppliers to educate consumers about the source and quality of their drinking water, and to involve them in decisions about it. The USEPA has revised its public notification requirements to expedite notification of serious health threats and simplify notification of other violations. Consumers who are familiar with the basic drinking water information in the CCRs will be able to participate more effectively in the notification processes. The information contained in the CCRs will assist consumers in making informed choices concerning their health and the health of their families. The information contained in the CCRs allows consumers to better understand and appreciate the challenges faced by public water suppliers in delivering safe drinking water. Educated consumers are more likely to help public water suppliers protect drinking water sources and realize the need to upgrade the treatment facilities in order to make their drinking water safe.

CCRs are based on one calendar-year of data. If a public water supplier is allowed to monitor for regulated contaminants less often than once a year, the date and results of the most recent testing where detections resulted will be listed. No results older than five (5) years will be included in the CCR.

Public water suppliers must deliver the CCRs for the previous year **by July 1st**. A “new” PWS must deliver its first CCR by July 1st of the year following its first full calendar year in operation and annually thereafter.

This chapter will guide you through the requirements for producing and distributing a satisfactory CCR. Appendices to this chapter will include Illinois EPA reporting forms, required CCR language, templates, and examples. All CCR correspondence and/or questions should be directed to:

CCR Coordinator
Illinois EPA/BOW/CAS #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-62702
Telephone: 217-785-0561
Fax 217-782-0075

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First Step to Creating a CCR

There are several different assistance tools or options (templates) to choose from when creating a CCR. Below are five different options (you are not limited to these options) to get you started:

1. The Illinois EPA has a customized detected result table and personalized CCR report available on the Internet. “If” you do not need to include any additional information (e.g., violation explanations, parent supplies data table, etc.), then you will be able to photocopy and distribute this report. Your report can be downloaded at the following Internet web address:

<http://www.epa.state.il.us/water/drinking-water-watch/>

Click the blue web link entitled Drink Water Watch. Next, click the Review Consumer Confidence Data tab at the bottom left.

If you choose to use the report we provide, a careful review of the data must be performed. If any errors or discrepancies are found, all applicable edits/additions/corrections must be made to the report prior to distribution. You do NOT have to get your edits/additions/corrections approved by the Illinois EPA prior to issuing your CCR.

2. The Illinois EPA customized CCR can be difficult to edit/add/change information because of the limited “output” options. If you are familiar with Rich Text Format (rtf), a “fill in the blank” template can be downloaded at:

<http://www.epa.state.il.us/water/compliance/drinking-water/collectors-handbook/index.html>

To complete the rtf template, you will need to first print the Illinois EPA customized CCR as described in option 1. The next step is to simply transpose (re-type) the information from the Illinois EPA customized CCR to your personal CCR version. This should allow you the greatest flexibility to edit/add/change information as needed.

3. USEPA has developed software that allows a user to generate a CCR. This software is called CCRiWriter. The CCRiWriter Web site is:

www.ccriwriter.com

To use this software, you will need to have your sample data and violation information ready. This software does not automatically populate your contaminant detection and violation tables. You will need to supply this information as you “build” your CCR report. More information can be found at the web site.

4. Use this Handbook chapter and start from scratch. All CCR requirements are listed following this page.
5. Hire an outside firm to complete the CCR for you.

Regardless of which option is chosen, a fair amount of work will be needed to produce a satisfactory report that your customers can understand. It is strongly recommended that after you produce a draft CCR, you have several persons proof read it for clarity before distribution. This simple task may help save many telephone calls from confused customers.

CCR Requirements

The CCRs are based on calendar-year data. The CCR will include sample data collected from the previous calendar year or when a public water supplier is allowed to monitor for regulated contaminants less often than once a year, the date and results of the most recent testing where detections resulted. No results older than five (5) years need to be included in the CCR.

Public water suppliers must deliver the CCRs for the previous year **by July 1st** of the current year. Parent/Source public water suppliers must deliver information to their satellites **by April 1st**. **The two systems may enter into a contractual agreement that could result in an alternate delivery date of sample data to the satellite.** A new public water supply must deliver its first CCR by July 1st of the year following its first full calendar year in operation and annually thereafter.

If your supply sells or purchases water from another supply you will need to carefully review **Appendix A** to know your rights and responsibilities.

You must also complete and submit a certification form each year. The self-assessment check list should be completed **prior** to CCR distribution to consumers. The self-assessment is a check-list of CCR requirements so that you can be confident no requirements are missed. These requirements are explained on page 16 and in **Appendix C**

CCR Content

Your CCR is required to contain the following items.

Water System Information	-Name/phone number of contact person -Information on public participation -Information for non-English speaking population, if applicable
Sources of Water	-Type and location of water sources -Availability of source water assessment -Source water susceptibility information
Required Educational Information	- MANDATORY educational statements regarding drinking water contamination -Explanation of contaminants and their presence in drinking water -Information to customers that some people may be more vulnerable to contaminants in drinking water
Information on Compliance With Monitoring, Reporting, and Treatment	-Explanation of violations including potential health effects and corrective actions taken -Explanation of variance/exemption, if applicable -Warning for vulnerable populations about <i>Cryptosporidium</i> and <i>Radon</i> , if applicable
Table of Detected Contaminants	-Definitions: Maximum Contaminant Level (MCL), Maximum Contaminant Level Goal (MCLG), others as needed -Likely source of each contaminant -For MCL violations: health effects language, explanation of violation, and steps the water system took to correct the violations -Informational statements on nitrate, arsenic and turbidity, if necessary, and lead, always required

Preparing Your CCR

There are **9 steps** or informational categories to consider when creating a satisfactory CCR.

STEP 1: CCR Title

The CCR Rule does not require the use of a report title; however, it is recommended. The report title, if used, should catch the customer's attention; for example, "Consumer Confidence Report," "Annual Drinking Water Quality Report" could be used. Customers are most interested in a clear statement of whether or not their drinking water meets all the relevant USEPA and Illinois EPA standards. Although not mandated by the CCR Rule, it is effective to begin the CCR by explaining the steps taken to protect their drinking water and whether the water meets all drinking water standards.

EXAMPLE: *This year, as in years past, your tap water met all USEPA and state drinking water health standards. Our system vigilantly safeguards its groundwater supply, and we are able to report that the department had no violation of a contaminant level or of any other water quality standard in the previous year. This report summarizes the quality of water that we provided last year, including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with this information because informed customers are our best allies.*

STEP 2: Contact Information and Opportunities for Public Participation

You must include a name and telephone number of a person at the public water supply who can provide additional information and answer questions about the CCR.

List any opportunities for public participation in the decision-making processes that affect drinking water quality, for instance, the time and place of regularly scheduled board meetings. If the public water supply does not host regularly scheduled meetings, customers should be told how they could get information when meetings are announced. See the example below.

EXAMPLE: *If you have any questions about this report or concerning your water system, please contact (give the name and phone number of a person able to address the customer's questions). We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings (provide the date, time and location of meeting).*

STEP 3: Language

For public water supplies with large portions of non-English speaking customers, the public water supply information must include, in the **appropriate language(s)**, the importance of the CCR and/or where to obtain additional information. The determination to add a multi-lingual paragraph **must** be made by the public water supply. (See example on next page)

The regulation specifies that public water supply must make a “good faith” effort for all consumers to receive and understand the CCR.

EXAMPLE: *Spanish--Este informe contiene información muy importante. Tradúscalo ó hable con alguien que lo entienda bien. (“This report contains very important information. Translate it, or speak with someone who understands it.”)*

STEP 4: Source Water Type

If a public water supply sells or purchases water from another public water supply, review **Appendix A** for more information on rights and responsibilities of parent/source and satellite public water supplies.

The CCR must include the type of water (groundwater, surface water, or a blend), including any commonly used name(s) (i.e. Lake Michigan or Illinois Prairie Aquifer).

Explaining the various interconnections and back-up sources may be difficult, but it is important that consumers understand that the source of their water may vary during the year; deciding whether to explain a well that is only used a few days a year is a judgment call.

EXAMPLE: *Our town uses groundwater provided by two wells drilled into the Illinois Prairie aquifer. An aquifer is a geological formation that contains water. Both of the wells are located within the city limits. Water is pumped from both wells, blended together, and then treated. Your home normally receives a mixture of water from both wells #1 and #2.*

STEP 5: Source Water Assessment

Your Illinois EPA “Source Water Assessment Summary” is available online at:

<http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>

This summary will include the information that is required to be included in the CCR. All CCRs must include the following source water assessment information:

- Notification to consumers of the availability of the assessment;
- A brief summary of the source water’s susceptibility to contamination (based on the findings of the source water assessment).

EXAMPLE: *The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by City Hall or call our water operator at 555-555-1515. Information provided by this assessment indicates our water supply is vulnerable to contamination from synthetic organic chemicals used by agricultural companies in the area. Vulnerability also exists due to ethylbenzene and xylene discharged from area petroleum refineries.*

STEP 6: Mandatory Information / Statements

Your CCR must include several mandatory statements. The items in this section are educational statements regarding commonly found drinking water contaminants. The language used in the first two items is **MANDATORY** and every CCR must contain these statements **WORD FOR WORD**.

<p>Mandatory Statement #1 <i>Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA’s Safe Drinking Water Hotline (1-800-426-4791).</i></p>
<p>Mandatory Statement #2 <i>Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA’s Safe Drinking Water Hotline (1-800-426-4791).</i></p>

The next three statements contain **required information** on the different types of contaminants that may be present in drinking water. Public water suppliers may use comparable language for this section. This means that the information may be reworded and/or tailored to the public water supply; it does not mean that the inclusion of this information is optional. Even if reworded and/or tailored, the information in this section must be substantially included:

<p>Required Information Statement #1 <i>The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and radioactive materials, and pick up substances resulting from the presence of animals or human activity. Possible contaminants consist of:</i></p> <ul style="list-style-type: none"> • <i><u>Microbial contaminants</u>, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;</i> • <i><u>Inorganic contaminants</u>, such as salts and metals, which may be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;</i> • <i><u>Pesticides and herbicides</u>, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses;</i> • <i><u>Organic chemical contaminants</u>, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff and septic systems; and</i> • <i><u>Radioactive contaminants</u>, which may be naturally occurring or be the result of oil and gas production and mining activities.</i>
<p>Required Information Statement #2 <i>In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.</i></p>

Required Information Statement #3

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

IF a public water supply has operated under a **variance or exemption** at any time during the report year, the CCR must include an explanation of the variance or exemption. Include the following: definition of variance or exemption, date that it was issued, why it was granted, when it is up for renewal, and a status report on what the public water supply is doing to remedy the problem. If the public may participate in the review of the variance or exemption, include a notice about how to participate.

Suggested Language for Variance/Exemption (if applicable)

A variance or exemption is state or USEPA permission not to meet an MCL or a treatment technique under certain conditions. On January 4, 1995, our system was granted a variance from restricted status. A system under restricted status will not be granted construction permits to extend their water mains. We were put on restricted status due to a history of chemical detection in our wells. We were granted the variance from restricted status since we have drilled new wells that will be fully operational in the next six months.

IF a public water supply has been issued a **vulnerability waiver** for the monitoring of SOCs and/or VOCs, the CCR must include an explanation of the waiver.

Suggested Language for Vulnerability Waiver (if applicable)

Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, our water supply was issued a vulnerability waiver renewal. No monitoring for VOCs and SOCs is required between January 1, 2011 and December 31, 2013.

IF the public water supply performed monitoring that indicates the presence of **cryptosporidium**, either in source (raw) water or finished water, the CCR must include a summary of the monitoring results and an explanation of the significance of the results.

Suggested Language for Detection of cryptosporidium (if applicable)

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring of source water and/or finished water indicate the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctors regarding appropriate precautions to avoid infection. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

If the public water supply monitored for **radon** and it was detected, the CCR must include a summary of the monitoring results and an explanation of the significance of the results.

Suggested Language for Detection of Radon (if applicable)
Radon is a radioactive gas that occurs naturally in some ground water. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Major sources of radon gas are soil and cigarettes. Inhalation of radon gas has been linked to lung cancer; however it is not clear how radon in your drinking water contributes to this health effect. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, contact [insert name of health department or other source of local test kits], or call 1-800-SOS RADON.

If the community public water supply receives notice of an **E. coli indicator-positive ground water source sample** they must provide special notice in the CCR addressing that year, informing the public served by the water system of the E. coli indicator-positive source sample. The system must continue to inform the public annually (as special notice in the CCR) until the Illinois EPA determines that the fecal contamination in the ground water source has been corrected. In order to address this special notice requirement, the following elements must be included in the CCR:

- The nature of the source of the fecal contamination (if the source is known) and the dates of the fecal indicator positive ground water source sample(s).
- If the fecal contamination in the ground water source has been addressed.
- For fecal contamination in the ground water source that has not been addressed, the state-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.
- The potential health effects using the health effects language.

In addition to the special notice requirements, a CWS must also include the E. coli indicator-positive result in the Regulated Contaminant table in the CCR addressing that year.

Example

Contaminant	TT	MCLG	Value	Date	Violation	Source
E. coli	TT	N/A	Positive	April 5, 2010	No	Human and animal fecal waste

**System A detected E. coli in their source water sample; the sample was collected in response to a total coliform-positive routine sample collected on April 2, 2010. More information about this situation is provided in the Situation section.*

On April 4, 2010 we were informed that one of our routine total coliform samples collected on April 2 was total coliform-positive. As required by the Ground Water Rule, we collected samples from both of our sources, Wells 1 and 2, and had them analyzed for fecal contamination. The sample for Well 1 was positive for fecal contamination (E. coli).

Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches. Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

In response, we sent notices to all of our customers within 24 hours of learning of this positive sample. We carefully considered our options and developed a plan with the State Department of Public Health to extend the well’s casing higher above the ground, replace the well cap, and install treatment (chlorination). As we stated in the most recent update on this issue, treatment was installed on June 1, 2010.

If the community public water supply receives notice from the Illinois EPA of a **GWR significant deficiency**, then the PWS must inform its customers of the significant deficiency that is uncorrected in their CCR.

EXAMPLE

On September 14, 2013, we were informed by the Illinois EPA that a significant deficiency—two leaking septic tanks near our source water supply—had been identified during a September 1, 2013 sanitary survey. As required, we contacted the Illinois EPA and were directed to make arrangements with the owner of the property on which the septic tanks are located to have the tanks replaced. We did not do so within the established deadline. Since being informed of the deficiency, we have been conducting regular testing of our source water and we are implementing the corrective action plan established by the Illinois EPA. Under this plan, the leaking tanks will be replaced by October 20, 2014.

STEP 7: Violation Reporting

If your water supply had a violation(s) during the reporting year, a brief summary must be included describing what happened. At a minimum, the summary must include:

- A clear and readily understandable explanation of the violation(s);
- Potential adverse health effects (if any); and
- The steps the system has taken to correct the violation(s).

Below is some example language for the different type of violations

Treatment Technique Violations

Filtration and disinfection (Surface Water Treatment Rule requirements) — If the violation was a failure to install adequate filtration or disinfection equipment or processes, or there was a failure of that equipment or process, include the following language:

EXAMPLE: *Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.*

Lead and copper control requirements — If the violation was a failure to meet corrosion control treatment, source water treatment, or lead service line requirements; you will need to include the relevant health effects language for lead or copper:

EXAMPLE: *The (supply name) failed to submit the required source water and optimal corrosion control treatment recommendations by the required date (insert date). The recommendation is an explanation to the state of what the water supply plans to initiate in order to reduce the amount of lead and copper exposure to its consumers. Failure to submit the recommendations in a timely manner has resulted in a treatment technique violation for which we submitted public notification.*

Monitoring Violations

If a public water supply failed to monitor during the scheduled sampling period and incurred a public notice requirement, you must describe what happened. Several examples below:

EXAMPLE 1: *The village water supply failed to collect **volatile organic chemical (VOC)** samples during the June monitoring period. The VOCs include chemicals such as total xylenes, vinyl chloride, and benzene. Failure to monitor could allow trace quantities of these chemicals to go undetected for extended periods of time. These chemicals have been associated with health related problems if the water is consumed for extended periods of time. We collected the samples in October and no VOCs were detected.*

EXAMPLE 2: *The village water supply failed to submit the required number of coliform samples during the September monitoring period. Failure to monitor the bacteriological quality of the water could allow contamination in the water system to go undetected. Bacterial contamination may indicate the presence of disease producing organisms that can cause an outbreak of waterborne disease. We are now monitoring as scheduled and no samples have been positive.*

NOTE: This explanation does NOT fulfill the public notification requirements; see page 18 or Chapter 1 of the Sample Collector’s Handbook.

If a public water supply failed to comply with the terms/conditions of any variance or exemption issued by the Illinois EPA or the Illinois Pollution Control Board, consumers must be told. The following is an example:

EXAMPLE: *As a condition of the variance issued to our water supply on March 3, 1987, we must inform customers quarterly of the current radium levels found at our wells. We failed to do so during the first and second quarters of this year. Our new water operator has since issued the public notice as required and will continue doing so each quarter.*

STEP 8: Table of Detected Regulated Contaminants

The CCR must include a table of detected regulated contaminants. This is a mandatory table. The purpose of this table is to identify the highest level of each **detected** contaminant and the range of levels detected for that contaminant found during the CCR reporting year. For each detected contaminant, the table lists the Maximum Contaminant Level (MCL), Maximum Contaminant Level Goal (MCLG), and the known or likely source of the contaminant in drinking water. The known or likely source of the contaminant in drinking water can be found in **Appendix D**.

If there are no analytical results for the report year, the table must show the most recent detect, if any, from the last five years. The table must show the date of monitoring and include a brief statement explaining that the data is from the most recent monitoring period. If a public water supply monitors less than once per year (triennial frequency), the table must include results of samples collected during the most recent monitoring period.

This table **MUST** contain the following information and the next several pages will explain each of these requirements as defined in the CCR rule.

<p>Mandatory Table Structure</p> <ul style="list-style-type: none"> • Definitions • Abbreviations • List of detected contaminants • MCLG column • MCL column • Level Found column • Range of Detection column • Violation column • Date of Sample column • Typical Source of Contamination column • Footnotes included underneath the contaminant explaining the data in the table
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Definitions

It is **mandatory** to include the following definitions. These definitions should be defined at the top of the contaminant detection table. Those indicated with an asterisk (*) should only be included **if** your table contains information on a contaminant that is regulated by a treatment technique or action level (i.e. turbidity, lead or copper).

Maximum Contaminant Level Goal (MCLG)	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Contaminant Level (MCL)	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Treatment Technique (TT)*	A required process intended to reduce the level of a contaminant in drinking water.
Action Level (AL)*	The concentration of a contaminant that triggers treatment or other required actions by the water supply.
Maximum Residual Disinfectant Level Goal (MRDLG)	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Maximum Residual Disinfectant Level (MRDL)	The highest level of a drinking water disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Abbreviations

It is **mandatory** to define the following abbreviations **if** they appear in the table. These abbreviations are defined at the bottom of the “Regulated Contaminants Detected” table.

ND	Not detectable at testing limits
N/A	Not Applicable
AL	Action Level
MFL	Million fibers per liter
TT	Treatment Technique
NTU	Nephelometric Turbidity Units
mrem/year	millirems per year (a measure of radiation absorbed by the body)
pCi/L	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/l)
ppb	parts per billion, or micrograms per liter (ug/l)
ppt	parts per trillion, or nanograms per liter
ppq	parts per quadrillion, or picograms per liter

List of Detected Contaminants (units)

The table must only contain data about regulated contaminants (contaminants subject to an MCL, TT, or AL) and unregulated contaminants that require monitoring under the Illinois EPA 611 regulations. A detected contaminant is any regulated contaminant detected at or above its minimum detection limit. This table must not include contaminants that were not detected.

MCLG Column

The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. The MCLG must be listed for any detected contaminants and must be expressed in the same units as the MCL.

MCL Column

The MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. The MCL must be listed for any detected contaminant and it must be expressed as a number greater than 1.0.

Highest Level Detected Column

In most cases, the “Highest Level Detected” is the annual average of all samples collected during the CCR calendar year. The calculation process is described in detail in **Appendix B** (Interpreting Monitoring Data). If a public water supply has several entry points, information included in the contaminant detection table represents the data from the entry point that had the highest values.

In other cases, the “Highest Level Detected” is determined by the following:

- Total trihalomethane and five haloacetic acids: highest locational running annual average (LRAAs). If more than one location exceeds the TTHM or HAA5 maximum contaminant level (MCL), the system must include the LRAA for all locations that exceed the MCL.
- Lead and Copper: include both the lead and copper 90th percentile value from the most recent monitoring period.
- Total coliform:
 - Public water supplies that collect **fewer than 40 samples per month**: use the highest number of positive samples collected in any one month.
 - Public water supplies that collect **40 or more samples per month**: use the highest percentage of positive samples collected in any one month.
- Fecal coliform/E. coli: use the highest number of positive fecal/E. coli samples collected in any one month.
- Turbidity: (if applicable, surface supply) include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits for the filtration technology being used.

Range of Levels Detected Column

For any detected contaminant, list the range from lowest to highest of all samples collected during that CCR reporting year. Two exceptions exist:

- Lead and copper (if applicable): Include the total number of sites that exceeded the action level during the most recent round of monitoring.
- This column does not apply to total coliform, fecal coliform, and *E. coli*. This column should be left blank for these contaminants.

Violation Column

Mark this column with a “YES” if a violation of an MCL, TT, or an action level exceedance was recorded for your water supply during the CCR calendar year.

Collection Date Column

Some of the data in the table represents samples collected within the last five years due to triennial monitoring or vulnerability waivers. If the table contains detection data that is not from the calendar year of the report, the table must show the date of monitoring and include an explanation.

EXAMPLE: *Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for during the CCR calendar year. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.*

Likely Source of Contaminant Column

For all detected contaminants include the most likely source of contamination. USEPA's intent is for this information to be as specific as possible. The CCR should identify a specific point source, such as "Jay's Hog Farm" or the "Super Shiny Paper Mill". If you are not sure of the contaminant source, include one or more of the typical sources listed in **Appendix D** applicable to your situation.

STEP 9: Contaminant Detect Table Footnotes

It is very important to provide accurate, easily understandable footnotes that explain the data in the contaminant detected table. Some of the footnotes discussed below are mandatory under certain situations.

State-Only Regulated Contaminant Footnote

If a public water supply has a detection of a state-only regulated contaminant (no federal standard), the footnote should contain an explanation that the detection (or MCL) is a state-regulated contaminant and no federal standard exists.

EXAMPLE: *This contaminant is not currently regulated by the USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more.*

Triennial or Less Frequent Monitoring Footnote

If a public water supply monitors less frequent than annually, an explanation must be given.

EXAMPLE: *The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.*

MCL or Treatment Technique Violation Footnote

If a public water supply had an action level exceedance, MCL or treatment technique violation during the CCR reporting year, you must include the following information in a footnote:

- Length of the violation/exceedance.
- Mandatory health effects language (**Appendix D**).
- Corrective action being taken by the water supply.

Special Footnotes for Nitrate, Arsenic, Turbidity and Unregulated Contaminants

Several informational statements **MUST** be included in the footnote page **IF** the following conditions exist and no violations or exceedances were recorded.

If the NITRATE level is above 5 mg/l (50 percent of the MCL), but below the MCL.
Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

If ARSENIC is detected above 5 ug/l and up to and including 10 ug/l.
While your drinking water meets USEPA’s standard for arsenic, it does contain low levels of arsenic. USEPA’s standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a naturally-occurring mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

If you measure for TURBIDITY, you must explain why.
Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Unregulated Contaminants - If your supply has a detection of a contaminant that is unregulated, but is required to be monitored, add the following footnote:
A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effects language been set. The purpose of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

CCR Certification and Self Assessment Check List

For the Illinois EPA to verify that CCR requirements have been satisfied, a copy of the CCR along with a Certification form must be submitted at the same time it is sent to your customers, or by July 10th of each year (see Appendix C).

THE SELF-ASSESSMENT CHECK LIST SHOULD BE COMPLETED **PRIOR** TO CCR DISTRIBUTION TO CONSUMERS. The self-assessment is a check-list of CCR elements so that you can be confident no requirements are missed.

CCR Method of Delivery

A public water supplier must deliver a copy of its consumer confidence report to each customer **by July 1st** of each year. For this purpose, “customer” is defined as a billing unit or service connection to which water is delivered by a community water system. One of these options must be used:

- Direct mail the report to all customers.
- Electronically direct deliver the report through URL or Email.
- Include the report in a monthly newsletter that is sent to each customer.
- Insert the report in a free local publication that is delivered to each postal patron.
- Hand deliver the report to each customer.
- Include the report with the water bill.

In addition to sending the report to each billing unit or service connection customer, a “good faith” effort must be made to ensure all non-bill-paying consumers (apartment dwellers, etc.) receive the information. A “good faith” effort means selecting the most appropriate method(s) to reach non-bill-paying consumers. Those methods include, but are not limited to:

- posting the report on a publicly accessible Internet site;
- mailing the report to all postal patrons;
- advertising the availability of the report in newspapers, TV and radio;
- publishing the report in a local newspaper;
- posting the report in public places such as cafeterias or lunch rooms of public buildings, libraries, churches, and schools;
- delivering multiple reports for distribution by single-billed customers; such as apartment buildings or large private employers; and
- delivering the report to community organizations.

Systems that serve **100,000 or more** people must also post their reports on a publicly accessible Internet site.

All systems must keep a copy of each CCR on file for a minimum of three years. Copies of the reports must also be available to the public upon request.

DON'T FORGET!

Send a copy of your CCR to the Illinois EPA when you mail it to the customers, include the CCR Certification form along with the report. Your supply is required to have the CCR and Certification Form to the Illinois EPA **by July 10th** of each year. The required Certification form is located in **Appendix C**.

CCR Method of Delivery “Waivers”

Method of delivery (MOD) waivers are available for public water suppliers that serve fewer than 10,000 persons and have had no water quality and/or monitoring violations during CCR calendar year. The CCR method of delivery (MOD) waiver is intended to allow financially limited public water supplies to forego the cost of printing and direct mail delivery. **The MOD waiver does not relieve a public water supply from preparing a CCR or notifying consumers of its availability by July 1st of each year.** The MOD waiver has no effect on the required content of the report. The waiver status for each public water supply will be reassessed annually. The use of the MOD is optional and you can always follow the delivery requirements specified on page 16.

501-10,000 populations

Public water suppliers that serve fewer than 10,000 persons but more than 500 and have no water quality or monitoring violations during the CCR calendar year may be issued a MOD waiver. Although direct mail delivery of the CCR to each customer is not required, **you are still required to:**

1. Prepare the CCR;
2. Publish the entire CCR in one or more local newspapers (CCR must be printed in a conspicuous location and in print size which is easily read);
3. Inform the customers (by newspaper) that the reports will not be mailed;
4. Make the reports available upon request;
5. Mail a copy to the Illinois EPA along with the CCR certification form by July 1 of each year.

For the Illinois EPA to verify that you satisfied the CCR requirement, a copy of the CCR and the newspaper article must be submitted to the Illinois EPA, Drinking Water Compliance Unit along with the CCR certification form by July 10th of each year. This required certification form is located in **Appendix C**.

25-500 populations

Public water suppliers that serve fewer than 501 persons and have no water quality or monitoring violations during the CCR calendar year may be issued a MOD waiver. Although direct mail delivery of the CCR to each customer is not required, **the following is required:**

1. Prepare the CCR;
2. Provide notification to customers that a CCR was prepared and is available upon request; this notice of CCR availability must be posted in a conspicuous location, provided directly to each customer, or published in a local newspaper.
3. Make the reports available upon request;
4. Mail a copy to the Illinois EPA along with the CCR certification form by July 1 of each year.

Recommended Language for Notification of CCR Availability:
<i>The (insert name of public water supply) has available upon request this year’s Consumer Confidence Report (CCR). The CCR includes basic information on the source(s) of your drinking water, the levels of any contaminants that were detected in the water during 2013, and compliance with other drinking water rules, as well as some educational materials. To obtain a free copy of the report, please call (insert name of contact person) at (insert telephone number of contact person) or you may pick one up at (insert locations).</i>

CCR Electronic Direct Delivery

The IEPA will accept the **electronic direct delivery** of the CCR to your customers to satisfy the CCR customer delivery requirements. This decision is based upon the U. S. Environmental Protection Agency's Consumer Confidence Report Retrospective Review Analysis, which was finalized in a Memorandum on January 3, 2013. This method of direct delivery does not affect your ability to use the Optional Method of Delivery Waivers for systems serving less than 10,000 customers.

Additional information regarding US EPA's CCR electronic delivery options, including examples can be found in US EPA's Memorandum available at:

<http://water.epa.gov/lawsregs/rulesregs/sdwa/ccr/upload/ccrdeliveryoptionsmemo.pdf>

It is important to note, Public Water Systems must ensure delivery of the CCR to each of their bill paying customers, which means more than one method of delivery may be necessary, such as a combination of email communications, paper copy delivery, etc. Public Water Systems can distribute the CCR electronically to their customers using the following approved methods:

1. Requirements for Email Delivery to the Customer

- a) The subject line of the email must contain "2014 CCR", the Public Water System Identification Number (PWSID Number) and the Public Water System's Name.
- b) The CCR must either be embedded in its entirety in the email message, have the CCR as a file attachment in PDF format, or contain the direct URL¹ to the CCR.
- c) The URL must take the customer directly to the entire CCR so that the customer does not have to retrieve the CCR by navigating through another website. The email must also contain a description explaining the purpose and content of the URL in the email.
- d) The email must also contain information on how the customer may obtain a paper copy of the CCR (i.e. by calling a phone number)
- e) If the PWS receives a message that the email was undeliverable, the PWS must utilize another method to ensure the customer receives the CCR (i.e. mail a paper copy)

¹ In computing, a uniform resource locator (URL) is a specific character string that constitutes a reference to an Internet resource.

2. Requirements for Mailing the Direct CCR URL to the Customer

- a) The direct URL to the CCR must be printed directly on a water bill, a bill insert, newsletter, or separate mailing. It must be a direct URL; you can't send the customer to a website where they must then click or download the report.
- b) It must be clear and in a font that is at least as large as the largest font used.
- c) ****A short description explaining the information available must accompany the URL.**
- d) Provide information on how the customer may obtain a paper copy of the document if they choose not to access the CCR by using the URL (i.e. by calling a phone number)

**** (example language)** Please go to www.anytownwater.org/2013waterreport.pdf to view your 2014 Annual Water Quality Report and learn more about your drinking water. This report contains important information about the source and quality of your drinking water during 2013. If you would like a paper copy of the report mailed to your home, please call (555) 555-5555.

The use of social media such as Twitter, Facebook, and automated telephone notification systems **do not** meet the "directly deliver" requirement of the CCR Rule and therefore, cannot be used. They can be used as an additional "good faith" effort to reach all consumers.

Using the CCR to comply with the Public Notification Rule

Monitoring (and reporting) violations require that an annual public notice be distributed to all customers. To help save on cost, the public water supply is allowed to issue this annual public notice along with the CCR.

If you use the CCR to issue your annual Tier 3 public notice, it can be a separate notice OR it may be added to the end of the CCR report. This is in addition to Step 7 – Violation Report (Page 9) as described in this Chapter. In other words, you will need to do the requirements listed in Step 7 concerning violation reporting for the CCR and do a “separate notice” at the end of the CCR to receive credit for issuing public notice. Be sure the “separate notice” includes all Public Notice elements.

When you submit a copy of your CCR and the certification/self-assessment form to the Illinois EPA, also include the Public Notice certification/self-assessment form that was sent to you when you were notified of the violation.

For additional information on the Public Notification Requirements, see Chapter 1 of the Sample Collector’s Handbook. This is available at the following internet location:

<http://www.epa.state.il.us/water/compliance/drinking-water/collectors-handbook/index.html>

APPENDIX A

Parent Supply / Satellite Supply Requirements

Parent Supply / Satellite Supply Requirements

The CCR Rule requires public supplies that sell water to other public water supplies to provide them with source water monitoring data and other information. The satellite will then be able to prepare a CCR for its customers using the information from the parent supply. This information must be provided by April 1st of each year; however, **the CCR rule does allow for the two supplies to enter a contractual agreement that would set an alternate delivery date for the parent supply to provide data to the satellite supply.** If an alternative delivery date of monitoring data is determined, both supplies MUST specify the date in a contract between the two supplies. This contract does not need to be approved by the Illinois EPA; however, the contract should be signed by the official custodian and kept on file at both public water supplies.

Parent supplies are not responsible for creating the CCR for the satellite, nor are they responsible for providing data on contaminants that the satellite monitors. **Parent supplies are required to furnish data on detected contaminants that are monitored at the entry point (source water) and any related compliance information.**

These contaminants would include:

- Volatile Organic Chemicals (VOCs)
- Synthetic Organic Chemicals (SOCs)
- Inorganic Chemicals (IOCs)
- Nitrate / Nitrite
- If applicable, turbidity

Other information the parent supply must provide to the satellite supply:

- All applicable information on type and location of water sources;
- Source water assessment and susceptibility information;
- Vulnerability Waiver information, if applicable;
- Cryptosporidium, if monitored for and detected
- Radon, if monitored

Satellite supplies monitor for the following contaminants. This data should only be reported by the satellite supply for monitoring done within their distribution system.

- Total Coliform Monitoring Data
- Lead and Copper Monitoring Data
- Disinfection By-Products (i.e., total trihalomethanes, maximum residual disinfectant levels)

Like the parent supply, **the satellite supply is required to prepare a CCR** and distribute to all customers. Using the information provided by the parent supply, the satellite supply should follow the CCR Guidance to create their CCR.

Some options the satellite supply may consider when developing the CCR:

1. In some cases, a satellite supply may contract with the parent supply to produce the CCR, since the parent may have more staff and resources available. Under those circumstances, it would be acceptable for the satellite supply to reprint the parent supply's CCR with a new title/letterhead and add any additional data.
2. The satellite supply may provide two tables of detected contaminants. One table would consist of the monitoring data provided by the parent supply. The second table would consist of monitoring data collected by the satellite. If this option is used, the CCR must clearly explain the relationship between the two tables (i.e., one table represents data collected by the parent supply, the other table represents data collected by the satellite).
3. The satellite supply may combine into a single table, the table of detected contaminants from the parent supply and the satellite's table of detected contaminants. If this option is used, the CCR must clearly explain that part of the data was collected by the parent supply and the satellite supply collected the rest.

Whatever option is used, satellite supplies are responsible for ensuring that their customers receive a CCR containing all the required CCR content elements, regardless of who prepares the report.

In order to make the CCR a useful tool, the parent supply must closely coordinate with the satellite supply, and vice versa.

APPENDIX B

Interpreting Monitoring Data

Interpreting Monitoring Data

The “Highest Level Detected” column should display the annual average of all samples collected during the CCR calendar year. In order to calculate the highest level detected data, one of the following methods should be used based on the individual public water supply’s requirements. Note: If a public water supply has several entry points or treatment plants (TPs), you must use the data from the TP that had the highest values.

Contaminants Monitored Annually or Less Frequently (triennial)

For public water supplies with one sampling location (in most cases each active entry point or TP), the single sample result from that location is used. For systems with multiple TPs, the location with the highest detected level is used in the table. If a confirmation sample was collected, the confirmation sample is averaged with the routine sample. In this case, the sampling location with the highest average is used in the table.

Contaminants Monitored Quarterly

For each location sampled (in most cases, each active entry point or TP), a quarterly average is calculated using all routine/confirmation samples collected during the quarter. Next, an annual average is calculated for each location by adding the quarterly averages and dividing by four. The location sampled with the highest annual average is used in the table.

Contaminants Monitored Two or Three Quarters per Year

For all locations sampled (in most cases, each active entry point or TP), a quarterly average is calculated for each quarter having sample data. Next, an annual average is calculated for each location by adding the quarterly averages, and dividing by the number of quarters tested (either two or three). The location sampled with the highest average is used in the table.

Turbidity

When reporting turbidity as an indicator of filtration performance, systems must report the highest single measurement and the lowest monthly percentage of samples meeting the requirements

	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source
Turbidity	TT = 0.3 NTU	N/A	99.7%	99.7-100			Soil runoff
Turbidity	TT = 1 NTU max	N/A	1	N/A			Soil runoff

Calculating a Running Annual Average

The following example describes the calculation process for a running annual average. This example illustrates an **atrazine** running annual average (RAA) that is calculated for two treatment plants or TPs.

	TP 01 SOUTH WTP (ug/l)			TP 02 WEST WTP (ug/l)		
<i>Monitoring Quarter</i>	<i>Atrazine Quarterly Results</i>	<i>Running Annual Average*</i>	TP01	<i>Atrazine Quarterly Results</i>	<i>Running Annual Average*</i>	TP02
Jan 2007 thru March 2007	3	NC		1	NC	
April 2007 thru June 2007	10	NC		2	NC	
July 2007 thru Sept 2007	9	NC		4	NC	
Oct 2007 thru Nov 2007	4	NC		1	NC	
Jan 2008 thru March 2008	2	6.3	OVER MCL	2	2.3	Under MCL
April 2008 thru June 2008	1	4	OVER MCL	1	2	Under MCL
July 2008 thru Sept 2008	2	2.3	Under MCL	1	1.3	Under MCL
Oct 2008 thru Dec 2008	2	1.8	Under MCL	1	1.3	Under MCL
<i>NC = Running Annual Average was not calculated.</i>						
* The running annual average is calculated by adding the <u>current quarter plus the three previous quarters</u> and then dividing by four.						

In this example, TP 01 had the highest results; thus, these values will be used in the detected contaminants table. For TP 01, no individual quarterly results exceeded the MCL during 2008; however, the running annual average exceeded the MCL for two quarters.

Therefore, your detected contaminant table for atrazine would look like:

	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source
Atrazine	3	3	6.3	1-2		YES	Runoff from herbicide used on row crops

NOTE: In your Violation Summary Table, you must include the length of the violation, corrective action being taken by the water supply, and the mandatory health effects language.

APPENDIX C

Consumer Confidence Report (CCR) Certification Form & Self-Assessment Check List

For the Illinois EPA to verify that CCR requirements have been satisfied, a copy of the CCR along with a certification form must be submitted at the same time it is sent to your customers. The Agency should receive a copy of your report and the certification form no later than July 10th of each year.

YOU SHOULD COMPLETE THE SELF-ASSESSMENT CHECK LIST PRIOR TO CCR DISTRIBUTION TO CONSUMERS. The self-assessment is provided so that you can be confident no CCR requirements are missed.

The CCR certification form must be completed and signed by the official custodian, administrative contact, or responsible operator in charge of the public water supply. If you have any questions, please call the Consumer Confidence Report Coordinator at 217/785-0561.

Failure to complete the certification may result in not receiving credit for issuing a satisfactory CCR and may require the water supplier to issue the CCR a second time.

Mail to: Illinois EPA
BOW/CAS/DWCU #19
P.O. Box 19276
Springfield, IL 62794-9276



Consumer Confidence Report Certification Form

PWS ID No: _____ PWS Name: _____

This form is required to be submitted as a means to certify that your Consumer Confidence Report (CCR) met all state and federal requirements. The owner, administrative contact, or responsible operator in charge must sign this certificate of acceptance acknowledging compliance with Illinois Environmental Protection Agency's Primary Drinking Water Standards found in Part 611 SubPart U: Consumer Confidence Reports.

Detailed CCR instructions and regulation requirements are listed in Chapter 2 of the **Sample Collectors Handbook (SCH)**. Also included is a check list that can be used to verify prior to issuing the CCR that all required elements have been included. It is recommended that you review this chapter and check list prior to issuing your CCR. The SCH can be viewed and/or downloaded at the following Internet web address: <http://www.epa.state.il.us/water/compliance/drinking-water/collectors-handbook/index.html>

Please complete the delivery certification, sign, and return it along with a copy of the issued CCR and the URL if required by July 10th to the Illinois EPA, CCR Coordinator, BOW/CAS #19, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276. Questions call 217-785-0561.

CERTIFICATION OF DELIVERY (SCH Reference Page 17 - 19)

Depending on your method of CCR Delivery Requirement, you MUST complete ONE of the following METHOD OF DELIVERY certification sections.

METHOD "A" DIRECT DELIVERY (use for Electronic CCR or paper copy CCR delivered to all customers)		
Our CCR or electronic CCR notification of delivery was delivered on _____ (date)		
Depending on your method of CCR Delivery, you MUST complete at least ONE of the following methods. Please check all items that apply.		
1.	<input type="checkbox"/>	CCR was distributed by mail
2.	<input type="checkbox"/>	Mail – notification that CCR is available on Web site via a direct uniform resource locator (URL)
3.	<input type="checkbox"/>	E-mail – direct URL to CCR
4.	<input type="checkbox"/>	E-mail – CCR sent as an attachment to the e-mail
5.	<input type="checkbox"/>	E-mail – CCR sent embedded in the e-mail
6.	<input type="checkbox"/>	Other: _____
If the CCR was provided by a direct URL, please provide the direct URL Internet address: www. _____		
If the CCR was provided electronically, please describe how a customer requests paper CCR delivery: _____ _____		
CWS serving => 100,000, Posted CCR on a public accessible Internet site at the following address: www. _____		

METHOD "B" DELIVERY (published in local newspaper; PWS must receive waiver from Illinois EPA to use this option)

Since our supply received a Method of Delivery Waiver and serves a direct population between 501 and 10,000, the CCR was not mailed to each customer. However, as required, our CCR was published in its entirety in one or more newspapers of general circulation. In addition, customers were also informed that the CCR was not going to be mailed; and that copies are available upon request. LIST NEWSPAPERS HERE

Newspaper 1:	_____	Published On:	_____
Newspaper 2:	_____	Published On:	_____

METHOD "C" DELIVERY (CCR availability notice only; PWS must receive waiver from Illinois EPA to use this option)

Since our supply received a Method of Delivery Waiver and serves a direct population of 500 or less, the CCR was not mailed to each customer. However, as required, customers were notified that a CCR was prepared and is available upon request.

The CCR notice of availability was delivered on: _____ (date)

Insert method here (e.g., newspaper, posted, hand _____ delivered, etc.)

GOOD FAITH EFFORT: at a minimum, one good faith effort must be used to reach non-bill paying consumers

Check all that apply:

<input type="checkbox"/> Posted CCR on a public accessible internet site www. _____	<input type="checkbox"/> Mailed the CCR to postal patrons within the service area (attach list of zip codes)
<input type="checkbox"/> Advertised availability of CCR in the news media (attach copy of announcement)	<input type="checkbox"/> Published CCR in local newspaper (attach copy of newspaper announcement)
<input type="checkbox"/> Posted the CCR in public places (attach a list of locations)	<input type="checkbox"/> Delivered multiple copies to single bill addresses serving several persons such as apartments and businesses
<input type="checkbox"/> Delivered to community organizations (attach a list)	<input type="checkbox"/> Other _____
<input type="checkbox"/> Electronic announcement of CCR availability via social media outlets (attach list of social media outlets utilized)	_____

Signature of Official Custodian, Administrative Contact, or Responsible Operator in Charge

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

I _____ (print name), hereby certify that our CCR was distributed following the requirements specified under METHOD _____ (insert method of delivery A, B, or C) DELIVERY. If delivery was made using the Electronic CCR method, the CCR was made available to customers requesting a paper copy of the CCR.

Signature: _____ Date: _____

Title: _____ Telephone No.: (____) _____

This Agency is authorized to require this information under 415 ILCS 5/17.5. Failure to disclose this information may result in a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This has been approved by the Forms Management Center.

IL532-2984

PWS 294 (3/2014)

Consumer Confidence Report Self-Assessment Check List

YOU SHOULD COMPLETE THE SELF-ASSESSMENT CHECK LIST PRIOR TO CCR DISTRIBUTION TO CONSUMERS. The self-assessment is provided so that you can be confident no CCR requirements are missed.

WATER SYSTEM INFORMATION		
Check Box or Enter "NA"	CCR Requirement	SCH Reference Page
	CCR includes a name and telephone number of a person at the public water supply that can provide additional information and answer questions about the CCR.	5
	CCR lists opportunities for public participation in the decision-making processes that affect drinking water quality, for instance, the time and place of regularly scheduled board meetings	5
	Our PWS has a large portion on non-English speaking customers. The required information in the appropriate language is included in our CCR. Enter "NA" if not applicable.	5
	CCR includes the type of water (groundwater, surface water, blended, or purchase water from ____, etc.), general location, and commonly used names (i.e. Lake Michigan or Illinois Prairie Aquifer).	6
	CCR includes notification to consumers of the availability of the source water assessment and a brief summary of the source water's susceptibility to contamination (based on the findings of the source water assessment).	6
HEALTH STATEMENTS & SPECIFIC CONTAMINANT INFORMATION		
	CCR includes mandatory statement explaining contaminants that may be in drinking and bottled water.	7
	CCR includes mandatory statement concerning customers that may be more vulnerable (immuno-comprised persons)	7
	CCR includes language explaining concerning general sources of contaminants in drinking water.	7
	CCR includes language explaining EPA role in setting regulatory limits.	7
	CCR includes language concerning how elevated levels of lead can cause serious health problems.	8
	Cryptosporidium was sampled. CCR includes a summary/explanation of results. Enter "NA" if not applicable.	8
	CCR includes an explanation of our Phase 2/5 cyanide, VOC, or SOC Vulnerability Waiver. Enter "NA" if not applicable.	8
	We have operated under a variance or exemption and our CCR included an explanation. Enter "NA" if not applicable.	8
	Radon was sampled. CCR includes a summary/explanation of results. Enter "NA" if not applicable.	9
	CCR includes special notice of an <i>E. coli</i> indicator-positive ground water source sample. Enter "NA" if not applicable.	9
	CCR includes special notice of Significant Deficiencies under the GWR. Enter "NA" if not applicable.	10
VIOLATIONS		
	Violations that occurred during the reporting calendar year are included in the CCR. Also included with each violation notation is an understandable explanation of the violation(s), potential health effects (if any), and steps taken to correct violation(s). Enter "NA" if not applicable or had no violations during reporting year.	10-11
	The CCR was used to satisfy PN delivery requirements for monitoring and/or reporting violations (Tier 3). This notice was added to the end of our CCR (or was attached). Notice included all PN elements. Include the PN Certification Form as part of the submittal to the IEPA.	20
REGULATED CONTAMINANT DETECTION TABLE / FOOTNOTES		
	Detection table included all applicable definitions (i.e., MCL, MCLG, TT, MRDLG, MRDL, and AL).	12
	Detection table included all required columns (i.e., MCL column, MCLG column, highest level detected, range of detects, date of sample, typical/likely source of contamination, violation)	13
	All abbreviations used in Detection table were defined (i.e., ppm, ppb, etc.)	13
	Detection table included all applicable footnotes (i.e., state-only regulated contaminants, triennial monitoring)	15
	Detection table included all applicable educational footnotes (i.e., turbidity, arsenic, nitrate, lead, TTHM)	16
	If any water is purchased, detection tables from all sources are included. In addition to the source water detection table(s), detection table for our distribution system was included. Enter "NA" if not applicable.	Appendix A

APPENDIX D

Federal and State Regulated Contaminants, and Applicable Health Effects Language

Also available online at <http://www.epa.gov/safewater/mcl.html#mcls>

Federal and State Regulated Contaminants and Applicable Health Effects Language

Key

AL=Action Level
MCL=Maximum Contaminant Level
MCLG=Maximum Contaminant Level Goal
MFL=Million Fibers per Liter
MRDL=Maximum Residual Disinfectant Level
MRDLG=Maximum Residual Disinfectant Level Goal
NTU=Nephelometric Turbidity Units (a measure of water clarity)
TT=Treatment Technique

mrem/year=millirems per year (a measure of radiation absorbed by the body)
pCi/l=picocuries per liter (a measure of radioactivity)
ppm=parts per million, or milligrams per liter (mg/l)
ppb=parts per billion, or micrograms per liter (µg/l)
ppt=parts per trillion, or nanograms per liter
ppq=parts per quadrillion, or picograms per liter
N/A=Not Applicable

*“State only” regulated contaminants listed in **BOLD***

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Cryptosporidium	TT	TT	0	Human and animal fecal waste	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Total Coliform Bacteria	MCL: (systems that collect 40 samples/ month) 5% of monthly samples are positive; (systems that collect < 40 samples/ month) 1 positive monthly sample	MCL: (systems that collect 40 samples/ month) 5% of monthly samples are positive; (systems that collect < 40 samples/ month) 1 positive monthly sample	0	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and <i>E. coli</i>	MCL: a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E.coli</i> positive	0	0	Human and animal fecal waste	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Total organic carbon (ppm)	TT	TT	N/A	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Turbidity (NTU)	TT	TT	N/A	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Beta/photon emitters (mrem/yr)	4 mrem/yr	4	0	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters (pCi/l)	15 pCi/l	15	0	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/l)	5 pCi/l	5	0	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Uranium (µg/l)	30µg/l	30	0	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Antimony (ppb)	.006	6	6	Discharge from petroleum refineries; fire retardants; ceramics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	0.01	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos (MFL)	7 MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	.004	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Bromate (ppb)	.010	10	0	By-product of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Cadmium (ppb)	.005	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Chloramines (ppm)	MRDL = 4	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine (ppm)	MRDL = 4	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorine dioxide (ppb)	MRDL = .8	MRDL = 800	MRDLG = 800	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorite (ppm)	1	1	0.8	By-product of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chromium (ppb)	.1	1000	100	Discharge from steel and pulp mills; erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Copper (ppm)	AL=1.3	AL=1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide (ppb)	.2	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	4	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Iron (ppb)	1.0	1000	N/A	Erosion from naturally occurring deposits	Excessive iron in water may cause staining of laundry & plumbing fixtures & may accumulate as deposits in the distribution system.
Lead (ppb)	AL=. 015	AL=15	0	Corrosion of household plumbing systems; erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Manganese (ppb)	0.15	150	N/A	Erosion of naturally occurring deposits	Excessive manganese in the water may cause staining of plumbing fixtures and laundry. It may also produce an unpleasant taste in beverages, including coffee & tea.
Mercury [inorganic] (ppb)	.002	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate (ppm)	10	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite (ppm)	1	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Total Nitrate and Nitrite (ppm)	10	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
Selenium (ppb)	.05	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Sodium (ppm)	N/A (There is no state or federal MCL for sodium)	N/A	N/A	Erosion of naturally occurring deposits; used in water softener regeneration	Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician.
Thallium (ppb)	.002	2	0.5	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Zinc (ppb)	5.0	5000	N/A	Naturally occurring; discharge from metal factories	Some people who drink water containing excessive zinc may experience toxic effects to the blood & cardiovascular systems, damage may occur to the skin, respiratory system, developmental system, reproductive system, and it may weaken the immune system.
2,4-D (ppb)	.07	70	70	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [Silvex](ppb)	.05	50	50	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
Acrylamide	TT	TT	0	Added to water during sewage/wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Alachlor (ppb)	.002	2	0	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Aldrin (ppb)	0.001	1	N/A	Runoff from use as an insecticide, not used since 1987	Some people who drink water containing excessive aldrin over a long period of time may experience problems with their liver, nervous system, weakened immune system, fetal damage may occur in pregnant women, and may have an increased risk of getting cancer.
Atrazine (ppb)	.003	3	3	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAH] (nanograms/l)	.0002	200	0	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (ppb)	.04	40	40	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
Chlordane (ppb)	.002	2	0	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon (ppb)	.2	200	200	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Total DDT (ppb)	.05	50	N/A	Runoff from use as a contact insecticide	Some people who drink water containing excessive DDT may experience problems with their reproductive or developmental systems, and may have an increased risk of getting cancer.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Di(2-ethylhexyl) adipate (ppb)	.4	400	400	Discharge from chemical factories	Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
Di(2-ethylhexyl) phthalate (ppb)	.006	6	0	Discharge from rubber and chemical factories	Some people who drink water containing di(2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane (ppt)	.0002	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Dieldrin (ppb)	0.001	1	N/A	Runoff from use as an insecticide, not used since 1987	Some people who drink water containing excessive dieldrin over a long period of time may experience problems with their liver, nervous system, weakened immune system, fetal damage may occur in pregnant women, and may have an increased risk of getting cancer.
Dioxin [2,3,7,8-TCDD] (ppq)	.00000003	30	0	Emissions from waste incineration and other combustion; discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Endothall (ppb)	.1	100	100	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin (ppb)	.002	2	2	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Epichlorohydrin	TT	TT	0	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
Ethylene dibromide (ppt)	.00005	50	0	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	.7	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	.0004	400	0	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide (ppt)	.0002	200	0	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene (ppb)	.001	1	0	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclopentadiene (ppb)	.05	50	50	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Lindane (ppt)	.0002	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.04	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [Vydate] (ppb)	.2	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt)	.0005	500	0	Runoff from landfills; discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Pentachlorophenol (ppb)	.001	1	0	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram (ppb)	.5	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	.004	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Toxaphene (ppb)	.003	3	0	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Benzene (ppb)	.005	5	0	Discharge from factories; leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Carbon tetrachloride (ppb)	.005	5	0	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chloride dioxide (ppb)	MRDL = .8	MRDL = 800	MRDLG = 800	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorobenzene (ppb)	.1	100	100	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
o-Dichlorobenzene (ppb)	.6	600	600	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
p-Dichlorobenzene (ppb)	.075	75	75	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichloroethane (ppb)	.005	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
1,1-Dichloroethylene (ppb)	.007	7	7	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
cis-1,2-Dichloroethylene (ppb)	.07	70	70	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2-Dichloroethylene (ppb)	.1	100	100	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)	.005	5	0	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-Dichloropropane (ppb)	.005	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (ppb)	.7	700	700	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Haloacetic Acids (HAA) (ppb)	.060	60	N/A	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Styrene (ppb)	.1	100	100	Discharge from rubber and plastic factories; leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Tetrachloroethylene (ppb)	.005	5	0	Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene (ppb)	.07	70	70	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-Trichloroethane (ppb)	.2	200	200	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloroethane (ppb)	.005	5	3	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Trichloroethylene (ppb)	.005	5	0	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
TTHMs [Total trihalomethanes] (ppb)	.080	80	N/A	By-product of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Toluene (ppm)	1	1	1	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

Contaminant (units)	Traditional MCL in mg/L	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Vinyl Chloride (ppb)	.002	2	0	Leaching from PVC piping; discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes (ppm)	10	10	10	Discharge from petroleum factories; discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Total Coliform Rule – Chapter 3 Question Index



If your question does not appear in this index or you need more information, please contact the Compliance Assurance Section (CAS) at 217-785-0561 or the appropriate [Regional Office](#) as listed in the Handbook Introduction. All blue text is linked.

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Total Coliform Rule – Chapter 3

This Chapter has been written in a Question / Answer format. If this Chapter does not answer your question, please contact the Total Coliform Rule (TCR) Compliance Coordinator at 217-785-0561 or your Illinois EPA [Regional Office](#) as listed in the Handbook Introduction. All blue text is linked.



[Section 1 – General Questions about Coliform](#)

▶ [What is the Total Coliform Rule \(TCR\)?](#)

The Total Coliform Rule (TCR) requires all public water supplies to monitor for the presence of total coliforms in the distribution system. For drinking water, total coliforms are used to monitor the sanitary quality of the water, adequacy of water treatment, and the integrity of the distribution system. The absence of total coliforms in the distribution system minimizes the likelihood that fecal pathogens are present. Thus, total coliforms are used to determine the vulnerability of a system to fecal contamination.

▶ [What is total coliform bacteria?](#)

Total coliforms are a group of closely related bacteria that are (with few exceptions) not harmful to humans. They are an indicator of other pathogens that can be present in water. Coliform bacteria are present in the intestinal tract of warm-blooded animals. They are shed from the body in the feces. Because these organisms are shed from the body in large numbers and are relatively easy to detect in the laboratory, they have been accepted as an indicator of contamination. All bacteriological samples are analyzed for the coliform group; however, a positive reaction to these coliform analyses may be from sources other than fecal. In order to differentiate between these sources, all samples that are total coliform positive must be analyzed again to determine if fecal coliform or *E. coli* are present.

▶ [What are fecal coliform and *E. coli*?](#)

Fecal coliform is bacteria whose presence indicates that the water may be contaminated with human or animal wastes. *E. coli* is a member of the fecal coliform group. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems. The presence of fecal coliform or *E. coli* in drinking water sample indicate recent contamination and signals a greater possibility that pathogenic organisms are also in the water.

► Why must a water system monitor for total coliform, fecal coliform, and *E. coli*?

Total coliforms serve as indicators of the efficiency of water treatment, of the integrity of the pipes in the distribution system, and as a screen for the presence of fecal contamination. Usually, coliforms are a sign that there could be a problem with the system's treatment or distribution system.

Fecal and/or *E. coli* indicates that pathogenic organisms may be present that can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, fatigue and jaundice. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Section 2 – Monitoring Requirements

► How many coliform samples must a water system collect?

Every Water System (WS) must collect a given number of “routine” coliform samples from the distribution system per month generally based on the population served. See [Appendix A](#). Additional raw, finished, and distribution water samples may also be required depending on your source of water, water treatment facilities, service area of the distribution system, and any related sanitary survey deficiencies. After a WS sanitary survey is conducted by the Illinois EPA Regional Office inspector, the total number of coliform samples required each month is listed on the follow-up inspection report that is mailed to the WS. If you are not sure how many samples you are required to collect, please contact your [Regional Office](#) as listed in the Handbook Introduction.

If a WS has a positive coliform sample, confirmation (repeat) samples must be collected immediately. The number of repeats will vary. See [Section 5](#) for additional information on repeat samples.

► Does the number of monthly routine distribution coliform samples ever change?

Yes. Two events may change your monthly distribution monitoring requirements:

- 1) A change in population may cause a change in the number of samples. If a change occurs, the Illinois EPA Regional Office will notify the WS.
- 2) One coliform positive routine finished or routine distribution system sample result during any month requires a minimum of **FIVE** routine distribution samples be collected the following month. If your system is already required to collect a minimum of five distribution samples each month, this does not affect you.

► Do I have to collect my monthly routine coliform samples from specific locations?

Yes. Failure to do so may result in a monitoring violation. Every WS must have on file an approved coliform sample site plan at the appropriate **Illinois EPA Regional Office**.

► What is a coliform sample site plan?

A coliform sample site plan is a list of sites by street address, lot number, or other permanent description, that identifies all the approved locations where your routine (monthly) coliform samples may be collected. The list of sites must be plotted on a map of your service area. Larger water systems will divide their distribution system into specific sample areas.

► Does the site plan have to be approved by the Illinois EPA?

Yes. The list of sites and the map is reviewed by the Illinois EPA Regional Office serving your facility to insure representative sites have been selected. A site number is then assigned to each sample location. All reporting forms must be completed using the sample site number rather than the street address. Your approved site plan **MUST** be followed each time you collect routine samples.

► Where can I get instructions on how to create a coliform sample site plan or make changes to an existing site plan?

Contact the appropriate **Regional Office** as listed in the Handbook Introduction.

► How can I find out the water system's sampling locations?

A copy of the WS's coliform site plan (and sample site numbers) is on file at your Illinois EPA **Regional Office**.

► How can I contact my Illinois EPA Regional Office?

You can determine which Illinois EPA **Regional Office** serves your county by going to the beginning of this Handbook or on-line at <http://www.epa.state.il.us/water/compliance/drinking-water/collectors-handbook>.

► How often and when must I collect my routine samples?

Routine compliance samples must be collected every month. Each month is a sampling period.

A WS with only a **groundwater source** (not under the direct influence of surface water) that **serves 4,900 persons or fewer**, may collect all required samples on a single day if they are taken from each area of the approved sample site plan.

Surface water supplies, supplies using groundwater under the direct influence of surface water and groundwater supplies that serve more than 4,900 people must collect samples throughout the month. WS that collect weekly or more frequently should continue this practice.

Samples should be collected as early each month as possible, but not before the first day of each month. Prompt collection allows sufficient time for replacement sampling if samples are discarded. Reasons for discarding samples include: failure to record date or time of collection, sample(s) more than 30 hours old upon arrival at the certified laboratory, and sample(s) broken or frozen in transit. If the sample(s) and/or any necessary replacement samples are not collected within the monthly monitoring period, the WS will be in violation of their monitoring requirements and must make public notice.

Section 3 – Collecting Samples

► How do I choose a proper sample faucet?

Since coliform samples must be representative of the water quality in the distribution system, it is important to select proper sampling locations. Visit the site before selecting it for your coliform sample site plan. See if a smooth-nosed cold-water faucet is available that will allow the collector to run the faucet at a constant flushing rate for 30 to 60 seconds without flooding the sink. You may choose to install a smooth nosed faucet at your designated sample locations.

The sampling faucet should be conveniently located and readily accessible to the collector. Avoid faucets that are connected to private water treatment equipment such as water softeners or filters. Faucets that are subject to exterior contamination because they are too close to a sink bottom or to the ground must be avoided. It is difficult to place a bottle beneath a low faucet without touching the interior of the bottle's neck against the outside of the faucet. Threaded faucets that might harbor bacteria around the threads should not be used. Leaking faucets that allow water to flow around the stem and over the outside of the faucet should be avoided. If an even stream of water cannot be sustained, a more suitable tap should be found. Failure to follow these precautions could result in a contaminated sample.

Keep in mind that in the event of a positive coliform sample, two (or three) additional distribution sites meeting the above criteria, one within five (5) service connections upstream and one within five (5) service connections downstream, will be needed for the collection of repeat samples. These additional sites should be included in your coliform sample site plan.

You may wish to install dedicated sampling faucets or sampling stations to assure access and satisfactory sampling conditions at all times.

► How should a coliform sample be collected?

Use great care when collecting coliform samples. Only bottles received from the certified laboratory should be used to collect samples. It is extremely important that the sample collector uses only the approved sampling locations and follows proper sampling techniques.

Contamination from the sampling faucet can easily occur if extreme caution is not used. Should an incident occur during sample collection that may result in contamination, the sample should be discarded and a new bottle requested. **It is assumed that all samples submitted for testing are properly collected. Sample error will not be accepted as an excuse to avoid repeat sampling.**

Generally, the following protocol should be followed:

1. Sample bottles should be examined when received. If for any reason (loose caps, caps off, etc.) the sterility of the bottle is in question, the bottles should not be used.
2. Open an approved sampling faucet so that a smooth flow of water at moderate pressure is obtained. Be sure that there is no splashing. Allow the water to flow for sufficient time to clear the service line. Depending on time of year and water source you may notice a water temperature change when the line has been cleared.
3. **If your WS is chlorinated**, check for residual chlorine. These results **MUST** be included on the reporting form. Indicate whether the residual measured is free (F) or total (T) chlorine.
4. The bottle cap should not be removed until you are ready to collect the sample. Do not lay the bottle cap down or put it in a pocket. Hold the bottle in one hand and the cap in the other, keeping the bottle cap right side up (threads down) and taking care not to touch the inside of the cap. Avoid touching the inside of the sterile bottle(s) with your fingers or the faucet nose.
5. Once you start filling the bottles do not adjust the stream flow. Do not allow splashing drops of water from the ground or sink to enter the bottle. Fill the bottle to the 100 ml mark on the side of the bottle. Cap the bottle immediately. Then turn off the faucet.

► Can I use any container to collect the sample?

No. You must use sterile 100 ml plastic (or glass) bottles obtained from a certified laboratory. These bottles contain a small amount of sodium thiosulfate to neutralize the residual chlorine in the sample. The sodium thiosulfate may appear as a tablet or as a white residue in the bottle. Do NOT rinse this material out of the bottle.

► Do we need to use any special reporting forms when submitting samples to the laboratory?

Yes. These forms can be obtained by calling your **certified laboratory**. The reporting forms should be included with the bottles.

► How do I complete the reporting/collection form?

For the most part, the form is self-explanatory. A few reminders:

1. Always use your Illinois EPA assigned sample site numbers (not sample address). If a site number does not exist for a location, please add it to your site plan by calling your **Illinois EPA Regional Office**. Simply record the address if it's a "one-time" sample location.
2. Be-sure you include all "Contact Person" information including telephone number and cellular number. This information is very important in case there is a positive sample.
3. Clearly mark sample purpose.
4. If your WS is chlorinated, you must include the chlorine residual on the form. Failure to do so will result in a violation.

► After I collect the sample, how long does it have to reach the laboratory?

30 HOURS. In order for the laboratory to analyze the sample(s), it must be received within 30 hours of collection. If not, a replacement must be collected. It is strongly recommended that the monthly routine samples be collected within the first few days of each month. This will allow ample time for the collection of replacement sample(s) if they are required.

► What days of the week should I collect my samples?

It is preferred that routine samples be collected and shipped to the laboratory on Mondays or Tuesdays. If routine samples are hand delivered to the laboratory, they should be delivered no later than Thursday. However, emergency or repeat samples may be submitted at any time. If you anticipate the samples will arrive on a weekend or holiday, you should contact your certified laboratory and make the necessary arrangements. It is recommended that you call your certified laboratory for a contact person, business hours, and any special delivery instructions.

► Do all coliform samples collected during the month count towards meeting our compliance monitoring requirements?

No. Special purpose samples, such as those taken to lift a boil order, or new construction samples to determine whether disinfection practices are sufficient following pipe placement, replacement or repair, will not be used to determine compliance with the Maximum Contaminant Level (MCL) or towards the routine number of samples required each month. Routine raw and/or finished water entry point samples do not count towards meeting the total number of distribution samples required each month. However, finished water entry point samples will be used to determine compliance with the MCL. Thus, if you have a positive finished water entry point sample, you must follow-up with the collection of repeat samples.

► Our water system is chlorine exempt. Are there any special monitoring requirements?

Yes. In past years, some very small systems have been granted an exemption from chlorination by the Illinois EPA. New exemptions are no longer granted. The Illinois EPA still honors past chlorine exemptions, but recognizes that the water lacks the protection of the residual chlorine.

Consequently, it is especially important that the bacterial quality of the water be monitored at frequent intervals. One of the conditions of the exemption is that samples be collected and analyzed at twice the frequency required of a chlorinated WS (two times a month).

Section 4 – Interpretation of Results

► How do I know if the sample is satisfactory?

The laboratory will determine if any bacteria are present in your sample(s). If no bacteria are present the sample is considered satisfactory with a (S) recorded on the reporting form.

If bacteria are detected in the sample, the laboratory will record the number of colonies (if using the membrane filter technique) and analyze the sample to see if the bacteria are coliform. If the bacteria are determined to be coliform the laboratory will use the designation of “P” (positive). If no coliform is detected, the designation will be given as “N” (negative).

Any sample with a non-coliform bacteria count of 200 colonies or less is considered a satisfactory (S) sample.

If any coliform bacteria are found, the sample is positive and requires collection of repeat samples as described in **Section 5 – Repeat Samples / Follow-up to Coliform Positive Samples**. Additional tests are performed on the original total coliform positive sample to determine if fecal coliform or *E. coli* is present. This result is also recorded on the reporting form with a P or N.

A sample analyzed by the membrane filter technique is deemed invalid (I) in the following scenarios:

1. Samples are negative for coliform but exhibit confluent growth. Confluent growth is continuous bacterial growth covering all or part of a membrane filter.
2. Samples are negative for coliform but bacteria colonies are too numerous to count (reported as G- or TNTC by the laboratory).

Submission of replacement sample(s) is required. When using the multiple fermentation tube procedure or the presence-absence procedure, if the media is turbid with no production of gas or acid, the sample also is invalidated with replacement sample(s) required.

► How long must I keep coliform results and other related paperwork?

5 years. Records of total coliform analyses must be kept for no less than five (5) years. The actual laboratory reports may be kept or the data may be transferred to tabular summaries.

Local procedures may contain requirements concerning the retention of records. The most stringent requirement should be followed.

Section 5 – Repeat Samples / Follow-up to Coliform Positive Samples

► How am I notified of positive coliform samples?

If a routine or replacement sample is total coliform positive, the certified laboratory and Illinois EPA Regional Office will try to contact the WS by telephone using the contact name and number provided on the reporting form. All Water Systems should keep a small number of extra coliform bottles/reporting forms in case of required repeat sampling. If for some unforeseen reason, the WS does not have extra coliform bottles on hand, the laboratory will overnight coliform bottles to the facility. However, this is not a preferred situation. Remember, responsibility for timely sampling ultimately falls on the WS. Therefore, waiting for bottles to arrive in the mail incurs risk on the WS. Obviously, to receive “repeat” sample bottles in the mail is an indication that there is a positive sample and immediate action is needed.

► What is a repeat sample?

Any sample that is analyzed as a follow-up to an initial positive result is referred to as “repeat” sample. After a routine coliform sample is found to be total coliform positive, repeat samples are required to confirm the initial positive result(s), to determine if the contamination is ongoing, and to evaluate the extent of the contamination within the distribution system.

► How many repeat samples must I collect?

The number of repeats samples is dependant on the number of routine samples collected for the month. **Three** repeat samples are required for each distribution sample that is coliform positive; **however**, if the WS sends in only one routine distribution sample per month, **four** repeat samples are required for each sample that is coliform positive.

► Where must repeat samples be collected?

If **three** repeat samples are required, one repeat sample must be collected from a tap within five (5) service connections upstream from the original sample, another repeat sample must be collected within five (5) service connections downstream from the original sampling site, and the last must be collected at the original site.

If **four** repeat samples are required, one repeat sample must be collected from a tap within five (5) service connections upstream from the original sample, another repeat sample must be collected within five (5) service connections downstream from the original sampling site, another must be collected at the original site, and the fourth may be collected anywhere within the distribution system (this may aid in identifying the possible source of contamination).

All repeat samples (or sample set) must be collected on the same day. Exceptions to this rule are WS with a single service connection. In this case the Illinois EPA may allow the WS to collect the repeat samples over a four-day period or to collect a single sample of at least 400 ml (300 ml if the system collects more than one sample per month).

► Where should the repeat samples be collected if the positive sample was collected at the end of the distribution system?

The WS is still required to collect three (or four when applicable) repeat samples. If the original sampling site is at the end of the distribution system (or one tap away from the end) the Illinois EPA may waive the requirement to collect one of the repeat samples downstream. An additional sample will be required upstream or from the same building.

► How many repeats are required if a finished water entry point sample or raw well sample is positive?

One. Only one repeat sample should be collected from the positive finished water entry point location or raw positive location. Raw or finished entry point samples (or raw/entry point repeat samples) are not used when determining compliance.

Prior to August 2007, a routine coliform positive finished water (entry point) sample required three or four repeats. This has changed. Only one repeat is now required and it is to be collected from the same entry point location as the positive (downstream repeat samples are no longer required).

► How much time do I have to collect repeat sample(s)?

24 Hours. If a routine or replacement sample is total coliform positive, the WS must collect a set of repeat samples within 24 hours of being notified of the positive result. Again, **all WS should keep a small number of extra coliform bottles/reporting forms in case of required repeat sampling.** If the WS is waiting for bottles to be shipped from the laboratory, repeat samples must be collected on the day of bottle receipt.

All repeat samples (or sample set) must be collected on the same day. Exceptions to this rule are WS with a single service connection. In this case the Illinois EPA may allow the WS to collect the repeat samples over a four-day period or to collect a single sample of at least 400 ml (300 ml if the system collects more than one sample per month).

► When does the repeat sample collection “start clock” begin?

The 24-hour clock starts when the laboratory (or IEPA) notifies the water system of the initial positive coliform result. You have 24 hours from the time of notification to collect your repeat samples and return them to a laboratory for analysis. If you fail to meet this window, a violation will be issued, provided that no extension had been granted.

If the WS cannot be reached via phone, the Illinois EPA has defined “notified” as the date that the laboratory initiates shipment of repeat sample bottles. The laboratory records this date on the coliform reporting form. The repeat samples must be collected on the on the day that the bottles are received at the WS.

► What if I cannot meet the 24-hour repeat collection requirement?

Illinois EPA acknowledges that some circumstances may arise, totally beyond the control of the WS, which prevent repeat samples from being collected within the 24-hour period. Therefore, extensions may be granted by calling CAS at 217-785-0561 or your **Regional Office**. A valid reason for the extension must be provided. Extensions cannot be granted after the fact. Therefore, requests for extensions **MUST** be made prior to or at the same time the repeat samples are being collected. Extensions will always specify exactly how much time the WS has to collect and return the repeat samples. Failure to obtain the extension or failure to meet the terms of the extension will result in a monitoring violation. Please remember that an extension on the 24-hour repeat collection requirement is **NOT** a waiver for actually collecting the repeat samples.

► What happens if I am notified on a Friday of positive routine results (or receive repeat bottles on a Friday or Holiday)?

The 24-hour collection requirement must still be met. You should contact your **certified laboratory** to arrange a time on Saturday to collect the repeat samples and drive them to the laboratory. If this is not possible, the WS must request an extension the first business day following the weekend or holiday. Please call the Illinois EPA at 217-785-0561 at the earliest possible time to request an extension on the 24-hour requirement.

It is strongly recommended that all routine coliform samples be collected and mailed on a Monday or Tuesday to avoid this situation.

► What happens if any of the repeats are positive or invalid?

If one or more repeat samples in the set are total coliform positive or invalid, the whole repeat monitoring process must start over. A new “set” of three or four (if only one routine sample is collected per month) repeats must be collected within 24 hours of being notified of the positive or invalid repeat.

If a repeat sample location is positive and is not from the same location as the original positive sample (and/or the original site is negative), the next repeat collection should be based on the original positive site location and **NOT** the positive repeat location. Every consecutive set of repeat samples must be collected at the same locations as the 1st set of repeat samples.

The WS must repeat this process until either total coliform are not detected in one complete “set” of repeat samples or the WS determines that the total coliform Maximum Contaminant Level (MCL) has been exceeded and notifies the Illinois EPA. It is highly recommended that sampling be repeated until a “set” is satisfactory.

► Does one (or more) positive routine or repeat sample change the following month's monitoring requirements?

Yes. If you collect less than 5 routine distribution samples per month and have at least one positive routine, repeat or replacement sample, 5 routine distribution samples **MUST** be collected the following month. The samples can be collected from other approved coliform sites or from other locations in the distribution system.

► Who is responsible for notifying the Illinois EPA if results are positive?

The WS is responsible for notifying the Illinois EPA when a total coliform positive sample is found and for having the appropriate repeat samples analyzed. In most cases, an agreement has been made between the certified laboratory and the WS that the laboratory will notify the Illinois EPA; however, even in this case, the WS is held accountable for this notification requirement.

A copy of the laboratory report must be submitted by the certified laboratory or the WS to the Illinois Environmental Protection Agency, Bureau of Water, Compliance Assurance Section #19, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276. Reports must be submitted within ten days of the sampling period, and should include both routine and repeat sample analyses.

Section 6 – Invalidating Sample Results

► Can a sample result be invalidated?

A coliform positive can be invalidated when there is a significant reason to believe the test results are not accurate or not representative of the water quality. These samples are not used in compliance calculations and a replacement must be collected within the same monitoring period (same month) at the same location to avoid a possible monitoring violation.

There are three conditions in which a total coliform positive sample result may be invalidated:

1. The laboratory establishes that an error in its analytical procedure caused the total coliform positive result.
2. The Illinois EPA, on the basis of the results of repeat samples collected determines that the total coliform positive sample resulted from a domestic or other non-distribution system-plumbing problem.
3. The Illinois EPA determines that there are substantial grounds to believe that a total coliform positive result is due to a circumstance or condition that does not reflect water quality in the distribution system.

The laboratory will invalidate the results if they are unable to obtain a true result according to the test method used to analyze the sample. If a laboratory invalidates a routine sample due to interference, the WS must collect another sample from the same location as the original sample within 24 hours of being notified of the interference problem.

► How can I have a positive coliform result invalidated?

The invalidation process involves 3 steps:

1. All repeat samples must have been collected in accordance with the repeat sampling requirements.
2. As soon as you feel a sample should be invalidated, the Illinois EPA **Regional Office** should be contacted by telephone and the situation discussed. If the Regional Office verbally agrees that the sample is not representative of the water quality, they will direct you as to what certain steps need to be taken (e.g., proof, additional samples, etc.). Ultimately, the Regional Office will recommend to the Illinois EPA Compliance Assurance Section (CAS) whether or not a sample should be invalidated. Failure to get the Regional Office's concurrence will result in your request being rejected by the CAS. If you are unable to speak to Regional Office staff, please contact CAS at 217-785-0561.
3. A formal written request must be mailed to the **Regional Office** and CAS within four weeks of the original routine sample collection date. The written documentation must state the specific cause of the total coliform positive sample and what action the supplier has taken, or will take, to correct this problem.

The Illinois EPA will provide a written notification to the WS as to whether or not the request for invalidation was granted.

The Illinois EPA will not invalidate a total coliform positive sample solely on the grounds that all repeat samples are total coliform negative.

► How soon do I have to initiate the invalidation process?

At the time of receiving notice of positive results, the WS should immediately begin an investigation and collect repeat samples. At that time, any reason to question validity of a result should be acted on promptly while the situation is fresh at hand.

► If a sample is invalidated by the Illinois EPA or the certified laboratory does it still count towards meeting the monthly monitoring requirements?

No. You **MUST** collect another routine sample to replace any invalidated routine sample. To confirm the sample purpose look at the reporting form. Remember that all routine samples are marked with a sample purpose of "Routine" on the reporting form. The replacement sample(s) **MUST** be collected within the same monitoring period (same month). Repeat samples cannot be used to meet this requirement.

► My repeat sample is invalid. Now what?

If one or more repeat samples in a set are invalid, the whole repeat monitoring process must begin over starting with the collection of a new “set” (3 or 4) of repeat samples within 24 hours. Every consecutive set of repeat samples should be collected at the same locations as the 1st set of repeats.

Section 7 – Laboratory Related Questions

► Can we have our coliform samples analyzed anywhere?

No. A laboratory certified by the Illinois Department of Public Health (IDPH) must analyze samples. A sample analyzed at a laboratory that is not IDPH certified cannot be used for compliance. Use this link to see a listing of [certified laboratories](#).

► What laboratory methods are used for analyzing coliform samples?

WS must conduct total coliform analyses in accordance with one of the analytical methods in the following table:

<u>Organism</u>	<u>Methodology</u>
Total Coliforms	Total Coliform Fermentation Technique
	Total Coliform Membrane Filter Technique
	Presence-Absence (P-A) Coliform Test
	ONPG-MUG Test (Colilert)
	Colisure Test
	E*Colite® Test
	m-ColiBlue24® Test
	Readycult coliform 100 Presence/Absence
	Colitag® Test

► Do we need to use any special reporting forms when submitting samples to the laboratory?

Yes. These forms can be obtained by calling your [certified laboratory](#). The reporting forms should be included with the bottles.

► Is the water system or the laboratory responsible for getting results to the Illinois EPA?

The water system. Regardless of whether a State of private laboratory is used, the WS is ultimately held accountable. It is very important that the WS is in frequent contact with the laboratory to confirm: the samples reach the laboratory, the status of results (positive vs.

negative), and the results are sent to the Illinois EPA in a timely manner (within 10 days of the sampling period).

► Where can I find a certified laboratory?

Use this link to find a list of **certified laboratories**. You may also obtain this list by contacting either the Bureau of Water or the Division of Laboratory Services or by searching the Illinois EPA's web page at: <http://www.epa.state.il.us/labs/combinedlist.html>

Section 8 – Compliance, Violations, and Follow-up Actions

► What is an MCL?

Maximum Contaminant Level. State and federal regulations set maximum contaminant levels (MCLs) on contaminants that have been determined to cause possible health effects. When MCLs are exceeded, the WS must accomplish all the required actions that generally include public notice within a specified time period. There are two types of coliform MCL violations, monthly and acute.

► What is a MONTHLY coliform MCL exceedance and how is it determined?

A monthly coliform MCL violation occurs when a WS exceeds the number of allowed coliform positive samples. The number allowed depends on the number of routine distribution samples collected during the monthly sample period.

Number of Routine* Distribution Samples per Month	Monthly MCL Violation
Less than 40 are collected	Two or more positive routine and/or repeat
40 or more are collected	>5% of the routine and/or repeat samples are positive**

* Repeat samples are not included in total count collected for the month; however they are included when determining MCL Violation Trigger. Finished entry point samples and/or raw samples are not included in compliance calculations.

** In calculating the five percent, do NOT round the numbers. As an example, a value of 5.05 percent cannot be rounded to five percent to meet compliance

If a system fails to collect any of the repeat samples for a positive routine sample, the missing repeats will be “assumed” positive and included when totaling the number of positive samples for the month.

► What is an ACUTE coliform MCL exceedance and how is it determined?

Acute MCLs are extremely serious and require immediate action. Coliform sample results have indicated an immediate threat to the WS and serious health effects can result. Therefore, water customers must be notified without delay.

All samples that are total coliform positive must be examined for fecal coliform or *E. coli*. Below describes how Acute MCL violations are determined.

IF ANY	AND	THEN
Routine distribution sample is total coliform positive	One or more repeat sample is fecal or <i>E. coli</i> positive	Acute MCL Violation
Routine distribution sample is fecal or <i>E. coli</i> positive	Any repeat sample is <i>E. coli</i> , total, and/or fecal coliform positive	Acute MCL Violation
Routine distribution sample is fecal or <i>E. coli</i> positive	Fail to collect all repeats (even if some were collected and negative)	Acute MCL Violation

► What is a monitoring violation and how can I avoid one?

A monitoring violation occurs when the coliform monitoring requirements for a month are not met. All WS are required to submit samples for bacteriological analysis during each calendar month. Do NOT sample before the beginning of the month.

The WS must meet several criteria to avoid a monitoring violation:

1. At a minimum, collect the required number of distribution samples each month. The number of distribution samples required is based on population served. **Appendix A** specifies the minimum number of water samples that must be collected at representative points throughout the distribution system each month. In some cases, a WS may be required to collect more than the minimum number of distribution samples. It is crucial that every WS operator know the coliform monitoring requirements for his or her WS.
2. Sampling locations used must be in accordance with the approved written coliform sample site plan. All sampling areas must be represented during each monthly sampling period.
3. All replacement and repeat samples must be returned promptly to the laboratory for analysis. These samples will be included in determining compliance.
4. Repeat samples and replacement samples for invalid (negative coliform growth) samples must be collected within 24 hours of notification. If these samples cannot be collected within 24 hours, you must contact the Illinois EPA for an extension. The time extension will be given on a case-by-case basis and will always specify exactly how much time the WS has to collect and return the repeat samples. Failure to obtain the extension or failure to meet the terms of the extension will result in a monitoring violation.
5. If a private certified laboratory analyzes samples, it is the responsibility of the WS to make sure that copies of the reports are sent to the Illinois EPA within 10 days of the end of the sampling period (month).

6. Collect at least five coliform distribution system samples the month following a coliform positive finished or distribution system sample.

► How are monitoring violations determined?

The table below describes how monitoring violations are determined.

IF	THEN
Failed to collect any routine distribution samples during a monthly period*	Major Monitoring Violation
Collected some routine distribution samples during a monthly period* but failed to collect the minimum number required for your WS	Minor Monitoring Violation
Following a distribution coliform positive sample, failed to collect any repeat samples during a monthly period*	Major Monitoring Violation
Following a distribution coliform positive sample, collected some of the repeats, but, failed to collect the minimum number required during a monthly period*	Minor Monitoring Violation
Following a routine distribution positive sample, failure to collect a minimum of 5 routine distribution samples the next month	Major Monitoring Violation

* All samples *MUST* be collected between the first and last day of the month

► How are repeat samples used in determining compliance?

Repeat samples are not counted towards determining monthly distribution monitoring compliance. However, failure to collect repeats within 24-hours (following notification of a positive routine sample) will result in a monitoring violation (and possible MCL violation) unless the WS obtained a waiver from the 24-hour collection requirement.

In addition, if a WS fails to collect any of the repeat samples for a positive routine sample, the missing repeats will be “assumed” positive and included when totaling the number of positive samples for the month. In most cases, this will result in an MCL violation and require public notification.

► Do I need to notify the water customers of a violation?

Yes. Each violation and situation requiring notice has been assigned to one of three categories, or tiers, based on the risk of adverse health effects. Public notice is required for any of the following:

Tier 1 Violations or other Situations	<p>Tier 1 violations or problems may result in an immediate adverse health problem for some consumers.</p> <p>Violation of the MCL for total coliform, when <i>fecal coliform</i> or <i>E. coli</i> are present in the water distribution system, or <i>failure to test</i> for fecal coliform or <i>E. coli</i> when any repeat sample tests positive for coliform</p>
Tier 2 Violations	<p>All violations of the <i>MCL</i>, <i>MRDL</i>, and <i>treatment technique</i> requirements <i>except</i> where <i>Tier 1 notice</i> is required</p> <p>Violations of the <i>monitoring</i> requirements <u>when</u> required by the Illinois EPA (see Tier 3)</p>
Tier 3 Violations or other Situations	<p><i>Monitoring</i> violations, except where Tier 1 or Tier 2 notice is required as determined by Illinois EPA.</p>

For specific information on public notification (such as form, matter, content, and frequency), please review Chapter 1 Public Notification of this handbook

Section 9 – Common Mistakes to Avoid

Below describes some common errors that may result in a violation.

1. WS does not collect the correct number of repeat samples following a routine positive sample.
2. Failure of small WS (that serve a population 4,100 or less) to collect a minimum of 5 routine distribution coliform samples the month following a coliform positive sample.
3. Marking the wrong sample purpose box on the reporting form. Most often, this occurs when collecting a repeat (due to positive sample) sample and marking it as an invalid replacement or replacement (due to invalid, TNTC, or broken) sample and vice versa.
4. Failure to use sample site numbers.
5. Failure to report the chlorine residual (if chlorine/chloramines is added) on the reporting form.
6. Failure to monitor early in the month. Waiting until the end of the month to collect the routine samples does not allow enough time for follow-up actions if required.

Appendix A

Total Coliform Monitoring Frequency for Community Water Systems

Population Served	Minimum Number of Samples Per Month
25 to 1,000 ¹	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

¹ Includes public water supplies that have at least 15 service connections, but serve fewer than 25 persons.



CHAPTER

4

Chapter 4 Lead/Copper Rule

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

Section 1: Monitoring for Lead and Copper

Section 2: Action Level (AL) Exceedance Requirements

Section 3: Notifying Customers of Test Results

Illinois EPA Assistance

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

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

Sample Bottles

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

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Section 1

Monitoring for Lead and Copper

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

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

Selecting Sampling Locations

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

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

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

Sampling sites to choose from:

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

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

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

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

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

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

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

Exceeding an “Action Level” (AL)

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

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

Collecting Additional Samples

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

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

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

Section 2

Action Level Exceedance

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

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

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

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

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

Milestone 1: Collection of Water Quality Samples (WQS)

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

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

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

WQS will be used to measure:

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

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

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

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

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

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

Milestone 2: Submittal of Source Water Treatment Recommendation

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

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

Source Water Treatment Recommendation

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

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

OPTION 1

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

OPTION 2

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

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

Maximum Permissible Level (MPL) Monitoring of the Source Water

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

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

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

Pre OCCT Installation

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

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

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

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

OCCT Installation

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

Post OCCT Installation

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

The United States Environmental Protection Agency (USEPA) has prepared several related reference documents and are available at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

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

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

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

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

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

Determining Compliance with the Water Quality Parameter Ranges

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

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

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

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

Key points concerning WQP:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Milestone 6: Lead Service Line Replacement (LSLR)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Section 3

Notifying Customers of Test Results

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

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

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

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

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

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

Example

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

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

Appendix A

Chapter 4 Lead/Copper Rule Laboratory Reporting Forms

- Water Quality Sample Certified Laboratory Form (*Pg. A-2*)
- Lead/Copper Certified Laboratory Form (*Pg. A-3*)
- Source Water Certified Laboratory Form (*Pg. A-4*)

If your supply participates in the Community Water Supply Testing Fund (CWSTF), sample containers and the laboratory reporting forms will be sent to your supply prior to the monitoring period.

If your supply does **not** participate in the CWSTF, it is your responsibility to have all testing completed by an Illinois EPA certified laboratory. These forms must be submitted within 10 days after the end of a monitoring period.



Illinois
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WATER QUALITY SAMPLES (WQS) ANALYSIS REPORT FORM

This section is to be completed by Sample Collector. Please fill in all information.

Facility No.	_____	Facility Name	_____
Date Collected	_____	Time Collected	_____
Sample Collector	_____		
Contact Name:	_____	Contact Telephone	() _____

Sample Location Type (circle one): ENTRY POINT Sample OR DISTRIBUTION Sample

Sample Location _____

If distribution sample, use address or coliform sample site number. If entry point sample include treatment application point (TP) number and identify location.

FIELD WATER TEMPERATURE _____ FIELD PH _____ Units

Circle all added corrosion inhibitors. If water is purchased, ALL inhibitors being added by the parent supply MUST be circled: None Orthophosphate Polyphosphate Blended Phosphate Silica Calcium Carbonate
Other: _____

-This section is to be completed by the Laboratory-

Lab Certification No.	_____	Laboratory Name	_____
Date Received	_____	Time Received	_____
Sample No.	_____	Date Analyzed	_____

PARAMETER	RESULT	USEPA METHOD#
pH (1925)	Units	
Alkalinity (1927)	mg/l	
Calcium (1919)	mg/l	
Conductivity (1064)	um/cm	
Silica (1049)	mg/l	
Orthophosphate (1044)	mg/l	

Date Forwarded _____ Signature of Analyst or Official _____

This Agency is authorized to require this information under Ill. Rev. Stat. 1989, Chapter 1112, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IL532 2053 PWS 183 Rev. Dec-96



**Illinois
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LEAD/COPPER ANALYSIS REPORT FORM

This section is to be completed by Sample Collector. Please fill in all information.

1.	Facility No.	_____	Facility Name	_____
2.	Sample Site No.	_____	(Seven digit assigned number from Pb/Cu Approved Site Plan)	
3.	Site Address	_____	4.	Date Collected _____
5.	Sample Collector	_____		
6.	Contact Name:	_____	Contact Telephone	(____) _____

TO THE BEST OF MY KNOWLEDGE, THIS WATER SAMPLE WAS COLLECTED AT A COLD WATER TAP OR COLD WATER BATHROOM TAP. THIS SAMPLE HAS REMAINED MOTIONLESS IN THE PLUMBING FOR AT LEAST 6 HOURS. THE SAMPLE COLLECTOR HAS RECEIVED INSTRUCTIONS ON SAMPLE COLLECTION PROCEDURES.

Signature of Sample Collector OR a Water Supply Official _____

Instructions

1. Give the seven-digit number identifying your supply as well as the name.
2. The seven digit state assigned number from your Pb/Cu Approved Site Plan.
3. Address of where the sample was collected.
4. Indicate month, day and year when sample was collected.
5. Give name of sample collector.
6. Give Contact Person name and telephone number including the area code.

Copies of this analysis report form and copies of the actual certified lab results must be submitted to the Agency within 10 days of receipt and in no case, later than 10 days from the end of the sampling period.

Illinois Environmental Protection Agency, BOW/DWCU #19
1021 North Grand Avenue East, P.O. Box 19276
Springfield, IL 62794-9276

-This section is to be completed by the Laboratory-

Lab Certification No.	_____	Laboratory Name	_____
Date Received	_____	Time Received	_____
Sample No.	_____	Date Analyzed	_____

SDWIS Parameter	USEPA Method	Reporting Limit ug/l	Result	Units
Lead (1030)				ug/l
Copper (1022)				ug/l

Date Forwarded _____ Signature of Analyst or Official _____

This Agency is authorized to require this information under Ill. Rev. Stat. 1989, Chapter 1112, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.



**Illinois
Environmental Protection Agency**

LEAD/COPPER SOURCE WATER REPORT FORM

This section is to be completed by public water supply official. Please fill in all information.

1.	Facility No. _____	Facility Name _____
2.	Sample Location _____	
3.	Date Collected _____	4. Sample Collector's Name _____
5.	Contact Person Telephone No. (____) _____	

Sample Description: This sample must be collected from the entry point into the distribution system after all treatment (finished water).

Purchase Water? : YES NO (Circle One):

If YES, we purchase from _____

If NO, this sample of water represents water coming from treatment application point number (TP) _____ which represents raw source _____ (well number or surface source).

Copies of this analysis report form and copies of the actual certified lab results must be submitted to the Agency within 10 days of receipt and in no case, later than 10 days from the end of your sampling period.

Illinois Environmental Protection Agency
BOW/Drinking Water Compliance Unit #19
1021 North Grand Avenue East, P.O. Box 19276
Springfield, IL 62794-9276

-This section is to be completed by the Laboratory-

Lab Certification No. _____	Laboratory Name _____
Date Received _____	Time Received _____
Sample No. _____	Date Analyzed _____

Parameter	USEPA Method	Reporting Limit ug/l	Result	Units
Lead (01051)				ug/l
Copper (01042)				ug/l

Date Forwarded _____ Signature of Analyst or Official _____

This Agency is authorized to require this information under Ill. Rev. Stat. 1989, Chapter 1112, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

Appendix B

Chapter 4 Lead/Copper Rule Sample Site Plan

- Initial Monitoring and Site Plan Instructions/Reporting Forms (*Pg. B-2*)
- Reduced Monitoring and Site Plan Instructions/Reporting Forms (*Pg. B-8*)
- Sample Collection Instructions (*Pg. B-14*)

Initial (Routine) Sample Site Plan and Monitoring

The tap water monitoring protocol for lead and copper is designed to identify those residences or sampling locations with lead service lines, lead interior plumbing, or copper pipes with lead solder. Samples collected from these locations are most likely to have high levels of lead and/or copper caused by the contact of corrosive water with lead- and copper-containing plumbing materials. The CWS is required to monitor at these “high-risk” locations, whenever possible (versus collecting a random sample) to better ensure that if the water is corrosive action can be taken to institute treatment that provides uniform and adequate levels of health protection throughout the distribution system. Tap water monitoring for lead and copper not only allows the CWS to determine the lead and copper concentrations in drinking water, but if treatment is installed, monitoring allows the CWS to assess the effectiveness of corrosion control treatment and/or source water treatment.

Prior to collecting the first set of samples, the CWS must choose locations based on very specific criteria and submit these locations to the Illinois EPA for approval and assignment of sample site numbers.

Locations must be chosen based from three tiers of sampling sites, which are described below. These sites are considered to have a higher risk for elevated levels of lead and/or copper. All sites must be Tier 1, if possible. If all of your sites are not Tier 1 sites, you must submit a letter with your site plan explaining why you had to use either Tier 2 or Tier 3 sites.

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

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

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

Initial (Routine) Sample Site Plan and Monitoring continued

The total number of initial or routine sites needed is based on the population served. Below is the minimum number of sites needed for initial/routine monitoring:

Minimum Number of Lead and Copper Tap Samples for CWS – Routine	
System Size	No. of Samples
> 100,000	100
10,001 – 100,000	60
3,301 - 10,000	40
501 - 3,300	20
101 – 500	10
≤ 100	5
Number of Sites for Routine and Initial Monitoring	

In addition to the minimum number of primary sites, it is recommended that the CWS also choose a fair number of “alternate” sites. Please note, however, once sites are chosen and approved by the Illinois EPA, only the same primary sites should be sampled each sample period. **In the event a primary site can no longer be used, a written, telephone, or email request (including justification) must be submitted to the Illinois EPA for approval to switch sample locations to an alternate location.** Once the switch is approved, this site becomes a primary location and samples must now always be collected at the alternate location in all subsequent monitoring periods

After the CWS chooses its sampling locations for the first time, they must submit the following documents:

- Lead and Copper Sample Site Plan Summary
- Illinois EPA PWS Lead and Copper Sample Site Plan

The above forms with instructions follow this page. Once completed, return to the Illinois EPA for written approval and assignment of sample site numbers. The return address is:

Lead/Copper Coordinator
Illinois EPA /BOW/CAS #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

If a CWS is only adding existing sites to an existing site plan, the CWS is not required to submit the sites on the forms, but to add a new site, they will need submit the form on B-5 to get approval and site numbers. To do this, contact the Lead/Copper Coordinator at 217-785-0561.

Initial/Routine Sample Site Plan and Monitoring

Lead and Copper Sampling Site Plan Summary

Facility Name: _____ CWS Number: _____

1. Number of persons served: _____
2. Number of primary sites required: _____
3. Number of alternative sites selected: _____
4. Do multiple family residences comprise at least 20 % of the structures of the served by your water system? Yes _____ No _____
5. Are there any lead service lines present within your distribution system?
Yes _____ No _____

If yes, are 50% of the sampling sites served by lead service lines? Yes _____ No _____

- Number of Tier 1 sites:

	Primary	Alternative	Total
A			
B			
C			
D			
E			
F			
Total			

- Number of Tier 2 sites:

	Primary	Alternative	Total
J			
K			
L			
Total			

- Number of Tier 3 sites:

	Primary	Alternative	Total
R			
S			
Total			

The undersigned official custodian and the responsible operator in charge for this facility, hereby certify that the above information is accurate and true to the best of their ability.

Official Custodian's Signature

Operator's Signature

Illinois EPA PWS Lead and Copper Sample Site Plan

CWS Number: IL _____ CWS Name _____ Date _____

AGENCY USE ONLY		Enter Sample Site Description (Address, Street/City, Rural route + Description, Name of Resident, etc.)	Primary Or Alternate (P or A)	Tier	Tier Type
Sample Site Number	Status				
L	A				
L	A				
L	A				
L	A				
L	A				
L	A				

PREPARED BY _____ **PHONE NUMBER** (____) _____

Illinois EPA PWS Lead and Copper Sample Site Plan

CWS Number: IL9823459

CWS Name Studertown

Date 6/20/08

AGENCY USE ONLY		Enter Sample Site Description (Address, Street/City, Rural route + Description, Name of Resident, etc.)	Primary Or Alternate (P or A)	Tier	Tier Type
Sample Site Number	Status				
L	A	1 4 3 2 N O L D W A T E R W O R K S R O A D	P	1	A
L	A	9 1 0 W 1 S T S T	P	1	C
L	A	R R 2 B O X 1 1 H A Z E L T O N R E S I D E N T	P	1	C
L	A	1 5 1 6 E 2 N D	A	3	S
L	A	3 2 C A L H O U N R D L O T 3	A	3	R

PREPARED BY John Studebaker PHONE NUMBER: 217-999-0000

**Illinois Environmental Protection Agency
Public Water Supply Lead and Copper Sample Site Plan**

Instructions For Filling Out Lead and Copper Sample Site Data Input Form

- 1) Facility Number: Enter the seven digit facility number.
- 2) Facility Name: Print the name of your facility.
- 3) Sample Site Number and Status: Leave this portion of the form blank.
- 4) Sample Site Description: Enter the Address of the location where sample will be collected. One letter per box.
- 5) Primary or Alternate: Enter "P" for a primary sampling site or an "A" for an alternate sampling site.
- 6) Tier: Enter 1 for Tier 1: 2 for Tier 2: or a 3 for Tier 3. (see explanation below)

Tier 1: a) Includes single and multifamily structures that contain copper pipes with lead solder that was installed after 1982.

- b) Lead pipes.
- c) Is served by a lead service line.

Tier 2: a) Includes buildings that contain copper pipes with lead solder installed after 1982

- b) Lead pipes
- c) Is served by a lead service line.

Tier3: a) Includes single family structures that contain copper pipes with lead solder that were installed prior to 1983

- b) If not enough Tier 1, 2, or 3 sites are available, then random sites may be chosen.

<u>Tier</u>	<u>Tier Type</u>
Tier 1	A – Single Family, copper pipe with lead solder constructed after 1982 B – Single Family, lead pipes C – Single Family, lead service line D – Multifamily, copper pipe with lead solder constructed after 1982 E – Multifamily, lead pipes F – Multifamily, lead service line
Tier 2	J – Building, copper pipe with lead solder constructed after 1982 K – Building, lead pipes L – Building, lead service line
Tier3	S – Single family, copper pipe with lead solder constructed before 1983 R – Random location

Reduced Sample Site Plan and Monitoring

After two consecutive six-month rounds of initial/routine monitoring, if the CWS has not had any AL exceedances, the CWS may qualify for reduced monitoring. Reduced monitoring changes the sample frequency from every six months to annual. It also reduces the number of sites.

Minimum Number of Lead and Copper Tap Samples for Systems on Reduced Monitoring	
System Size	No. of Samples
> 100,000	50
10,001 – 100,000	30
3,301 - 10,000	20
501 - 3,300	10
101 – 500	5
≤ 100*	5
* The number of samples for this group is the same as initial/routine monitoring	

Samples for reduced monitoring must be collected between the months of June and September. Samples collected before June or after September will not count in meeting the reduced monitoring requirements.

After three consecutive years of lead/copper monitoring without any AL exceedances, the CWS may qualify for maintenance (triennial) monitoring. For maintenance monitoring, the number of samples remain the same as reduced monitoring; however, the frequency is changed to every three years. Like as in reduced monitoring, samples must be collected between the months of June and September and must be collected exactly at three year intervals. Samples collected before June or after September will not count in meeting the maintenance monitoring requirements.

If a CWS is on reduced or maintenance monitoring, if an AL is exceeded, the CWS will return to routine monitoring status.

Prior to reduced or maintenance monitoring, the CWS must submit a reduced sample site plan. These locations are a subset of the routine (or initial) sample site plan that has been already previously approved. The highest Tier level sites must be selected first. In addition, if lead service lines are present, at least 50% of the reduced plan must include these sites. If the initial site plan consist of locations that were of the same Tier level and Tier type, sites maybe selected at random (sites do not need to be selected based on historical result levels, the CWS can pick and choose).

The following pages include the site plan reporting forms the CWS must complete and return to the Illinois EPA prior to monitoring. Use the chart above to determine which form is needed.

LEAD AND COPPER REDUCED MONITORING SITE PLAN (5 Sites)

CWS Number: _____ CWS Name: _____

List **five** sites from the original sampling pool to be used for the reduced monitoring pool. Sites must be chosen as follows:

1. The lead/copper rule requires a facility to always use the highest available Tier sites first. In other words, all Tier 1 sites (i.e., P1C, P1A, P1D) sampled in the first two rounds of monitoring must be sampled during reduced monitoring before Tier 2 sites may be sampled. Likewise all active Tier 2 sites must be sampled before Tier 3 sites may be sampled.
2. Primary sites are preferred. However, previously approved alternates may be used if enough primary sites are not available.
3. If your facility has lead service lines, you should maintain the same mix of Tier Type A and Tier Type C that was sampled in the original sample pool. At no time should there be less than 50% Tier Type C, unless all the active Tier Type C sites are already included in the reduced monitoring sampling pool.
4. All Tier Type S must be sampled before Tier Type R may be sampled.

If sites are not chosen as outlined above, results will not be used to calculate compliance and your supply will receive a monitoring violation.

Please list sites in numerical order (P1A001, P1A002, P3S003, etc.)

1.	
2.	
3.	
4.	
5.	

Mail this form **after collection of samples** to:

**IEPA/BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276**

This Agency is authorized to require this information under Ill. Rev. Stat., 1989, Chapter 111 1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center. c:\wp51\forms\red5.lst

LEAD AND COPPER REDUCED MONITORING SITE PLAN (10 Sites)

CWS Number: _____ CWS Name: _____

List **10** sites from the original sampling pool to be used for the reduced monitoring pool. Sites must be chosen as follows:

1. The lead/copper rule requires a facility to always use the highest available Tier sites first. In other words, all Tier 1 sites (i.e., P1C, P1A, P1D) sampled in the first two rounds of monitoring must be sampled during reduced monitoring before Tier 2 sites may be sampled. Likewise all active Tier 2 sites must be sampled before Tier 3 sites may be sampled.
2. Primary sites are preferred. However, previously approved alternates may be used if enough primary sites are not available.
3. If your facility has lead service lines, you should maintain the same mix of Tier Type A and Tier Type C that was sampled in the original sample pool. At no time should there be less than 50% Tier Type C, unless all the active Tier Type C sites are already included in the reduced monitoring sampling pool.
4. All Tier Type S must be sampled before Tier Type R may be sampled.

If sites are not chosen as outlined above, results will not be used to calculate compliance and your supply will receive a monitoring violation.

Please list sites in numerical order (P1A001, P1A002, P3S003, etc.)

1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

Mail this form **after collection of samples** to:

**IEPA/BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276**

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LEAD AND COPPER REDUCED MONITORING SITE PLAN (20 Sites)

CWS Number: _____ CWS Name: _____

List 20 sites from the original sampling pool to be used for the reduced monitoring pool. Sites must be chosen as follows:

1. The lead/copper rule requires a facility to always use the highest available Tier sites first. In other words, all Tier 1 sites (i.e., P1C, P1A, P1D) sampled in the first two rounds of monitoring must be sampled during reduced monitoring before Tier 2 sites may be sampled. Likewise all active Tier 2 sites must be sampled before Tier 3 sites may be sampled.
2. Primary sites are preferred. However, previously approved alternates may be used if enough primary sites are not available.
3. If your facility has lead service lines, you should maintain the same mix of Tier Type A and Tier Type C that was sampled in the original sample pool. At no time should there be less than 50% Tier Type C, unless all the active Tier Type C sites are already included in the reduced monitoring sampling pool.
4. All Tier Type S must be sampled before Tier Type R may be sampled.

If sites are not chosen as outlined above, results will not be used to calculate compliance and your supply will receive a monitoring violation.

Please list sites in numerical order (P1A001, P1A002, P3S003, etc.)

1.		11.	
2.		12.	
3.		13.	
4.		14.	
5.		15.	
6.		16.	
7.		17.	
8.		18.	
9.		19.	
10.		20.	

Mail this form **after collection of samples** to:

**IEPA/BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276**

This Agency is authorized to require this information under Ill. Rev. Stat., 1989, Chapter 111 1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center. c:\wp51\forms\red10.txt

LEAD AND COPPER REDUCED MONITORING SITE PLAN (30 Sites)

CWS Number: _____ CWS Name: _____

List 30 sites from the original sampling pool to be used for the reduced monitoring pool. Sites must be chosen as follows:

1. The lead/copper rule requires a facility to always use the highest available Tier sites first. In other words, all Tier 1 sites (i.e., P1C, P1A, P1D) sampled in the first two rounds of monitoring must be sampled during reduced monitoring before Tier 2 sites may be sampled. Likewise all active Tier 2 sites must be sampled before Tier 3 sites may be sampled.
2. Primary sites are preferred. However, previously approved alternates may be used if enough primary sites are not available.
3. If your facility has lead service lines, you should maintain the same mix of Tier Type A and Tier Type C that was sampled in the original sample pool. At no time should there be less than 50% Tier Type C, unless all the active Tier Tpe C sites are already included in the reduced monitoring sampling pool.
4. All Tier Type S must be sampled before Tier Type R may be sampled.

If sites are not chosen as outlined above, results will not be used to calculate compliance and your supply will receive a monitoring violation.

Please list sites in numerical order (P1A001, P1A002, P3S003, etc.)

1.		11.		21.	
2.		12.		22.	
3.		13.		23.	
4.		14.		24.	
5.		15.		25.	
6.		16.		26.	
7.		17.		27.	
8.		18.		28.	
9.		19.		29.	
10.		20.		30.	

Mail this form **after collection of samples** to:

**IEPA/BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276**

This Agency is authorized to require this information under Ill. Rev. Stat., 1989, Chapter 111 1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.
c:\wp51\forms\red10.txt

LEAD AND COPPER REDUCED MONITORING SITE PLAN (50 Sites)

CWS Number: _____ CWS Name: _____

List 50 sites from the original sampling pool to be used for the reduced monitoring pool. Sites must be chosen as follows:

1. The lead/copper rule requires a facility to always use the highest available Tier sites first. In other words, all Tier 1 sites (i.e., P1C, P1A, P1D) sampled in the first two rounds of monitoring must be sampled during reduced monitoring before Tier 2 sites may be sampled. Likewise all active Tier 2 sites must be sampled before Tier 3 sites may be sampled.
2. Primary sites are preferred. However, previously approved alternates may be used if enough primary sites are not available.
3. If your facility has lead service lines, you should maintain the same mix of Tier Type A and Tier Type C that was sampled in the original sample pool. At no time should there be less than 50% Tier Type C, unless all the active Tier Type C sites are already included in the reduced monitoring sampling pool.
4. All Tier Type S must be sampled before Tier Type R may be sampled.

If sites are not chosen as outlined above, results will not be used to calculate compliance and your supply will receive a monitoring violation.

Please list sites in numerical order (P1A001, P1A002, P3S003, etc.)

1.		11.		21.		31.		41.	
2.		12.		22.		32.		42.	
3.		13.		23.		33.		43.	
4.		14.		24.		34.		44.	
5.		15.		25.		35.		45.	
6.		16.		26.		36.		46.	
7.		17.		27.		37.		47.	
8.		18.		28.		38.		48.	
9.		19.		29.		39.		49.	
10.		20.		30.		40.		50.	

Mail this form **after collection of samples** to:

**IEPA/BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276**

This Agency is authorized to require this information under Ill. Rev. Stat., 1989, Chapter 111 1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.
c:\wp51\forms\red10.xls

Lead/Copper Sample Collection Instructions

When collecting lead and copper tap samples, you must follow the procedures listed below:

- Always collect a 1-liter sample in one container only (e.g., do not split the sample between two containers).
- Always collect a first-draw sample from a tap where the water has stood in the pipes for at least six hours (e.g., no flushing, showering, etc). However, make sure it is a tap that is used regularly, and not an abandoned or infrequently used tap.
- If your water system is a NTNCWS or CWS (such as a prison or hospital) that does not have enough inside taps where the water stands unused for at least six hours, you are allowed to use interior taps from which water is typically drawn for consumption and which are the most likely to have remained unused for the longest period of time.
- First-draw samples collected at single-family residences should always be drawn from the cold-water kitchen tap or bathroom tap.
- First-draw samples collected from buildings other than single-family homes should always be drawn from an interior tap from which water is typically taken for consumption.
- You may allow residents to collect sample, but you must supply the residents with instructions as to the sample collection procedures. Be sure to properly label sample bottles prior to distributing them to residents.
- As a general rule, you should collect your lead and copper tap water samples early in the monitoring period in case you exceed the lead or copper action level. This is because you will be required to also collect WQP samples during the same monitoring period (refer to Section III for a more detailed discussion of WQP monitoring). In addition, you will need to submit your monitoring results within 10 days after the end of the monitoring period (e.g., by October 10 for systems that monitoring during June - September).
- After the sample is drawn, acidification of the sample should be completed by the laboratory personnel upon receipt of the sample, but in no case later than 14 days after sample collection. Neither the homeowner nor the sample collector should handle the nitric acid used for sample acidification.

If you cannot gain access to an original sampling site during any subsequent sample collections, the CWS should select an alternate site that has been previously approved. In this event, you will need to contact the Illinois EPA Lead /Copper Coordinator at 217-785-0561 to get the switch recorded in State records.

Suggested Directions for Homeowner Tap Sample Collection Procedures

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

Please read the following directions prior to collection of the sample.

1. Prior arrangements will be made with the customer to coordinate the sample collection event. Dates will be set for sample kit delivery and pick-up by water department staff.
2. There must be a minimum of 6 hours during which there is no water used from the tap the sample is taken from and any taps adjacent or close to that tap. The water department recommends that either early mornings or evenings upon returning home are the best sampling times to collect the sample.
3. A kitchen or bathroom cold-water faucet is to be used for sampling. Be sure to use a faucet that has been in recent general use by your household. If you have a water softener on your kitchen tap, collect your sample from the bathroom tap that is not attached to a water softener, if possible. **Do not remove the aerator prior to 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.

DO NOT FLUSH ANY WATER FROM YOUR FAUCET PRIOR TO FILLING THE BOTTLE

4. Tightly cap the sample bottle and place in the sample kit provided. Please review the sample kit label at this time to ensure that all information contained on the label is correct.
5. ***IF ANY PLUMBING REPAIRS OR REPLACEMENT HAS BEEN DONE IN THE HOME SINCE THE PREVIOUS SAMPLING EVENT, NOTE THIS INFORMATION ON THE LABEL AS PROVIDED. ALSO IF YOUR SAMPLE WAS COLLECTED FROM A TAP WITH A WATER SOFTENER, NOTE THIS AS WELL.***
6. Place the sample kit outside of the residence in the location of the kit's delivery so 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. However, if excessive lead and/or copper levels are found, 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.

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

Chapter 4 Lead/Copper Rule Interpreting Results – Invalidation of Results

- Determining the 90th percentile (*Pg. C-2*)
- Calculating the 90th percentile blank worksheet with instructions (*Pg. C-4*)
- Invalidation of Results (*Pg. C-7*)

Interpreting Results

Lead and copper analytical results are evaluated against an action level (AL), not an MCL. The lead AL is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period is greater than 0.015 mg/L (i.e., if the 90th percentile level lead level is greater than 0.015 mg/L). The copper AL is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted is greater than 1.3 mg/L (i.e., if the 90th percentile copper level is greater than 1.3 mg/L). All samples that meet the proper site selection and sample collection procedures are used to determine the 90th percentile calculation, even if you collect samples from more sites than required.

It is strongly recommended that results are evaluated by the CWS as they are received from the laboratory. If the CWS waits until after the end of the monitoring period to evaluate the results, then this will reduce the number of options the CWS will have for the next course of action should results indicate an AL exceedance (such as collection of additional samples). It is suggested the CWS contact the Lead / Copper Rule Coordinator at 217-785-0561 to discuss options as soon as results indicate an AL exceedance.

The 90th percentile is calculated separately for lead and copper. The procedure for determining the lead 90th percentile value is as follows:

If you are required to collect more than five samples:

- Step 1: Place lead results in ascending order (from lowest to highest value).
- Step 2: Assign each sample a number, 1 for lowest value.
- Step 3: Multiply the total number of samples by 0.9.
- Step 4: Compare the answer to Step 3, the 90th percentile level, to the action level of 0.015 mg/L (can also be expressed as 15 parts per billion (ppb)). If your 90th percentile value is higher than 0.015 mg/L, you have an exceedance.

Repeat this procedure for copper sample results, except compare the 90th percentile copper level against its action level of 1.3 mg/L. If your 90th percentile value is greater than 1.3 mg/L, you have an exceedance. See Pages C-4 through C-6 for more detailed instructions.

If you are required to collect five samples:

- Step 1: Place lead or copper results in ascending order.
- Step 2: Take the average of the 4th and 5th highest sample. This is your 90th percentile level.
- Step 3: Compare the 90th percentile level against the lead or copper action level.

The next page is two examples to help demonstrate the 90th percentile calculation for systems that are required to collect more than five samples. The first example explains how to determine whether you have exceeded an action level when your 90th percentile level is a whole number. The second example shows how to make this determination using interpolation when your 90th percentile level contains a decimal. This may happen when you collect more than the minimum required number of samples.


In **Example 1**, a system serving 150 people is on initial monitoring, and collects the minimum number of required samples for its size category (i.e., 10 samples). The 90th percentile level corresponds to the 9th highest sample (i.e., 10 samples x 0.9). It does not exceed the lead action level because its 90th percentile level is 0.015 mg/L, which equals the lead action level. To have an exceedance, the 90th percentile level must be greater than 0.015 mg/L.

In **Example 2**, the system is required to collect a minimum of 10 valid samples. It collects 12 valid samples and thus, all 12 are used in the 90th percentile calculation. The 90th percentile level is 10.8 (i.e., 12 samples x 0.9 = 10.8). Interpolation can be used to determine the 90th percentile level when the sample that represents it is not a whole number (see explanation below).


Using Interpolation: To determine the 90th percentile level, using interpolation, you would:

1. Subtract the difference of the two samples between which your 90th percentile falls. In this example you would subtract the 10th sample result of 0.014 mg/L from the 11th sample result of 0.018 mg/L, for a difference of 0.004 mg/L.
2. Subtract the difference between the 90th percentile level of 10.8 and the lower of the two sample rankings between which the 90th percentile level falls or 10, for a difference of 0.8.
3. Multiply the difference of 0.004 mg/L (from Step 2) by 0.8 (from Step 3): $0.004 \times 0.8 = 0.0032$ mg/L (or 0.003 when rounded to the number of significant figures).
4. Add 0.003 to the lower of the two sample results, in this example to the 10th sample result of 0.014 mg/L: $0.003 + 0.014 = 0.017$ mg/L.

Thus, the 90th percentile lead level is 0.017 mg/L and the system exceeds the lead action level.

 Example 1: 90th Percentile Is a Whole Number

Sample Rank	Sample Value
1	0.000
2	0.000
3	0.002
4	0.005
5	0.005
6	0.006
7	0.006
8	0.010
9 (90th percentile)	0.015
10	0.020

 Example 2: 90th Percentile Contains a Decimal

Sample Rank	Sample Value
1	0.000
2	0.000
3	0.002
4	0.005
5	0.005
6	0.005
7	0.006
8	0.006
9	0.010
10	0.014
10.8 (90th percentile)	
11	0.018
12	0.020

1. Using the chart on paged C-5 and C-6, fill in the facility number, facility name and six-month monitoring compliance period for the samples.
2. List the lead results on one form and the copper results on another form. Circle the appropriate metal on the top of the chart. (No lead or copper to circle on form????)
3. All sample results must be listed, those analyzed by the Illinois EPA laboratory, those analyzed by certified laboratories, those listed on the lead/copper site plan, any additional samples collected beyond the required number, and any repeat samples.
4. List the results in ascending order (least to greatest) with the corresponding sample site number. If there is no site number, for additional samples collected beyond the required number, list an address.
5. If there are more than 100 samples, use an additional page for listing the results and change the ranking number (i.e. 1 to 101, 2 to 102, etc.).
6. Complete the calculation portion of the form.
 - A. Multiply the number of samples time 0.9. Write the answer on line A.
 - B. If this is a whole number (i.e. 3, 120), write the result for this number on line H after the equal sign. You are done!
 - C. If this is not a whole number (i.e. 3.5, 112.3), list the ninetieth percentile sample number on line C.
 - D. List the sample number of the next lower whole number on line B with its result and list the sample number of the next higher whole number on line D with its result.
 - E. Subtract the sample number on line B from the ninetieth percentile sample number on line C, this is the interpolation factor. Write the answer on line E.
 - F. Subtract the result of the next lower sample on line B from the result for the next higher sample on line D. Write the answer on line F.
 - G. Multiply the interpolation factor, line E, times the difference in the sample results, line F. Write the answer on line G.

Add the interpolated result, line G, to the result for the next lower sample, line B. This is the ninetieth percentile result, write it on line H.

Calculation of Ninetieth Percentile

Facility No. _____ Compliance Period: _____

Facility Name: _____

	Site Number	Result (ug/l)			Site Number	Result (ug/l)
1.				37.		
2.				38.		
3.				39.		
4.				40.		
5.				41.		
6.				42.		
7.				43.		
8.				44.		
9.				45.		
10.				46.		
11.				47.		
12.				48.		
13.				49.		
14.				50.		
15.				51.		
16.				52.		
17.				53.		
18.				54.		
19.				55.		
20.				56.		
21.				57.		
22.				58.		
23.				59.		
24.				60.		
25.				61.		
26.				62.		
27.				63.		
28.				64.		
29.				65.		
30.				66.		
31.				67.		
32.				68.		
33.				69.		
34.				70.		
35.				71.		
36.				72.		

Calculation of Ninetieth Percentile

Facility No. _____ Compliance Period: _____

Facility Name: _____

	Site Number	Result (ug/l)			Site Number	Result (ug/l)
73.					87.	
74.					88.	
75.					89.	
76.					90.	
77.					91.	
78.					92.	
79.					93.	
80.					94.	
81.					95.	
82.					96.	
83.					97.	
84.					98.	
85.					99.	
86.					100.	

If more than 100 samples are collected, list samples on a second form and calculate ninetieth percentile on that form.

A. (number of samples) X (0.9) = 90th percentile sample
 _____ X (0.9) = _____

B. Next lower sample no. _____ Result _____

C. 90th percentile sample no. _____ Result _____

D. Next higher sample no. _____ Result _____

E. Line C – Line B sample no. _____ = Interpolation Factor

F. Line D result - Line B result _____ Result _____

G. (Line E factor) X (Line F result) = _____

H. Line G result + Line B result = interpolated 90th percentile
 _____ + _____ = _____

Instructions of Calculation of Ninetieth Percentile

7. Fill in the facility number, facility name and six-month monitoring compliance period for the samples.
8. List the lead results on one form and the copper results on another form. Circle the appropriate metal on the top of the chart.
9. All sample results must be listed, those analyzed by the Illinois EPA laboratory, those analyzed by certified laboratories, those listed on the lead/copper site plan, any additional samples collected beyond the required number, and any repeat samples.
10. List the results in ascending order (least to greatest) with the corresponding sample site number. If there is no site number, for additional samples collected beyond the required number, list an address.
11. If there are more than 100 samples, use an additional page for listing the results and change the ranking number (i.e. 1 to 101, 2 to 102, etc.).
12. Complete the calculation portion of the form.
 - H. Multiply the number of samples time 0.9. Write the answer on line A.
 - I. If this is a whole number (i.e. 3, 120), write the result for this number on line H after the equal sign. You are done!
 - J. If this is not a whole number (i.e. 3.5, 112.3), list the ninetieth percentile sample number on line C.
 - K. List the sample number of the next lower whole number on line B with its result and list the sample number of the next higher whole number on line D with its result.
 - L. Subtract the sample number on line B from the ninetieth percentile sample number on line C, this is the interpolation factor. Write the answer on line E.
 - M. Subtract the result of the next lower sample on line B from the result for the next higher sample on line D. Write the answer on line F.
 - N. Multiply the interpolation factor, line E, times the difference in the sample results, line F. Write the answer on line G.
 - O. Add the interpolated result, line G, to the result for the next lower sample, line B. This is the ninetieth percentile result, write it on line H.

Invalidation of Results

The Illinois EPA can invalidate a lead or copper tap water sample if any one of the following is true:

1. The laboratory establishes that improper analysis caused errors;
2. The Illinois EPA determines that the sample site did not meet the site selection criteria;
3. The sample container was damaged in transit; or
4. Substantial reason exists to believe that the sample was tampered with.

For the Illinois EPA to make this determination, you must provide them with all sample results and documentation of the reasons that the samples should be invalidated. **Samples may not be invalidated solely on the grounds that a follow-up sample result is higher or lower than the original sample.**

Replacement Samples: If the Illinois EPA invalidates your sample(s), you only need to collect a replacement sample if the number of valid samples is below the minimum number of required samples. For example, assume you are on routine monitoring and only collect the required number of samples (use 40 as an example). If one of these samples is invalidated, you only have 39 valid samples, and therefore, must collect 1 replacement sample. Conversely, if you initially collected 41 samples and 1 was invalidated, you would still have 40 valid samples and would not need to collect a replacement sample.

Replacement samples must be taken as soon as possible, but must be taken within 20 days of the date of invalidation, or by the end of the applicable monitoring period, whichever is later. If these samples are taken after the end of the applicable monitoring period, they cannot be used to fulfill the sampling requirements of a subsequent period. For example, assume a system is on a six-month monitoring schedule. It collects a replacement sample in July 2009 for one invalidated sample that was collected during the January through June 2009 monitoring period. It cannot include this replacement sample as part of its samples for the July through December 2009 monitoring period.

Please note that you may find yourself in a situation where the State invalidates your sample(s) on a date that does not allow you to collect a replacement sample during the months in which you are required to conduct monitoring (i.e., June through September or an alternate period designated by the State). In this event, you can collect this sample outside this time period, as long as you collect the sample(s) no later than 20 days after the date the sample(s) was(were) invalidated. For example, assume you are required to conduct monitoring during June through September and the State invalidates one of your samples on October 15, 2009. You have until November 4, 2009 (i.e., 20 days after the State's invalidation decision) to collect the replacement sample.

Appendix D

Chapter 4 Lead/Copper Rule Source Water Treatment Recommendation

- Option 1 (*Pg. D-2*)
Usually used by supplies having all lead/copper entry point sample results equal to or below the detection limit.
- Option 2 (*Pg. D-3*)
Required when any source water sample result exceeds the detection limit.



Option 1

Source Water Treatment Recommendation

Date: _____

PWS ID No. _____ Name: _____

Contact Phone (____) _____ Contact Name: _____

POP Served _____

List all entry point (or treatment application point - TAP) values obtained in sampling for this monitoring period and attach the results of any other samples collected at each entry point.

TP No.	Entry Point (TP) Description	Date Collected	Lead Value	Copper Value
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

According to all my source water (entry point) sample results, the source water contribution of lead and copper into the distribution system is equal to or less than the detection level (0.005 mg/l for lead and 0.100 mg/l for copper). Therefore, our source water treatment recommendation is no treatment. I understand that my maximum permissible level for monitoring will be 0.005 mg/l for lead and 0.200 mg/l for copper.

Signature of Official Custodian _____

Date: _____

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center

IL 532-2192
PWS 233 Rvsd Dec-96



Option 2

Source Water Treatment Recommendation

Need help with this form? Please contact the Lead/Copper Coordinator at 217/785-0561

Date: _____

PWS ID No. _____ Name: _____

Contact Phone (____) _____ Contact Name: _____

POP Served _____

List all entry point (or treatment application point - TAP) values obtained in sampling for this monitoring period and attach the results of any other samples collected at each entry point.

TP No.	TP Description	Date Collected	Lead Value	Copper Value
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Checkmark Your Recommendation Response

_____ **I recommend No Treatment.** I understand that my maximum permissible level for monitoring will be 0.005 mg/l for lead and 0.200 mg/l for copper.

OR

_____ I recommend the following treatment _____
My recommended maximum permissible levels are _____ mg/l for lead & _____ mg/l for copper.

Appendix E

Chapter 4 Lead/Copper Rule Optimal Corrosion Control Treatment (OCCT) Recommendation

- **Form 141-C; Optimal Corrosion Control Treatment (OCCT) Recommendation Template** (*Pg. E-2*)
This 2-page form has several applications. It can be used to: 1) document the results of monitoring used to evaluate various corrosion control treatment (CCT) options and to provide your study recommendation or 2) request a modification to your State's decision regarding CCT and/or OWQPs
- **Natural OCCT Template** (only used when Form 141-C is not required; a PWS meets the ALs for 2 consecutive monitoring periods and is recommending no treatment) (*Pg. E-4*)

OPTIMAL CORROSION CONTROL TREATMENT RECOMMENDATION

System's Name: _____ System Type: CWS NTNCWS

Address: _____ Number of People Served:

_____ >100,000 501 to 3,300

_____ 10,001 to 100,000 101 to 500

_____ 3,301 to 10,000 ≤ 100

System ID #: _____

Contact Person: _____ Telephone number: _____

RESULTS OF MONITORING

The Results of Source Water, Tap Water, and WQP Samples Must Be Attached to This Document

of tap water samples required _____ # of tap water samples submitted _____

of source water samples required _____ # of source water samples submitted _____

RESULTS OF OPTIMAL CORROSION CONTROL TREATMENT STUDIES

(If the State requires you to conduct additional treatment analyses, copy this form and attach the results.)

Test 1 -- Alkalinity & pH Adjustment			Test 2 -- Calcium Hardness Treatment		
<u>Before</u>	<u>Parameters</u>	<u>After</u>	<u>Before</u>	<u>Parameters</u>	<u>After</u>
_____	Pb	_____	_____	Pb	_____
_____	Cu	_____	_____	Cu	_____
_____	pH	_____	_____	pH	_____
_____	alkalinity	_____	_____	alkalinity	_____
_____	calcium	_____	_____	calcium	_____
_____	conductivity	_____	_____	conductivity	_____
_____	orthophosphate	_____	_____	orthophosphate	_____
_____	silicate	_____	_____	silicate	_____
_____	water temperature	_____	_____	water temperature	_____
Test 3 -- Addition of Corrosion Inhibitor			Test 4 -- Other (please specify) _____		
<u>Before</u>	<u>Parameters</u>	<u>After</u>	<u>Before</u>	<u>Parameters</u>	<u>After</u>
_____	Pb	_____	_____	Pb	_____
_____	Cu	_____	_____	Cu	_____
_____	pH	_____	_____	pH	_____
_____	alkalinity	_____	_____	alkalinity	_____
_____	calcium	_____	_____	calcium	_____
_____	conductivity	_____	_____	conductivity	_____
_____	orthophosphate	_____	_____	orthophosphate	_____
_____	silicate	_____	_____	silicate	_____
_____	water temperature	_____	_____	water temperature	_____

OPTIMAL CORROSION CONTROL TREATMENT RECOMMENDATION

1. Treatment recommendation and rationale: _____

2. Test methodologies used to evaluate each treatment (e.g., pipe rig loop tests, metal coupon tests, etc.):

3. Identify any chemical or physical constraint that limits or prohibits the use of a particular corrosion control treatment (attach all data indicating that a particular treatment has adversely affected other water treatment processes or is ineffective for reducing corrosion): _____

CERTIFICATION THAT OPTIMAL CORROSION CONTROL TREATMENT HAS BEEN INSTALLED

The _____ water system certifies that optimal corrosion control treatment has been installed and is being properly operated as agreed to between the above named water system and the State of _____. Optimal corrosion control treatment was required to be installed by _____ (date). Optimal corrosion control treatment was installed on _____ (date).

REQUEST FOR MODIFICATION OF CURRENT CORROSION CONTROL TREATMENT AND/OR WATER QUALITY PARAMETERS

Reason for modification: _____

(Attach all supporting studies, data, treatment specifications, etc., that substantiate this request for modification.)

SIGNATURE

PRINTED NAME

TITLE

DATE



Illinois Environmental Protection Agency

Natural Optimal Corrosion Control Designation

Date: _____ Facility No.: _____
 Facility Name: _____
 Contact Person: _____
 Telephone No.: () _____

Do you purchase water? () Yes () No If Yes, Parent Supply _____

If **no** treatment process change has taken place since initial monitoring, a supply may demonstrate naturally non-corrosive water. A supply may demonstrate naturally non-corrosive water **if no treatment process change has taken place since initial monitoring, and sample results from two consecutive six-month monitoring periods** are below the action level.

<u>1st Monitoring Period both Action Levels Were Not Exceeded</u>	<u>2nd Monitoring Period both Action Levels Were Not Exceeded</u>
_____ / _____ / _____ through _____ / _____ / _____	_____ / _____ / _____ through _____ / _____ / _____
90% Lead () ug/l 90% Copper () ug/l	90% Lead () ug/l 90% Copper () ug/l

To the best of my knowledge, the treatment process has not been changed or modified since the samples with results exceeding the action level were taken.

Owner or Official _____ **ROINC** _____
 Print Name _____ Print Name _____

If you purchase water, the following section must be completed and signed and signed by a representative of your parent water supply.

To the best of my knowledge, the treatment process has not been changed or modified since the samples with results exceeding the action level were taken by the supply listed above.

Owner or Official _____ **ROINC** _____
 Print Name _____ Print Name _____

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

Appendix F

Chapter 4 Lead/Copper Rule
OCCT Verification Form (*Pg. F-2*)



OCCT Verification Form

This form is required to be submitted to the Illinois EPA once your Optimal Corrosion Control Treatment is installed and optimized.

Date: _____

PWS ID No. _____ Name: _____

Contact Phone (____) _____ Contact Name: _____

POP Served _____

The following must be completed by the owner or official custodian:

I, _____ (print name), have certified the Optimal Corrosion Control Treatment (OCCT) has been installed and optimization of water treatment is complete. We are ready to begin Follow-up Monitoring.

Signature _____

Title _____

Date _____

Type of OCCT Treatment Installed _____

The Illinois EPA **operating permit** for the OCCT was issued on _____ (date of permit). *(Note: If you do not have an operating permit, please call the Lead and Copper Coordinator at 217/785-0561)*

Please return to this address:

Illinois Environmental Protection Agency
Drinking Water Compliance Unit #19
Bureau of Water
1021 North grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 ½, section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and additional civil penalty up to \$10,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management center.
IL 532-2534
PWS 260 Rev. 9/2000

Appendix G

Chapter 4 Lead/Copper Rule Compliance with the Water Quality Parameter Ranges

- Water Quality Parameter Ranges Overview (*Pg. G-2*)
- Determining Compliance (*Pg. G-3*)
 - Daily Values (*Pg. G-3*)
 - Excursions (*Pg. G-4*)
 - Determining Daily Values and Excursions for Entry Points (*Pg. G-5*)
 - Determining Daily Values and Excursions for the Distribution System (*Pg. G-8*)
- Key Points to Remember About Water Quality Monitoring (*Pg. G-11*)
 - Water Quality Parameters On-site Analytical Equipment (*Pg. G-12*)
- Recording Water Quality Parameter (WQP) Monitoring Results and Illinois EPA Reporting Requirements (*Pg. G-13*)
 - Illinois EPA Compliance with the Water Quality Parameter (WQP) Ranges Certification of Results Form (**Summary Form**) (*Pg. G-14*)
 - **Entry-point** Monitoring Water Quality Parameter (WQP) Range **Worksheet** (*Pg. G-15*)
 - **Distribution** Monitoring Water Quality Parameter (WQP) Range **Worksheet** (*Pg. G-17*)

Water Quality Parameter Ranges Overview

After a supply completes installation of OCCT, they must conduct follow-up monitoring to determine the effectiveness of the corrosion control treatment. Follow-up monitoring verifies the relationship between water quality parameters and levels of lead and copper in drinking water. During follow-up monitoring, the supply monitors for lead and copper, and begins to collect bi-weekly water quality samples (WQSs). This also applies to satellite systems that purchase all water and have corrosion control treatment added by the source water supply. After follow-up monitoring is completed, the Illinois EPA uses the lead and copper tap and WQS data collected before and after the installation of corrosion control treatment to set WQP ranges or minimums (called optimal water quality parameters or OWQPs) that indicate that a system is operating corrosion control treatment at a level that most effectively minimizes the lead and copper concentrations at users' taps. Once the Illinois EPA sets the WQP ranges, the supply is notified by Special Exception Permit (SEP). The SEP specifies the parameters, ranges, and the date when monitoring begins.

If your water system serves more than 50,000 people and does not qualify as a (b)(3) system, you must collect WQP samples and operate in compliance with the OWQPs designated for your system.

If your water system serves 50,000 or fewer people, you are only required to collect WQP samples during those monitoring periods in which an action level exceedance occurs.

The Illinois EPA sets ranges or minimums for the following OWQPs at entry points and within the distribution system (i.e., tap samples) after the installation of OCCT:

- *pH;*
- *Alkalinity (when alkalinity is adjusted);*
- *Orthophosphate (when a phosphate inhibitor is used);*
- *Silica (when a silicate inhibitor is used); and*
- *Calcium (when calcium carbonate stabilization is used as part of corrosion control).*

For example, the Illinois EPA might require you to maintain pH between 7.8 and 8.2 at each entry point and a pH between 7.0 to 8.0 at all sampling sites in the distribution system. Similarly, the Illinois EPA might require you to inject sodium bicarbonate at a dosage rate of 10 mg/L (measured at each entry point) to maintain alkalinity above 20 (measured at all distribution system sites). The Illinois EPA can also designate values for additional water quality control parameters.

The concentration of each applicable WQP is measured at entry points and at a specified number of sites within the distribution system. Measurements at the entry points also include a reading of the dosage rate of the chemical used to adjust the alkalinity (if applicable) and a reading of the dosage rate of the inhibitor used (if applicable).

Determining Compliance

The Lead and Copper Rule Minor Revisions (LCRMR) have significantly changed the method of compliance determination for the water quality parameter ranges. **As previously indicated, if your water system serves 50,000 or fewer people, you are only required to collect WQP samples during those monitoring periods in which an action level exceedance occurs.** While reading this information, think about the importance of having the equipment to perform WQP monitoring at the water plant. Under the revisions, if WQP ranges are exceeded, a supply will need to know results immediately in order to take the necessary follow-up actions within the time constraints. Sending WQP samples to a laboratory (Illinois EPA or certified) will not allow the supply enough time to collect follow-up samples due to the laboratory turn-around-time. **Since WQP monitoring is an ongoing process, the Illinois EPA feels that the up-front monetary cost to purchase equipment will actually save money in the long run. Additional information concerning on-site monitoring equipment is listed on the last page of the Appendix.**

As with most rules, the supply always has the option to increase the frequency and number of samples collected. As you will realize by reading the examples, collecting more WQP samples than the required minimum amount has advantages.

Two terms that the water system operator must be familiar with is the term “**daily value**” and “**excursion**”. The following pages explain these two terms.

Daily Value

CWS that directly add a chemical (or have made adjustments to water treatment) for corrosion control will be required to record a daily value most days of the month. “Daily” in this case refers to a minimum of **20** samples per month.

CWS that only purchase water and does not directly add a chemical (or have made adjustments to water treatment) added for corrosion control will normally be required to sample bi-weekly. “Daily” in this case refers to a minimum of **2** samples per month per sample location.

A sampling location can be either an entry point or a point in the distribution system. Daily values are calculated for each WQP at each sampling location. The procedure for determining the daily value is based on the sampling frequency for that WQP and sampling point. Although the term “daily values” contains the word “daily”, in many instances, the daily value represents a measurement that was collected more or less frequently than once per day. Daily values will be calculated for each WQP sampling location.

On days when more than one measurement for the WQP is collected, the daily value shall be the average of all results collected during the day, regardless if they are collected by continuous monitoring, grab sampling, or a combination of both.

Below are some examples of determining **daily values for entry point monitoring**:

Example 1: A water system has a pH WQP range of 7.0 or above, has one entry point, and must collect one sample (or measurement) every two weeks (bi-weekly).

Date	pH level	Daily Value
7/1/2001	7.2	7.2
7/2/2001*	No sample collected (NS)	7.2
7/3/2001*	No sample collected (NS)	7.2

7/4/2001 – 7/13/2001*	No samples collected (NS)	7.2
7/14/2001	7.6	7.6
7/15/2001*	No sample collected (NS)	7.6

* Even though no samples for pH were collected on these days, a daily value is calculated using the most recent sample.

In this example, 13 days had a daily value of 7.2 and two days had a daily value 7.6.

Example 2: A water system has a pH WQP range of 7.0 or above, has one entry point, and must collect one sample (or measurement) every day.

Date	pH level	Daily Value
7/1/2001	7.2	7.2
7/2/2001	7.5	7.5
7/3/2001*	No sample collected-Saturday (NS)	7.5
7/4/2001*	No samples collected-Sunday (NS)	7.5
7/5/2001	7.6	7.6
7/6/2001	7.4	7.4

* Even though no samples for pH were collected on these days, a daily value is calculated using the most recent sample.

In this example, one day had a daily value of 7.2, three days had a daily value of 7.5, one day had a 7.6 daily value, and one day had a daily value of 7.4.

Example 3: A water system has a orthophosphate WQP range of 1.0 or above, has one entry point, and collects three samples (or measurements) a day.

Date	Orthophosphate level	Daily Value
7/1/2001 (7 a.m.)	1.2	
7/1/2001 (1 p.m.)	1.5	
7/1/2001 (2 p.m.)	0.9	
Calculation (average)	$(1.2+1.5+0.9) / 3 = 1.2$	1.2
7/2/2001 (7 a.m.)	1.3	
7/2/2001 (1 p.m.)	1.0	
7/2/2001 (2 p.m.)	1.1	
Calculation (average)	$(1.3+1.0+1.1) / 3 = 1.13$	1.1

In this example, one day had a daily value of 1.2 and the other day had a daily value of 1.1. Averaging was used.

Excursion

An **excursion** is any “daily value” for a WQP that is outside the established WQP range. The duration of an excursion is the number of days that elapse between the day the excursion first occurs, and the day that the daily value is back within the WQP range. These figures are based on when the sample was collected, not the date the system received the sample results.

You cannot be outside the OWQP ranges or below the OWQP minimum (also known as an excursion) for more than a total of **nine** days at a specific sampling point or combination of sampling points, or for a specific WQP or combination of WQPs during a six-month period. The nine days can occur anytime during the six-month period and do not have to be consecutive days. The nine days allow you to make necessary repairs that may be causing your system to not meet its OWQP specifications.

To determine the duration of excursion, count the first day the sample is outside the WQP range and stop counting days when the parameter meets the range. Do not count the day that the sample falls within the WQP range. This procedure is repeated any time a daily value exceeds the WQP range.

Determining “daily values” and “excursions” with Entry Point monitoring

Example A1: A water system has a pH WQP range of 7.0 or above, has one entry point, and must collect one sample (or measurement) every two weeks (bi-weekly).

Date	pH level	Daily Value
7/1/2001	6.9	6.9
7/2/2001*	No sample collected (NS)	6.9
7/3/2001*	No sample collected (NS)	6.9
7/4/2001 – 7/13/2001*	No samples collected (NS)	6.9
7/14/2001	7.2	7.2
7/15/2001*	No sample collected (NS)	7.2

** Even though no samples for pH were collected for these days, a daily value is calculated using the most recent sample.*

In this example, 13 days had a daily value of 6.9 and two days had a daily value 7.2. Since the supply was required to maintain a pH of 7.0 or better, the supply had an **excursion for 13 days** (July 1st through July 13th).

Example A2: A water system has a pH WQP range of 7.0 or above, has one entry point, and must collect one sample (or measurement) every two weeks (bi-weekly).

In this example, the pH was measured in the field and the sample collector reacted and collected another measurement the next day.

Date	pH level	Daily Value
7/1/2001	6.9	6.9
7/2/2001	7.1	7.1
7/3/2001*	No sample collected (NS)	7.1
7/4/2001 – 7/13/2001*	No samples collected (NS)	7.1
7/14/2001	7.2	7.2
7/15/2001*	No sample collected (NS)	7.2

** Even though no samples for pH were collected for these days, a daily value is calculated using the most recent sample.*

In this example, the **excursion was for only one day**, rather than 13 as in Example A1. **This is why purchasing on-site testing equipment is so important.**

Example A3: A water system has a pH WQP range of 7.0 or above, has one entry point, and must collect one sample (or measurement) every day.

Date	pH level	Daily Value
7/1/2001	7.2	7.2
7/2/2001	6.8	6.8
7/3/2001*	No sample collected-Saturday (NS)	6.8
7/4/2001*	No samples collected-Sunday (NS)	6.8
7/5/2001	7.6	7.6
7/6/2001	7.4	7.4

* Even though no samples for pH were collected on these days, a daily value is calculated using the most recent sample.

In this example, 3 days had a daily value of 6.8. Since the supply was required to maintain a pH of 7.0 or better, the supply had an **excursion for 3 days** (July 2nd through July 4th).

Example A4: In this example, the pH was measured in the field and the sample collector reacted and collected another reading on Saturday.

Date	pH level	Daily Value
7/1/2001	7.2	7.2
7/2/2001	6.8	6.8
7/3/2001	7.0 – Saturday	7.0
7/4/2001*	No samples collected-Sunday (NS)	7.0
7/5/2001	7.6	7.6
7/6/2001	7.4	7.4

* Even though no samples for pH were collected on these days, a daily value is calculated using the most recent sample.

In this example, **only one daily value had an excursion**, rather than three as in Example A3.

Example A5: A water system has a pH WQP range of 7.0 or above, has one entry point, and collects more than one reading (or sample) a day.

Date	pH level	Daily Value
7/1/2001 (7 a.m.)	7.0	
7/1/2001 (1 p.m.)	6.9	
7/1/2001 (2 p.m.)	6.8	
Calculation	$(7.0+6.9+6.8) / 3 = 6.9$	6.9
7/2/2001 (7 a.m.)	7.1	
7/2/2001 (1 p.m.)	7.2	
7/2/2001 (2 p.m.)	7.1	
Calculation	$(7.1+7.2+7.1) / 3 = 7.13$	7.1

On days when more than one measurement for a WQP is collected, the daily value shall be the average of all results collected during the day, regardless if they are collected by continuous monitoring, grab sampling, or a combination of both.

In this example, only **one** daily value had an excursion.

Most supplies will have multiple parameter ranges that must be maintained. It is important to remember, that excursions for multiple parameters that occur on the same day are only counted once.

To assist water supplies in calculating daily values and excursions, The Illinois EPA has created customized WQP range report worksheets. Below is an example of a completed entry point WQP range report worksheet for July 2001. **These worksheets should be completed daily and kept on file by the water supply. These worksheets are not required to be submitted; however, you are required to maintain accurate data.** The Illinois EPA reserves the right to request this information at any given time and/or may be reviewed during your sanitary survey.

*****EXAMPLE*****

In this example, the supply has one entry point, a pH WQP range of 7.0 or above, and an orthophosphate WQP range of 0.25 mg/l or above. The supply measures pH twice a day and orthophosphate once a day. The two pH measurements are averaged together to obtain one daily value. On July 9th, both the pH and orthophosphate ranges were not met; however, it only counted as one excursion. For the month, the supply had four excursions.

Water Quality Parameter (WQP) Range Worksheet for the month of July 2001 (month/year).

Entry Point Test Results

Facility: 02345678, Watertown					
TAP NO.		01 (Water Treatment Plant)			
Frequency:		Once per day*			
		<i>*This is the minimum number of measurements per month. It is your option to monitor more frequently.</i>			
Corrosion Control Treatment		Blended Phosphate			
Water Quality Parameters and Ranges					
PH		7.0 or greater			
Orthophosphate		0.25 mg/l or greater			
Date	PH Range 7.0 or greater		Orthophosphate (mg/l) as PO4 Range 0.25 mg/l or greater		Check if excursion of either Daily Value
	No. of samples	Daily Value	No. of samples	Daily Value	
1	2	7.0	1	0.26	
2	2	7.1	1	0.25	
3	2	7.0	1	0.27	
4	2	7.2	1	0.26	
5	2	7.6	1	0.23	+
6	2**	7.6	1**	0.26	
7	NS*	7.6	NS*	0.26	
8	2	7.2	1	0.26	
9	2	6.9	1	0.21	+
10	2	7.0	1	0.27	
11	2	7.0	1	0.28	
12	2	7.1	1	0.27	
13	NS*	7.1	NS*	0.27	
14	NS*	7.1	NS*	0.27	
15	2	7.2	1	0.26	
16	2	7.3	1	0.23	+
17	2	7.3	1	0.26	
18	2	7.3	1	0.24	
19	2	7.0	1	0.26	
20	NS*	7.0	NS*	0.26	
21	NS*	7.0	NS*	0.26	
22	2	7.1	1	0.26	
23	2	7.1	1	0.25	
24	2	7.2	1	0.25	
25	2	7.1	1	0.25	
26	2	7.3	1	0.27	
27	NS*	7.3	NS*	0.27	
28	NS*	7.3	NS*	0.27	
29	2	7.2	1	0.26	
30	2	7.0	1	0.20	+
31	2	7.2	1	0.25	
Total Excursions for Month (total all checks)					4

NS - No actual sample measurement taken that day

* No sample collected - Saturday and Sunday. Daily Value for the day is the last recorded measurement.

** Supply collected a sample on Saturday due to an excursion on Friday.

Determining “daily values” and “excursions” with Distribution monitoring

Each monitoring period is six-months in duration; however, supplies are required to measure distribution WQP every three months (quarterly). The number of samples or measurements required every three months depends on the population served.

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

All water supplies have only one distribution WQP range which is the same for all facilities: a pH range of 7.0 or greater. This range must be maintained at all distribution sampling points.

The steps identified below will guide you through the distribution WQP monitoring requirements. An example (A7) follows the steps outlined below.

Step 1: Determine the number of sampling points required every three months. The number of sample points required is identified above. For our example on the next page, **two samples** (or measurements) are required every three months.

Step 2: Make one copy of the WQP distribution worksheet for **EACH SAMPLING POINT**. For this example, two copies of the form are required.

Step 3. Select distribution sample locations. Record each location on the space provided on the worksheet. For our example, we selected 2 locations.

Step 4: Measure the pH at each location and record it on the worksheet. If the pH is 7.0 or greater, record at the **bottom** that the **Total Excursions** for the period is **0**. In this case, you are done for three months.

If the pH is less than 7.0, check the “**Excursion**” **column** on the worksheet. The next day, you must return to the same location and repeat the pH measurement. This process must continue until the pH is 7.0 or greater. When a 7.0 pH measurement is achieved, total all checks in the **Excursion column** and record that number in the **Total Excursions** box.

Step 5: Repeat steps 1 through 4 during the next three-month period.

Like entry point data, these worksheets should be kept on file by the water supply. The information is not required to be submitted; however, you are required to maintain accurate data. The Illinois EPA reserves the right to request this information at any given time.

Example A7: – Distribution WQP Range Worksheet for two sample locations during the first three months.

----- Distribution Location 1 -----

Water Quality Parameter (WQP) Range Worksheet July 2001 through September 2001 (enter three month period)

Distribution Test Results

Facility: 02345678, Watertown	
Number of distribution points that must be monitored every three months	2
	<i>*This is the minimum number of measurements per quarter. It is your option to monitor more frequently.</i>
Water Quality Parameters and Ranges	
PH	7.0 or greater

Distribution Site Location: **808 Fifth Street**

Date	PH		Check if excursion of Daily Value
	Range 7.0 or greater		
	No. of samples	Daily Value	
1	1	6.8	+
2	1	6.9	+
3	1	7.2	
4			
5			
6			
7-31			
Total Excursions for Month (total all checks)			2

----- Distribution Location 2 -----

Water Quality Parameter (WQP) Range Report July 2001 through September 2001 (enter three month period)

Distribution Test Results

Facility: 02345678, Watertown	
Number of distribution points that must be monitored every three months	2
	<i>*This is the minimum number of measurements per quarter. It is your option to monitor more frequently.</i>
Water Quality Parameters and Ranges	
PH	7.0 or greater

Distribution Site Location: **1721 College Street**

Date	PH		Check if excursion of Daily Value
	Range 7.0 or greater		
	No. of samples	Daily Value	
1	1	7.1	
2			
3			
4			
5			
6			
7-31			
Total Excursions for Month (total all checks)			0

Please notice on Distribution Location 1 that a second sample was collected on 7/2 and that no sample was collected on 7/2 for Distribution Location 2. In addition, a third sample was even collected on 7/3 at Distribution Location 1. Sampling should continue at least daily when an excursion occurs until the level falls within acceptable limits.

Compliance is determined for both the entry point and distribution point(s) at the end of each six-month period. At the end of the six-month period, total the number of daily value excursions that occurred at all sampling locations (both entry point and distribution). This **MUST** be reported at the end of each six-month compliance period using the “**Illinois EPA Compliance with the Water Quality Parameter (WQP) Ranges Certification of Results**” form (enclosed in this Appendix).

The total number of excursions for the six-month period **cannot exceed nine**. If there are more than nine excursions throughout the entire system during the six-month period, the system has incurred a treatment technique violation for the period. **If a treatment technique violation occurs, the supply must issue public notification, and if the system was on a reduced lead/copper monitoring schedule, return to routine lead and copper monitoring for a minimum of two-consecutive six-month monitoring periods.**

It is strongly recommended that a representative from your water supply contact the Illinois EPA Compliance Assurance Section at 217-785-0561 for additional consultation and guidance at any time during the six-month period when excursions occur.

Key Points to Remember About Water Quality Monitoring

- ★ If you serve more than 50,000 people, you must conduct some WQP monitoring.
- ★ If you serve 50,000 or fewer people, you do not have to collect WQP samples unless you exceed an action level. However, you must collect WQP samples during any monitoring period in which you exceed the lead or copper action level.
- ★ Samples must be collected from entry points to the distribution system and from a set of representative sites located throughout the distribution system (coliform sites may be used).
- ★ Unlike lead and copper tap samples, WQP samples should be fully flushed. Samples collected at entry points to the distribution system must be collected at locations representative of each source of water after treatment.
- ★ Before collecting a sample for pH and temperature (or dissolved oxygen, if needed) remove the faucet aerator and run the water gently to flush the line.
- ★ After you install corrosion control treatment, entry point monitoring changes from two sets of samples per site every six months to one sample per site every two weeks.
- ★ You are in compliance with your OWQP requirements if you have excursions for no more than a total of nine days at a specific sampling point or combination of sampling points, or for a specific WQP or combination of WQPs during a six-month period.
- ★ WQP six-month monitoring periods are July 1 - December 31 and January 1 - June 30 for all systems except medium and small that had an exceedance during a reduced lead and copper tap monitoring period. For these systems, the six-month WQP periods are June 1 - November 30 and December 1 - May 31.
- ★ Sending WQP samples to a laboratory (Illinois EPA or certified) will not allow the supply enough time to collect additional samples due to the laboratory turn-around-time. Since WQP monitoring is an ongoing process, the Illinois EPA feels that the up-front monetary cost to purchase field equipment will actually save money in the long run (see next page).

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

Water Quality Parameters – Analytical Equipment

The Illinois EPA strongly encourages all water supplies that are required to measure water quality parameters (WQPs) to purchase analytical equipment that allows the water operator to measure the WQPs on-site. **Since WQP monitoring is an ongoing process, the Illinois EPA feels that the up-front monetary cost to purchase equipment will actually save money in the long run.**

Water supplies will be asked to begin measuring all WQPs on-site. Therefore, you will need to purchase the necessary analytical equipment. Below is a list of some reputable distributors from whom equipment may be purchased:

HACH COMPANY
1-800-227-4224

COLE PALMER
1-800-323-4340

THOMAS SCIENTIFIC
1-800-345-2100

FISHER SCIENTIFIC
1-800-766-7000

BLUE BOOK
1-800-548-1234

You are **not** limited to these distributors. Since these results will be used for determining compliance, it is essential that quality equipment be purchased. It is also important that you follow the equipment maintenance schedule provided by the distributor.

The ability to measure WQPs on-site has many advantages as described below:

- If WQP ranges are exceeded, a supply will be able to quickly respond with follow-up actions within the very restricted time constraints. Sending WQP samples to a laboratory, Illinois EPA or certified, will not allow the supply enough time to collect follow-up samples due to the laboratory turn-around-time.
- Save on costly public notification for a one-time WQP excursion.
- Save on mailing cost of sample bottles to laboratory.
- You will know immediately if adjustments are needed to the corrosion control treatment.

The cost of purchasing the analytical equipment will vary depending on the distributor and equipment model. A water supply required to measure pH and orthophosphate can expect to pay between \$100 and \$500 for the orthophosphate test kit, and between \$100 to \$300 for a pH meter. After the initial equipment investment, the supply could expect to spend annually between \$50 and \$150 for orthophosphate reagents. Again, the cost per year will depend upon the type of equipment purchased and the number of measurements collected.

If additional information is needed on types, models, and/or quality of equipment available, please contact the Illinois Rural Water Association at (217) 287-2115. For more information on your monitoring requirements, please contact the Illinois EPA Lead and Copper Coordinator at (217) 785-0561.

Recording Water Quality Parameter (WQP) Monitoring Results and Illinois EPA Reporting Requirements

Once WQP ranges are established, your supply is required to maintain water quality parameter values at or above minimum levels or within ranges approved by the Illinois EPA in each WQP sample collected as required in 35 Ill. Adm. Code Section 611.352(g)(1). The Illinois EPA does **not** require that you submit each WQP sample result. However, the Illinois EPA does require that the day to day (or bi-weekly if applicable) sampling is recorded and can be submitted or viewed upon request.

Depending on your required monitoring frequency, daily vs. bi-weekly, the Illinois EPA has developed worksheets to assist the water system in recording the individual test values and tracking excursions. These worksheets are strictly for the water systems use and do not have to be submitted to the Illinois EPA. However, these worksheets, or something comparable, should be available upon request.

While individual WQP range sample results are not required to be submitted, the Illinois EPA does require that a “summary” report of WQP excursions be submitted every six month (January 10th and July 10th).

The following pages include 3 forms:

1. **Illinois EPA Compliance with the Water Quality Parameter (WQP) Ranges Certification of Results Form**

This is the **summary reporting form** discussed above. This form is required to be submitted within 10 days following each six-month monitoring period. Submit to:

Lead/Copper Coordinator
Illinois EPA /BOW/CAS #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

2. **Entry Point Monitoring Water Quality Parameter (WQP) Range Worksheet**

This worksheet is intended to be used by systems that are required to sample daily or bi-weekly for WQP (or for those that are directly adding OCCT) at the entry point. It is not required to be submitted to the Illinois EPA. It is for CWS use only (as discussed above). You will need one worksheet per entry point.

3. **Distribution Monitoring Water Quality Parameter (WQP) Range Worksheet**

This worksheet is intended to be used by systems that are required to sample distribution WQP. It is not required to be submitted to the Illinois EPA. It is for CWS use only (as discussed above). You will need one worksheet per distribution sample location.

**Illinois Environmental Protection Agency
Compliance with the Water Quality Parameter (WQP) Ranges
Certification of Results**

By completing this form, you are verifying information about entry-point and distribution WQP measurements taken during a six-month period at this water supply. Fill-out all required information below including information specific to each month of the six-month period. This form must be submitted within 10 days following the end of each six-month monitoring period (either July 10th or January 10th). Submit completed forms to: Lead and Copper Coordinator, DWCU #19, 1021 North Grand Ave. East, P.O. Box 19276, Springfield, IL 62794-9276.

Facility Number _____ **Facility Name** _____

Report is for the **6-month period** beginning _____ and ending _____ **Year 20** _____
(January or July) (June or December)

Frequency of Entry Point Monitoring (circle one): *Daily* *Bi-weekly* *Other* _____

****Fill in the table for each month of the 6-month period****

Circle Month January July	Circle Month February August	Circle Month March September
Total Entry Point Excursions for the Month <input style="width: 50px; height: 20px;" type="text"/>	Total Entry Point Excursions for the Month <input style="width: 50px; height: 20px;" type="text"/>	Total Entry Point Excursions for the Month <input style="width: 50px; height: 20px;" type="text"/>
Total number of Distribution Samples collected for the 1st three-month period <input style="width: 50px; height: 20px;" type="text"/>	Total Distribution Point Excursions for the 1st three-month period <input style="width: 50px; height: 20px;" type="text"/>	

Circle Month April October	Circle Month May November	Circle Month June December
Total Entry Point Excursions for the Month <input style="width: 50px; height: 20px;" type="text"/>	Total Entry Point Excursions for the Month <input style="width: 50px; height: 20px;" type="text"/>	Total Entry Point Excursions for the Month <input style="width: 50px; height: 20px;" type="text"/>
Total number of Distribution Samples collected for the 2nd three-month period <input style="width: 50px; height: 20px;" type="text"/>	Total Distribution Point Excursions for the 2nd three-month period <input style="width: 50px; height: 20px;" type="text"/>	

Signature of Owner or Official Custodian

I hereby certify that the above information is accurate. I also certify the above information was calculated using the methodology described in Section 2 of the "Determining Compliance with the Water Quality Parameter Ranges Guidance Manual" and is documented at the water supply using the Water Quality Parameter (WQP) Range Reports kept on file at the water supply. I also certify that all water quality parameters were measured accurately and reliably.

(Signature)

(Date)

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues. a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

Entry Point Water Quality Parameter (WQP) Range Worksheet for the Month of
 _____ **(month/year)**

Facility : IL	Name:
ENTRY POINT(s)	
Frequency:	Daily or Bi-weekly <i>(circle applicable frequency)</i>
Corrosion Control Treatment	
Water Quality Parameters and Ranges	
pH range	
Inhibitor range	_____ to _____

Directions for completing form is below

Date	pH		_____ (mg/l) <i>(list inhibitor e.g. orthophosphate as PO4)</i>		Check if excursion of either Daily Value
	No. of samples	Daily Value	No. of samples	Daily Value	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Total Excursions for Month (total all checks)					

Directions for completing entry point WQP form

1. **Your are required to sample for each WQP at least once each day with the exception of Holidays, Saturdays, and Sundays.**
2. **Insert the month and year** in the space provided at the top of the form.
3. **Date:** There is nothing to complete in this field. The number represents the date.

pH column and inhibitor (e.g. orthophosphate) column

4. **No. of samples:** The supply has the option to collect more than one sample per day. In this column, record the number of samples (or measurements) collected for that day. For compliance purposes, the number of samples collected from day to day must be constant. If you did not collect a sample for a day, enter “NS” (no sample).

For example: If you are only taking one measurement for the day, then enter 1. If you take four measurements throughout the day for that WQP, enter 4.

5. **Daily Value:** If only one sample was collected during the day: enter concentration. If more than one sample is collected for the day, calculate an average using all results. Enter the average concentration.

Every day MUST have a Daily Value recorded even if no measurements were collected for that day. If no measurement were collected for a day, the Daily Value would be the last Daily Value in which a measurement was recorded.

6. **Check if excursion of either Daily Value occurred.** If the Daily Value exceeds the WQP ranges for either or both parameters, put a checkmark in this column.
7. **Total Excursions for Month:** Total all checkmarks for the month. If you have nine or more checkmarks, your supply has incurred a treatment technique violation.

Example of completed form

Date	pH Range 7.0 or greater		Orthophosphate (mg/l) as PO4 Range 0.25 mg/l or greater		Check if excursion of either Daily Value
	No. of samples	Daily Value	No. of samples	Daily Value	
1	2	7.0	1	0.26	
2	2	7.1	1	0.25	
3	2	7.0	1	0.27	
4	2	7.2	1	0.26	
5	2	7.6	1	0.23	+
6	NS	7.6*	1**	0.26**	
7	NS	7.6*	NS	0.25*	
8	2	7.2	1	0.26	
9	2	6.9	1	0.26	+
10	2	7.0	1	0.27	
11	2	7.0	1	0.28	
12	2	7.1	1	0.27	
13	NS	7.1*	NS	0.27*	
14	NS	7.1*	NS	0.27*	
15	2	7.2	1	0.26	
16	2	7.3	1	0.23	+
17	2	7.3	1	0.26	
18	2	7.3	1	0.24	
19	2	7.0	1	0.26	
20	NS	7.0*	NS	0.26*	
21	NS	7.0*	NS	0.26*	
22	2	7.1	1	0.26	
23	2	7.1	1	0.25	
24	2	7.2	1	0.25	
25	2	7.1	1	0.25	
26	2	7.3	1	0.27	
27	NS	7.3*	NS	0.27*	
28	NS	7.3*	NS	0.27*	
29	2	7.2	1	0.26	
30	2	7.0	1	0.20	+
31	2	7.2	1	0.25	
Total Excursions for Month (total all checks)					4

* No sample collected - Saturday and Sunday. Daily Value for the day is the last recorded measurement.

** Supply collected a sample on Saturday due to an excursion on Friday.

Distribution Water Quality Parameter (WQP) Range Worksheet for the Month of
 _____ **(month/year)**

Facility: IL _____ Name _____	
Number of distribution points that must be monitored every three months	_____
<i>*This is the minimum number of measurements per quarter. It is your option to monitor more frequently.</i>	
pH	7.0 or greater

Distribution Site Location: _____

Directions for completing this form is below

Date	pH		Check if excursion of Daily Value
	Range 7.0 or greater		
	No. of samples	Daily Value	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
Total Excursions (total all checks)			

Directions for completing Distribution WQP form

8. **Your are required to sample for distribution WQPs every three months. One copy of this reporting form is needed per sampling location every three months.**
9. **Insert the first month/year and last month/year** of the three-month period in the space provided at the top of the form (i.e., July 2001 through October 2001).
10. Record the distribution sample location on the space provided in the space provided.
11. **No. of samples:** The supply has the option to collect more than one sample per day. In this column, record the number of samples (or measurements) collected for that day. For compliance purposes, the number of samples collected from day to day must be constant. For example: If you are only taking one measurement for the day, then enter 1. If you take four measurements throughout the day for that WQP, enter 4.
12. **Record the pH daily value.** If more than one sample is collected for the day, calculate an average using all results. Enter the average concentration.
13. If the pH is 7.0 or greater, record at the **bottom** that the **Total Excursions** for the period is **0**. In this case, you are done for three months at this location.
14. If the pH is less than 7.0, check the **Excursion column** on the reporting form. The next day, you must return to the same location again and measure the pH. This process must continue until the pH is 7.0 or greater. Once this process is completed, total all checks in the **Excursion column** and record at the **bottom** that next to the **Total Excursions** box.
15. Repeat steps 1 through 7 during the next three-month cycle.

Example of completed form

Date	PH		Check if excursion of Daily Value
	Range 7.0 or greater		
	No. of samples	Daily Value	
1	1	6.8	+
2	1	6.9	+
3	1	7.2	
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
Total Excursions for Month (total all checks)			2

Appendix H

Chapter 4 Lead/Copper Rule Lead Public Education (PE) Program

- Illinois PE Self-Assessment Form (Pre-distribution of PE materials) *Pg. H-2*
- Illinois PE Summary Reporting Form (Post-distribution of PE materials) *Pg. H-5*
- Comprehensive PE Program Instructions and Templates *Pg. H-8*



Public Education (PE) Self-Assessment

Below is a self-assessment of your PE program. This form must be submitted along with a copy of your PE material **before it is distributed to the public**. Please submit to: Lead/Copper Coordinator, Illinois EPA /BOW/CAS #19, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276. If you have questions when assembling/delivering your PE program, please call the Lead/Copper Coordinator at 217-785-0561.

PWS Name: _____ PWS No. _____
 Contact Person: _____ Phone : (____) _____
 Today's Date: _____
 Estimated delivery date of our PE program is: _____ (MM/DD/YY)

Listed below are the mandatory PE elements. Please verify that your PE materials meet each requirement by initialing on the space provided

Our PE Begins with the Following Statement <i>Important Information about Lead in Your Drinking Water</i> <i>[Insert name of water system] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.</i>	Initial _____
Our PE will Contain the Mandatory Health Effects Language <i>Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.</i>	Initial _____

SOURCES OF LEAD	
<i>Initial Box</i>	
	Our PE materials described what lead is and described sources of lead other than drinking water (e.g., paint)
	Our PE materials identified the sources of lead in drinking water. Information was included on home and building plumbing materials and service lines that may contain lead
STEPS YOU CAN TAKE TO REDUCE YOUR EXPOSURE TO LEAD IN YOUR WATER	
	Our PE materials included recommendation of flushing the water pipes
	Our PE materials explained the concerns with using hot water (especially for baby formula) and that boiling water does not reduce lead levels
	Our PE materials discussed options other than flushing to reduce lead exposure such as alternative sources or treatment of water
	Our PE materials suggested that parents have their child's blood tested for lead and informed customers how to get their water tested
	Our PE materials discussed lead in plumbing components and the difference between low lead and lead free
WHAT HAPPENED? WHAT IS BEING DONE? / MORE INFORMATION STATEMENT	
	Our PE materials explained why there are high lead levels in the drinking water
	Our PE materials explained what the water system is doing to reduce the lead levels
	Our PE materials included information about lead service lines and how the consumer can find out if their home has one. If so, the PE materials listed any on-going programs to replace them or special incentives
	Our PE materials included the following statement <i>Call us at [Insert Number] or (if applicable) visit our web site [Insert Web Site Here]. For more information on reducing lead exposure around your home /building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or contact your health care provider.</i>

Delivery Requirements of Your PE Program

Unless otherwise noted, the timing for all requirements is within 60 days after the end on the monitoring period in which the exceedance occurred and repeating once every 12 months. The Illinois EPA can allow activities to extend beyond the 60-day requirement if needed for implementation purposes; however, this extension must be approved in writing in advance of the 60-day deadline.

Complete only the Section below **applicable to YOUR water system size**

Complete this Section if your water system <u>serves equal to or less than 3,300 customers</u>	
<i>Below are the required Method of Delivery requirements. Please initial each box verifying that you understand the requirement and plan to complete.</i>	
	Printed PE materials (pamphlets, brochures, posters) will be delivered to all bill paying customers
	PE materials will be delivered to all the following organizations which are most likely to be visited by pregnant women and children; local public health agencies, public and private schools or school boards, Women Infants and Children (WIC) and Head Start programs, public and private hospitals and medical clinics, pediatricians, family planning clinics, and local welfare agencies <i>(Systems are required to contact their local Public Health Agency directly either in person or by phone)</i>
	A good faith effort will be made to locate the following organizations within the service area and deliver the PE materials (along with an informational notice encouraging distribution to all potentially affected customers); licensed childcare centers, public and private preschools, and Obstetricians-Gynecologists, and Midwives
	The PWS commits to providing information on or in each water bill no less than quarterly as long as the system exceeds the lead action level SUBMIT A COPY of BILL QUARTERLY <i>(A separate mailing may be allowed if the water system cannot place the information on the water bill)</i>
	PE Press Release will be submitted to newspaper, television, and radio stations <i>(The Illinois EPA may waive this requirement as long as the system distributes notices to every household served by the system. Please initial here _____ if you plan to distribute to each household)</i>
In addition to the above, you must conduct at least ONE (1) additional activity from the list below. Please initial only the activities you plan to do.	
Public Service Announcements	Display Information in Public Areas
Radio	Community and Health Centers
Television	Local Sporting Events
Paid Advertisements	Grocery Stores
Newspaper	Laundromat bulletin boards
Transit	Libraries
Movie Theater	Faith-based Organizations
Via Email	Community Listservs
Email to Customers	Utility Web Site
Individual Contact with Customers	Post on Local Government Web Site
Phone Trees	Public Meeting
Calls to Individual Consumers	Town Hall
Target Mailings to at-risk Populations	PTA Meetings
Delivery to Every Household	Other Methods Pre-approved by the Illinois EPA (list)
Doorknob Hangers	
Direct Mailing	
Provide Materials Directly to Multi-family Housing	
Posters	
Flyers	

Complete this Section if your water system serves > 3,300 customers	
<i>Below are the required Method of Delivery requirements. Please initial each box verifying that you understand the requirement and plan to complete.</i>	
	Printed PE materials (pamphlets, brochures, posters) will be delivered to all bill paying customers
	PE materials, along with a cover letter encouraging distribution to all potentially affected customers, will be delivered to the following organizations located within your service area; local public health agencies, public and private schools or school boards, Women Infants and Children (WIC) and Head Start programs, public and private hospitals and medical clinics, pediatricians, family planning clinics, and local welfare agencies <i>(Systems are required to contact their local Public Health Agency directly either in person or by phone)</i>
	A good faith effort will be made to locate the following organizations within the service area and deliver the PE materials (along with an informational notice encouraging distribution to all potentially affected customers); licensed childcare centers, public and private preschools, and Obstetricians-Gynecologists, and Midwives
	The PWS commits to providing information on or in each water bill no less than quarterly as long as the system exceeds the lead action level SUBMIT COPY OF BILL QUARTERLY <i>(A separate mailing may be allowed if the water system cannot place the information on the water bill)</i>
	PE Press Release was submitted to newspaper, television, and radio stations
	If applicable, systems serving > 100,000 customers must also post PE materials on the system's web site at:
In addition to the above, you must conduct at least THREE (3) additional activities from the list below. Please initial only the activities you plan to do.	
Public Service Announcements	Display Information in Public Areas
Radio	Community and Health Centers
Television	Local Sporting Events
Paid Advertisements	Grocery Stores
Newspaper	Laundromat bulletin boards
Transit	Libraries
Movie Theater	Faith-based Organizations
Via Email	Community Listservs
Email to Customers	Utility Web Site
Individual Contact with Customers	Post on Local Government Web Site
Phone Trees	Public Meeting
Calls to Individual Consumers	Town Hall
Target Mailings to at-risk Populations	PTA Meetings
Delivery to Every Household	Other Methods Pre-approved by the Illinois EPA (list)
Doorknob Hangers	
Direct Mailing	
Provide Materials Directly to Multi-family Housing	
Posters	
Flyers	

Signature of Owner, Administrative Contact, or Official Custodian

I, _____, have certified that our public education (PE) materials meets all the mandatory information as specified on page 1 of this form. In addition, distribution requirements that are specified on pages 2 and/or 3 will be followed.

Signature _____ Date _____

Title _____

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center
IL 532-2195 PWS 236



Public Education (PE) Summary Reporting Form

After your PE is distributed to the public, please complete all the information below and return to: Lead/Copper Coordinator, Illinois EPA /BOW/CAS #19, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276. Be sure to include a copy of you PE materials along with this form. If you have questions when assembling/delivering your PE program, please call the Lead/Copper Coordinator at 217-785-0561.

PWS Name: _____ PWS No. _____
 Contact Person: _____ Phone : (____) _____
 Today's Date: _____

Distribution of our PE program was completed on : _____ (MM/DD/YY)

Please **initial** on the space provided verifying that each mandatory requirement was completed by the date listed above

Our PE Began with the Following Statement <i>Important Information about Lead in Your Drinking Water</i> <i>[Insert name of water system] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.</i>	Initial _____
Our PE Contained the Mandatory Health Effects Language <i>Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.</i>	Initial _____

SOURCES OF LEAD	
<i>Initial Box</i>	
	Our PE materials described what lead is and described sources of lead other than drinking water (e.g., paint)
	Our PE materials identified the sources of lead in drinking water. Information was included on home and building plumbing materials and service lines that may contain lead
STEPS YOU CAN TAKE TO REDUCE YOUR EXPOSURE TO LEAD IN YOUR WATER	
	Our PE materials included recommendation of running water to flush
	Our PE materials explained the concerns with using hot water (especially for baby formula) and that boiling water does not reduce lead levels
	Our PE materials discussed other options to flushing to reduce lead exposure such as alternative sources or treatment of water
	Our PE materials suggested that parents have their child's blood tested for lead and informed customers how to get their water tested
	Our PE materials discussed lead in plumbing components and the difference between low lead and lead free
WHAT HAPPENED? WHAT IS BEING DONE? / MORE INFORMATION STATEMENT	
	Our PE materials explained why there is high levels in the drinking water
	Our PE materials explained what the water system is doing to reduce the lead levels
	Our PE materials included information about lead service lines and how the consumer can find out if their home has one. If so, the PE materials listed any on-going programs to replace them or special incentives
	Our PE materials included the following statement <i>Call us at [Insert Number] or (if applicable) visit our web site [Insert Web Site Here]. For more information on reducing lead exposure around your home /building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or contact your health care provider.</i>

Verification of Delivery Requirements of Your PE Program

Unless otherwise noted, the timing for all requirements is within 60 days after the end on the monitoring period in which the exceedance occurred and repeating once every 12 months. The Illinois EPA can allow activities to extend beyond the 60-day requirement if needed for implementation purposes; however, this extension must be approved in writing in advance of the 60-day deadline.

Complete only the Section below **applicable to YOUR water system size**

<p>Complete this Section if your water system serves equal to or less than 3,300 customers Please initial each box verifying that each mandatory requirement was completed</p>	
	Printed PE materials (pamphlets, brochures, posters) were delivered to all bill paying customers
	PE materials were delivered to the following organizations which most likely to be visited by pregnant women and children; local public health agencies, public and private schools or school boards, Women Infants and Children (WIC) and Head Start programs, public and private hospitals and medical clinics, pediatricians, family planning clinics, and local welfare agencies <i>(Systems are required to contact their local Public Health Agency directly either in person or by phone)</i>
	A good faith effort was made to locate the following organizations within the service area and deliver the PE materials (along with an informational notice encouraging distribution to all potentially affected customers); licensed childcare centers, public and private preschools, and Obstetricians-Gynecologists, and Midwives
	The PWS commits to providing information on or in each water bill <u>no less than quarterly</u> as long as the system exceeds the lead action level <i>(A separate mailing may be allowed if the water system cannot place the information on the water bill)</i>
	PE Press Release was submitted to newspaper, television, and radio stations <i>(The Illinois EPA may waive this requirement as long as the system distributes notices to every household served by the system)</i>
<p>In addition to the above, you must conduct at least ONE (1) additional activity from the list below. Please initial only the activities that were conducted by your water system.</p>	
Public Service Announcements	
	Radio
	Television
Paid Advertisements	
	Newspaper
	Transit
	Movie Theater
Via Email	
	Email to Customers
Individual Contact with Customers	
	Phone Trees
	Calls to Individual Consumers
	Target Mailings to at-risk Populations
Delivery to Every Household	
	Doorknob Hangers
	Direct Mailing
Provide Materials Directly to Multi-family Housing	
	Posters
	Flyers

Complete this Section if your water system serves > 3,300 customers Please initial each box verifying that each mandatory requirement was completed	
<input type="checkbox"/>	Printed PE materials (pamphlets, brochures, posters) were delivered to all bill paying customers
<input type="checkbox"/>	PE materials, along with a cover letter encouraging distribution to all potentially affected customers, were delivered to the following organizations located within your service area; local public health agencies, public and private schools or school boards, Women Infants and Children (WIC) and Head Start programs, public and private hospitals and medical clinics, pediatricians, family planning clinics, and local welfare agencies (Systems are required to contact their local Public Health Agency directly either in person or by phone)
<input type="checkbox"/>	A good faith effort was made to locate the following organizations within the service area and deliver the PE materials (along with an informational notice encouraging distribution to all potentially affected customers); licensed childcare centers, public and private preschools, and Obstetricians-Gynecologists, and Midwives
<input type="checkbox"/>	The PWS commits to providing information on or in each water bill <u>no less than quarterly</u> as long as the system exceeds the lead action level (A separate mailing may be allowed if the water system cannot place the information on the water bill)
<input type="checkbox"/>	PE Press Release was submitted to newspaper, television, and radio stations
<input type="checkbox"/>	If applicable, systems serving >100,000 customers must also post PE materials on the system's web site at:
In addition to the above, you must conduct at least THREE (3) additional activities from the list below. Please initial only the activities that were conducted by your water system.	
Public Service Announcements	Display Information in Public Areas
<input type="checkbox"/> Radio	<input type="checkbox"/> Community and Health Centers
<input type="checkbox"/> Television	<input type="checkbox"/> Local Sporting Events
Paid Advertisements	<input type="checkbox"/> Grocery Stores
<input type="checkbox"/> Newspaper	<input type="checkbox"/> Laundromat bulletin boards
<input type="checkbox"/> Transit	<input type="checkbox"/> Libraries
<input type="checkbox"/> Movie Theater	<input type="checkbox"/> Faith-based Organizations
Via Email	<input type="checkbox"/> Community Listservs
<input type="checkbox"/> Email to Customers	<input type="checkbox"/> Utility Web Site
Individual Contact with Customers	<input type="checkbox"/> Post on Local Government Web Site
<input type="checkbox"/> Phone Trees	<input type="checkbox"/> Public Meeting
<input type="checkbox"/> Calls to Individual Consumers	<input type="checkbox"/> Town Hall
<input type="checkbox"/> Target Mailings to at-risk Populations	<input type="checkbox"/> PTA Meetings
Delivery to Every Household	Other Methods Pre-approved by the Illinois EPA (list)
<input type="checkbox"/> Doorknob Hangers	<input type="checkbox"/>
<input type="checkbox"/> Direct Mailing	<input type="checkbox"/>
Provide Materials Directly to Multi-family Housing	
<input type="checkbox"/> Posters	
<input type="checkbox"/> Flyers	

Signature of Owner, Administrative Contact, or Official Custodian

I, _____, have certified that our public education (PE) materials contained all the mandatory information as specified on page 1 of this form. In addition, distribution requirements that are specified on pages 2 and/or 3 were strictly followed as verified by my initials.

Signature _____ Date _____

Title _____

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center
IL 532-2195 PWS 236 Revs November 2008

Implementing the Lead Public Education Program

The following document, “*Implementing the Lead Public Education Provision of the Lead and Copper Rule*”, is a comprehensive instruction manual of how to implement a satisfactory lead Public Education (PE) program. It was written by the United States Environmental Protection Agency (USEPA).

Delivering a satisfactory and understandable PE program is not an easy task. A good deal of time and effort should be taken to plan and execute the PE program. There is no “quick and easy” way to implement a satisfactory PE program. There are many requirements including mandatory language that must be included in your PE materials. Therefore, the Illinois EPA strongly recommends that the following document be carefully read and understood. Templates in which you can use in your PE program are also included in this document.

If questions arise after reading this document, please call the Illinois EPA Lead/Copper Coordinator at 217-785-0561.



Implementing the Lead Public Education Provision of the Lead and Copper Rule: A Guide For Community Water Systems

(Original Document: Lead in Drinking Water Regulation:
Public Education Guidance for Community Water Systems, EPA 816-R-02-010, June 2002)

(Revised Document: Implementing the Lead Public Education Provision of the LCR,
A Guide for Community Water Systems: EPA 816-R-08-007, June 2008)

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Objective and Organization

This guidance document explains the revised requirements for a lead Public Education (PE) program, describes a practical approach for successfully carrying out a PE program on lead in drinking water, and continues to serve as a tool to assist water suppliers with conducting a community-based, PE program on lead in drinking water. The approach described here is based on our National Primary Drinking Water Regulations (NPDWRs) for lead and copper, practical experience gained from implementing the PE requirements of the Lead and Copper Rule (LCR), and principles of good risk communication. This guidance is not a rule, but is intended to explain EPA's PE rules and provide recommendations on "best practice" approaches that systems might want to consider in complying with these rules. While compliance with the PE rules is required, following the recommendations and tips is optional.

The Environmental Protection Agency (EPA), first issued this guidance document in July 1992. Since that time, EPA published minor revisions to the NPDWRs for lead and copper on January 12, 2000 (65 FR 1950). On October 10, 2007, EPA published an additional set of short-term revisions and clarifications (72 FR 57782). These most recent changes to the LCR incorporate comments received from members of the National Drinking Water Advisory Committee (NDWAC) Work Group on Public Education (WGPE), water systems, utility organizations, and States. These groups have extensive experience implementing or overseeing public education (PE) programs. The new rule requirements make changes to the content of the messages provided to consumers, how the materials are delivered to consumers, and the timeframe in which materials must be delivered. The rule changes still require water systems to deliver PE materials after a lead action level exceedance. A summary of the revised PE requirements for community water systems (CWS) is provided in Tables 1, 1A, 2, and 3 in Section 1.

Under the authority of the Safe Drinking Water Act, EPA set the action level for lead in drinking water at 15 ppb. This means utilities must determine whether water from the customer's tap exceeds this level in at least 10 percent of the homes sampled (i.e. 90th percentile level). If the 90th percentile level does exceed this limit, then the utility must take certain steps to correct the problem. One action a utility must take following a lead action level exceedance is to conduct public education (no public education is required if only the copper AL is exceeded).

For utilities seeking to quickly identify the basic public education requirements after a lead action level exceedance, we have developed a five page fact sheet summarizing requirements (Appendix E).

Many systems have already developed PE programs, but we believe that systems, both large and small, will find this document useful in understanding the modifications to the PE requirements resulting from the most recent LCR changes and helping them to develop more effective PE programs.

The guidance manual is divided into the following sections:

- ▶ **Introduction** provides a discussion of the health effects of lead, a brief history of the LCR regulations, and discusses the importance of conducting a thorough PE program that is grounded in strong risk communication principles.
- ▶ **Section I: PE Program Requirements** summarizes requirements that water suppliers must meet to comply with the Federal regulations and how the latest LCR rule changes have impacted these requirements.

- ▶ **Section II: Designing an Effective PE Program** suggests practical steps a water system can take to plan a PE program prior to an exceedance.
- ▶ **Section III: Implementing Your PE Program** discusses how a water system can implement their PE requirements in the event of an exceedance; details tips for preparing materials needed to effectively communicate with the public; and provides practical tips on working with the media and communicating directly with the public.

This document contains five appendices:

- ▶ **Appendix A: Frequently Asked Questions about Lead in Drinking Water**
- ▶ **Appendix B: PE Materials Templates**
- ▶ **Appendix C: Contacts/Additional Sources of Information**
- ▶ **Appendix D: Lead and Copper Rule Public Education Requirements—Federal Regulatory Language**
- ▶ **Appendix E: Lead and Copper CWS Public Education Fact Sheet**

Introduction

Reducing lead in the environment is an important public health issue. Lead, a metal found in natural deposits, is harmful to human health. The most common exposure to lead is swallowing or breathing in lead paint chips and dust. However, lead in drinking water can also be a source of lead exposure. Lead is used in some water service lines and household plumbing materials. Lead in water usually occurs through corrosion of plumbing products containing lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development. EPA has taken a number of actions to limit our total exposure to lead, such as phasing out the use of lead in gasoline and banning lead based paint. 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.

On June 7, 1991, EPA promulgated provisions to the maximum contaminant level goals (MCLGs) and NPDWRs for controlling lead and copper in drinking water (56 FR 26460). We modified this rule with four technical amendments that were published in the Federal Register on July 15, 1991 (56 FR 32113), June 29, 1992 (57 FR 28785), June 30, 1994 (59 FR 33860), and minor revisions to reduce the reporting burden were published on January 12, 2000 (65 FR 1950). Beginning in 2004, EPA conducted a national review of implementation of the Lead and Copper Rule (LCR) to determine if there was a national problem related to elevated lead levels in drinking water. Our review placed a focus on determining if the existing rule was being effectively implemented by states and local communities and on identifying where additional guidance or changes to the regulation were needed to improve implementation. During 2004, Congress held a number of oversight hearings to further investigate implementation of the LCR in the District of Columbia and the nation.

On October 10, 2007, EPA published the latest changes to the LCR. These revisions are intended to better ensure that at-risk populations receive information quickly and are able to act to reduce their exposure. It is EPA's belief that these changes will also help water systems to better comply with the PE requirements.

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

The LCR specifies that a water system must conduct a PE program on lead in drinking water if, during a monitoring period, more than 10 percent of the tap water samples collected in accordance with 40 CFR §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 PE materials are contained in §141.85 of the regulation. Section 1 of this guidance document details these requirements.

This guidance document presents practical steps and helpful tips for large and small systems to understand

their PE requirements under the LCR and to design and implement a community-based education program on lead and drinking water that reaches all segments of the population. This guidance document provides comprehensive information and includes required and suggested activities for conducting a successful PE effort. Water systems should pay particular attention to Section 1 for the specific PE requirements in the event of an exceedance. Keep in mind, water systems may already have in place a communications team or infrastructure that your PE program efforts can build upon. The key to reducing the health risks associated with lead in drinking water is communicating these risks with those who most need to hear this information and in the manner in which they are used to receiving information. A good PE program equals good risk communication.

Section 1

PE Requirements/Developing Your PE Program Plan

Conducting an effective Public Education (PE) program is essential if your system experiences a lead action level exceedance. The Lead and Copper Rule (LCR) requires specific actions in the event of an exceedance to inform the affected community about the risks associated with elevated lead levels (particularly to children and expectant or nursing mothers), to provide information on what the water system is doing to address lead in drinking water, and to advise the community on actions individuals can take to reduce their chance of exposure to elevated levels of lead in drinking water.

This section details the specific PE requirements under the LCR and presents basic steps in developing a PE Program Plan. Sections 2 and 3 go into a greater level of detail on each step in the Program Plan and strategies for implementing each step. Water systems, both large and small, should pay particular attention to the requirements outlined in Section 1 in order to meet your obligations under the LCR. (*Appendix D* of this document provides a copy of the Federal regulatory language described in this document.)

Summary of Program Requirements

This document provides guidance to you, the public water supplier, regarding the PE requirements of the LCR, as amended in 2007. Section 141.85 of the lead and copper rule regulations contain specific requirements regarding the content and delivery of your public education program. The tables below highlight the changes to the PE requirements contained in §141.85 and other public information requirements. Refer to pages 5-7 of this Section for complete program requirements.

Note: Water systems must submit all written public education materials to the state prior to delivery. The state may require the system to obtain approval of the content of written PE materials prior to delivery.

Table 1. Changes in the Public Education Requirements Resulting from the Lead and Copper Rule Short-term Revisions and Clarifications	
Revisions:	Applies to:
Content of Materials	
Must alter language of previous public education according to the new text.	All water systems
May use own language to discuss sources of lead and steps to reduce lead in drinking water (previously pre-written text was required. Systems are now able to develop own text within the guidelines that is applicable to local situation).	All water systems
Must include language explaining what happened and what is being done.	All water systems
Must include language providing contacts for more information.	All water systems
Must include language explaining how to get water tested and lead in plumbing components (low lead vs. lead free).	CWSs
Delivery of Public Education Materials	
Must deliver printed materials meeting the content requirements to all bill paying customers within 60 days after the end of the monitoring period in which the exceedance occurred.	CWSs

Table 1. Changes in the Public Education Requirements Resulting from the Lead and Copper Rule Short-term Revisions and Clarifications - (continued)

Revisions:	Applies to:
Must, no less than quarterly, provide information on or in each water bill as long as the system exceeds the action level for lead after the end of the monitoring period in which the exceedance occurred. ¹ The message on the water bill must include the following statement: “[Insert name of water system] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information please call [insert name of water system] or visit [insert your Web site here.]”	CWSSs
Must continue to include information in water utility bill every billing cycle, but no less frequently than quarterly, while still in exceedance of lead action level.	CWSSs
Must make a good-faith effort within 60 days after the end of the monitoring period in which the exceedance occurred to contact customers most at risk by delivering materials to the contact list of organizations with an informational notice encouraging them to pass the information along.	CWSSs
Must deliver materials that meet content requirements to local public health agency and directly contact the agencies within 60 days after the end of the monitoring period in which the exceedance occurred.	CWSSs
Must deliver materials that meet content requirements to: - Public and private schools or school boards - Women Infants and Children (WIC) and Head Start programs - Public and private hospitals and medical clinics - Pediatricians - Family planning clinics - Local welfare agencies	CWSSs
Must post material to a publicly accessible Web site within 60 days after the end of the monitoring period in which the exceedance occurred.	CWSSs serving a population greater than 100,000
Must submit press release to newspaper, television, and radio stations within 60 days after the end of the monitoring period in which the exceedance occurred.	CWSSs
Must repeat submission of press releases twice every 12 months while still in exceedance of lead action level.	CWSSs
Must implement additional activities from one or more of the categories listed within 60 days after the end of the period in which the exceedance occurred (See Tables 2 and 3).	CWSSs
May distribute notices to every household served by system in place of submitting a press release.	CWSSs serving 3,300 or fewer people (previously for CWSSs serving between 501 and 3,300 people)
May limit the distribution of PE materials to facilities and organizations served by the system most likely visited by pregnant women and children provided the system distributes the PE materials to every household served by the system.	CWSSs serving 3,300 or fewer people
Must repeat delivering printed materials, good-faith efforts, and outreach activities every 12 months while still in exceedance of lead action level.	CWSSs
May receive extension from State on 60 day requirement if needed for implementation purposes. ²	CWSSs
End of the monitoring period is September 30 of the calendar year in which sampling occurs, or, if the Primacy Agency has established an alternate monitoring period, the last day of that period.	All water systems that are required to conduct monitoring annually or less frequently

¹The message or delivery mechanism can be modified in consultation with the Primacy Agency. Specifically, the Primacy Agency may allow a separate mailing of PE materials to customers if the water system cannot place information on the water bills.

²Note: This extension is only appropriate if the system has initiated public education activities prior to the end of the 60-day deadline.

Table 1A. Other Lead and Copper Rule Public Information Requirements	
Revisions:	Applies to:
Notification of Results – Reporting Requirements¹	
Must provide a consumer notice of lead tap water monitoring results to all persons served by sampling sites. ²	All water systems
Must provide consumer notice as soon as practical, but no later than 30 days after system learns of tap monitoring results.	All water systems
Must include the following information: results of lead tap water monitoring, an explanation of the health effects of lead, list steps consumers can take to reduce exposure to lead in drinking water, and contact information for the water utility. The notice must also provide the maximum contaminant level goal (MCLG) and the action level (AL) for lead and definitions for these two terms. ³	All water systems
Must be provided to all persons served at the site by mail or other methods. This includes those who do not receive a water bill.	All water systems
Consumer Confidence Report (CCR) Requirements⁴	
Every report must include the following lead-specific information: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking ⁵ . If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead . ^{6,7}	All CWSs
A system may write its own statement in consultation with the Primacy Agency.	All CWSs

¹See *Appendix C* for templates with language that meets the notification of results requirements.

²This must be done whether or not you have a lead action level exceedence.

³The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. The action level (AL) is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

⁴This information must be included in the CCR whether or not the CWS has had a lead action level exceedence.

⁵You may wish to, in consultation with the Primacy Agency, write your own flushing time based on the actual flushing time in your PE plan or a flushing time that is more appropriate to your system.

⁶For CWSs that have a lead action level exceedence, the new required language is in addition to what the system is required to report in the CCR. Note: All CWSs must report the number of samples above the action level and the 90th percentile value.

⁷CWSs in States where EPA is the Primacy Agency or that have adopted the Revisions by December 2008 must begin including this lead informational statement in CCRs that are due to consumers by July 1, 2009 (i.e., the 2008 CCR.) Otherwise, CWSs must begin to include this information in the 2009 CCR.

I. Required Content of Public Education Materials

Your PE notices are **required** to begin with the following statement:

Important Information about Lead in Your Drinking Water

[Insert name of water system] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

In addition to this statement, your PE notices are required to include, and in the order presented, the **topics which are listed below in bold** and the mandatory language which is noted below in *italics*. Additional information under the topics must be addressed in your PE materials, however, the specific content and wording is flexible. (*Appendix B* contains a template for a PE notice with the required content as well as suggested EPA language. Additional information for developing statements may be found at EPA's Lead Web site at www.epa.gov/lead).

► **Health Effects of Lead**

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

► **Sources of Lead**

- What is lead?
- Where does the lead in drinking water come from? Include information on home/building plumbing materials and service lines that may contain lead.
- What are other important sources of lead in addition to drinking water? (e.g., paint)

► **Steps you can take to reduce your exposure to lead in your water**

- You must encourage running water to flush out the lead.¹
- You must explain concerns with using hot water and specifically caution against the use of hot water for baby formula (because lead dissolves more easily in hot water).
- You must tell customers that boiling water does not reduce lead levels.
- You must discuss other options customers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.
- You must suggest that parents have their child's blood tested for lead.
- You must tell customers how to get their water tested.
- You must discuss lead in plumbing components and the difference between low lead and lead free.

¹ Consider conducting a study to determine the appropriate system specific flushing time. Consult with the Primacy Agency before designing or beginning a study. For example, a study may consist of collecting tap samples at different flushing time durations from a statistically significant number of taps. In addition, use a sample size that is different than the sample size used for the 90th percent calculation to avoid study samples from being included in the 90th percent calculation.

► **What happened? What is being done?**

- Why are there high levels of lead in my drinking water (if known)?
- What are you (the water system) doing to reduce the lead levels in homes in this area?
- Does your system have lead service lines? How can a consumer find out if their home has one? Is there a program to replace it? Are there any special incentives offered?
- Your system may also want to provide information on the history of lead levels in tap samples: have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any change?

► **For more information**

Call us at [Insert Number] or (if applicable) visit our Web site at [Insert Web site Here]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or contact your health care provider.

- We recommend you include the name of your system and the date that the information is being distributed, along with the state water system ID, somewhere on the notice.

II. Required Delivery Methods for Your Public Education Materials

Tables 2 and 3 provide a summary of the required PE activities and the timing of their implementation, depending on system size. (*Appendix B* contains templates for all of the types of required notices and the required content).

Requirement	Timing ¹
Deliver printed materials (pamphlets, brochures, posters) along with an informational statement encouraging distribution to all potentially affected customers or users	Within 60 days after the end of the monitoring period in which the exceedance occurred and repeating once every 12 months
Deliver public education materials to the following facilities and organizations that are served by the system along with an informational notice that encourages distribution to potentially affected customers: ² <ol style="list-style-type: none"> 1. Local public health agencies³ 2. Public and private schools or school boards 3. Women Infants and Children (WIC) and Head Start programs 4. Public and private hospitals and medical clinics 5. Pediatricians 6. Family planning clinics 7. Local welfare agencies 	Within 60 days after the end of the monitoring period in which the exceedance occurred and repeating once every 12 months

Table 2. Required Methods of Delivery for Small (<3,300 customers) Community Water Systems (Continued)

Requirement	Timing ¹
<p>Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of the organizations from the local public health agencies, even if the agencies are not located within the water system service area:⁴</p> <ol style="list-style-type: none"> 1. Licensed childcare centers 2. Public and private preschools 3. Obstetricians-Gynecologists and Midwives 	<p>Within 60 days after the end of the monitoring period in which the exceedance occurred and CWSs must submit a press release twice every 12 months on a schedule agreed upon with the Primacy Agency</p>
<p>Provide information on or in each water bill (no less than quarterly or state can approve a separate mailing)^{5,6}</p>	<p>Each billing cycle for as long as the system exceeds the lead action level</p>
<p>Submit press release to newspaper, television, and radio stations⁷</p>	<p>Within 60 days after the end of the monitoring period in which the exceedance occurred and CWSs must submit a press release twice every 12 months on a schedule agreed upon with the Primacy Agency</p>
<p>Implement additional Public Education activities⁸</p>	<p>Within 60 days after the end of the monitoring period in which the exceedance occurred and repeating once every 12 months</p>

¹ Primacy Agency can allow activities to extend beyond the 60-day requirement if needed for implementation purposes; however, this extension must be approved in writing in advance of the 60-day deadline.

² To obtain a list of organizations in your area, contact your local public health agency. Additional informational resources of associations and licensing agencies of these organizations are listed in *Appendix C*.

³ Systems are required to contact their Local Public Health Agencies directly (either in person or by phone) even if they are not located in the water system service area. If you do not have a Local Public Health Agency, you should contact your State Health Department.

⁴ For further clarification of a good faith effort, systems should consult with their Primacy Agency.

⁵ State may allow a separate mailing if the water system cannot place information on the water bill. Water bill language is included in *Appendix B*.

⁶ Systems may add additional pages (e.g., public education brochure) to the Consumer Confidence Report if timing is appropriate. However, it may be rare that timing will coincide, given that the CCR must contain compliance data collected in the previous calendar year and the report must be provided to consumers no later than July 1 (i.e., the report issued by July 1, 2007 contains compliance data collected in calendar year 2006).

⁷ Primacy Agency may waive this requirement as long as the system distributes notices to every household served by the system.

⁸ See Table 4 for a listing of the additional required activities for small systems.

Table 3. Required Methods of Delivery for Large (>3,300 customers) Community Water Systems	
Requirement	Timing¹
Deliver printed materials (pamphlets, brochures, posters) to all bill paying customers	Within 60 days after the end of the monitoring period in which the exceedance occurred and repeating once every 12 months
Deliver public education materials to the following organizations that are served by the system, along with an informational notice encouraging distribution to all potentially affected customers: ² <ol style="list-style-type: none"> 1. Local public health agencies³ 2. Public and private schools or school boards 3. Women Infants and Children (WIC) and Head Start programs 4. Public and private hospitals and medical clinics 5. Pediatricians 6. Family planning clinics 7. Local welfare agencies 	Within 60 days after the end of the monitoring period in which the exceedance occurred and repeating once every 12 months
Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of the organizations from the local public health agencies, even if the agencies are not located within the water system service area: ⁴ <ol style="list-style-type: none"> 1. Licensed childcare centers 2. Public and private pre-schools 3. Obstetricians-Gynecologists and Midwives 	Within 60 days after the end of the monitoring period in which the exceedance occurred and repeating once every 12 months
Provide information on or in each water bill (no less than quarterly or state can approve a separate mailing) ^{5,6}	Each billing cycle for as long as the system exceeds the lead action level
Post material on the water system's Web site (for systems serving >100,000 individuals) or on a publicly accessible Web site (e.g. State Web site)	Within 60 days after the end of the monitoring period in which the exceedance occurred and continuously throughout the exceedance
Submit press release to newspaper, television, and radio stations	Within 60 days after the end of the monitoring period in which the exceedance occurred and CWSs must submit a press release twice every 12 months on a schedule agreed upon with the Primacy Agency
Implement additional Public Education activities ⁷	Within 60 days after the end of the monitoring period in which the exceedance occurred and repeating once every 12 months

¹ Primacy Agency can allow activities to extend beyond the 60-day requirement if needed for implementation purposes; however, this extension must be approved in writing in advance of the 60-day deadline.

² To obtain a list of organizations in your area, contact your local public health agency. Additional informational resources of associations and licensing agencies of these organizations are listed in *Appendix C*.

³ Systems are required to contact their Local Public Health Agencies directly (either in person or by phone).

⁴ For further clarification of a good faith effort, systems should consult with their Primacy Agency.

⁵ Primacy Agency may allow a separate mailing if the water system cannot place information on the water bill. See *Appendix B* for the required water bill language.

⁶ Systems may add additional pages (e.g., public education brochure) to the Consumer Confidence Report if timing is appropriate. However, it may be rare that timing will coincide, given that the CCR must contain compliance data collected in the previous calendar year and the report must be provided to consumers no later than July 1 (i.e., the report issued by July 1, 2007 contains compliance data collected in calendar year 2006).

⁷ See Table 4 for a listing of the additional required activities for large systems.

In addition to the activities described previously that are required for all community water systems, there are requirements that affect water systems depending on their size. Small systems (serving <3,300 individuals) are required to conduct one (1) additional activity listed in Table 4. Large systems (serving >3,300 individuals) are required to conduct three (3) activities from one, two, or three of the general categories listed in Table 4. Systems should verify with their Primacy Agency* to ensure fulfillment of all requirements.

Table 4. Required Methods of Delivery for Community Water Systems to Choose From^{1,2}	
Categories	Example Activities
Public Service Announcements	Radio and Television PSAs
Paid Advertisements	Newspaper, transit, or movie theater ads
Display Information in Public Areas	Community and health centers Local sporting events Grocery stores Laundromat bulletin boards Libraries Faith-based organizations Community listservs Utility or other publicly accessible Web site (for small systems serving < 3,300) ³ Post on local government Web sites
Email to Customers	
Public Meetings	Town hall meetings PTA meetings
Delivery to Every Household	Doorknob hangers, mailing to all consumers
Individual Contact with Customers (targeted contact)	Phone trees Calls to individual consumers/households Targeted mailings to at-risk populations
Provide Materials Directly to Multi-family Housing	Posters, flyers
Other Methods Approved by the State	

¹ Appendix B contains customizable templates for PE materials that may be used to meet these requirements.

² Consult with the Primacy Agency about what constitutes a good faith effort and what activities would work for your community.

³ Large Systems must conduct this activity (see Table 3).

*In general, the term "State" is used to mean the Primacy Agency. Section 141.2 definition of "State" is the agency of the State or Tribal government which has jurisdiction over public water systems. During any period when a State or Tribal government does not have primary enforcement responsibility pursuant to section 141.3 of the Act, the term "State" means the Regional Administrator, U.S. Environmental Protection Agency.

III. Consumer Confidence Report Required Information¹

In addition to the required PE activities above, all CWSs must include a statement about lead, health effects language, and ways to reduce exposure in every CCR released to the public. For CWSs that have a lead action level exceedance, the new required language (see below) is in addition to what a system is required to report in the CCR. Note: All CWSs must report the number of samples above the action level and the 90th percentile value.

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

Flexibility is given to CWSs to write its own informational statement, but only in consultation with the Primacy Agency. For example, the system may wish to revise the flushing time of “30 seconds to 2 minutes” if it conflicts with the flushing information in its public education materials or to add the phone number for the Safe Drinking Water Hotline (1-800-426-4791). CWSs in States where EPA is the Primacy Agency or that have adopted the Revisions by December 2008 must begin including this lead informational statement in CCRs that are due to consumers by July 1, 2009 (i.e., the 2008 CCR). Otherwise, CWSs must begin to include this information in the 2009 CCR. **Please note**, this new requirement applies to **all** CWSs irrespective of whether they have had a lead action level exceedance.

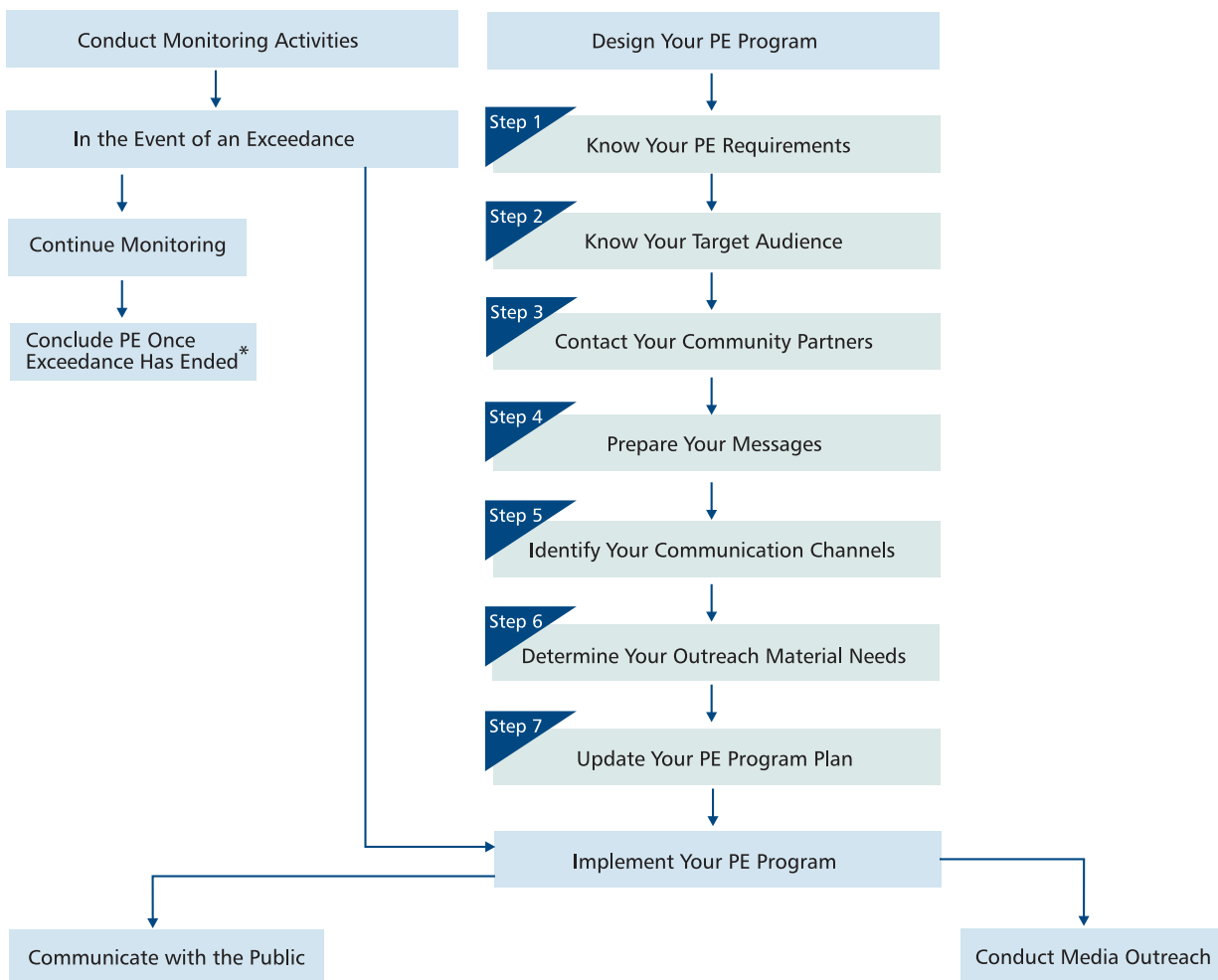
¹ Refer to *Appendix B* for sample Consumer Notification templates.

IV. Developing Your Public Education Program Plan

Meeting the requirements outlined above will require a good deal of effort on the part of a water system to implement the required activities, and within the required timeframe. The most effective way to implement these requirements is to develop a PE Program Plan in advance of an exceedance. This plan will help you determine what activities you will want to undertake during your routine monitoring and what you will need to do to implement your required PE activities in the event of an exceedance.

The flowchart below lists seven recommended steps for designing and implementing your PE Program Plan. Each step corresponds to a more detailed description included in Sections 2 and 3 of this guidance document. Page 26 includes a simple checklist of actions you may wish to conduct as you design and execute your PE Program Plan.

Public Education Flow Chart



*Note: A water system may discontinue delivery of public education materials when the system has met the lead action level during the most recent six month monitoring period.

▶ **Step 1: Know Your PE Requirements**

Refer to pages 8-12 of this Section to review the required content and delivery mechanisms for your PE program.

▶ **Step 2: Know Your Target Audience**

Knowing who is in your target audience is an important first step. This will help guide your efforts to craft messages and materials, develop effective partnerships, and determine how (and through whom) to deliver these message and materials for maximum impact. (See Pages 17-18 to learn more about identifying your target audiences).

▶ **Step 3: Contact Your Community Partners**

Once you know your requirements and who you will be contacting, develop partnerships with key members of your community who will help you distribute your messages and materials and who serve as an information source in your community (e.g. local health department). You should educate these partners about your PE requirements and PE program, ask them for advice on how to reach your target audiences, and let them know what assistance they can provide, such as quickly reaching the community and providing input in planning your PE program. **Please note that systems are required under the LCR to make direct contact with their local health departments.** (See Pages 18-21 to learn more about identifying and working with your community partners). *Appendix C* contains additional information for contacting local community partners.

▶ **Step 4: Prepare Your Messages**

After identifying your audience and resources and talking with your community partners, you should identify the messages and most effective activities and delivery methods to reach your audiences. Pages 8-10 provide specific information on the delivery methods you are required to conduct. Consider the education level of your audience and use the templates in *Appendix B* to customize your PE materials (and keep in mind the required content detailed on Pages 8-9). Preparing templates ahead of time will help make compliance within the standard timelines more feasible. (See Page 21 to learn more about preparing your messages).

▶ **Step 5: Identify Your Communication Channels**

Knowing what messages and delivery methods you will likely be targeting, you can contact the appropriate channels to prepare for implementation. This should include developing a list of media outlets and contacts for distributing press releases, documenting posting requirements for Web sites, and determining contact information for placing advertisements or submitting public service announcements. Work with the community partners you established in Step 3 to enlist their assistance in reaching high-risk groups, specific ethnic or cultural groups, or other target audiences. (See Pages 22-23 to learn more about communication channels). *Appendix C* contains additional information for identifying communication channels.

▶ **Step 6: Determine Your Outreach Material Needs**

Identify what materials you will need and what processes you will need to put in place to produce them quickly. You should determine how many copies of materials you will need, the costs for producing materials, the amount of time printers will need to produce materials, and contact information for printers, web designers, and others who will assist you in materials preparation. (See Pages 23-24 to learn more about planning your outreach material needs).

▶ **Step 7: Update Your PE Program Plan**

Periodically, you should review and update your PE Program Plan. This should include updating all contacts, talking with your community partners to confirm their willingness and ability to assist you in the event of an exceedance, and determining if any new methods or ideas for reaching your target audiences are available to you. All resources and prices associated with creating and producing your PE outreach materials should also be checked and updated.

Section 2

Designing an Effective Public Education Program

This section describes the recommended steps you should consider in planning your public education (PE) program. These steps can help you design your PE program to ensure that, should your system experience an action level exceedance, you will be ready to implement PE activities quickly and effectively. Your PE Program Plan should be part of your system's larger communications plan (i.e. incorporate with your public notifications, boiling water advisories, communication planning, etc.) While the PE requirements vary somewhat by system size, the steps and tips presented below are applicable to all water systems, large and small.

This section is organized around the following key steps:

- ▶ **Step 1: Know Your PE Requirements**
- ▶ **Step 2: Know Your Audience**
- ▶ **Step 3: Contact Your Community Partners**
- ▶ **Step 4: Prepare Your Messages**
- ▶ **Step 5: Identify Your Communication Channels**
- ▶ **Step 6: Determine Your Outreach Material Needs**
- ▶ **Step 7: Update Your PE Program Plan**

Creating an effective PE program requires careful planning and timely execution. Increasingly, the public expects service providers to share health risk information in a timely and effective way. Prompt and thorough communication allows the public to understand a health risk issue and take action to minimize their personal risk until the issue is resolved. Risk information should be clear, thoughtful, and should be delivered in a manner that meets the needs of all members of your community. Waiting until a lead action level exceedance has occurred to plan your program and materials creates an unnecessary burden on your system and may result in rushed and less effective communications with your community.

TIP: An effective PE Program equals effective risk communication

There are several guidelines for effective risk communication that should be considered when designing a PE campaign.

- ▶ Take the initiative in providing information to your community.
- ▶ Plan your efforts in advance and evaluate them upon completion.
- ▶ Listen to your community members and acknowledge their concerns.
- ▶ Be a reliable source of information. Provide honest, accurate, and comprehensive information.
- ▶ Partner with trusted sources in your community.
- ▶ Provide timely and accurate information to the media.
- ▶ Always speak with a consistent voice. Designate one point of contact that can respond to the public and the media.
- ▶ Make PE materials easy to read and understand for people with differing educational levels.

Step 1: Know Your PE Requirements

Section 1 of this guidance document outlined the required activities, content, and delivery mechanisms water systems must implement in the event of a lead action level exceedance. Water systems are required to communicate with their Primacy Agency when an exceedance is identified. As part of your planning, you should identify the contact at the Primacy Agency for consultations on PE requirements. Review pages 5-13 to understand your PE requirements and see *Appendix D* for the Federal regulatory language.

Step 2: Know Your Audience

Once you have reviewed your PE program requirements, the next step is to determine the audience(s) for your PE program activities.

Identifying your key audiences and their information needs is, perhaps, the most important step that you can take when planning your program. The size, location, and cultural composition of your audiences will have a direct effect on the design of your program — from the educational materials you use to how you distribute information. Effective risk communication requires that important messages reach those who need to hear them when they are ready to hear them and in a way they can understand. In some cases, effectiveness is determined by the person communicating the message (i.e., using health care providers to educate expectant mothers) while in other cases, effectiveness is determined by the way the information is presented (i.e. through direct mailings, mass media, etc.). Whatever the case, understanding your audience and their needs is essential for determining how and where to deliver information that educates, promotes desired behaviors and actions, and creates confidence in your system’s ability to deal with an exceedance.

TIP: Research your audience in advance to understand any unique requirements they may have.

- ▶ What languages are spoken in your service area?
- ▶ Within each language community, what percentage of people is also proficient in English?
- ▶ Are there large numbers of people in your service area with low literacy levels?
- ▶ Are low-literacy groups “clustered” in certain zip codes or neighborhoods?
- ▶ What sources of information do these groups trust?

Below are some of the audience segments that you must reach out to when conducting your PE Program.

- ▶ **General public.** This includes everyone in your service area that may be affected by an action level exceedance.
- ▶ **High-risk Groups.** Those particularly vulnerable to lead in drinking water exposure include children 6 years of age and younger, infants, and pregnant women. Your PE program should target agencies and organizations that serve high-risk groups, deliver materials and messages that make the risks clear, and provide actionable recommendations for how to protect oneself and ones children from the risks of lead in drinking water.
- ▶ **Different Language Communities.** If significant proportions of the population in your community speak languages other than English, the PE materials must contain information in the appropriate language(s) regarding the importance of the notice or a contact where persons can obtain a translation or assistance.
- ▶ **Low-literacy Audiences.** Some individuals in your community may possess limited reading skills. To reach these individuals, print materials must be written as simply and concisely as possible and should contain graphical representations of key messages and actions. Low-literacy groups are more likely to rely on non-print forms of communication, such as TV or radio Public Service Announcements (PSAs), to receive information about critical health topics.
- ▶ **Non-bill Paying Customers.** Some people who drink your system’s water may not receive a water bill (e.g., commuters working within the water system area, but living outside of it; residents in multi-unit dwellings who may not pay for water; restaurant owners who use the water for cooking, etc.) and your system needs to establish delivery mechanisms to reach these individuals.

Sources of information about your audiences:

U.S. Census Bureau

To find information on the languages spoken in your area, see the U.S. Census Bureau's Web site, <http://factfinder.census.gov>. The census database includes information about literacy levels, what languages besides English are spoken at home, and the level of English proficiency. (English proficiency is important, because if a group tends to speak a language at home, but is also able to read and understand English, a notification in a second language may not be necessary.) You should also be able to find out the number of people who speak each language.

Local Media

Your local media is a good source of information about your community. It is the media's job to know the community inside and out. Media outlets have an economic need to understand how to reach various segments of the audience and typically have a mission to serve the community. These two goals mean that they are likely to know the various audience segments in your community and have contacts with key leaders within the community who have strong relationships or access to a specific subgroup. Since you should establish relationships with your media anyway (Step 3), one way to create media allies is to recognize their knowledge and ask them for valuable information about your service population.

Community and Ethnic Group Leaders

Community and ethnic group leaders can help you understand the audience segments you serve and learn about the communication channels each segment uses and trusts. These grassroots groups have a high level of contact with target demographic groups and tend to be trusted by them. Establish and maintain working alliances with these grassroots organizations so that if you need to quickly disseminate a message about the drinking water in the future, you already have channels in place to reach your diverse audience. This can demonstrate your concern for the community they serve and establish a level of trust that will increase the likelihood that they will assist you when needed.

Cultural and ethnic interest groups, churches/ mosques/ synagogues, and multicultural centers are in touch with the needs and concerns of specific racial, religious, or ethnic groups, including people who may not speak or read English. Leaders of such groups may enjoy greater trust among their constituents than water system spokespeople.

Health Care Providers

Health care providers, hospital and nursing home directors, and social service providers are a first source of information for many people, especially vulnerable populations. Health professionals are likely to be asked questions when there is an issue related to the drinking water. Establishing relationships with these professionals in advance of an action level exceedance and providing them with information on your water system's plans when an exceedance occurs will help them educate their customers and allay their concerns. *Appendix C* contains more information on identifying these resources within your community.

TIP: As you explore the resources in your community and establish relationships with potential allies, remember to ask about the key local media that each audience segment looks to for information. For example, many communities have multiple non-English radio stations, cable access television shows, and local public radio stations that may appeal to your various audience segments.

Step 3: Contact Your Community Partners

Now that you understand your PE program requirements and know your audiences, you should assemble your communication or outreach team and establish community partnerships. You may already have a communications team or person(s) that can be utilized to implement the PE program. Water systems that seek assistance from a variety of community partners to inform PE efforts and to design PE programs are more successful at implementing effective PE campaigns than those that do not. A diverse team comprised of community members representing the public, private, and civic sectors can provide your water system with: access to a wide range of community resources; understanding of the community's audience segments and the best ways to reach them; and ready-made communication channels that you can access in the event of an exceedance.

These groups can make unique and important contributions to your PE program. Government officials lend credibility and authority and can draw attention to the program. Government agencies offer a variety of specialized services and technical expertise from mobilizing community resources and media involvement to providing expertise on the health effects of lead. Schools are one of the best conduits in any community for reaching parents of young children. 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 and explain information about lead in drinking water to high-risk targeted groups.

Form your planning team and meet with them regularly to help you take action on the remaining steps presented below.

In addition to the members of your communication or outreach team, consider creating partnerships with two important groups within your community: the public health community and the media. These groups are essential avenues for quickly reaching the public. Enlist their assistance in planning your PE program so that they will be ready to assist your efforts should you have an exceedance.

Partnering with the public health community

Collaborating with public health officials is crucial to developing an effective PE effort. Different parts of the health department,

Suggested PE Community Partners (see Appendix C for more information)

- ▶ City, county, and State government officials including representatives of the city, county, or municipal council; the mayor's, city administrator's, or county commissioner's office
- ▶ City or county government agencies including the public affairs, health, and environmental protection departments, and local agencies responsible for lead screening programs
- ▶ Representatives of the local public school system
- ▶ Representatives of public hospitals and/or clinics
- ▶ Representatives of community organizations that the LCR requires water systems to reach out to in the event of an exceedance (see Page 9 for a list of these organizations)
- ▶ Members of civic groups such as the Chamber of Commerce, neighborhood associations, and local chapters of community service organizations
- ▶ Private sector leaders such as child care centers, health care providers, health care facilities or clinics, and hospitals

TIP: Because of their interactions with your target audiences, local health professionals need to understand how a lead action level exceedance affects their constituents and patients. Public health officials may know the most effective channels for reaching your community's health providers. Discuss this in advance so that you are not trying to find every child and maternal health clinic, doctor, and nurse in your community at the same time that you are trying to solve an exceedance problem.

including maternal and child health, community health, environmental health, and other sections, can assist in developing your materials and conducting effective outreach. Local public health agencies often know how to reach specific segments of your target audience because they may have had to conduct a similarly targeted outreach campaign before. Connecting your PE campaign effort to the health department's lead poisoning prevention, water quality, and broader environmental programs, can seed the kind of holistic lead education program that communities require. Lead in drinking water is one possible source of exposure, but there are many other sources and the public needs to think about lead health risks from every source, not just what could be in the water.

Remember that the public health community is a much larger group than just the local government agencies. Local universities, community based organizations, health care providers and insurers, nurse practitioners, and many others create the network of care that surrounds your community. You should try to access as many of these organizations as you can to determine the most effective communication channels and outreach tactics for your PE campaign. The more allies you have, the better. *Appendix C* contains additional information for identifying community partners.

Chances are that public health officials who regularly work on lead issues already have lists of contacts of health care providers, schools, child care organizations, and social service providers with close ties to women, infants, and children in your community. Learn from what they already know. Explain your role in monitoring for and communicating about lead and educate health officials and others about how lead enters drinking water, how the water system monitors for it, and steps one can take to minimize lead exposure.

TIP: Be on the lookout for opportunities to help your local media learn about the services your system provides and to recruit them as allies in your PE efforts. One successful approach is to host an annual media day where you can offer tours, explain how your system operates, and explain your lead monitoring program. The more informed your local media is about your water system, the more accurate and positive they will be when covering an exceedance and conveying information to your public.

Develop a relationship and response plan with your local health department so that you have an agreed upon process for sharing information about lead in drinking water risks and communicating with the public. Consumers may call the health department for information about the health risks described in your PE materials; if you coordinate in advance, you can ensure that, regardless of who they call, your public hears consistent messages that will help them understand the risks and how to manage them. The latest LCR revisions require that water systems must have direct contact with public health officials in the event of an exceedance. Establishing and maintaining relationships with these individuals as you plan your program will make it easier to work with these individuals in the event of an exceedance.

Partnering with the media

Your local media (print, radio, and television) can be a powerful ally in planning and executing your PE program. More than any other communication channel, the media can rapidly reach a large number of people with educational messages. Although working with the media may be challenging at times, planning ahead will help you to quickly and effectively engage them should you have an exceedance. (See Section 3 for information on working with the media during an exceedance).

Designate one person on your staff to serve as a liaison to the media. Media outlets will need to know who they can speak to about an exceedance and any ramifications for the public. In the event of an exceedance, all media inquiries should be directed to the media spokesperson. This will ensure that messages coming

from your water system are consistent and contain accurate information. As part of your system's community relations efforts, your spokesperson should meet regularly with local editors or station managers for both small and large media outlets. You should identify and meet with reporters or segment producers that deal with environment, health, and water issues to educate them about the water system, why and how you monitor the water quality, and what your program will do if a lead action level exceedance or other kind of violation occurs. The more information you can provide up front, the less likely the media will be to make errors in their coverage.

Ask your media contacts what kind of information about water quality issues they would find valuable in case of an exceedance and prepare draft materials for the media in advance. If you make it easy for the media to cover your story correctly, they are more likely to do so. If you base your draft media materials on input from the media themselves, when it is time to finalize your materials and distribute them as part of your PE campaign, the media is more likely to help you get your message out and to reinforce your messages.

Finally, as part of your planning for media engagement, identify individuals in your community (e.g. public health officials, scientists, experts from local universities, etc.) who can serve as experts for the media to contact. These individuals should be very familiar with issues related to lead in drinking water—preferably they are members of your team who you have educated thoroughly about your lead monitoring program and who know your commitment to safeguarding the public health, steps individual customers can take to protect against lead health risks, your PE Program Plan, and your plan for solving the problem.

Step 4: Prepare Your Messages

Now that you have identified your target audiences and determined what specific communication needs they might have, the next step is to prepare your PE messages. For drinking water-related issues, the public is most likely to be interested in:

- ▶ Health and safety implications. (Is my family's health in danger?)
- ▶ Simple advice and guidance. (What should I do to stay safe?)
- ▶ Practical implications, such as potential service interruptions. (How will this affect my daily life?)

You do not have to wait for an exceedance to begin preparing your messages. The required PE language (as detailed in Section 1) considers the public's risk communication needs, but your system will want to customize your communications to convey actions you are taking as a system to address the exceedance. Developing your key messages and identifying materials to distribute to the public (Step 5) will ensure that, should an exceedance occur, you will be ready to deliver materials that educate your public, empower people to take action to protect their health, and build trust between you and your community.

When you think about preparing messages, consider that doing so also allows you to train spokespersons, build Web pages, draft press releases, and create fact sheets, brochures, and other required materials before you ever have to deal with an exceedance. **Keep in mind that Section 1 contains information about the messages your PE materials are required to contain.**

Effective messages should:

- ▶ Be clear and concise.
- ▶ Be compelling, encourage action, and explain how to take action.
- ▶ Communicate the risks from all sources of lead with a particular emphasis on drinking water.
- ▶ Meet the communication needs of your entire community (See Step 2).

TIP: Effective risk communication requires that any member of the affected public should know who to contact for more information and how they can learn more about lead in drinking water and lead health risks.

Step 5: Identify Communication Channels to Get Your Message Out

The next step after determining what messages you will use in your PE Program is to identify what mechanisms you will use to get your messages out to your target audiences.

As part of your PE program, water systems that have lead action level exceedances are **required** to reach out to organizations that regularly interact with young children, infants, and pregnant women (See Section 1). This requirement is designed to help water systems find communication channels, or conduit organizations, through which they can distribute materials and educational messages to ensure that critical information reaches the most vulnerable populations as quickly as possible. You should assemble a list of organizations, contacts, and distribution plans to ensure that, when you need to implement your PE campaign, the pathways for sharing your information and reinforcing your messages are already in place.

Many of the organizations that may serve as communication channels should already be on your PE team. Those organizations that may play a role in the event of an exceedance and who are not on your team will need some specific information from you as you are establishing the relationship. Make sure all of the partners you expect to work with know:

- ▶ What to expect if an action level exceedance occurs.
- ▶ What to do with the materials that you provide them.
- ▶ How to reach the key person(s) responsible for your drinking water PE program.

Tips for Planning Your Messages and Outreach

Identify Key Organizations. Identify those organizations in your community that meet the required and recommended list of organizations.

Assemble Your List and Be Ready for Action. Routinely review and update as necessary your list of target organizations. Include the name of a contact person at each school, hospital, clinic, child care provider, social service, or other organization through which you plan to distribute your PE materials. Make sure you have the address, phone number, email, and any contact information you need to quickly reach these organizations.

Assemble a spreadsheet or database to manage organizational contact information. In addition to managing the contact information for your conduit organizations and community partners, you may also want to include the name of the target population you expect that organization to help you reach. Having such a system can prove useful if you have an exceedance: you can use it to print mailing labels; organize a phone tree; and track your efforts to reach vulnerable populations, various language communities, and non-bill paying customers.

Learn from the Professionals and Recruit Advocates. Meet with your local health department officials and ask them about the most effective means of communicating to target populations in your community (see Step 3).

Educate and Learn from Your Advocates. Explain why lead is something you monitor, how you monitor, what you are required to do in the event an exceedance, how they can help you and why they should care to help you, what they can expect to receive from you in the event of an exceedance, and what you would like them to do. Ask them what they have found to be effective methods for sharing health risk information with your target audiences.

Remember: To reach vulnerable populations with information about lead, water systems are **required** to conduct targeted outreach to:

- ▶ Local public health agencies
- ▶ Public/private schools or school boards
- ▶ WIC/Head Start centers
- ▶ Public/private hospitals and clinics
- ▶ Pediatricians and pediatric nurse practitioners
- ▶ Family planning clinics
- ▶ Local welfare agencies

Water systems are required to make a good faith effort to conduct targeted outreach to:

- ▶ Licensed childcare centers
- ▶ Public and private pre-schools
- ▶ Obstetricians-Gynecologists and Midwives

Appendix C contains additional information on how to locate these organizations

In addition to the organizations you are **required** to conduct outreach to, EPA strongly recommends that water systems also contact:

- ▶ Maternity programs/birthing classes
- ▶ Teen parent programs
- ▶ Parent teacher organizations
- ▶ Parent support organizations
- ▶ Women’s shelters
- ▶ Family/general practices and nurse practitioners
- ▶ Institutes of higher education
- ▶ Local non profit health groups

In addition to these organizations that have access to high-risk populations, EPA recommends reaching out to conduit organizations that can help you to reach non-bill paying and other target audiences including:

- ▶ Citizen’s assistance offices to request that they place your materials in their lobbies or waiting rooms;
- ▶ Health insurers who can include your messages in their regular communications to their provider network and members;
- ▶ Outlets that accept government payment for goods and services, such as supermarkets that take food stamps or WIC coupons;
- ▶ Low income/HUD housing where you can place posters; and
- ▶ Non-profit organizations, such as soup kitchens, religious organizations, and others, that provide services to people who may not receive a water bill.

TIP: While systems serving over 100,000 customers are **required** to provide information on their system or other publicly accessible Web site, systems of all sizes are encouraged to also utilize electronic dissemination where available.

You should also share key information and messages with all of your employees. Your system’s employees are all ambassadors for the system as they go about doing their work. Keeping them well informed is critical, as they will get questions and should be prepared to address issues from your customers.

It is ideal to establish relationships and mechanisms for sharing information with such conduit organizations before an action level exceedance occurs. By coordinating with these groups, you can establish a ready-to-go plan for communication, build understanding of why information about lead in drinking water is important and why young children, infants, and pregnant women need to know about lead in drinking water, and prepare staff at these organizations to discuss lead health risks.

Step 6: Determine Your Outreach Material Needs

The next step you should take in designing your PE program is determining what materials you will provide and how you will make them available. As you are identifying how best to reach your target audiences, keep in mind any production processes that will need to occur between the time you finalize your materials and the time they are ready for distribution.

TIP: Systems should identify groups (e.g. schools or community organizations) that can translate PE materials for non-English consumers.

- ▶ Identify approximately how many copies of brochure, pamphlets, and posters you will need to print for quick distribution. Be sure to make extra copies of all materials should you need to distribute several mailings during the exceedance.
- ▶ Determine if your system has the capability, to quickly generate these materials and in the needed quantities.
- ▶ Consider financial needs and resources of outreach activities, (i.e. printing costs).

- ▶ Identify vendors in your community that can quickly reproduce the materials that you need and regularly check in with them to ensure that they can meet your needs.
- ▶ Negotiate an agreement with printers ahead of time so that you are not forced to negotiate your terms when you are under pressure to meet a deadline.
- ▶ Ask your community partners if they have the capability to assist you with preparation and production of materials.

TIP: When preparing your materials, keep in mind the variety of customers that you serve and their unique needs (Step 2). For example, your audience research will tell you if you have a large Hispanic population in your service area. You may learn from your partner organizations that many Hispanics in your community listen to specific radio stations, watch certain television programs, read particular periodicals, and convene at specific locations.

Assemble additional materials you may want to distribute with your PE materials, such as fact sheets and other supporting materials on the health effects of lead. These materials are available at no-cost from EPA's Safe Drinking Water Hotline at 1(800) 426-4791 or EPA's Web site at <http://www.epa.gov/safewater/lead/index.html>. In the event of an action level exceedance, you will already have the explanatory materials your consumers may ask for after receiving your notices. EPA's materials are updated periodically, so check the Web site regularly to make sure that you have the most recent versions. The Hotline also can provide phone numbers for state laboratory certification offices where consumers can get a list of labs certified to conduct lead testing.

Step 7: Update Your PE Program Plan

During the course of your monitoring activities (and if there is no exceedance), you should update your PE Program Plan periodically. Contact all of your community partners (if you have not done so on a regular basis) and determine if you have correct contact information. Update any material templates you have created (with any new information on corrosion control or other activities undertaken by your water system to control lead in drinking water). Contact all of the printers and vendors that you will use to produce your materials in the event of an exceedance. Update your local public health agencies and providers about your lead program and any activities you are taking to reduce lead and monitor drinking water supplies. Finally, contact your local media to update them on your efforts and to address any questions they may have about your systems' monitoring or corrosion control activities.

By keeping your plan updated and maintaining regular contact with your community partners and the media, you will ensure that, should you have an exceedance, you will have all of the mechanisms in place to quickly and effectively respond with your PE program.

Section 3

Implementing Your Public Education Program

A lead action level exceedance triggers the Lead and Copper Rule (LCR) requirements for Public Education (PE) and establishes a timeline for performing required activities. In most cases, your PE activities must be implemented within 60 days of the end of the monitoring period in which the exceedance occurred. See Section 1 to review the specific requirements for PE if you have an exceedance.

Section 2 of this guidance document outlined the suggested steps you should take to design your PE program, prior to an exceedance. In this section, key activities for implementing your PE program are presented. These activities include:

- ▶ **Produce Your PE Materials**
- ▶ **Distribute Your PE Materials**
- ▶ **Conduct Media Outreach**
- ▶ **Communicate Directly with the Public**
- ▶ **Conclude Your PE Activities (at the End of the Exceedance)**

TIP: It is important to remember that education programs can only be effective when they are administered over time. Competing demands for people's attention—information overload—can be a significant impediment to understanding. Therefore, you should meet the initial PE requirements as soon as possible and pace your additional PE activities over several months to ensure that your public has multiple opportunities to receive your messages.

The checklist below provides the key activities your program will need to take in order to effectively implement the PE requirements and reach your key audiences. Refer to *Appendix B* for a checklist you can tear out and use as you complete your activities.

Checklist for Implementing Your PE Program

- ✓ Notify your Primacy Agency of an action level exceedance triggering your PE program.
- ✓ Notify your system's decision maker (owner or president) of the exceedance.
- ✓ Review your PE requirements (Section 1) and the timeline for delivering PE materials (see Tables 2 or 3 on Pages 8 or 9).
- ✓ Notify your communication or outreach team of the exceedance and enlist their assistance in implementing your plan.
- ✓ Inform all of your employees about your activities so that they can respond to customer questions or issues.
- ✓ Implement your phone tree and contact your conduit organizations to let them know that an exceedance has occurred and that you will be sending them materials for distribution.
- ✓ Update your PE material templates with information on the exceedance, actions you are taking to address it, and any other relevant information.
- ✓ Identify groups (e.g. schools and community organizations) that can translate PE materials for non-English consumers.
- ✓ Prepare mailing labels for conduit organizations and other dissemination mechanisms.
- ✓ Duplicate your pamphlets, flyers, posters, or other printed materials and prepare to deliver them to your customers and conduit organizations.
- ✓ Meet with representatives from your local health agency (in person or by phone) to alert them to the exceedance and provide them with materials they can distribute to the public.
- ✓ Send a press release to your local media outlets (print, TV, and radio).
- ✓ Reach out to your established media contacts and work with them to distribute your key messages.
- ✓ Coordinate with your spokesperson/spokespeople to conduct media interviews.
- ✓ Document your PE activities and report back to your Primacy Agency on completion of activities as required.
- ✓ Update your system's Web site (if applicable) to include PE materials and key messages for the public.
- ✓ Schedule and conduct public meetings as needed.
- ✓ Continue to conduct your monitoring activities as required.
- ✓ Notify the public when the action level exceedance has ended.

Produce Your PE Materials

A critical first step in implementing your PE program in the event of an exceedance is to produce the materials you have determined in your planning that you will need to distribute to your target audiences. The following information will help you finalize your materials in accordance with the LCR requirements and prepare them for quick delivery to your conduit organizations and your community.

Printed Materials

See Section 1 for a reminder of the LCR requirements for content for PE materials.

Appendix B provides template pamphlets with the mandatory language systems must provide to their customers. Note that electronic fill in the blank versions of these materials are available on the internet at www.epa.gov/safewater/lcrmr/compliancehelp.html for systems to update and customize the documents with their system-specific information.

Press Releases or Media Notices

Water systems are required to provide two press releases per year for the duration of the exceedance. (See Section 1).

Your press releases should be brief informational notices that are ready to be 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. (A sample press release template is provided in *Appendix B*). When conducting your planning, ask your media contacts what would make a press release stand out to them and what they are most likely to publish so that you can plan ahead to secure media coverage in the event of an exceedance.

Tips for Creating PE Materials That Work

- ▶ **Place the most important information first.** Most readers only read the top half of printed materials and focus on large text such as headings and bolded text. The most important information, especially instructions to protect consumers' health, should be placed on the top half of the notice in large print. Smaller type is appropriate for less critical elements.
- ▶ **Limit wordiness.** A question and answer or heading and subheading format is easy to read and guides readers to the information that is likely to concern them. Risk communication studies have shown that when dealing with potential health risks, people become emotional and have difficulty processing information. The best way to help the public understand your messages is to communicate a limited number of messages and to strive for consistency of messaging across all communications media. If people hear your few, simple messages over and over again, they are more likely to accurately estimate their risks and to take the right steps to manage them.
- ▶ **Use graphics,** such as photographs or drawings, to illustrate your messages. Wherever possible, provide an image that describes the actions the public should take to protect themselves from potential health risks.
- ▶ **Highlight the name of your system,** especially where people in your area are served by more than one water system. You may also want to prepare a map showing the area you serve, especially if it extends beyond city limits. You may want to print materials on your system's letterhead which, coupled with the material's title, will help people recognize that it is important.

Material Templates

Appendix B contains templates for a variety of public education materials that your system can use to support your efforts. These templates include:

- ▶ Water Bill Insert Statement
- ▶ Brochure
- ▶ Poster
- ▶ Press Release
- ▶ Print Advertisement
- ▶ Listserv or Web site Announcement
- ▶ Public Service Announcement (text for a radio or television PSA)
- ▶ Consumer Notice of Tap Water Results

Additional Materials

Table 5 contains a list of suggested materials that may be useful in conducting additional PE outreach activities.

Fact sheets - Provide basic, objective, detailed information on an issue or topic. Fact sheets can provide information about the problem, recommended consumer actions, health risks, actions being taken, and treatment goals. Fact sheets should be easily understood by the broadest spectrum of audiences.

Tip sheets and brochures – Outline specific actions residents should take. They should be clear, concise, and present the action steps in a simplified manner.

Talking points – Give water system representatives and expert spokespeople tips on communicating about the exceedance and the treatment process. The talking points highlight key messages that should be delivered to the target audience in a clear and effective manner.

Charts and illustrations – Visuals can help to convey complex messages that may be difficult to understand or to communicate textually. Examples include: the incidence of elevated lead levels in homes with and without lead service lines, and the relative numbers of homes in each category; and a “source to tap” representation of how water gets from the source to customers’ taps.

Fliers – If you plan to host public meetings, fliers can be used to publicize upcoming meetings and other events. They should be translated into the most common languages spoken among the target audience.

Technical/medical materials – Doctors, nurses, clinic workers, and other health care professionals may prefer technical information about the potential health effects of lead in drinking water.

Deliver Your PE Materials

Once you have produced your PE materials, the next step is to deliver them through the various conduit organizations and communications channels that you identified in your program design (See Section 2, Step 6).

Table 5. Suggestions for Materials in Various Communications Venues

Materials	Communication Routes
Fact sheets	<ul style="list-style-type: none"> ▶ Insert in media press kits ▶ Include in conduit organization mailings ▶ Hand out at public meetings
Tip sheets	<ul style="list-style-type: none"> ▶ Include in conduit organization mailings ▶ Hand out at public meetings
Talking points	<ul style="list-style-type: none"> ▶ Use for press events ▶ Use at public meeting presentations ▶ Provide to utility telephone receptionists or others taking calls from the public
Press releases	<ul style="list-style-type: none"> ▶ Issue in advance of press events and public meetings
Charts and illustrations	<ul style="list-style-type: none"> ▶ Provide as graphics to television stations and print media ▶ Display and distribute as handouts at public meetings ▶ Use in briefing slides or display as posters for press events and public meetings
Fliers	<ul style="list-style-type: none"> ▶ Distribute in advance of public meetings
Public service materials	<ul style="list-style-type: none"> ▶ Distribute PSAs to radio and television stations and print media ▶ Include in conduit organizations mailings ▶ Distribute at public meetings
Technical/ medical materials	<ul style="list-style-type: none"> ▶ Distribute to community leaders and health care professionals

Bill Inserts

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 notice provided in *Appendix B*. Remember: in an exceedance you are required to provide lead information no less than quarterly on each water bill using the required language.

TIP: 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.

Local Newspapers

CWSs must deliver information within 60 days after the end of the monitoring period in which the exceedance occurred and twice every 12 months on a schedule agreed upon with the Primacy Agency 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 and weekly newspapers to get your message delivered.

TIP: Under the LCR, small systems (serving 3,300 or fewer people) are no longer required to deliver PSAs. Check with your State Primacy Agency to be sure that you are exempt from this requirement.

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 press 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. Large CWSs should promote radio and television coverage of lead in drinking water issues as an effective way to get the message delivered to a mass audience at no cost.

Public Service Announcements

Section 141.85(b) of the regulation does not specify the minimum content of the public education language to be broadcast to customers. 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 can be provided to radio stations; the text for a video spot or an actual videotaped message can be provided to television stations.

TIP: The Short Term revisions to the LCR do not require water systems to produce PSAs. However, PSAs are one of the additional activities that large and small water systems can provide to meet the additional PE requirements.

EPA encourages CWSs to submit PSAs to five radio or television stations with the largest audiences in the community. If you select this method, PSAs must be submitted once every twelve months for as long as the system continues to exceed the lead action level.

Conduct Media Outreach

To help disseminate your PE messages, call on your established media contacts who already understand your mission to inform and protect the public. When you pitch messages to newspapers, TV, or radio outlets, clearly explain what information you are trying to communicate and why. Explain to the media in clear and open terms what you are required to do to communicate about an action level exceedance and make it easy for them to identify the most important information, including information that led to detection of the action level exceedance, the populations most at risk from elevated lead levels in drinking water and potential health effects, actions consumers can take to reduce their risks, and actions your water system is taking to address the problem. The easier you make it for the media to accurately cover your story, the more likely you are to get the results you want.

TIP: Whenever possible, visit your media contacts in person to request coverage.

TIP: In addition to sending the required press releases or notifications, consider:

- ▶ Offering a spokesperson to be interviewed on the air. Ideally, you have identified and prepped spokespeople to understand your program and how to deal with the pressures associated with an interview, so that they will seem calm (and not evasive or defensive).
- ▶ Writing a draft story or an op-ed for the newspaper and providing a completed draft to an editor.
- ▶ Providing radio and television programs with talking points, sources for impartial information (such as links to the EPA or CDC Web-based information on lead), contacts at the health department, and suggestions of people they can interview for a story.
- ▶ Providing statistics, charts, graphics (photographs, video footage, drawings, maps) along with your text to make it easy for different types of media to broadcast your story.

When you send press releases or notices to radio and TV stations and newspapers, write “PRESS RELEASE FOR DRINKING WATER NOTICE” at the top of the notice to emphasize its importance and ensure that it will be printed or aired in a timely manner.

Don't be upset if a media story isn't exactly as you would want it, but politely tell a reporter if a significant piece of information is wrong or missing so that they can get the correct information out to the public.

If a newspaper will not publish a story or press release, you may want to consider buying space to print the notice in its entirety, though it is not required. You should buy an advertisement as close

to the front of the paper as possible and make it large enough that people will easily see it. Your initial planning should have determined if this may be a concern and if you should budget for purchasing advertisement space.

Communicate Directly with the Public

Effective PE campaigns can minimize the chances of overreaction to an action level exceedance and can help focus your community's attention on the source of a problem. A robust PE campaign that explains what an exceedance means and the specific steps you are taking to address the issue can be an excellent public relations tool. Such a campaign will help to create a partnership between you and your customers that demonstrates your commitment to providing safe water and reduces the prevalence of the "us versus them" mentality.

Quickly distributing the required and recommended materials to all your target populations will help reduce the chance that people will become alarmed and overreact to information about an exceedance. If you have planned your distribution of materials through communication channels and partners effectively and established close relationships with conduits, your materials should reach your community promptly and educate them about the issue.

Public Meetings

In addition to distributing messages and materials to your community, public meetings are an effective avenue for directly communicating with your audiences about the exceedance and your activities to address it. Well advertised public meetings provide a forum where the public can ask questions and meet individuals responsible for addressing the lead issue. Many public meeting formats and styles are available. A few options are described below.

Speakers' forums feature formal presentations by a speaker or group of speakers, with questions taken during or after their presentations. This format ensures that the message is specific and that everyone receives the same message, and offers the greatest control over the content, flow, and outcome of the event. However, it allows limited interaction with the audience, with the exception of a brief question and answer period, and therefore restricts the amount of public feedback received.

In **round table discussions**, the public is given an opportunity to present their opinion or ask questions in a facilitated discussion. This format can be a facilitated open dialogue among all participants, or small group discussions between members of the public with facilitators or experts moderating the conversations. Like testimony, round table discussions can offer a great deal of interaction and opinion sharing, and are a good way to gauge public opinion. Likewise, planners have little control over the content. All participants may not receive the same message, especially where multiple conversations take place simultaneously.

Open houses are a one-on-one information exchange format, where experts sit at tables or booths and the public is invited to talk to them, share their concerns, and ask questions. Written materials can be available

Tips for Working with the Media

- ▶ Be truthful and up-front about local water quality issues and the exceedance.
- ▶ Don't be defensive when answering questions.
- ▶ Answer questions as well as you can, but don't be afraid to say that you need to check on something if there is a question you can't answer (and once you find the information, quickly report back on what you've found).
- ▶ Keep in mind that reporters are not familiar with State or Federal requirements for safe drinking water - avoid technical jargon!
- ▶ Provide additional sources of information (for instance, referrals to State contacts, local experts, or EPA fact sheets).
- ▶ Be sensitive to the fact that reporters may be working on tight deadlines.
- ▶ Provide a list of the elements that the media must address to adequately inform the public about potential risks and how to manage them.

for the public to take with them. In this informal format, the public can “digest” what they want, either a brief, direct answer to a question or detailed information. All participants do not receive the same message (i.e., what they learn depends on what they ask). While there is no way to anticipate the content of topics raised, this approach offers more control than other open forums because the exchange is one-on-one, not across a large group.

Availability sessions combine structured speakers forums and open houses. Prior to formal presentations, speakers are available to talk to people and answer questions. The structured presentations offer an opportunity to disseminate the message as planned. The one-on-one interaction supplements the formal information exchange by giving citizens an opportunity to ask questions or speak to an involved party about their concerns. This dialog also can help the speakers anticipate questions or concerns that may be raised in front of reporters and a large audience.

Conclude Your PE Activities at the End of the Exceedance

Your public education program is required to provide ongoing messages until the action level exceedance has ended. This continued education effort will keep your public informed about any continuing issues related to lead in drinking water and keep them abreast of progress your system is making toward resolving the problem. Once the issue has been resolved, continue to provide the public information about lead in drinking water. Your Consumer Confidence Report is an opportunity to provide ongoing education to your customers about the importance of addressing lead in drinking water and your program’s monitoring and education activities. (See Section 1 for required language for use in CCRs.)

After the exceedance has ended, conducting follow-up focus group testing with your customers can help to ensure that the messages in your materials were received as intended and that all target audiences understood your materials. The results of such an analysis can help mold future efforts and guide you on areas where you may want to refine your planning.

Considerations for Public Meetings

Meeting planning is an involved process that requires many detailed steps.

- ▶ Public meetings should be held as soon as possible following an exceedance. The availability of newsworthy information generates public interest and increases the likelihood of a high turnout at meetings. Proper spacing of the meetings over time is important to keep the media and public interested in the issue.
- ▶ Scheduling of public meetings should take into consideration other events that could pose conflicts, such as the school calendar (e.g., start of school, vacations), other community meetings, holidays, or other events of importance to the target audience.
- ▶ Meeting site selection should be based on attracting the greatest variety of interested audience segments. Meetings should be geographically distributed throughout the community. Selecting locations that are convenient to large numbers of people in certain groups can increase interest and boost media coverage geared to those groups.
- ▶ Proper publicity is a crucial planning step for each public event, because a high turnout is needed to ensure the widest distribution of the message. A few outreach considerations for public meetings are:
 - Where target populations are clustered in a few apartment communities, meeting notices should be posted on bulletin boards, in hallways, laundry rooms, and other public areas; placed as advertisements or articles in community newsletters; or be advertised through mailings to each apartment.
 - Local elected officials should be invited, and receive “courtesy calls” in advance of any public advertising.
 - Translators should be provided at meetings held in areas with significant non-English speaking populations. Provide sign-language interpreters for the hearing impaired.

Media surveys can assess how well the information was reported by television and radio stations and the press. Media coverage can be monitored by reviewing the Web sites of local media outlets, or purchasing the services of media surveillance firms. Relevant information includes the frequency of stories, the media through which they were reported, and the content of the stories (e.g., whether the most important facts were covered or if any erroneous information was reported).

Polling citizens can directly gauge their opinion of the outreach by determining citizens' awareness of the exceedance, how they perceived the information, where they received the information, and if they were satisfied with and could understand it. The telephone is the most common polling avenue, however, phone polls should be undertaken and interpreted with caution, as the subjects of a phone survey may not include low income residents with no telephone (door-to-door surveys are an option in these areas). Pollsters should be able to speak all of the languages represented in the service area. Your conduit organizations should be surveyed as well.

Conclusion

The steps outlined in this guidance document and the tips provided are designed to provide you with all of the background you need to design and implement an effective PE program. Following the guidance provided will allow you to reach out to all members of your community, including those that are the most vulnerable to adverse health effects from lead exposure, with messages and delivery methods that meet your community's diverse communication needs. The partnerships you create with your local media, public health community, and other key partners can serve as important ties for all of your work, regardless of whether your system experiences an exceedance. Most importantly, the guidance provided in this document establishes an effective framework for communicating with your public about the many issues your water system addresses.

Appendix A

Frequently Asked Questions

Lead in Drinking Water – Frequently Asked Questions Template*

What are the Sources of Lead?

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, and cosmetics. Other sources of lead include exposures in the work place and exposure from certain hobbies (lead dust can be carried on clothing and shoes.) Lead is found in some toys, some playground equipment, and some children’s metal jewelry. Everyone, especially children, should be encouraged to regularly wash their hands to reduce lead dust exposure.

Why is there lead in my drinking water?

Lead is not usually found in water that comes from wells or water treatment plants. More commonly lead can enter drinking water when the water comes in contact with plumbing materials such as lead pipes or lead solder, or when it comes in contact with faucets, valves, and other components made of brass (brass may have lead in it). This interaction is referred to as corrosion.

Even though your public water supplier may deliver water that meets all federal and state standards for lead, you may end up with elevated lead levels in your drinking water because of the plumbing in your home.

What is the water system doing about it?

Our water system is working to educate the public about steps for reducing exposure to lead in drinking water and the health risks associated with exposure to lead. In addition, our water system is conducting a number of activities aimed at reducing high lead levels and possible exposures. For example [insert information on your system’s corrosion control program; lead service line replacement efforts; and/or other activities you are undertaking to reduce lead in drinking water in your community.]

What can I do to make my water safer?

Flush your pipes before drinking, and only use cold water for cooking and drinking. The more time water has been sitting in your home’s pipes, the more lead it may contain. Anytime the water in a particular faucet has not been used for six hours or longer, “flush” your cold-water pipes by running the water until it becomes as cold as it will get. This could take as little as five to thirty seconds if there has been recent heavy water use such as showering or toilet flushing. Otherwise, it could take two minutes or longer. Your water utility will inform you if longer flushing times are needed to respond to local conditions. Please note that flushing may not be effective in high-rise buildings.

TIP: If you are considering replacing lead containing plumbing fixtures, keep in mind that plumbing fixtures labeled lead-free may have up to 8% lead.

Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead.

You may also consider using a lead reducing filter tested and certified by an independent third party for such ability per the standards set by NSF International.

* **Note:** These questions and answers are provided to water systems to help address the types of questions that may arise from customers during implementation of a PE Program. This information or the language above should not be used as a substitute for the mandatory content required under the LCR, as outlined in Section 1.

What will lead do to me or my family?

Lead is a toxic metal that is harmful to human health when it is ingested or inhaled. The greatest risk is to infants, young children, and pregnant women. Small amounts slow down normal mental development in growing children and alter the development of other organs and systems. The effects of lead on the brain are associated with lowered IQ in children. Adults with kidney problems and high blood pressure are more likely to be affected by low levels of lead than the general population. Lead is stored in the bones allowing it to be released even after exposure stops. The presence in bone increases the concern for exposure at all points of the life cycle.

EPA estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Infants who consume mostly formula prepared with tap water can receive 40 to 60 percent of their exposure to lead from drinking water.

Does boiling water remove lead?

No, boiling water does not remove lead. Boiling water can concentrate lead levels and increase the amount of lead in water.

If I boil water for making formula, will it increase or remove lead?

Boiling water will concentrate lead levels, which can increase the amount of lead in the water. Always flush your faucet and use water from the cold water tap when making formula.

Why can't I use hot water from the tap for drinking, cooking, or making baby formula?

Hot water dissolves lead more quickly than cold water and is therefore more likely to contain greater amounts of lead. Never use water from the hot water tap for drinking, cooking, or making baby formula.

Will my filter remove lead?

Some filters can remove lead from drinking water. If you use a filter, be sure to get one that is tested and certified by an independent third party per the standards developed by NSF International. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.

My neighbors got their water tested and found lead. Is my water safe/are my test results accurate?

Each home should be tested separately for lead. Lead usually gets into drinking water through contact with plumbing materials such as lead pipes or lead solder, or faucets, valves, and fixtures made of brass (brass contains some lead). Since each home has different plumbing pipes and materials, test results are likely to be different for each home.

Can I get my water tested for lead?

Yes. EPA recommends testing your water for lead by a certified laboratory; lists are available from your state or local drinking water authority. Testing costs between \$20 and \$100. Since you cannot see, taste, or smell lead dissolved in water, testing is the only sure way of telling whether there are elevated levels of lead in your drinking water. You should be particularly suspicious if your home has lead pipes (lead is a dull gray metal that is soft enough to be easily scratched with a house key), if you see signs of corrosion (frequent leaks, rust-colored water, stained dishes or laundry), or if your non-plastic plumbing is less than five years old. Your water supplier may have useful information, including whether the service connector used in your home or area is made of lead. Testing is especially important in high-rise buildings where flushing may not be effective.

What do you mean when you say the Action Level has been exceeded?

The action level for lead is a level at which the regulatory agency is concerned about corrosion and requires water systems to take additional steps to protect users of the water. Our water system is required to notify the public when our test results show levels of lead above the 15 ppb action level in >10% of samples collected.

Is there anything else I can do beyond flushing my tap or buying bottled water?

Test your water first to determine whether your water has elevated levels of lead. If there is lead in your water, you may want to consider buying a water filter to lower lead levels. Replacing pipes and fixtures with products certified against NSF/ANSI Standard 61 can lower lead levels. In addition, be sure to clean all water outlet screens regularly to remove small sediments that may contain lead.

Where can I get more information on lead?

For more information, visit www.epa.gov/lead or call EPA's Safe Drinking Water Hotline at 1-800-426-4791. Your state or local public health department will also be able to provide information about lead.

Appendix B

Public Education Material Templates*

- ▶ Checklist for Implementing Your PE Program
- ▶ General Public Education Notice and ListServ/Email Announcement
- ▶ Web site Announcement
- ▶ Public Service Announcement
- ▶ Water Bill Statement/Insert
- ▶ Press Release
- ▶ Brochure
- ▶ Poster
- ▶ Consumer Notice of Tap Water Results

*Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

Checklist for Implementing Your PE Program

- Notify your Primacy Agency of an action level exceedance triggering your PE program.
- Notify your system's decision maker(s) of the exceedance.
- Review your PE requirements (Section 1) and the timeline for delivering PE materials (see Tables 2 or 3 on Pages 8 or 9).
- Notify your communication or outreach team of the exceedance and enlist their assistance in implementing your plan.
- Inform all of your employees about your activities so that they can respond to customer questions or issues.
- Implement your phone tree and contact your conduit organizations to let them know that an exceedance has occurred and that you will be sending them materials for distribution.
- Update your PE material templates with information on the exceedance, actions you are taking to address it, and any other relevant information.
- Identify groups (e.g. schools and community organizations) that can translate PE materials for non-English consumers.
- Prepare mailing labels for conduit organizations and other dissemination mechanisms.
- Duplicate your pamphlets, flyers, posters, or other printed materials and prepare to deliver them to your customers and conduit organizations.
- Meet with representatives from your local health agency (in person or by phone) to alert them to the exceedance and provide them with materials they can distribute to the public.
- Send a press release to your local media outlets (print, TV, and radio).
- Reach out to your established media contacts and work with them to distribute your key messages.
- Coordinate with your spokesperson/spokespeople to conduct media interviews.
- Document your PE activities and report back to your Primacy Agency on completion of activities as required.
- Update your system's Web site (if required) to include PE materials and key messages for the public.
- Schedule and conduct public meetings as needed.
- Continue to conduct your monitoring activities as required.
- Notify the public when the action level exceedance has ended.

⁷Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmt/compliancehelp.html>

General Public Education Notice and ListServ/Email Announcement Template

The following language meets the revised PE requirements under the 2007 short-term revisions and clarifications to the Lead and Copper Rule (LCR). **Your notice must include the topic areas in bold below.** Anything in italics under each topic area is required language and cannot be changed while anything in regular text must be covered, but you have the flexibility to use either the suggested language or your own words to cover these topics.

Your notice must begin with the following opening statement (though you have the option to include a title of the pamphlet or brochure of your choosing):

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

[Insert name of water system] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and children 6 years and younger. Please read this notice closely to see what you can do to reduce lead in your drinking water.

Health Effects of Lead

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

Sources of Lead

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the work place and exposure from certain hobbies (lead can be carried on clothing or shoes). Lead is found in some toys, some playground equipment, and some children's metal jewelry.

Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8 percent lead to be labeled as "lead free."

[Insert utility specific information describing your community's source water – e.g. "The source of water from XX Reservoir does not contain lead" or "Community X does not have any lead in its source water or water mains in the street."] When water is in contact with pipes [or service lines] or plumbing that contains lead for several hours, the lead may enter drinking water. Homes built before 1988 are more likely to have lead pipes or lead solder.

EPA estimates that 10 to 20 percent of a person's potential exposure to lead may come from drinking water. Infants who consume mostly formula mixed with lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water.

Don't forget about other sources of lead such as lead paint, lead dust, and lead in soil. Wash your children's hands and toys often as they can come into contact with dirt and dust containing lead.

¹Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrrmt/compliancehelp.html>

Steps You Can Take To Reduce Your Exposure To Lead In Your Water

- 1. Run your water to flush out lead.** Run water for 15-30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹
- 2. Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
- 3. Do not boil water to remove lead.** Boiling water will not reduce lead.
- 4. Look for alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.
- 5. Test your water for lead.** Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- 6. Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.
- 7. Identify and replace plumbing fixtures containing lead.** Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as "lead free." Visit the Web site at www.nsf.org to learn more about lead-containing plumbing fixtures.

What Happened? What is Being Done?

[Insert information about how and when the exceedance was discovered in your community and provide information on the source(s) of lead in the drinking water, if known.]

[Insert information about what your system is doing to reduce lead levels in homes in your community.]

[Insert information about lead service lines in your community, how a consumer can find out if they have a lead service line, what your water system is doing to replace lead service lines, etc.]

[Insert information about the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes?]

For More Information

Call us at [Insert Number] (if applicable) or visit our Web site at [insert Web site Here]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead or contact your health care provider.

[We recommend you include the name of your system and the date that the information is being distributed, along with the state water system ID, somewhere on the notice.]

¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.

²Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmt/compliancehelp.html>

General Public Education Notice and ListServ/Email Announcement Template (Spanish)

The following language meets the revised PE requirements under the 2007 short-term revisions and clarifications to the Lead and Copper Rule (LCR). **Your notice must include the topic areas in bold below.** Anything in *italics* under each topic area is required language and cannot be changed while anything in regular text must be covered, but you have the flexibility to use either the suggested language or your own words to cover these topics.

Your notice must begin with the following opening statement (though you have the option to include a title of the pamphlet or brochure of your choosing):

INFORMACIÓN IMPORTANTE ACERCA DEL PLOMO EN SU AGUA POTABLE

[Insert name of water system] ha encontrado altos niveles de plomo en el agua potable de algunos domicilios y edificios. El plomo puede causar serios problemas a la salud, especialmente a las mujeres encintas y a los niños de 6 años o menores. Por favor lea esta información atentamente para ver qué puede hacer para reducir el plomo en su agua potable.

Efectos del plomo en la salud

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones y también puede interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro.

Fuentes del plomo

El plomo es un metal común que se encuentra en el medio ambiente. El agua potable es una posible fuente de exposición al plomo. Las fuentes principales de exposición al plomo radican en la pintura con plomo, la tierra o el polvo contaminado con plomo y ciertos materiales de fontanería. Además, el plomo puede encontrarse en ciertos tipos de cerámica, peltre, accesorios de latón, alimentos y de productos cosméticos. Otras fuentes de exposición incluyen el lugar de trabajo y la exposición asociada con ciertos pasatiempos (es posible transportar plomo en la ropa o los zapatos). El plomo se halla en algunos juguetes, equipos de parques infantiles y en ciertas joyas metálicas para niños.

Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar “sin plomo,” pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse “sin plomo.”

[Insert utility specific information describing your community’s source water – e.g. “The source of water from XX Reservoir does not contain lead” or “Community X does not have any lead in its source water or water mains in the street.”] Cuando el agua entra en contacto con tuberías [o líneas de servicio] o con fontanería que contiene plomo y durante varias horas, el plomo puede introducirse en el agua potable. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo.

La EPA calcula que de 10 a 20 por ciento de la exposición posible de una persona al plomo puede provenir del agua potable. Los infantes que consumen mayormente fórmula para bebés mezclada con agua que contiene plomo pueden ingerir con el agua potable hasta entre 40 y 60 por ciento de su exposición al plomo.

No se olvide que existen otras fuentes de plomo tales como la pintura con contenido de plomo, el polvo de plomo y el plomo en la tierra. Lave las manos de sus hijos y los juguetes a menudo ya que pueden entrar en contacto con el polvo y la suciedad que contienen plomo.

Medidas que usted puede emprender para reducir su exposición al plomo en el agua

- 1. Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹
- 2. Utilice agua fría para cocinar y para preparar la fórmula para bebés.** No cocine ni beba agua del grifo de agua caliente ya que el plomo se disuelve más fácilmente en agua caliente. No utilice el grifo de agua caliente para preparar la fórmula para bebés.
- 3. No hierva el agua para eliminar plomo.** El agua hervida no reduce el plomo.
- 4. Busque otras fuentes o formas de tratar el agua.** Usted puede comprar agua en botellas o un filtro de agua. Lea el embalaje para cerciorarse de que el filtro está aprobado para reducir el plomo, o póngase en contacto con NSF International, marcando el 800-NSF-8010 ó visite www.nsf.org para más información sobre las normas de rendimiento de los filtros de agua. Asegúrese de mantener y de reemplazar el dispositivo filtrante conforme a las instrucciones del fabricante para proteger la calidad del agua.
- 5. Pida que se analice su agua para saber si tiene plomo.** Llámenos al [insert phone number for your water system] para saber cómo obtener un análisis del plomo en su agua. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- 6. Pida un análisis de la sangre de sus hijos.** Póngase en contacto con el departamento de salud de su zona o con su proveedor de atención médica para saber cómo puede obtener un análisis de sangre de su hijo si es que le preocupa una posible exposición.
- 7. Identifique y reemplace el equipo de fontanería que contenga plomo.** Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar “sin plomo”, pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse “sin plomo”. Visite el sitio Internet en www.nsf.org para aprender más acerca de los equipos de fontanería que contienen plomo.

¿Que pasó? ¿Qué se está haciendo?

[Insert information about how and when the exceedance was discovered in your community and provide information on the source(s) of lead in the drinking water, if known.]

[Insert information about what your system is doing to reduce lead levels in homes in your community.]

[insert information about lead service lines in your community, how a consumer can find out if they have a lead service line, what your water system is doing to replace lead service lines, etc.]

[Insert information about the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes?]

Para más información

*Llámenos al [Insert Number] (if applicable) ó visite nuestro sitio Internet [insert Web site Here]. Para más información sobre la reducción de la exposición al plomo en su hogar/edificio y los efectos del plomo, visite el sitio Internet de EPA en **www.epa.gov/lead** o póngase en contacto con su proveedor de atención médica.*

[We recommend you include the name of your system and the date that the information is being distributed, along with the water system ID, somewhere on the notice.]

Web Site Announcement Template

Large community water systems (serving greater than 100,000 people) are **required** to provide a Public Education notice on a publicly accessible Web site. The following language can serve as an announcement on the Web site, but to meet the revised PE requirements under the 2007 short-term revisions and clarifications to the Lead and Copper Rule (LCR), large CWSs should include a link to their General Public Education Notice, which includes all of the required language. Refer to page 45 of this Appendix for the General Public Education Notice template. Small systems are also encouraged to utilize electronic information dissemination where available.

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

[Insert name of your water system] found elevated levels of lead in drinking water in some homes/buildings in our community. Lead can cause serious health problems, especially for pregnant women and children 6 years and younger. Please read the following notice [insert link to Public Education Notice] closely to see what you can do to reduce lead in your drinking water and to learn what [Insert name of your water system] is doing to address this problem.

Call us at [insert your water system phone number] for more information Date [Insert the date posted]

[Provide your system's General Public Education Notice here or link to it within your Web site.]

Web Site Announcement Template (Spanish)

Large community water systems (serving greater than 100,000 people) are required to provide a Public Education notice on a publicly accessible Web site. The following language can serve as an announcement on the Web site, but to meet the revised PE requirements under the 2007 short-term revisions and clarifications to the Lead and Copper Rule (LCR), large CWSs should include a link to their General Public Education Notice, which includes all of the required language. Refer to page 47 of this Appendix for the General Public Education Notice template. Small systems are also encouraged to utilize electronic information dissemination where available.

INFORMACIÓN IMPORTANTE ACERCA DEL PLOMO EN SU AGUA POTABLE

[Insert name of your water system] ha encontrado altos niveles de plomo en el agua potable de algunos domicilios y edificios en su comunidad. El plomo puede causar serios problemas a la salud, especialmente a las mujeres encintas y a los niños de 6 años o menores. Por favor lea el siguiente aviso [insert link to Public Education Notice] detenidamente y aprenda qué puede hacer para reducir el plomo en su agua potable y qué hace [Insert name of your water system] para resolver este problema.

Llámenos a [insert your water system phone number] para más información - Fecha [Insert the date posted]

[Provide your system's General Public Education Notice here or link to it within your Web site.]

*Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

Public Service Announcement Template

The latest revisions to the LCR do not require water systems to produce Public Service Announcements. However, Public Service Announcements are one of the additional activities that large and small water systems can produce to meet the additional PE requirements (see Table 3). Although you should include the following information, which is consistent with the PE requirements under the 2007 short-term revisions and clarifications to the Lead and Copper Rule (LCR), the media outlets may opt to not include all of the information.

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

[Insert name of water system] found elevated levels of lead in drinking water in some homes/buildings in our community. Lead can cause serious health problems, especially for pregnant women and children 6 years and younger.

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil.

The following are some of the steps you can take to reduce your exposure to lead in your water including:

- ▶ **Run your water for 15 – 30 seconds to flush out lead.** [Or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the Primacy Agency approves the wording]
- ▶ **Use cold water for cooking and preparing baby formula.**
- ▶ **Do not boil water to remove lead.**

Call [insert name of your water system] at [insert number] (if applicable) or visit our Web site at [insert Web site Here] to find out how to get your water tested for lead or for more information. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead or contact your health care provider.

This notice is brought to you by [insert the name of your water system]. State Water System ID# [insert your water system's ID number] Date [Insert the date distributed]

¹Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

Public Service Announcement Template (Spanish)

The latest revisions to the LCR do not require water systems to produce Public Service Announcements. However, Public Service Announcements are one of the additional activities that large and small water systems can produce to meet the additional PE requirements (see Table 3). Although you should include the following information, which is consistent with the PE requirements under the 2007 short-term revisions and clarifications to the Lead and Copper Rule (LCR), the media outlets may opt to not include all of the information.

INFORMACIÓN IMPORTANTE ACERCA DEL PLOMO EN SU AGUA POTABLE

[Insert name of your water system] ha encontrado altos niveles de plomo en el agua potable de algunos domicilios y edificios en su comunidad. El plomo puede causar serios problemas a la salud, especialmente a las mujeres encintas y a los niños de 6 años o menores.

El plomo es un metal común que se encuentra en el medio ambiente. El agua potable es una posible fuente de exposición al plomo. Las fuentes principales de la exposición al plomo radican en la pintura que contiene plomo, la tierra o el polvo contaminado con plomo y ciertos materiales de fontanería.

A continuación siguen unos cuantos pasos para ayudarle a reducir su exposición al plomo en el agua, inclusive:

- ▶ **Deje correr el agua para 15 - 30 segundos para eliminar el plomo.** [Or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the Primacy Agency approves the wording.]
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.**
- ▶ **No hierva el agua para eliminar plomo.**

Llame a [insert name of your water system] marcando el [insert number] (si aplica) o visite nuestro sitio Internet en [insert Web site Here] para aprender cómo pedir un análisis de plomo en su agua o para más información. Para más información sobre la reducción de la exposición al plomo en su hogar/edificio y los efectos del plomo, visite el sitio Internet de EPA en www.epa.gov/lead o póngase en contacto con su proveedor de atención médica.

Esta notificación le ha sido entregada por [insertar el nombre de su sistema de aguas]. Número de identificación del sistema de aguas del estado [insert your water system's ID number] Fecha [Insert the date distributed]

Press Release Template

The revisions to the LCR PE **require** systems to provide two press releases per year during a lead action level exceedance. For small systems, the Primacy Agency can waive this requirement if the system provides a notice to each household. The following template contains information that is consistent with the LCR requirements. Providing local information, quotes from a local water system and/or public health official, and information about actions your system is taking to address the exceedance can help the media to accurately convey information about the exceedance and your system's action steps. Please note, media outlets may choose not to include all of the information that you provide in your Press Release.

PRESS RELEASE DRINKING WATER NOTICE

IMPORTANT INFORMATION ABOUT LEAD IN [INSERT NAME OF YOUR COMMUNITY] DRINKING WATER

Recent drinking water quality monitoring conducted by *[insert name of water system/community]* has found elevated levels of lead in drinking water in some homes/buildings in *[insert name of community or area served by your water system]*. Although the primary sources of lead exposure are lead-based paint and lead-contaminated dust or soil, the U.S. Environmental Protection Agency estimates that 10 to 20 percent of a person's potential exposure to lead may come from drinking water.

[Insert name of community] is concerned about the health of their residents because lead can cause serious health problems if too much enters your body from drinking water or other sources, especially for pregnant women and children 6 years and younger. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

[Insert information about what happened and what is being done? You may wish to include information about the exceedance and the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes? Explain the steps being taken to reduce lead levels, such as corrosion control treatment and/or lead service line replacement.]

There are steps you can take to reduce your exposure to lead in your water:

- ▶ **Run your water to flush out lead.** Run water for 15-30 seconds to flush lead from interior plumbing or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹
- ▶ **Use cold water for cooking and preparing baby formula.**
- ▶ **Do not boil water to remove lead.** Boiling water will not reduce lead.
- ▶ **Look for alternative drinking water sources or treatment of water.** You may want to consider purchasing bottled water or a water filter.
- ▶ **Test your water for lead.** Call us at *[insert phone number for your water system]* to find out how to get your water tested for lead.

¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.

²Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmt/compliancehelp.html>

- ▶ **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.
- ▶ **Identify and replace plumbing fixtures containing lead.**

There are several actions that [insert name of water system of community] are taking to address this lead in drinking water concern. [Insert a quote from a water system official letting the public know what actions the system is taking to address the lead action level exceedance or insert a list of action steps.]

Call [insert name of your water system] at [insert number] (if applicable) or visit [insert name of your water system] Web site at [insert Web site Here] to find out how to get your water tested for lead or for more information on steps [insert name of your water system] is taking to address the lead action level exceedance. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead or contact your health care provider.

[We recommend you include the name of your system and the date that the information is being distributed, along with the state water system ID, somewhere on the notice.]

Press Release Template (Spanish)

The revisions to the LCR PE **require** systems to provide two press releases per year during a lead action level exceedance. For small systems, the Primacy Agency can waive this requirement if the system provides a notice to each household. The following template contains information that is consistent with the LCR requirements. Providing local information, quotes, from a local water system and/or public health official, and information about actions your system is taking to address the exceedance can help the media to accurately convey information about the exceedance and your system's action steps. Please note, media outlets may choose not to include all of the information that you provide in your Press Release.

COMUNICADO DE PRENSA PARA EL AVISO SOBRE EL AGUA POTABLE

INFORMACIÓN IMPORTANTE SOBRE EL PLOMO EN EL AGUA POTABLE DE [INSERT NAME OF YOUR COMMUNITY]

El monitoreo reciente de la calidad del agua potable realizado por [insert name of water system/community] ha encontrado altos niveles de plomo en el agua potable de algunos hogares/edificios de [insert name of community or area served by your water system]. Aunque las fuentes principales de exposición al plomo radican en la pintura con plomo o en la tierra o el polvo contaminados con plomo, la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) de los Estados Unidos calcula que de 10 a 20 por ciento de la posible exposición al plomo de una persona puede provenir del agua potable.

La salud de sus residentes es de gran importancia para [Insert name of community] debido a que el *plomo puede causar serios problemas de salud si su cuerpo recibe demasiado plomo proveniente del agua potable u otras fuentes, especialmente en el caso de las mujeres encintas y de los niños de 6 años o menores. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro.*

[Insert information about what happened and what is being done? You may wish to include information about the exceedance and the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes?] Explain the steps being taken to reduce lead levels, such as corrosion control treatment and/or lead service line replacement.]

Existen pasos que usted puede seguir para reducir su exposición al plomo en el agua:

- ▶ **Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.**
- ▶ **No hierva el agua para eliminar plomo.** El agua hervida no reduce el plomo.

¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.

²Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrrmt/compliancehelp.html>

- ▶ **Busque otras fuentes o formas de tratar el agua.** Usted puede comprar agua en botellas o un filtro de agua.
- ▶ **Pida que se analice su agua para saber si tiene plomo.** Llámenos al [insert phone number for your water system] para saber cómo obtener un análisis del plomo en su agua.
- ▶ **Pida un análisis de la sangre de sus hijos.** Póngase en contacto con el departamento de salud de su zona o con su proveedor de atención médica para saber cómo puede obtener un análisis de sangre de su hijo si es que le preocupa una posible exposición.
- ▶ **Identifique y reemplace el equipo de fontanería que contenga plomo.**

Existen varias medidas que [insert name of water system of community] ha emprendido para resolver este tema del plomo en el agua potable. [Insert a quote from a water system official letting the public know what actions the system is taking to address the lead action level exceedance or insert a list of action steps.]

Llame a [insert name of your water system] marcando el [insert number] (si aplica) o visite el sitio Internet de [insert name of your water system] en [insert Web site Here] para aprender cómo puede pedir un análisis del plomo en su agua o para más información sobre los pasos que emprende [insert name of your water system] para resolver la excedencia del nivel de acción para el plomo. Para más información sobre la reducción de la exposición al plomo en su hogar/edificio y los efectos del plomo, visite el sitio Internet de EPA en www.epa.gov/lead o póngase en contacto con su proveedor de atención médica.

[We recommend you include the name of your system and the date that the information is being distributed along with the state water system ID, somewhere on the notice.]

Water Bill Language/Insert Template

The following paragraph includes language that meets the LCR PE requirements and must be included in water bill notification in the event of a lead action level exceedance; however, you should consult with the Primacy Agency because the rule allows the Primacy Agency to allow alternate message content and delivery mechanisms. Please note, the following statement may be placed directly on the water bill itself or included as an insert.

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

[Insert name of your water system] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information, please call [insert name and phone number of water system] or visit [insert your Web site].

Water Bill Language/Insert Template (Spanish)

The following paragraph includes language that meets the LCR PE requirements and must be included in water bill notification in the event of a lead action level exceedance; however, you should consult with the Primacy Agency because the rule allows the Primacy Agency to allow alternate message content and delivery mechanisms. Please note, the following statement may be placed directly on the water bill itself or included as an insert.

INFORMACIÓN IMPORTANTE ACERCA DEL PLOMO EN SU AGUA POTABLE

[Insert name of your water system] ha encontrado altos niveles de plomo en el agua potable de algunos hogares. El plomo puede tener graves consecuencias para la salud. Para más información, por favor llame a [insert name and phone number of water system] ó visite [insert your Web site].

Public Education Brochure

4. Look for alternative sources or treatment of water.

You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.



5. Test your water for lead. Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]



6. Get your child's blood tested. Contact your local health department or healthcare provider to find out how you can get your child tested for lead, if you are concerned about exposure.

7. Identify and replace plumbing fixtures containing lead. New brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as "lead-free."

WHAT HAPPENED? WHAT IS BEING DONE?

[Insert information about how and when the exceedance was discovered in your community and provide information on the source(s) of lead in the drinking water, if known.]

[Insert information about what your system is doing to reduce lead levels in homes in your community.]

[Insert information about lead service lines in your community, how a consumer can find out if they have a lead service line, what your water system is doing to replace lead service lines, etc.]

[Insert information about the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes?]

FOR MORE INFORMATION

Call us at [Insert Number] (if applicable) or visit our Web site at [insert Web site Here]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or contact your health care provider.

[We recommend you include the name of your system and the date that the information is being distributed, along with the state water system ID, somewhere on the notice.]

Lead in Drinking Water



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.

Important Information about Lead in Your Drinking Water

[Insert name of water system] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

HEALTH EFFECTS OF LEAD

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

SOURCES OF LEAD

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the work place and exposure from certain hobbies (lead can be carried on clothing

or shoes). Lead is found in some toys, some playground equipment, and some children's metal jewelry.

Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8 percent lead to be labeled as "lead-free."

[CWS – Insert utility specific information describing your community's source water – e.g. "The source of water from XX Reservoir does not contain lead" or "Community X does not have any lead in its source water or water mains in the street."] When water is in contact with pipes [or service lines], and plumbing containing lead for several hours, the lead may enter drinking water. Homes built before 1988 are more likely to have lead pipes or lead solder.

EPA estimates that 10 to 20 percent of a person's potential exposure to lead may come from drinking water. Infants who consume mostly formula mixed with lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water.

Don't forget about other sources of lead such as lead paint, lead dust, and lead in soil. Wash your children's hands and toys often as they can come into contact with dirt and dust containing lead.

STEPS YOU CAN TAKE TO REDUCE YOUR EXPOSURE TO LEAD IN YOUR WATER



1. Run your water to flush out lead. Run water for 15-30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primary Agency approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹

2. Use cold water for cooking and preparing baby formula. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.



3. Do not boil water to remove lead. Boiling water will not reduce lead.

¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.

²Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

Public Education Brochure (Spanish)

los filtros de agua. Asegúrese de mantener y de reemplazar el dispositivo filtrante conforme a las instrucciones del fabricante para proteger la calidad del agua.

5. Pida que se analice su agua para saber si tiene plomo. Llámennos al [insert phone number for your water system] para saber cómo obtener un análisis del plomo en su agua. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]



6. Pida un análisis de la sangre de sus hijos. Póngase en contacto con el departamento de salud de su zona o con su proveedor de atención médica para saber cómo puede obtener un análisis de sangre de su hijo si es que le preocupa una posible exposición.

7. Identifique y reemplace el equipo de fontanería que contenga plomo. Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar "sin plomo", pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse "sin plomo". Visite el sitio Internet en www.nsf.org para aprender más acerca de los equipos de fontanería que contienen plomo.

¿QUE PASÓ? ¿QUÉ SE ESTÁ HACIENDO?

[Insert information about how and when the exceedance was discovered in your community and provide information on the source(s) of lead in the drinking water, in known.]

PARA MÁS INFORMACIÓN

Llámenos al [Insert Number] (if applicable) ó visite nuestro sitio Internet [insert Web site Here]. Para más información sobre la reducción de la exposición al plomo en su hogar/edificio y los efectos del plomo, visite el sitio Internet de EPA en www.epa.gov/lead o póngase en contacto con su proveedor de atención médica

[We recommend you include the name of your system and the date that the information is being distributed, along with the water system ID, somewhere on the notice.]

[Insert information about what your system is doing to reduce lead levels in homes in community.]

[Insert information about lead service lines in your community, how a consumer can find out if they have a lead service line, what your water system is doing to replace lead service lines, etc.]

[Insert information about the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes?]

Plomo en el Agua Potable



[You may add your logo here.]

El plomo en su agua potable es un tema importante para la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) y [insert name of water supplier here]. Aunque el nivel de plomo es muy bajo en el agua potable de la mayoría de hogares, algunos domicilios en la comunidad tienen niveles de plomo que exceden el nivel de acción de EPA de 15 partes por mil millones (ppb), es decir 0,015 miligramos de plomo por litro de agua (mg/L). En virtud de la ley federal, debemos implementar un programa que minimice el plomo en su agua potable antes de [insert date when corrosion control will be completed for your system].

Este programa incluye:

1. un tratamiento de control de la corrosión (el agua tratada evita mejor que el plomo se disuelva en el agua);
2. el tratamiento del agua de origen (eliminación del plomo en el agua cuando sale de nuestra instalación de tratamiento); y
3. un programa de educación pública.

También debemos reemplazar la parte de cada línea de servicio de plomo de la que somos propietarios cuando dicha línea contribuye concentraciones de plomo que exceden 15 pbb tras realizar el programa de tratamiento integral. Si tiene cualquier pregunta sobre nuestra forma de cumplir con los requisitos del reglamento sobre el plomo no dude en llamarnos al [insert water system's phone number here].

Este folleto también explica pasos sencillos que usted puede emprender para protegerse al reducir la exposición al plomo en el agua potable.

INFORMACIÓN IMPORTANTE ACERCA DEL PLOMO EN SU AGUA POTABLE

[Insert name of water system] ha encontrado altos niveles de plomo en el agua potable de algunos domicilios y edificios. El plomo puede causar serios problemas a la salud, especialmente a las mujeres embarazadas y a los niños pequeños. Se ruega lea esta información atentamente para ver qué puede hacer para reducir el plomo en su agua potable.

EFFECTOS DEL PLOMO EN LA SALUD

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres embarazadas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro.

FUENTES DEL PLOMO

El plomo es un metal común que se encuentra en el medio ambiente. El agua potable es una posible fuente de exposición al plomo. Las fuentes principales de exposición al plomo radican en la pintura con plomo, la tierra o el polvo contaminado con plomo y ciertos materiales de

fontanería. Además, el plomo puede encontrarse en ciertos tipos de cerámica, peltre, accesorios de latón, alimentos y de productos cosméticos. Otras fuentes de exposición incluyen el lugar de trabajo y la exposición asociada con ciertos pasatiempos (es posible transportar plomo en la ropa o los zapatos). El plomo se halla en algunos juguetes, equipos de parques infantiles y en ciertas joyas metálicas para niños.

Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar "sin plomo", pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse "sin plomo".

[Insert utility specific information describing your community's source water – e.g. "The source of water from XX Reservoir does not contain lead" or "Community X does not have any lead in its source water or water mains in the street."]

Cuando el agua entra en contacto con tuberías [o líneas de servicio] o con fontanería que contiene plomo y durante varias horas, el plomo puede introducirse en el agua potable. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo.

La EPA calcula que de 10 a 20 por ciento de la exposición posible de una persona al plomo puede provenir del agua potable. Los infantes que consumen mayormente fórmula para bebés mezclada con agua que contiene plomo pueden ingerir con el agua potable hasta entre 40 y 60 por ciento de su exposición al plomo.

No se olvide que existen otras fuentes de plomo tales como la pintura con contenido de plomo, el polvo de plomo y el plomo en la tierra. Lave las manos de sus hijos y los juguetes a menudo ya que pueden entrar en contacto con el polvo y la suciedad que contienen plomo.

MEDIDAS QUE USTED PUEDE EMPRENDER PARA REDUCIR SU EXPOSICIÓN AL PLOMO EN EL AGUA

1. Deje correr el agua para eliminar el plomo.

Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]



2. Utilice agua fría para cocinar y para preparar la fórmula para bebés.

No cocine ni beba agua del grifo de agua caliente ya que el plomo se disuelve más fácilmente en agua caliente. No utilice el grifo de agua caliente para preparar la fórmula para bebés.



3. No hierva el agua para eliminar plomo.

El agua hervida no reduce el plomo.

4. Busque otras fuentes o formas de tratar el agua.

Usted puede comprar agua en botellas o un filtro de agua. Lea el embalaje para cerciorarse de que el filtro está aprobado para reducir el plomo, o póngase en contacto con NSF International, marcando el 800-NSF-8010 ó visite www.nsf.org para más información sobre las normas de rendimiento de



¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.

²Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

Public Education Poster

Important Information about Lead in Your Drinking Water

[Insert name of water system] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

Health Effects of Lead

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

Sources of Lead

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the work place and exposure from certain hobbies (lead can be carried on clothing or shoes). Lead is found in some toys, some playground equipment, and some children's metal jewelry.

Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8 percent lead to be labeled as "lead-free."

[CWS-Insert utility specific information describing your community's source water - e.g. "The source of water from XX Reservoir does not contain lead" or "Community X does not have any lead in its source water or water mains in the street."] When water is in contact with pipes [or service lines], and plumbing containing lead for several hours, the lead may enter drinking water. Homes built before 1988 are more likely to have lead pipes or lead solder.

EPA estimates that 10 to 20 percent of a person's potential exposure to lead may come from drinking water. Infants who consume mostly formula mixed with lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water. Don't forget about other sources of lead such as lead paint, lead dust, and lead in soil. Wash your children's hands and toys often as they can come into contact with dirt and dust containing lead.

Steps You Can Take to Reduce Exposure to Lead in Water

1. Run your water to flush out lead. Run water for 15-30 seconds to flush lead from interior plumbing [or insert a different flushing time if



your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primary Agency approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹

2. Use cold water for cooking and preparing baby formula. Do not cook with or drink water from the hot water tap: lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.

3. Do not boil water to remove lead. Boiling water will not reduce lead.



4. Look for alternative sources or treatment of water. You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.

5. Test your water for lead. Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]



6. Get your child's blood tested. Contact your local health department or healthcare provider to find out how you can get your child tested for lead, if you are concerned about exposure.

7. Identify and replace plumbing fixtures containing lead. Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as "lead-free."

What happened? What is being done?

[Insert information about how and when the exceedance was discovered in your community and provide information on the source(s) of lead in the drinking water, if known.]

[Insert information about what your system is doing to reduce lead levels in homes in your community.]

[Insert information about lead service lines in your community, how a consumer can find out if they have a lead service line, what your water system is doing to replace lead service lines, etc.]

[Insert information about the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes?]

For More Information

Call us at [Insert Number] (if applicable) or visit our Web site at [insert Web site Here]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or contact your health care provider.

[We recommend you include the name of your system and the date that the information is being distributed, along with the state water system ID, somewhere on the notice.]

¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.

²Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrr/compliancehelp.html>

Public Education Poster (Spanish)

INFORMACIÓN IMPORTANTE ACERCA DEL PLOMO EN SU AGUA POTABLE

[Insert name of water system] ha encontrado altos niveles de plomo en el agua potable de algunos domicilios y edificios. El plomo puede causar serios problemas a la salud, especialmente a las mujeres encintas y a los niños pequeños. Por favor lea esta información atentamente para ver qué puede hacer para reducir el plomo en su agua potable

Efectos del plomo en la salud

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones y también puede interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro.

Fuentes del plomo

El plomo es un metal común que se encuentra en el medio ambiente. El agua potable es una posible fuente de exposición al plomo. Las fuentes principales de exposición al plomo radican en la pintura con plomo, la tierra o el polvo contaminado con plomo y ciertos materiales de fontanería. Además, el plomo puede encontrarse en ciertos tipos de cerámica, peltre, accesorios de latón, alimentos y de productos cosméticos. Otras fuentes de exposición incluyen el lugar de trabajo y la exposición asociada con ciertos pasatiempos (es posible transportar plomo en la ropa o los zapatos). El plomo se halla en algunos juguetes, equipos de parques infantiles y en ciertas joyas metálicas para niños.

Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar "sin plomo," pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse "sin plomo."

[Insert utility specific information describing your community's source water – e.g. "The source of water from XX Reservoir does not contain lead" or "Community X does not have any lead in its source water or water mains in the street."] Cuando el agua entra en contacto con tuberías [o líneas de servicio] o con fontanería que contiene plomo y durante varias horas, el plomo puede introducirse en el agua potable. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo.

La EPA calcula que de 10 a 20 por ciento de la exposición posible de una persona al plomo puede provenir del agua potable. Los infantes

que consumen mayormente fórmula para bebés mezclada con agua que contiene plomo pueden ingerir con el agua potable hasta entre 40 y 60 por ciento de su exposición al plomo.

No se olvide que existen otras fuentes de plomo tales como la pintura con contenido de plomo, el polvo de plomo y el plomo en la tierra. Lave las manos de sus hijos y los juguetes a menudo ya que pueden entrar en contacto con el polvo y la suciedad que contienen plomo.

Medidas que usted puede emprender para reducir su exposición al plomo en el agua

1. Deje correr el agua para eliminar el plomo. Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹



2. Utilice agua fría para cocinar y para preparar la fórmula para bebés. No cocine ni beba agua del grifo de agua caliente ya que el plomo se disuelve más fácilmente en agua caliente. No utilice el grifo de agua caliente para preparar la fórmula para bebés.



3. No hierva el agua para eliminar plomo. El agua hervida no reduce el plomo.

4. Busque otras fuentes o formas de tratar el agua. Usted puede comprar agua en botellas o un filtro de agua. Lea el embalaje para cerciorarse de que el filtro está aprobado para reducir el plomo, o póngase en contacto con NSF International, marcando el 800-NSF-8010 ó visite www.nsf.org para más información sobre las normas de rendimiento de los filtros de agua. Asegúrese de mantener y de reemplazar el dispositivo filtrante conforme a las instrucciones del fabricante para proteger la calidad del agua.

5. Pida que se analice su agua para saber si tiene plomo. Llámenos al [insert phone number for your water system] para saber cómo obtener un análisis del plomo en su agua. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]



6. Pida un análisis de la sangre de sus hijos. Póngase en contacto con el departamento de salud de su zona o con su proveedor de atención médica para saber cómo puede obtener un análisis de sangre de su hijo si es que le preocupa una posible exposición.

7. Identifique y reemplace el equipo de fontanería que contenga plomo. Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar "sin plomo", pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse "sin plomo". Visite el sitio Internet en www.nsf.org para aprender más acerca de los equipos de fontanería que contienen plomo.

¿Que pasó? ¿Qué se está haciendo?

[Insert information about how and when the exceedance was discovered in your community and provide information on the source(s) of lead in the drinking water, in known.]

[Insert information about what your system is doing to reduce lead levels in homes in your community.]

[Insert information about lead service lines in your community, how a consumer can find out if they have a lead service line, what your water system is doing to replace lead service lines, etc.]

[Insert information about the history of lead levels in tap water samples in your community. For example, have they declined substantially over time? Have they been low and risen recently? Is there a known reason for any lead level changes?]

Para más información

Llámenos al [Insert Number] (if applicable) ó visite nuestro sitio Internet [insert Web site Here]. Para más información sobre la reducción de la exposición al plomo en su hogar/edificio y los efectos del plomo, visite el sitio Internet de EPA en www.epa.gov/lead o póngase en contacto con su proveedor de atención médica.

¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.

²Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

Consumer Notice of Tap Water Results Template for Community Water Systems

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Dear (Consumer's Name),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of [insert data from the laboratory analysis of the sample collected-make sure the value is in pbb] was reported for the sample collected on [date] at your location, [insert address of customer].

1. Your result, as well as the 90th percentile value for our water system, is below the lead action level of 15 parts per billion.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health*. MCLGs allow for a margin of safety.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Lead is found in some toys, some playground equipment, some children's metal jewelry, and some traditional pottery. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult. Although your home's drinking water lead levels were below the action level, if you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood.

*Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

What Can I Do To Reduce Exposure to Lead in Drinking Water?

Although your test results were below EPA's action level, you may still want to take steps to further reduce your exposure.

- ▶ **Run your water to flush out lead.** If water hasn't been used for several hours, run water for 15-30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking.
- ▶ **Use cold water for cooking and preparing baby formula.**
- ▶ **Do not boil water to remove lead.**
- ▶ **Look for alternative sources or treatment of water (such as bottled water or water filters).**
- ▶ **Re-test your water for lead periodically.**
- ▶ **Identify and replace plumbing fixtures containing lead.**

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Consumer Notice of Tap Water Results Template for Community Water Systems

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Dear (Consumer's Name),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of [insert data from the laboratory analysis of the sample collected-make sure the value is in ppb] was reported for the sample collected on [date] at your location, [insert address of customer].

2. Your result was below the lead action level of 15 parts per billion. However, the 90th percentile value for our system was above the lead action level.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health*. MCLGs allow for a margin of safety.

We are taking a number of steps to correct the problem. We will begin sampling for lead every 6 months so we can closely monitor the lead levels in our water system. Your continued participation and support in our lead tap monitoring program is very important. In addition, we will initiate a Public Education campaign to ensure our customers know about the action level exceedance, understand the health effects of lead, the sources of lead and actions they can take to reduce exposure to lead in drinking water. We will also monitor our source water, initiate controls to reduce the corrosivity of our water (corrosive water can cause lead to leach from plumbing materials that contain lead) and initiate lead service line replacement [for those systems with lead service lines].

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Exposure to lead is a significant health concern, especially for

young children and infants whose growing bodies tend to absorb more lead than the average adult. Lead is found in some toys, some playground equipment, some children's metal jewelry, and some traditional pottery. Although your home's drinking water lead levels were below the action level, if you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1988 are more likely to have lead pipes or lead solder.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

Although your test results were below EPA's action level, you may still want to take steps to further reduce your exposure.

- ▶ **Run your water to flush out lead.** Run water for 15-30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours.
- ▶ **Use cold water for cooking and preparing baby formula.**
- ▶ **Do not boil water to remove lead.**
- ▶ **Look for alternative sources or treatment of water (such as bottled water or water filters).**
- ▶ **Re-test your water for lead periodically.**
- ▶ **Identify and replace plumbing fixtures containing lead.**

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Consumer Notice of Tap Water Results Template for Community Water Systems

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Dear (Consumer's Name),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of [insert data from the laboratory analysis of the sample collected-make sure the value is in pbb] was reported for the sample collected on [date] at your location, [insert address of customer].

3. Your result is greater than the lead action level of 15 parts per billion. However, the 90th percentile value for our water system was below the lead action level.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health*. MCLGs allow for a margin of safety.

Your lead level may be due to conditions unique to your home, such as the presence of lead solder or brass faucets, fittings and valves that may contain lead. Our system works to keep the corrosivity of our water as low as possible (corrosive water can cause lead to leach from plumbing materials that contain lead) and there are actions you can take to reduce exposure. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

Although most lead exposure occurs when people eat paint chips and inhale dust, or from contaminated soil, EPA estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1988 are more likely to have lead pipes or lead solder. However, new homes are also at risk:

even legally “lead-free” plumbing may contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

- ▶ **Run your water to flush out lead.** If water hasn’t been used for several hours, run water for 15-30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking.
- ▶ **Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
- ▶ **Do not boil water to remove lead.** Boiling water will not reduce lead.
- ▶ **Look for alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead.
- ▶ **Re-test your water for lead periodically.** Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system’s testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- ▶ **Identify and replace plumbing fixtures containing lead.** Brass faucets, fittings, and valves, including those advertised as “lead-free,” may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as “lead free.” The law also requires faucets and other end-use fixtures to be independently certified against NSF/ANSI Standard 61. Products that comply will be marked directly on the product or its packaging.

For More Information

Call us at [insert your water system’s phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA’s Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Consumer Notice of Tap Water Results Template for Community Water Systems

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Dear (Consumer's Name),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of [insert data from the laboratory analysis of the sample collected-make sure the value is in pbb] was reported for the sample collected on [date] at your location, [insert address of customer].

4. Your result is greater than the lead action level and the 90th percentile value for our water system is also greater than the lead action level of 15 parts per billion.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile result). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health*. MCLGs allow for a margin of safety.

We are taking a number of steps to correct the problem. We will begin sampling for lead every 6 months so we can closely monitor the lead levels in our water system. Your continued participation and support in our lead tap monitoring program is very important. In addition, we will initiate a Public Education campaign to ensure our customers know about the action level exceedance, understand the health effects of lead, the sources of lead and actions they can take to reduce exposure to leads in drinking water. We will also monitor our source water, initiate controls to reduce the corrosivity of our water (corrosive water can cause lead to leach from plumbing materials that contain lead) and initiate lead service line replacement [for those systems with lead service lines].

Although we are taking action to reduce lead levels, your elevated lead level may also be due to conditions unique to your home, such as the presence of lead solder or brass faucets, fittings and valves that may contain lead. Our system works to keep the corrosivity of our water as low as possible (corrosive water can cause lead to leach from plumbing materials that contain lead) and there are actions you can take to reduce exposure. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water.

What Are The Health Effects of Lead?

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

from the mother's bones, which may affect brain development. If you are concerned about lead exposure, you may want to ask your health care provider about testing children to determine levels of lead in their blood.

What Are The Sources of Lead?

Although most lead exposure occurs when people eat paint chips and inhale dust, or from contaminated soil, EPA estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1988 are more likely to have lead pipes or lead solder. However, new homes are also at risk: even legally "lead-free" plumbing may contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

- ▶ **Run your water to flush out lead.** If water hasn't been used for several hours, run water for 15-30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking.
- ▶ **Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
- ▶ **Do not boil water to remove lead.** Boiling water will not reduce lead.
- ▶ **Look for alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead.
- ▶ **Re-test you water for lead periodically.** Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- ▶ **Identify and replace plumbing fixtures containing lead.** Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as "lead free." The law also requires faucets and other end-use fixtures to be independently certified against NSF/ANSI Standard 61. Products that comply will be marked directly on the product or its packaging.

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Consumer Notice of Tap Water Results Template for Community Water Systems

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Dear (Consumer's Name),

[Insert name or your water system] appreciates your participation in the lead tap monitoring program. A lead level of [insert data from the laboratory analysis of the sample collected – make sure the value is in ppb] was reported for the sample collected on [date] at your location, [insert address of customer].

5. Your result was below the lead action level of 15 parts per billion. Our water system, however, has not yet calculated the 90th percentile value for our system, so we do not yet know if our system is above the lead action level.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) set the action level for lead in drinking water at 15 parts per billion (ppb). This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of homes sampled (90th percentile value). *The action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.* If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. *The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.*

We are in the process of determining the 90th percentile value for our water system. You can call us at [insert water system phone number] after [insert date that your 90th percentile calculation information will be available] to find out our system's 90th percentile value. If our 90th percentile value is found to be below the lead action level for lead no additional actions will be taken and we will continue our regular lead in drinking water monitoring program.

If our 90th percentile value is found to be in exceedance of the action level for lead, there are a number of steps that we will take to correct the problem. We will begin sampling for lead every 6 months so that we can closely monitor the lead levels in our water system. Your continued participation and support in our lead tap monitoring program is very important. In addition, we will initiate a Public Education campaign to ensure all of our customers know about the action level exceedance, understand the health effects of lead, the sources of lead, and actions they can take to reduce exposure to lead in drinking water. We will also monitor our source water, initiate controls to reduce the corrosivity of our water (corrosive water can cause lead to leach from plumbing materials that contain lead), and initiate lead service line replacement [for those systems with lead service lines].

What Are The Health Effects of Lead?

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have link the effects of lead on the brain with lowered IQ in children. Adults

with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

What Are The Sources of Lead?

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult. Although your home's drinking water levels were below the action level, if you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1988 are more likely to have lead pipes or lead solder.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

Although your test results were below EPA's action level, you may still want to take steps to further reduce your exposure.

- ▶ **Run your water to flush out lead.** Run water for 15 to 30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours.
- ▶ **Use cold water for cooking and preparing baby formula.**
- ▶ **Do not boil water to remove lead.**
- ▶ **Look for alternative sources or treatment of water (such as bottled water or water filters).**
- ▶ **Re-test you water for lead periodically.**
- ▶ **Identify and replace plumbing fixtures containing lead.**

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

*Customizable versions of these templates are available for download at: <http://www.epa.gov/safewater/lcrmr/compliancehelp.html>

Consumer Notice of Tap Water Results Template for Community Water Systems

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Dear (Consumer's Name),

[Insert name or your water system] appreciates your participation in the lead tap monitoring program. A lead level of [insert data from the laboratory analysis of the sample collected – make sure the value is in ppb] was reported for the sample collected on [date] at your location, [insert address of customer].

6. Your result is greater than the lead action level of 15 parts per billion (ppb). Our water system, however, has not yet calculated the 90th percentile value for our system, so we do not yet know if our system is above the lead action level.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) set the action level for lead in drinking water at 15 parts per billion (ppb). This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of homes sampled (90th percentile value). *The action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.* If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. *The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.*

We are in the process of determining the 90th percentile value for our water system. You can call us at [insert water system phone number] after [insert date that your 90th percentile calculation information will be available] to find out our system's 90th percentile value. If our 90th percentile value is found to be below the lead action level for lead no additional actions will be taken and we will continue our regular lead in drinking water monitoring program.

If our 90th percentile value is found to be in exceedance of the action level for lead, there are a number of steps that we will take to correct the problem. We will begin sampling for lead every 6 months so that we can closely monitor the lead levels in our water system. Your continued participation and support in our lead tap monitoring program is very important. In addition, we will initiate a Public Education campaign to ensure all of our customers know about the action level exceedance, understand the health effects of lead, the sources of lead, and actions they can take to reduce exposure to lead in drinking water. We will also monitor our source water, initiate controls to reduce the corrosivity of our water (corrosive water can cause lead to leach from plumbing materials that contain lead), and initiate lead service line replacement [for those systems with lead service lines].

Your lead level may be due to conditions unique to your home, such as the presence of lead solder or brass faucets, fittings, and valves that may contain lead. Our system works to keep the corrosivity of our water as low as possible (corrosive water can cause lead to leach from plumbing materials that contain lead) and there are actions you can take to reduce exposure. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult. Although your home's drinking water levels were below the action level, if you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1988 are more likely to have lead pipes or lead solder.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

- ▶ **Run your water to flush out lead.** Run water for 15 to 30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours.
- ▶ **Use cold water for cooking and preparing baby formula.** Do not cool with or drink water from the hot water tap; lead dissolves easily into hot water. Do not use water from the hot water tap to make baby formula.
- ▶ **Do not boil water to remove lead.** Boiling water will not reduce lead.
- ▶ **Look for alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead.
- ▶ **Re-test you water for lead periodically.** Call us at [insert phone number for your water system] to find out how and when to re-test your water for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- ▶ **Identify and replace plumbing fixtures containing lead.** Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute to lead in drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8 percent lead to be labeled as "lead-free." The law also requires faucets and other end-use fixtures to be independently certified against NSF/ANSI Standard 61. Products that comply will be marked directly on the product or its packaging.

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Consumer Notice of Tap Water Results Template for Community Water Systems (Spanish)

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Estimado/a (Consumer's Name),

[Insert name of your water system] agradece su participación en el programa de monitoreo de plomo en el agua de grifo. Un nivel de [insert data from the laboratory analysis of the sample collected-make sure the value is in pbb] ha resultado de la muestra obtenida el [date], en la ubicación de [insert address of customer].

1. Su resultado, así como el valor de percentil 90 de nuestro sistema de aguas, se halla bajo el nivel de acción de plomo de 15 partes por mil millones, es decir 15 ppb.

¿Qué significa este resultado?

Bajo la autoridad de la Ley de Agua Potable Segura, la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) de los Estados Unidos estableció a 15 ppb el nivel de acción para el plomo en el agua potable. Esto significa que los servicios públicos deben asegurarse que el agua de grifo de sus clientes no exceda dicho nivel en el 90 por ciento de hogares analizados (valor de percentil 90). El nivel de acción significa *una concentración de contaminante que una vez excedida provoca el tratamiento u otros requisitos que debe acatar un sistema de aguas*. Si el agua de grifo excede dicho límite, el servicio público debe entonces emprender ciertas medidas para corregir el problema. Debido a que el plomo puede conllevar serios riesgos para la salud, la EPA ha establecido un Objetivo de Nivel Máximo de Contaminante (MCLG por sus siglas en inglés) de cero para el plomo. El MCLG es *el nivel de un contaminante en el agua potable cuyo valor menor no presenta ningún riesgo conocido o previsto para la salud*. Los niveles MCLG ofrecen un margen de seguridad.

¿Cómo afecta el plomo a la salud?

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro.

¿Cuáles son las fuentes del plomo?

Las fuentes principales de la exposición al plomo para la mayoría de niños radican en la pintura con plomo que se deteriora, la tierra residencial y el polvo contaminados con plomo. El plomo se halla en algunos juguetes, equipos de parques infantiles, joyas metálicas de niños y en algunas cerámicas tradicionales. La exposición al plomo es de especial importancia para la salud, especialmente para los niños de baja edad y para los infantes cuyos cuerpos crecientes tienen tendencia a absorber mayores cantidades de plomo que un adulto corriente. Aunque los niveles de plomo en el agua potable de su hogar se hallaron debajo del nivel de acción, si siente inquietud por la exposición al plomo, se recomienda que los padres consulten a

sus proveedores de atención médica acerca de un análisis de sangre para determinar cuáles son los niveles de plomo en los niños.

¿Qué puedo hacer para reducir la exposición al plomo en el agua de grifo?

- ▶ **Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar.
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.**
- ▶ **No hierva el agua para eliminar plomo.**
- ▶ **Busque otras fuentes o formas de tratar el agua (agua en botellas o filtros de agua, entre otros).**
- ▶ **Analice periódicamente el plomo en su agua.**
- ▶ **Identifique y reemplace el equipo de fontanería que contenga plomo.**

Para más información

Llámenos al [insert your water system's phone number]. Para más información acerca de la reducción de exposición al plomo en su hogar y los efectos del plomo en la salud puede visitar el sitio Internet en www.epa.gov/lead, llamar al centro nacional de información sobre el plomo (National Lead Information Center) marcando el 1-800-424-LEAD (424-5323) ó bien consultar a su proveedor de atención médica.

Consumer Notice of Tap Water Results Template for Community Water Systems (Spanish)

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Estimado/a (Consumer's Name),

[Insert name of your water system] agradece su participación en el programa de monitoreo de plomo en el agua de grifo. Un nivel de [insert data from the laboratory analysis of the sample collected-make sure the value is in pbb] ha resultado de la muestra obtenida el [date], en la ubicación de [insert address of customer].

2. Su resultado se halla debajo del nivel de acción para el plomo de 15 partes por mil millones (15 ppb). No obstante, el valor de percentil 90 de nuestro sistema se halla por encima del nivel de acción para el plomo.

¿Qué significa este resultado?

Bajo la autoridad de la Ley de Agua Potable Segura, la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) de los Estados Unidos estableció a 15 ppb el nivel de acción para el plomo en el agua potable. Esto significa que los servicios públicos deben asegurarse que el agua de grifo de sus clientes no exceda dicho nivel en el 90 por ciento de hogares analizados (valor de percentil 90). El nivel de acción significa *una concentración de contaminante que una vez excedida provoca el tratamiento u otros requisitos que debe acatar un sistema de aguas*. Si el agua de grifo excede dicho límite, el servicio público debe entonces emprender ciertas medidas para corregir el problema. Debido a que el plomo puede conllevar serios riesgos para la salud, la EPA ha establecido un Objetivo de Nivel Máximo de Contaminante (MCLG por sus siglas en inglés) de cero para el plomo. El MCLG es *el nivel de un contaminante en el agua potable cuyo valor menor no presenta ningún riesgo conocido o previsto para la salud*. Los niveles MCLG ofrecen un margen de seguridad.

Hemos emprendido ciertas medidas para corregir este problema. Comenzaremos a tomar muestras cada 6 meses con el fin de monitorear de cerca los niveles de plomo en nuestro sistema de aguas. Su participación y apoyo continuos en nuestro programa de supervisión de agua de grifo es de gran importancia. Iniciaremos una campaña de Educación Pública que permita cerciorarse de que nuestros clientes se hallan conscientes de la excedencia en el nivel de acción de plomo, comprenden cómo el plomo afecta la salud, conocen las fuentes de plomo y saben qué acciones pueden emprender con el fin de reducir la exposición al plomo en el agua potable. También monitorearemos nuestra agua potable, estableceremos controles cuyo fin es reducir la corrosividad de nuestra agua (el agua corrosiva puede disolver el plomo de los materiales que lo contengan) e iniciaremos el reemplazo de líneas de servicio (para los sistemas cuyas líneas de servicio son de plomo).

¿Cómo afecta el plomo a la salud?

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el

embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro.

¿Cuáles son las fuentes del plomo?

Las fuentes principales de la exposición al plomo para la mayoría de niños radican en la pintura con plomo que se deteriora, la tierra residencial y el polvo contaminados con plomo. La exposición al plomo es de especial importancia para la salud, especialmente para los niños de baja edad y para los infantes cuyos cuerpos crecientes tienen tendencia a absorber mayores cantidades de plomo que un adulto corriente. El plomo se halla en algunos juguetes, equipos de parques infantiles, joyas metálicas de niños y en algunas cerámicas tradicionales. Aunque los niveles de plomo en el agua potable de su hogar se hallaron debajo del nivel de acción, si siente inquietud por la exposición al plomo, se recomienda que los padres consulten a sus proveedores de atención médica acerca de un análisis de sangre para determinar cuáles son los niveles de plomo en los niños. Raramente existe plomo en el agua de fuente, sino que se introduce en el agua de grifo debido a la corrosión de los materiales de fontanería. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo.

¿Qué puedo hacer para reducir la exposición al plomo en el agua de grifo?

Aunque los resultados de su análisis se hallan debajo del nivel de acción establecido por la EPA, es posible que usted desee emprender medidas que reduzcan su nivel de exposición aún más.

- ▶ **Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar.
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.**
- ▶ **No hierva el agua para eliminar plomo.**
- ▶ **Busque otras fuentes o formas de tratar el agua (agua en botellas o filtros de agua, entre otros).**
- ▶ **Analice periódicamente el plomo en su agua.**
- ▶ **Identifique y reemplace el equipo de fontanería que contenga plomo.**

Para más información

Llámenos al [insert your water system's phone number]. Para más información acerca de la reducción de exposición al plomo en su hogar y los efectos del plomo en la salud puede visitar el sitio Internet en www.epa.gov/lead, llamar al centro nacional de información sobre el plomo (National Lead Information Center) marcando el 1-800-424-LEAD (424-5323) ó bien consultar a su proveedor de atención médica.

Consumer Notice of Tap Water Results Template for Community Water Systems (Spanish)

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Estimado/a (Consumer's Name),

[Insert name of your water system] agradece su participación en el programa de monitoreo de plomo en el agua de grifo. Un nivel de [insert data from the laboratory analysis of the sample collected-make sure the value is in pbb] ha resultado de la muestra obtenida el [date], en la ubicación de [insert address of customer].

3. Su resultado se halla por encima del nivel de acción para el plomo de 15 partes por mil millones (15 ppb). No obstante, el valor de percentil 90 de nuestro sistema se halla debajo del nivel de acción para el plomo.

¿Qué significa este resultado?

Bajo la autoridad de la Ley de Agua Potable Segura, la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) de los Estados Unidos estableció a 15 ppb el nivel de acción para el plomo en el agua potable. Esto significa que los servicios públicos deben asegurarse que el agua de grifo de sus clientes no exceda dicho nivel en el 90 por ciento de hogares analizados (valor de percentil 90). El nivel de acción significa *una concentración de contaminante que una vez excedida provoca el tratamiento u otros requisitos que debe acatar un sistema de aguas*. Si el agua de grifo excede dicho límite, el servicio público debe entonces emprender ciertas medidas para corregir el problema. Debido a que el plomo puede conllevar serios riesgos para la salud, la EPA ha establecido un Objetivo de Nivel Máximo de Contaminante (MCLG por sus siglas en inglés) de cero para el plomo. El MCLG es *el nivel de un contaminante en el agua potable cuyo valor menor no presenta ningún riesgo conocido o previsto para la salud*. Los niveles MCLG ofrecen un margen de seguridad.

Es posible que su nivel de plomo se deba a condiciones intrínsecas a su hogar, tales como la existencia de soldaduras de plomo o de grifos, accesorios y válvulas de latón que pueden contener plomo. Nuestro sistema se esfuerza en reducir al máximo la corrosividad de nuestra agua (el agua corrosiva puede disolver el plomo de los materiales que lo contengan) y usted puede emprender ciertas medidas para reducir la exposición.

Le aconsejamos seriamente de emprender las medidas a continuación para reducir su nivel de exposición al plomo en el agua potable.

¿Cómo afecta el plomo a la salud?

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro. Si la exposición al plomo le preocupa puede consultar con su proveedor de atención médica acerca de un análisis de sangre de los niños para determinar cuáles son los niveles de plomo.

¿Cuáles son las fuentes del plomo?

Aunque la mayor parte de exposición al plomo ocurre cuando la gente ingiere escamas de pintura o aspira polvo contaminado, la EPA considera que de 10 a 20 por ciento de la exposición humana al plomo puede deberse al plomo en el agua potable. Raramente existe plomo en el agua de fuente, sino que se introduce en el agua de grifo debido a la corrosión de los materiales de fontanería. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo. Sin embargo, las casas nuevas también presentan riesgos: inclusive la fontanería que legalmente se halla “sin plomo” pueden contener hasta 8 por ciento de plomo. El problema más corriente radica en los grifos y accesorios de latón o de latón cromado que pueden disolver grandes cantidades de plomo en el agua, especialmente en agua caliente.

¿Qué puedo hacer para reducir la exposición al plomo en el agua de grifo?

- ▶ **Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar.
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.** No cocine ni beba agua del grifo de agua caliente ya que el plomo se disuelve más fácilmente en agua caliente. No utilice el grifo de agua caliente para preparar la fórmula para bebés.
- ▶ **No hierva el agua para eliminar plomo.** El agua hervida no reduce el plomo.
- ▶ **Busque otras fuentes o formas de tratar el agua.** Usted puede comprar agua en botellas o un filtro de agua. Lea el embalaje y cerciórese de que el filtro se halla aprobado para reducir plomo.
- ▶ **Analice periódicamente el plomo en su agua.** Llámenos al [insert phone number for your water system] para saber cómo obtener un análisis del plomo en su agua. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- ▶ **Identifique y reemplace el equipo de fontanería que contenga plomo.** Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar “sin plomo”, pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse “sin plomo”. Esta ley también exige que los grifos y otros accesorios de uso final tengan una certificación independiente que cumpla con la Norma 61 NSF/ANSI. Los productos conformes se hallan marcados directamente en el producto mismo o en el embalaje.

Para más información

Llámenos al [insert your water system's phone number]. Para más información acerca de la reducción de exposición al plomo en su hogar y los efectos del plomo en la salud puede visitar el sitio Internet en www.epa.gov/lead, llamar al centro nacional de información sobre el plomo (National Lead Information Center) marcando el 1-800-424-LEAD (424-5323) ó bien consultar a su proveedor de atención médica.

Consumer Notice of Tap Water Results Template for Community Water Systems (Spanish)

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Estimado/a (Consumer's Name),

[Insert name of your water system] agradece su participación en el programa de monitoreo de plomo en el agua de grifo. Un nivel de [insert data from the laboratory analysis of the sample collected-make sure the value is in pbb] ha resultado de la muestra obtenida el [date], en la ubicación de [insert address of customer].

4. Su resultado excede el nivel de acción para el plomo y el valor de percentil 90 de nuestro sistema de aguas es también mayor del nivel de acción para el plomo de 15 parte por mil millones (15 ppb).

¿Qué significa este resultado?

Bajo la autoridad de la Ley de Agua Potable Segura, la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) de los Estados Unidos estableció a 15 ppb el nivel de acción para el plomo en el agua potable. Esto significa que los servicios públicos deben asegurarse que el agua de grifo de sus clientes no exceda dicho nivel en el 90 por ciento de hogares analizados (resultado de percentil 90). El nivel de acción significa *una concentración de contaminante que una vez excedida provoca el tratamiento u otros requisitos que debe acatar un sistema de aguas*. Si el agua de grifo excede dicho límite, el servicio público debe entonces emprender ciertas medidas para corregir el problema. Debido a que el plomo puede conllevar serios riesgos para la salud, la EPA ha establecido un Objetivo de Nivel Máximo de Contaminante (MCLG por sus siglas en inglés) de cero para el plomo. El MCLG es *el nivel de un contaminante en el agua potable cuyo valor menor no presenta ningún riesgo conocido o previsto para la salud*. Los niveles MCLG ofrecen un margen de seguridad.

Hemos emprendido ciertas medidas para corregir este problema. Comenzaremos a tomar muestras cada 6 meses con el fin de monitorear de cerca los niveles de plomo en nuestro sistema de aguas. Su participación y apoyo continuos en nuestro programa de supervisión de agua de grifo es de gran importancia. Iniciaremos una campaña de Educación Pública que permita cerciorarse de que nuestros clientes se hallan conscientes de la excedencia en el nivel de acción, comprenden cómo el plomo afecta la salud, conocen las fuentes de plomo y saben qué acciones pueden emprender con el fin de reducir la exposición al plomo en el agua potable. También monitorearemos nuestra agua potable, estableceremos controles cuyo fin es reducir la corrosividad de nuestra agua (el agua corrosiva puede disolver el plomo de los materiales que lo contengan) e iniciaremos el reemplazo de líneas de servicio (para los sistemas cuyas líneas de servicio son de plomo).

Aunque hemos emprendido medidas para reducir los niveles de plomo, es posible que su nivel elevado de plomo se deba a condiciones intrínsecas a su hogar, tales como la existencia de soldaduras de plomo o de grifos, accesorios y válvulas de latón que pueden contener plomo. Nuestro sistema se esfuerza en reducir al máximo la corrosividad de nuestra agua (el agua corrosiva puede disolver el plomo de los materiales que lo contengan) y usted puede emprender ciertas medidas para reducir la exposición. Le aconsejamos seriamente de emprender las medidas a continuación para reducir su nivel de exposición al plomo en el agua potable.

¿Cómo afecta el plomo a la salud?

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición

al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro. Si la exposición al plomo le preocupa puede consultar con su proveedor de atención médica acerca de un análisis de sangre de los niños para determinar cuáles son los niveles de plomo.

¿Cuáles son las fuentes del plomo?

Aunque la mayor parte de exposición al plomo ocurre cuando la gente ingiere escamas de pintura o aspira polvo contaminado, la EPA considera que de 10 a 20 por ciento de la exposición humana al plomo puede deberse al plomo en el agua potable. Raramente existe plomo en el agua de fuente, sino que se introduce en el agua de grifo debido a la corrosión de los materiales de fontanería. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo. Sin embargo, las casas nuevas también presentan riesgos: inclusive la fontanería que legalmente se halla “sin plomo” pueden contener hasta 8 por ciento de plomo. El problema más corriente radica en los grifos y accesorios de latón o de latón cromado que pueden disolver grandes cantidades de plomo en el agua, especialmente en agua caliente.

¿Qué puedo hacer para reducir la exposición al plomo en el agua de grifo?

- ▶ **Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar.
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.** No cocine ni beba agua del grifo de agua caliente ya que el plomo se disuelve más fácilmente en agua caliente. No utilice el grifo de agua caliente para preparar la fórmula para bebés.
- ▶ **No hierva el agua para eliminar plomo.** El agua hervida no reduce el plomo.
- ▶ **Busque otras fuentes o formas de tratar el agua.** Usted puede comprar agua en botellas o un filtro de agua. Lea el embalaje y cerciórese de que el filtro se halla aprobado para reducir plomo.
- ▶ **Analice periódicamente el plomo en su agua.** Llámenos al [insert phone number for your water system] para saber cómo obtener un análisis del plomo en su agua. [Include information on your water system’s testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- ▶ **Identifique y reemplace el equipo de fontanería que contenga plomo.** Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar “sin plomo”, pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse “sin plomo”. Esta ley también exige que los grifos y otros accesorios de uso final tengan una certificación independiente que cumpla con la Norma 61 NSF/ANSI. Los productos conformes se hallan marcados directamente en el producto mismo o en el embalaje.

Para más información

Llámenos al [insert your water system’s phone number]. Para más información acerca de la reducción de exposición al plomo en su hogar y los efectos del plomo en la salud puede visitar el sitio Internet en www.epa.gov/lead, llamar al centro nacional de información sobre el plomo (National Lead Information Center) marcando el 1-800-424-LEAD (424-5323) ó bien consultar a su proveedor de atención médica.

Consumer Notice of Tap Water Results Template for Community Water Systems (Spanish)

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Estimado/a (Consumer's Name),

[Insert name or your water system] agradece su participación en el programa de monitoreo de plomo en el agua de grifo. Un nivel de [insert data from the laboratory analysis of the sample collected – make sure the value is in ppb] ha resultado de la muestra obtenida el [date], en la ubicación de [insert address of customer].

5. Su resultado se halla debajo del nivel de acción para el plomo de 15 partes por mil millones (15 ppb). No obstante, nuestro sistema de aguas todavía no ha calculado el valor de percentil 90 de nuestro sistema y todavía no sabemos si nuestro sistema se halla por encima del nivel de acción para el plomo.

¿Qué significa este resultado?

Bajo a la autoridad de la Ley de Agua Potable Segura, la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) de los Estados Unidos estableció a 15 partes por mil millones (ppb) el nivel de acción para el plomo en el agua potable. Esto significa que los servicios públicos deben asegurarse que el agua de grifo de sus clientes no exceda dicho nivel en el 90 por ciento de hogares analizados (valor de percentil 90). *El nivel de acción significa una concentración de contaminante que una vez excedida provoca el tratamiento u otros requisitos que debe acatar un sistema de aguas.* Si el agua de grifo excede dicho límite, el servicio público debe entonces emprender ciertas medidas para corregir el problema. Debido a que el plomo puede conllevar serios riesgos para la salud, la EPA ha establecido un Objetivo de Nivel Máximo de Contaminante (MCLG por sus siglas en inglés) de cero para el plomo. El MCLG es *el nivel de un contaminante en el agua potable cuyo valor menor no presenta ningún riesgo conocido o previsto para la salud. Los niveles MCLG ofrecen un margen de seguridad.*

Estamos en proceso de determinar el valor de percentil 90 de nuestro sistema de aguas. Usted puede llamarnos al [insert water system phone number] después de [insert date that your 90th percentile calculation information will be available] para conocer el valor percentil 90 de nuestro sistema. Si nuestro valor percentil 90 se halla debajo del nivel de acción para el plomo, no será necesario emprender medidas suplementarias y seguiremos con nuestro programa regular de monitoreo del plomo en el agua potable.

Si nuestro valor de percentil 90 se halla en excedencia del nivel de acción para el plomo existen ciertas medidas que emprenderemos para corregir este problema. Comenzaremos a tomar muestras cada 6 meses con el fin de monitorear de cerca los niveles de plomo en nuestro sistema de aguas. Su participación y apoyo continuos en nuestro programa de supervisión de agua de grifo es de gran importancia. Iniciaremos una campaña de Educación Pública que permita cerciorarse de que todos nuestros clientes se hallan conscientes de la excedencia en el nivel de acción, comprenden cómo el plomo afecta la salud, conocen las fuentes de plomo y saben qué acciones pueden emprender con el fin de reducir la exposición al plomo en el agua potable. También monitorearemos nuestra agua potable, estableceremos controles cuyo fin es reducir la corrosividad de nuestra agua (el agua corrosiva puede disolver el plomo de los materiales que lo contengan) e iniciaremos el reemplazo de líneas de servicio [for those systems with lead service lines].

¿Cómo afecta el plomo a la salud?

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro.

¿Cuáles son las fuentes del plomo?

Las fuentes principales de la exposición al plomo para la mayoría de niños radican en la pintura con plomo que se deteriora, la tierra residencial y el polvo contaminados con plomo. La exposición al plomo es de especial importancia para la salud, especialmente para los niños de baja edad y para los infantes cuyos cuerpos crecientes tienen tendencia a absorber mayores cantidades de plomo que un adulto corriente. Aunque los niveles de plomo en el agua potable de su hogar se hallaron debajo del nivel de acción, si siente inquietud por la exposición al plomo, se recomienda que los padres consulten a sus proveedores de atención médica acerca de un análisis de sangre para determinar cuáles son los niveles de plomo en los niños. Raramente existe plomo en el agua de fuente, sino que se introduce en el agua de grifo debido a la corrosión de los materiales de fontanería. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo.

¿Qué puedo hacer para reducir la exposición al plomo en el agua de grifo?

Aunque los resultados de su análisis se hallan debajo del nivel de acción establecido por la EPA, es posible que usted desee emprender medidas que reduzcan su nivel de exposición aún más.

- ▶ **Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado agua en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar.
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.**
- ▶ **No hierva el agua para eliminar plomo.**
- ▶ **Busque otras fuentes o formas de tratar el agua (agua en botellas o filtros de agua, entre otros).**
- ▶ **Analice periódicamente el plomo en su agua.**
- ▶ **Identifique y reemplace el equipo de fontanería que contenga plomo.**

Para más información

Llámenos al [insert your water system's phone number]. Para más información acerca de la reducción de exposición al plomo en su hogar y los efectos del plomo en la salud puede visitar el sitio Internet en www.epa.gov/lead, llamar al centro nacional de información sobre el plomo (National Lead Information Center) marcando el 1-800-424-LEAD (424-5323) ó bien consultar a su proveedor de atención médica.

Consumer Notice of Tap Water Results Template for Community Water Systems (Spanish)

[Information in italics is required/mandatory language and cannot be changed]

[Select the appropriate number from the 6 possible options]

Estimado/a (Consumer's Name),

[Insert name or your water system] agradece su participación en el programa de monitoreo de plomo en el agua de grifo. Un nivel de [insert data from the laboratory analysis of the sample collected – make sure the value is in ppb] ha resultado de la muestra obtenida el [date], en la ubicación de [insert address of customer].

6. Su resultado se halla por encima del nivel de acción para el plomo de 15 partes por mil millones (ppb). No obstante, nuestro sistema de aguas todavía no ha calculado el valor de percentil 90 de nuestro sistema y todavía no sabemos si nuestro sistema se halla por encima del nivel de acción para el plomo.

¿Qué significa este resultado?

Bajo a la autoridad de la Ley de Agua Potable Segura, la Agencia de Protección del Medio Ambiente (Environmental Protection Agency, o EPA por sus siglas en inglés) de los Estados Unidos estableció a 15 partes por mil millones (ppb) el nivel de acción para el plomo en el agua potable. Esto significa que los servicios públicos deben asegurarse que el agua de grifo de sus clientes no exceda dicho nivel en el 90 por ciento de hogares analizados (valor de percentil 90). *El nivel de acción significa una concentración de contaminante que una vez excedida provoca el tratamiento u otros requisitos que debe acatar un sistema de aguas.* Si el agua de grifo excede dicho límite, el servicio público debe entonces emprender ciertas medidas para corregir el problema. Debido a que el plomo puede conllevar serios riesgos para la salud, la EPA ha establecido un Objetivo de Nivel Máximo de Contaminante (MCLG por sus siglas en inglés) de cero para el plomo. El MCLG es *el nivel de un contaminante en el agua potable cuyo valor menor no presenta ningún riesgo conocido o previsto para la salud. Los niveles MCLG ofrecen un margen de seguridad.*

Estamos en proceso de determinar el valor de percentil 90 de nuestro sistema de aguas. Usted puede llamarnos al [insert water system phone number] después de [insert date that your 90th percentile calculation information will be available] para conocer el valor percentil 90 de nuestro sistema. Si nuestro valor percentil 90 se halla debajo del nivel de acción para el plomo, no será necesario emprender medidas suplementarias y seguiremos con nuestro programa regular de monitoreo del plomo en el agua potable.

Si nuestro valor de percentil 90 se halla en excedencia del nivel de acción para el plomo existen ciertas medidas que emprenderemos para corregir este problema. Comenzaremos a tomar muestras cada 6 meses con el fin de monitorear de cerca los niveles de plomo en nuestro sistema de aguas. Su participación y apoyo continuos en nuestro programa de supervisión de agua de grifo es de gran importancia. Iniciaremos una campaña de Educación Pública que permita cerciorarse de que todos nuestros clientes se hallan conscientes de la excedencia en el nivel de acción, comprenden cómo el plomo afecta la salud, conocen las fuentes de plomo y saben qué acciones pueden emprender con el fin de reducir la exposición al plomo en el agua potable. También monitorearemos nuestra agua potable, estableceremos controles cuyo fin es reducir la corrosividad de nuestra agua (el agua corrosiva puede disolver el plomo de los materiales que lo contengan) e iniciaremos el reemplazo de líneas de servicio [for those systems with lead service lines].

Es posible que su nivel de plomo se deba a condiciones intrínsecas a su hogar, tales como la existencia de

soldaduras de plomo o de grifos, accesorios y válvulas de latón que pueden contener plomo. Nuestro sistema se esfuerza en reducir al máximo la corrosividad de nuestra agua (el agua corrosiva puede disolver el plomo de los materiales que lo contengan) y usted puede emprender ciertas medidas para reducir la exposición. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water. Le aconsejamos seriamente de emprender las medidas a continuación para reducir su nivel de exposición al plomo en el agua potable.

¿Cómo afecta el plomo a la salud?

El plomo puede causar serios problemas de salud si cantidades excesivas provenientes del agua potable, u otras fuentes, se introducen en su cuerpo. Puede dañar al cerebro y a los riñones e interferir en la producción de glóbulos rojos que transportan oxígeno a todas las partes de su cuerpo. El riesgo más serio de exposición al plomo es para los infantes, los niños de baja edad y las mujeres encintas. Los científicos han conectado los efectos del plomo en el cerebro con coeficientes de inteligencia más reducidos en los niños. Niveles bajos de plomo tienen un mayor efecto en los adultos con problemas de riñón y de alta presión sanguínea que en los adultos sanos. El plomo se almacena en los huesos y puede ser dispersado más tarde en la vida. Durante el embarazo, el bebé recibe plomo proveniente de los huesos maternos lo cual puede afectar el desarrollo de su cerebro. Si la exposición al plomo lo preocupa puede consultar con su proveedor de atención médica acerca de un análisis de sangre de los niños para determinar cuáles son los niveles de plomo.

¿Cuáles son las fuentes del plomo?

Las fuentes principales de la exposición al plomo para la mayoría de niños radican en la pintura con plomo que se deteriora, la tierra residencial y el polvo contaminados con plomo. La exposición al plomo es de especial importancia para la salud, especialmente para los niños de baja edad y para los infantes cuyos cuerpos crecientes tienen tendencia a absorber mayores cantidades de plomo que un adulto corriente. Aunque los niveles de plomo en el agua potable de su hogar se hallaron debajo del nivel de acción, si siente inquietud por la exposición al plomo, se recomienda que los padres consulten a sus proveedores de atención médica acerca de un análisis de sangre para determinar cuáles son los niveles de plomo en los niños. Raramente existe plomo en el agua de fuente, sino que se introduce en el agua de grifo debido a la corrosión de los materiales de fontanería. Las casas construidas antes de 1988 suelen tener tuberías de plomo o soldaduras de plomo.

¿Qué puedo hacer para reducir la exposición al plomo en el agua de grifo?

- ▶ **Deje correr el agua para eliminar el plomo.** Deje correr el agua unos 15 a 30 segundos, si no se ha utilizado agua en varias horas, para eliminar el plomo de la fontanería interior [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State Primacy Agency approves the wording] o hasta que se enfríe o alcance una temperatura constante antes de utilizar el agua para beber o cocinar.
- ▶ **Utilice agua fría para cocinar y para preparar la fórmula para bebés.** No cocine ni beba agua del grifo de agua caliente ya que el plomo se disuelve fácilmente en agua caliente. No utilice el grifo de agua caliente para preparar la fórmula para bebés.
- ▶ **No hierva el agua para eliminar plomo.** El agua hervida no reduce el plomo.
- ▶ **Busque otras fuentes o formas de tratar el agua.** Usted puede comprar agua en botellas o un filtro de agua. Lea el embalaje y cerciórese de que el filtro se halla aprobado para reducir plomo.
- ▶ **Analice periódicamente el plomo en su agua.** Llámenos al [insert phone number for your water system] para saber cómo y cuándo repetir el análisis de plomo en su agua. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are

certified to do lead in water testing?]

- ▶ **Identifique y reemplace el equipo de fontanería que contenga plomo.** Los grifos, los accesorios y las válvulas de latón, inclusive las que se anuncian estar “sin plomo”, pueden contribuir al plomo en el agua potable. En la actualidad la ley permite que los accesorios de uso final de latón, tales como los grifos, cuyo tenor puede tener hasta 8 por ciento de plomo, puedan etiquetarse “sin plomo”. Esta ley también exige que los grifos y otros accesorios de uso final tengan una certificación independiente que cumpla con la Norma 61 NSF/ANSI. Los productos conformes se hallan marcados directamente en el producto mismo o en el embalaje.

Para más información

Llámenos al [insert your water system's phone number]. Para más información acerca de la reducción de exposición al plomo en su hogar y los efectos del plomo en la salud puede visitar el sitio Internet en www.epa.gov/lead, llamar al centro nacional de información sobre el plomo (National Lead Information Center) marcando el 1-800-424-LEAD (424-5323) ó bien consultar a su proveedor de atención.

Appendix C

Contacts and Additional Resources

Federal Informational Sources

- ▶ EPA's Web site on Lead: www.epa.gov/lead
- ▶ EPA's Web site on Lead in Drinking Water: www.epa.gov/safewater/lead
- ▶ EPA's Web site on Reducing Lead in Drinking Water in Schools and Day Care Centers: www.epa.gov/safewater/schools.
- ▶ Centers for Disease Control and Prevention's Web site on Lead: www.cdc.gov/lead
- ▶ National Lead Information Center Hotline: (800) 424-LEAD
- ▶ EPA's Safe Drinking Water Hotline: (800) 426-4791

State Drinking Water and Lead Poisoning Prevention Informational Sources

State	Lead in Drinking Water Program	Lead Poisoning Prevention Program
Alabama	Alabama Department of Environmental Management, Water Supply Branch Phone: (334) 271-7700 Web site: www.adem.state.al.us/WaterDivision/Drinking/DWMainInfo.htm	Alabama Department of Public Health, Bureau of Family Health Services, Childhood Lead Poisoning Prevention Program Phone: (334) 206-2966 Web site: www.adph.org/acldppp
Alaska	Alaska Department of Environmental Conservation, Division of Environmental Health, Drinking Water and Wastewater Program Phone: (907) 269-7647 Web site: www.dec.state.ak.us/eh/dw/	Alaska Department of Health and Social Services, Division of Public Health, Section of Epidemiology Phone: (907) 269-8086 Web site: www.epi.hss.state.ak.us/eh/default.stm
Arizona	Arizona Department of Environmental Quality, Drinking Water Section Phone: (602) 771-2300 Toll-free Phone: (800) 234-5677 Web site: www.azdeq.gov/environ/water/dw/	Arizona Department of Health Services, Office of Environmental Health, Lead Poisoning Prevention Program Phone: (602) 364-3118 Web site: www.azdhs.gov/phs/oeh/invsurv/lead/index.htm
Arkansas	Arkansas Department of Health and Human Services, Division of Engineering Phone: (501) 661-2623 Web site: http://www.healthyarkansas.com/eng/index.html	Arkansas Department of Health, Lead Based Paint Program Phone: 501-661-2000 Web site: www.healthyarkansas.com/faq/faq_lead.html
California	California Department of Public Health, Division of Drinking Water and Environmental Management Phone: (916) 449-5600 Web site: www.cdph.ca.gov/programs/Pages/ddwem.aspx	California Department of Health Services, Childhood Lead Poisoning Prevention Branch Phone: (510) 620-5600 Web site: www.dhs.ca.gov/childlead/
Colorado	Colorado Department of Public Health and Environment, Water Quality Control Division Phone: (303) 692-3500 Web site: www.cdphe.state.co.us/wq/index.html	Colorado Department of Public Health and Environment, Lead Poisoning Prevention Phone: (303) 739-1123 Web site: www.cdphe.state.co.us/dc/lead/index.html
Connecticut	Connecticut Department of Public Health, Water Supplies Section Phone: (860) 509-7333 Web site: www.dph.state.ct.us/BRS/Water/DWD.htm	Connecticut Department of Public Health, Lead Poisoning Prevention and Control Program Phone: (860) 509-7299 Web site: www.ct.gov/dph/cwp/view.asp?a=3140&q=387550

Delaware	Delaware Health and Social Services, Division of Public Health, Environmental Evaluation Branch, Office of Drinking Water Phone: (302) 741-8630 Web site: www.dhss.delaware.gov/dhss/dph/hsp/odw.html	Delaware Health and Social Services, Division of Public Health, Office of Lead Poisoning Prevention Phone: (302) 744-4546 Web site: www.dhss.delaware.gov/dph/hsp/lead.html
Florida	Florida Department of Environmental Protection, Drinking Water Program Phone: (850) 245-8336 Web site: www.dep.state.fl.us/water/drinkingwater/index.htm	Florida Department of Health, Division of Environmental Health, Bureau of Community Environmental Health, Childhood Lead Poisoning Prevention Program Phone: (850) 245-4250 Web site: www.doh.state.fl.us/environment/community/lead/
Georgia	Georgia Department of Natural Resources, Environmental Protection Division, Water Resource Branch Phone: (404) 675-6232 Web site: www.georgiaepd.org/Documents/wpb.html	Georgia Department of Human Resources, Division of Public Health, Childhood Lead Poisoning Prevention Program Phone: (404) 463-3754 Web site: http://health.state.ga.us/programs/lead/
Hawaii	Hawaii Department of Health, Environmental Management Division Phone: (808) 586-4258 Web site: www.hawaii.gov/health/environmental/water/sdwb/index.html	Hawaii Department of Health, Maternal and Child Health Branch Phone: (808) 733-9022 Web site: http://hawaii.gov/health/family-child-health/mchb/index.html
Idaho	Idaho Department of Environmental Quality, Division of Environmental Quality, Drinking Water Program Phone: (208) 373-0291 Web site: www.deq.idaho.gov/water/program/issues/drinking_water/overview.cfm	Idaho Division of Health and Welfare, Bureau of Community and Environmental Health, Indoor Environment Program Phone: (800) 926-2588 Web site: www.healthandwelfare.idaho.gov/portal/alias_Rainbow/lang_en-US/tabID_3392/DesktopDefault.aspx
Illinois	Illinois EPA, Division of Public Water Supplies Phone: (217) 785-8653 Web site: www.epa.state.il.us/water/	Illinois Department of Public Health, Childhood Lead Poisoning Phone: (217) 782-3517 Web site: www.idph.state.il.us/public/hb/hblead.htm
Indiana	Indiana Department of Environmental Management, Office of Water Quality Phone: (317) 232-8670 Web site: www.in.gov/idem/programs/water/index.html	Indiana Department of Health, Children's Lead Poisoning Prevention Phone: (317) 233-1325 Web site: www.in.gov/isdh/programs/lead/index.htm
Iowa	Iowa Department of Natural Resources, Water Supply Program Phone: (515) 725-0282 Web site: www.iowadnr.com/water/drinking/index.html	Iowa Department of Public Health, Bureau of Lead Poisoning Prevention Phone: (800) 972-2026 Web site: www.idph.state.ia.us/eh/lead_poisoning_prevention.asp
Kansas	Kansas Department of Health and Environment, Bureau of Water, Public Water Supply Section Phone: (785) 296-5500 Web site: www.kdheks.gov/pws/	Kansas Department of Health and Environment, Healthy Homes and Lead Hazard Prevention Program Phone: (866)-865-3233 Web site: www.kdheks.gov/lead/
Kentucky	Kentucky Department of Environmental Protection, Division of Water, Water Supply Branch Phone: (502) 564-3410 ext. 552 Web site: www.water.ky.gov/dw/	Kentucky Department of Public Health, Center for Health and Family Services, Adult and Child Health, Maternal and Child Health, Child Lead Poisoning Prevention Program Phone: (502) 564-2154 Web site: http://chfs.ky.gov/dph/ach/mch/clppp.htm

Louisiana	Louisiana Department of Health and Hospitals, Office of Public Health, Center for Environmental and Health Services, Safe Drinking Water Program Phone: (225) 342-9500 Web site: www.dhh.louisiana.gov/offices/?ID=238	Louisiana Department of Health and Hospitals, Office of Public Health, Center for Preventive Health, Genetic Diseases, Childhood Lead Poisoning Prevention Programs Phone: (504) 219-4413 Web site: www.dhh.louisiana.gov/offices/page.asp?ID=263&Detail=6296
Maine	Maine Department of Health and Human Services, Drinking Water Program Phone: (207) 287-2070 Web site: www.maine.gov/dhhs/eng/water/	Maine Department of Health and Human Services, Division of Environmental Health, Environmental and Occupational Health Programs, Childhood Lead Program Phone: (207) 287-8671 Web site: http://maine.gov/dhhs/eohp/lead/
Maryland	Maryland Department of the Environment, Water Supply Program Phone: (410) 537-3702 Web site: www.mde.state.md.us/Programs/WaterPrograms/Water_Supply/index.asp	Maryland Department of the Environment, Lead Poisoning Prevention Program Phone: (800)776-2706 Web site: www.mde.state.md.us/programs/landprograms/leadcoordination/index.asp
Massachusetts	Massachusetts Department of Environment, Drinking Water Program Phone: 617-292-5770 Web site: www.mass.gov/dep/water/drinking.htm	Massachusetts Office of Health and Human Services, Department of Public Health, Childhood Lead Poisoning Prevention Program Phone: (800) 532-9571 Web site: www.mass.gov/?pageID=eohhs2terminal&L=5&L0=Home&L1=Government&L2=Departments+and+Divisions&L3=Department+of+Public+Health&L4=Programs+and+Services+A+-+J&sid=Eeohhs2&b=terminalcontent&f=dph_environmental_lead_g_clppp_about&csid=Eeohhs2
Michigan	Michigan Department of Environmental Quality, Water Bureau Phone: (517) 241-1300 Web site: www.michigan.gov/deqwater	Michigan Department of Community Health, Childhood Lead Poisoning Prevention Program Phone: (517) 335-8885 Web site: www.michigan.gov/mdch/0,1607,7-132-2942_4911_4913---,00.html
Minnesota	Minnesota Department of Health, Drinking Water Protection Section Phone: (651) 201-4700 Web site: www.health.state.mn.us/divs/eh/water/index.html	Minnesota Department of Health, Lead Poisoning Prevention Phone: (651) 201-4620 Web site: www.health.state.mn.us/divs/eh/lead/index.html
Mississippi	Mississippi State Department of Health, Water Supply Division Phone: (601) 576-7518 Web site: www.msdh.state.ms.us/msdhsite/_static/44,0,76.html	Mississippi State Department of Health, Childhood Lead Poisoning Prevention Program Phone: (601) 576-7447 Web site: www.msdh.state.ms.us/msdhsite/_static/41,0,176.html
Missouri	Missouri Department of Natural Resources, Division of Environmental Quality, Public Drinking Water Branch Phone: (800) 361-4827 Website: www.dnr.mo.gov/env/wpp/dw-index.htm	Missouri Department of Health and Senior Services, Childhood Lead Poisoning Prevention Program Phone: (573) 526-4911 Web site: www.dhss.mo.gov/ChildhoodLead/
Montana	Montana Department of Environmental Quality, Public Water Supply Program Phone: (406) 444-4400 Web site: www.deq.state.mt.us/wqinfo/pws/index.asp	Montana Department of Public Health and Human Services, Lead Program Phone: (406) 444-5622 Web site: www.dphhs.mt.gov/epht/lead.shtml

Nebraska	Nebraska Department of Health and Human Services, Environmental Health Services Section, Public Water Supply Program Phone: (402) 471-2306 Web site: www.hhs.state.ne.us/enh/pwsindex.htm	Nebraska Department of Health and Human Services, Lead-Based Paint Program Phone: (402) 471-0386 Web site: www.dhhs.ne.gov/puh/enh/leadpaint/leadindex.htm
Nevada	Nevada Bureau of Health Protection Services, Division of Environmental Protection, Bureau of Safe Drinking Water Phone: (775) 687-9520 Web site: http://ndep.nv.gov/bsdw/index.htm	Southern Nevada Health District, Childhood Lead Poisoning Prevention Program Phone: (702) 759-1000 Web site: www.southernnevadahealthdistrict.org/clppp/index.htm
New Hampshire	New Hampshire Department of Environmental Services, Drinking Water and Ground Water Bureau, Drinking Water Source Protection Program Phone: (603) 271-3503 Web site: www.des.state.nh.us/dwspp	New Hampshire Department of Health and Human Services, Childhood Lead Poisoning Prevention Program Phone: (603) 271-4507 Web site: www.dhhs.state.nh.us/DHHS/CLPPP/default.htm
New Jersey	New Jersey Department of Environmental Protection, Division of Water Supply, Bureau of Safe Drinking Water Phone: (609)292-5550 Web site: www.state.nj.us/dep/watersupply/safedrnk.htm	New Jersey Department of Health and Senior Services, Family Health Services, Childhood Lead Prevention Program Phone: (609) 292-7837 Web site: www.state.nj.us/health/fhs/newborn/lead.shtml
New Mexico	New Mexico Environmental Department, Drinking Water Bureau Phone: (877) 654-8720 (Toll-free) Web site: www.nmenv.state.nm.us/dwb/dwbtop.html	New Mexico Department of Health, Environmental Health Epidemiology Bureau, Lead Poisoning Prevention Program Phone: (888) 878-8992 Web site: www.health.state.nm.us/eheb/lead.html
New York	New York Department of Health, Drinking Water Protection Program Phone: (800) 458-1158 Web site: http://health.state.ny.us/environmental/lead/leadwtr.htm	New York Department of Health, Bureau of Child and Adolescent Health, Lead Program Phone: (518) 474-2084 Web site: www.nyhealth.gov/environmental/lead/
North Carolina	North Carolina Department of the Environment and Natural Resources, Public Water Supply Section Phone: (919) 733-2321 Web site: www.deh.enr.state.nc.us/pws/index.htm	North Carolina Department of Environment and Natural Resources, Children’s Environmental Health Branch, Childhood Lead Poisoning Prevention Phone: (919) 715-5237 Web site: www.deh.enr.state.nc.us/ehs/Children_Health/Lead/lead.html
North Dakota	North Dakota Department of Health, Drinking Water Program Phone: (701) 328-5211 Web site: www.health.state.nd.us/MF/dw.html	North Dakota Department of Health, Lead Based Paint Phone: (701) 328.5188 Web site: www.health.state.nd.us/aaq/iaq/lbp/index.htm
Ohio	Ohio EPA, Division of Drinking and Ground Waters Phone: (614) 644-2752 Web site: www.epa.state.oh.us/ddagw/	Ohio Department of Health, Lead Poisoning Prevention Phone: (877) 668-5323 Web site: www.odh.ohio.gov/odhPrograms/dspc/lp_prev/lp_prev1.aspx
Oklahoma	Oklahoma Department of Environmental Quality, Water Quality Division Phone: (405) 702-8100 Web site: www.deq.state.ok.us/WQDNew/	Oklahoma Department of Health, Childhood Lead Poisoning Prevention Program Phone: (405) 271-6617 Web site: www.ok.gov/health/Child_and_Family_Health/Screening_Special_Services_and_Sooner_Start/Oklahoma_Childhood_Lead_Poisoning_Prevention_Program/index.html

Oregon	Oregon Department of Human Services, Public Health Division, Drinking Water Program Phone: (971) 673-0405 Web site: www.oregon.gov/DHS/ph/dwp/	Oregon Department of Human Services, Public Health Division, Lead Poisoning Prevention Program Phone: (971) 673-0440 Web site: www.oregon.gov/DHS/ph/lead/index.shtml
Pennsylvania	Pennsylvania Department of Environmental Protection, Bureau of Water Supply and Wastewater Management Phone: (717) 787-9637 Web site: www.depweb.state.pa.us/watersupply/cwp/view.asp?a=1251&Q=448745&watersupplyNav= 30131 	Pennsylvania Department of Health, Lead Poisoning Prevention and Control Program Phone: (800) 440-5323 Web site: www.dsf.health.state.pa.us/health/cwp/view.asp?a=179&q=201197
Puerto Rico	Puerto Rico Department of Health, Water Supply Supervision Program Phone: (787) 767 – 8181 Web site: www.salud.gov.pr/Pages/default.aspx	Puerto Rico Department of Health Phone: (787) 274-7676 Web site: www.salud.gov.pr/Pages/default.aspx
Rhode Island	Rhode Island Department of Health, Office of Drinking Water Quality Phone: (401) 222-6867 Web site: www.health.state.ri.us/environment/dwq/index.php	Rhode Island Department of Health, Childhood Lead Poisoning Prevention Program Phone: (800) 942-7434 Web site: www.health.state.ri.us/lead/index.php
South Carolina	South Carolina Department of Health and Environmental Control, Bureau of Water Phone: (803) 898-4300 Web site: www.scdhec.net/water/html/dwater.html	South Carolina Department of Health and Environmental Control, Women’s and Children’s Services, Childhood Lead Poisoning Prevention Program Phone: (866) 466-5323 Web site: www.scdhec.gov/health/mch/wcs/ch/lead.htm
South Dakota	South Dakota Department of Environment and Natural Resources, Drinking Water Program Phone: (605) 773-3754 Web site: www.state.sd.us/DENR/des/drinking/dwprg.htm	EPA Region 8 Lead Program Phone: (303) 312-6966 Web site: www.epa.gov/region8/toxics_pesticides/leadpnt/index.html
Tennessee	Tennessee Department of Environment and Conservation, Division of Water Supply Phone: (615) 532-0191 Web site: www.state.tn.us/environment/dws/	Tennessee Department of Health, Childhood Lead Poisoning Prevention Program Phone: (615) 741-7305 Web site: http://health.state.tn.us/lead/index.htm
Texas	Texas Commission on Environmental Quality, Drinking Water and Water Availability Phone: (512) 239-4691 Web site: www.tceq.state.tx.us/nav/util_water/	Texas Department of State Health Services, Childhood Lead Poisoning Prevention Program Phone: (800) 588-1248 Web site: www.dshs.state.tx.us/lead/default.shtm
Utah	Utah Department of Environmental Quality, Division of Drinking Water Phone: (801) 536-4200 Web site: www.drinkingwater.utah.gov/	Utah Department of Environmental Quality, Office of Epidemiology, Child Blood Lead Epidemiology and Surveillance Phone: (801) 538-6191 Web site: http://health.utah.gov/epi/enviroepi/ables98/child.htm
Vermont	Vermont Department of Environmental Conservation, Water Supply Division Phone: 802-241-3400 Toll-free: 800-823-6500 Website: www.vermontdrinkingwater.org/	Vermont Department of Health, Health Protection Division, Lead Surveillance Program Phone: (802) 865-7786 Web site: http://healthvermont.gov/enviro/lead/lead.aspx
Virginia	Virginia Department of Health, Office of Drinking Water Phone: (804) 864-7500 Web site: www.vdh.virginia.gov/DrinkingWater/Consumer/	Virginia Department of Health, Office of Family Health Services, Childhood Lead Poisoning Prevention Program Phone: (804) 864-7694 Web site: www.vahealth.org/leadsafe/

Washington, DC	DC Department of Health, Environmental Health Administration, Water Quality Division Phone: (202) 535-2190 Web site: http://doh.dc.gov/doh/cwp/view,a,1374,Q,586624,dohNav_GID,1811,.asp EPA Web site on Lead in DC Drinking Water: http://www.epa.gov/dclead/	DC Department of Health, Lead Poisoning Prevention Program Phone: (202) 442-9216 Web site: http://doh.dc.gov/doh/site/default.asp
Washington	Washington Department of Health, Division of Environmental Health, Office of Drinking Water Phone: (360) 236-3100 Web site: www.doh.wa.gov/ehp/dw/	Washington Department of Health, Division of Environmental Health, Office of Environmental Health Assessments Phone: (800) 909-9898 Web site: www.doh.wa.gov/ehp/lead/default.htm
West Virginia	West Virginia Department of Health and Human Services, Environmental Engineering Division Phone: (304)558-6715 Web site: www.wvdhhr.org/oehs/eed/	West Virginia Department of Health and Human Services, Bureau of Public Health, Radiation, Toxics, and Air Division Phone: (304) 558-6716 Web site: www.wvdhhr.org/rtia/lead.asp
Wisconsin	Wisconsin Department of Natural Resources, Bureau of Drinking Water and Groundwater Phone: (608) 266-2621 Web site: www.dnr.state.wi.us/org/water/dwg/	Wisconsin Department of Health and Family Services, Lead-Safe Wisconsin Phone: (608) 261-6876 Web site: www.dhfs.state.wi.us/lead/
Wyoming	U.S. EPA Region 8 Drinking Water Program Phone: (303) 312-6337 Web site: http://epa.gov/region8/water/dwhome/wycon.html	Wyoming Department of Health, Preventive Health and Safety Division, Lead Poisoning Prevention Program Phone: (307) 777-6015 Web site: http://wdh.state.wy.us/PHSD/lead/index.htm/

Resources to Locate Organizations in Your Service Area

For a list of organizations in your service area, water systems should consult with their local public health agency first, as they may have lists of the following organizations in your area. However, the Web sites below have directories where you can input your location to find surrounding organizations.

- ▶ Local Public Health Agencies
Contact your state or local county government
National Association of County and City Health Officials, Local Public Health Agency Index
<http://lhadirectory.naccho.org/phdir/>
- ▶ Public and Private Schools or School Boards
US Department of Education, Institute for Education Sciences, National Center for Education Statistics
<http://nces.ed.gov/globallocator/>
- ▶ Women, Infants, and Children (WIC) and Head Start programs
US Department of Agriculture, Food and Nutrition Service, WIC State Agency Contacts
www.fns.usda.gov/wic/Contacts/ContactsMenu.HTM
US Department of Health and Human Services, Head Start Locator
<http://eclkc.ohs.acf.hhs.gov/hslc/HeadStartOffices>
- ▶ Public and Private Hospitals and Medical clinics
Contact your local health agency
- ▶ Pediatricians
American Academy of Pediatrics Referral Service www.aap.org/referral/
American Board of Pediatrics www.abp.org/ABPWebSite/
- ▶ Family Planning Clinics
Contact your local health agency
- ▶ Local Welfare Agencies
Contact your local health agency
- ▶ Licensed childcare centers
National Child Care Association www.nccanet.org
- ▶ Public and private preschools
US Department of Education, Institute for Education Sciences, National Center for Education Statistics
<http://nces.ed.gov/globallocator/>
- ▶ Obstetricians-Gynecologists and Midwives
American College of Obstetricians and Gynecologists, Physician Lookup
www.acog.org/member-lookup/
American College of Nurse-Midwives www.midwife.org/find.cfm

Publications

Regulatory Publications

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 (72 FR 57782, October 10, 2007). This Federal Register Notice and further information is available at <http://www.epa.gov/safewater/lcrmr/index.html>.

Guidance Documents

“Lead and Copper Rule: Revised Quick Reference Guide for Schools and Child Care Facilities that are Regulated Under the Safe Drinking Water Act.” US Environmental Protection Agency, Office of Water, Washington, DC. October 2005, EPA 816-F-05-030. This document is available at <http://www.epa.gov/safewater/schools/>.

“Lead and Copper Rule: Revised Quick Reference Guide.” US Environmental Protection Agency, Office of Water, Washington, DC. June 2008, EPA 816-F-08-018. This document is available at <http://www.epa.gov/safewater/lcrmr/>.

“How to Determine Compliance with Optimal Water Quality Parameters as Revised by the Lead and Copper Rule Minor Revisions.” US Environmental Protection Agency, Office of Water, Washington, DC. February 2001, EPA 815-R-99-019. This document is available at <http://www.epa.gov/safewater/lcrmr/>.

Risk Communications

“AWWA Public Communications Toolkit.” American Water Works Association.” This document is available at <http://www.awwa.org/Government/Content.cfm?ItemNumber=3851&navItemNumber=3852>.

Public Information and Fact Sheets

“Water Health Series: Filtration Facts.” US Environmental Protection Agency, Office of Water, Washington, DC. September 2005, 816-K-05-002. This document is available at <http://www.epa.gov/safewater/>.

“Is There Lead in my Drinking Water?: You can Reduce the Risk of Lead Exposure from Drinking Water” US Environmental Protection Agency, Office of Water, Washington, DC. February 2005, EPA 816-F-05-001. This document is available in English and Spanish at <http://www.epa.gov/safewater/lead/leadfactsheet.html>.

“Controlling Lead in Drinking Water for Schools and Day Care Facilities: A Summary of State Programs.” US Environmental Protection Agency, Office of Water, Washington, DC. July 2004, EPA-810-R-04-001. This document is available at <http://www.epa.gov/safewater/lcrmr/>.

“Tap Into Prevention: Drinking Water Information for Health Care Providers.” US Environmental Protection Agency, Office of Water, Washington, DC. August 2004, EPA 816-C-04-001. This video is available in DVD and VHS format at <http://www.epa.gov/safewater/healthcare/index.html>.

“Water on Tap: What you Need to Know.” US Environmental Protection Agency, Office of Water, Washington, DC. October 2003, EPA 816-K-03-007. This document is available in English, Spanish and Chinese at <http://www.epa.gov/safewater/wot/index.html>.

“Is There Lead in the Drinking Water?: You Can Reduce the Risk of Lead Exposure from Drinking Water in Educational Facilities” US Environmental Protection Agency, Office of Water, Washington DC. April 2002, 903-F01-002. This document is available at <http://www.epa.gov/safewater/lead/>.

“Is There Lead in My Drinking Water?: You Can Reduce the Risk of Lead Exposure from Drinking Water in Your Home.” US Environmental Protection Agency, Office of Water, Washington, DC. February 2005, EPA 816-F-05-001. This document is available at <http://www.epa.gov/ogwdw/lead/leadfactsheet.html>.

“Drinking Water from Household Wells.” US Environmental Protection Agency, Office of Water, Washington, DC. January 2002, EPA 816-K-02-003. This document is available at <http://www.epa.gov/safewater/privatewells/booklet/index.html>.

“Lead and Copper Rule: Short-Term Revisions and Clarifications Training.” US Environmental Protection Agency, Drinking Water Academy, Washington, DC. April 2008. This presentation is available at <http://www.epa.gov/safewater/lcrmr/>.

“Children and Drinking Water Standards.” US Environmental Protection Agency, Office of Water, Washington, DC. December 1999, 815-K-99-001. This document is available at <http://www.epa.gov/safewater/kids/kidshealth/>.

“Drinking Water and Health: What You Need to Know!” US Environmental Protection Agency, Office of Water, Washington, DC. October 1999, EPA 816-K-99-001. This document is available in English and Spanish at <http://www.epa.gov/safewater/dwh/index.html>.

CDC Publications

“Preventing Lead Poisoning in Young Children.” Center for Disease Control and Prevention, Atlanta, GA. August 2005. This document is available at http://www.cdc.gov/nceh/lead/publications/pub_Reas.htm.

“Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention.” Center for Disease Control and Prevention, Atlanta, GA. March 2002. This document is available at http://www.cdc.gov/nceh/lead/CaseManagement/caseManage_main.htm.

Appendix D

Lead and Copper Rule Public Education Requirements— Federal Regulatory Language

Lead and Copper Rule Short-Term Revisions and Clarifications that Relate to Public Education Requirements

§141.85 Public education and supplemental monitoring requirements.

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

(a) Content of written public education materials.

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

(i) IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER. [INSERT NAME OF WATER SYSTEM] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

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

(iii) Sources of Lead.

(A) Explain what lead is.

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

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

- (iv) Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.
 - (A) Encourage running the water to flush out the lead.
 - (B) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.
 - (C) Explain that boiling water does not reduce lead levels.
 - (D) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.
 - (E) Suggest that parents have their child's blood tested for lead.

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

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

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

- (i) Tell consumers how to get their water tested.
- (ii) Discuss lead in plumbing components and the difference between low lead and lead free.

(b) Delivery of public education materials.

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

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

- (i) Deliver printed materials meeting the content requirements of paragraph (a) of this section to all bill paying customers.
- (ii) (A) Contact customers who are most at risk by delivering education materials that meet the content requirements of paragraph (a) of this section to local public health agencies even if they are not located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users. The water system must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional

community based organizations serving target populations, which may include organizations outside the service area of the water system. If such lists are provided, systems must deliver education materials that meet the content requirements of paragraph (a) of this section to all organizations on the provided lists.

(B) Contact customers who are most at risk by delivering materials that meet the content requirements of paragraph (a) of this section to the following organizations listed in 1 through 6 that are located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users:

- (1) Public and private schools or school boards.
- (2) Women Infants and Children (WIC) and Head Start programs.
- (3) Public and private hospitals and medical clinics.
- (4) Pediatricians.
- (5) Family planning clinics.
- (6) Local welfare agencies.

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

- (1) Licensed childcare centers
- (2) Public and private preschools.
- (3) Obstetricians-Gynecologists and Midwives.

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

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

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

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

- (A) Public Service Announcements.
- (B) Paid advertisements.
- (C) Public Area Information Displays.
- (D) Emails to customers.
- (E) Public Meetings.
- (F) Household Deliveries.
- (G) Targeted Individual Customer Contact.
- (H) Direct material distribution to all multi-family homes and institutions.
- (I) Other methods approved by the State.

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

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

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

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

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

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

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

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

(ii) Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the non-transient non-community water system. The State may allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage.

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

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

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

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

- (i) The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and
- (ii) The system provides water as part of the cost of services provided and does not separately charge for water consumption.

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

- (i) With respect to the requirements of paragraph (b)(2)(vi) of this section, a system serving 3,300 or fewer must implement at least one of the activities listed in that paragraph.
- (ii) With respect to the requirements of paragraph (b)(2)(ii) of this section, a system serving 3,300 or fewer people may limit the distribution of the public education materials required under that paragraph to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.
- (iii) With respect to the requirements of paragraph (b)(2)(v) of this section, the State may waive this requirement for systems serving 3,300 or fewer persons as long as system distributes notices to every household served by the system.

(c) Supplemental monitoring and notification of results.

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

(d) Notification of results.

(1) Reporting requirement. All water systems must provide a notice of the individual tap results from lead tap water monitoring carried out under the requirements of §141.86 to the persons served by the water

system at the specific sampling site from which the sample was taken (e.g., the occupants of the residence where the tap was tested).

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

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

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

Section 141.90 Reporting Requirements

(f)(1) Any water system that is subject to the public education requirements in Sec. 141.85 shall, within 10 days after the end of each period in which the system is required to perform public education in accordance with Sec. 141.85 (b), send written documentation to the State that contains:

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

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

Lead and Copper Rule Short-Term Revisions and Clarifications that Relate to Consumer Confidence Reports (CCR)

§141.154 Required additional health information.

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

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

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your

tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

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

Appendix E

Lead and Copper CWS Public Education Fact Sheet

Lead and Copper Rule: Public Education & Other Public Information Requirements for Community Water Systems

Public Education Requirements

Utilities must ensure that water from the customer's tap does not exceed the action level for lead in drinking water (15 ppb) in at least 90 percent of the homes sampled. If you have a **lead action level exceedance** you must complete the following steps to comply with the Lead and Copper Rule (LCR) public education (PE) requirements.

Section 141.85 of the LCR regulations contains specific requirements regarding the content and delivery of your public education program. To learn more about the revisions to the public education requirements, refer to *Implementing the Lead Public Education Provision of the Lead and Copper Rule: A Guide for Community Water Systems*, Section 1, page 5.

Step 1: Develop the content of your written public education materials.

The following information must be included in your PE materials. The text in *italics* is mandatory and must be included as written. Headings in **bold** must be addressed, but can be customized. Fill-in-the-blank templates (in English and Spanish) are available at: www.epa.gov/safewater/lcrrm/compliancehelp.html. More information can be found in *Implementing the Lead Public Education Provision of the Lead and Copper Rule: A Guide for Community Water Systems*; Section 1, page 8: Required Content of Public Education Materials and Appendix B: Public Education templates.



Table 1. Required Content and Language for Public Education Materials

Section	Language
Informational Statement * Mandatory language	<i>Important Information about Lead in Your Drinking Water</i> <i>[Insert name of water system] found elevated levels of lead in drinking water in some homes and buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.</i>
Health Effects of Lead * Mandatory language	<i>Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.</i>
Sources of Lead * Can be customized; Example language	Lead is a common metal found in the environment. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the work place and exposure from certain hobbies (lead can be carried on clothing or shoes). Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. EPA estimates that 10 to 20 percent of a person's potential exposure to lead may come from drinking water. Infants who consume mostly formula mixed with lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water.

Table 1. Required Content and Language for Public Education Materials (continued)

Section	Language
<p>Steps you can take to reduce your exposure to lead in your water * Can be customized; Example language</p>	<p>1. Run your water to flush out lead. Run water for 15 - 30 seconds to flush lead from interior plumbing [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the Primacy Agency approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours. [It is likely that systems with lead service lines will need to collect data to determine the appropriate flushing time for lead service lines.]¹</p> <p>2. Use cold water for cooking and preparing baby formula. Lead dissolves more easily into hot water.</p> <p>3. Do not boil water to remove lead. Boiling water will not reduce lead.</p> <p>4. Look for alternative sources or treatment of water. You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on performance standards for water filters.</p> <p>5. Test your water for lead. Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]</p> <p>6. Get your child's blood tested. Contact your local health department or healthcare provider to find out how you can get your child tested for lead, if you are concerned about exposure.</p> <p>7. Identify and replace plumbing fixtures containing lead. Brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as "lead free." Visit the NSF Web site at www.nsf.org to learn more about lead-containing plumbing fixtures.</p>
<p>What happened? What is being done? * Can be customized; Example language</p>	<p>[Insert information about how and when the exceedance was discovered in your community and provide information on the source(s) of lead in the drinking water, if known.]</p> <p>[Insert information about what your system is doing to reduce lead levels in homes in your community.]</p>
<p>For More Information * Mandatory language</p>	<p><i>Call us at [Insert Number] or (if applicable) visit our Web site at [insert Web site Here]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or contact your health care provider.</i></p> <p>[We recommend you include the name of your system and the date that the information is being distributed, along with the state water system ID, somewhere on the notice.]</p>

¹The bracketed language does not need to be included, as worded, in your materials. It is designed to alert systems that, where applicable, lead service lines might affect the flushing time.



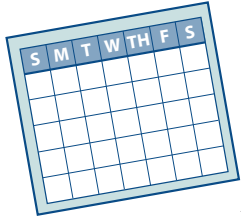
Different Language Communities. If significant proportions of the population in your community speak languages other than English, the PE materials must contain information in the appropriate language(s) regarding the importance of the notice or a contact where persons can obtain a translation or assistance.



Step 2: Get State approval.

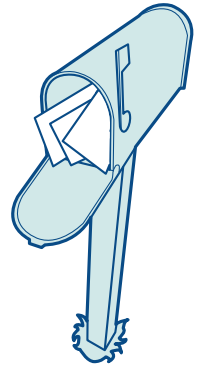
You must submit all written PE materials to the Primacy Agency prior to delivery. The Primacy Agency may require you to obtain approval of PE materials prior to delivery.

Step 3: Deliver your public education materials.



Timing: All public education materials must be delivered within 60 days after the end of the monitoring period in which the exceedance occurred and repeated once every 12 months, EXCEPT providing information on or in each water bill, which must be included in each billing cycle (no less than quarterly or the Primacy Agency can approve a separate mailing) and two press releases per 12 month period for as long as you exceed the lead action level. Also, the Primacy Agency

can allow activities to extend beyond the 60-day requirement if needed for implementation purposes; however, this extension must be approved in writing in advance of the 60-day deadline. Note: This extension is only appropriate if the system has initiated public education activities prior to the end of the 60-day deadline.



For more information go to *Implementing the Lead Public Education Provision of the Lead and Copper Rule: A Guide for Community Water Systems*; Section 1, page 9: Required Methods of Delivery for Community Water Systems.

Table 2. Required Methods of Delivery for Small and Large Community Water Systems

Small (<3,300 customers)	Large (>3,300 customers)
Deliver printed materials (pamphlets, brochures, posters) to all bill paying customers	Deliver printed materials (pamphlets, brochures, posters) to all bill paying customers
Deliver public education materials to the following facilities and organizations that are served by the system that are most likely to be visited regularly by pregnant women and children: <ol style="list-style-type: none"> 1. Local public health agencies¹ 2. Public and private schools or school boards 3. Women Infants and Children (WIC) and Head Start programs 4. Public and private hospitals and medical clinics 5. Pediatricians 6. Family planning clinics 7. Local welfare agencies 	Deliver public education materials to the following organizations that are located within your service area, along with a cover letter encouraging distribution to all potentially affected customers or users: <ol style="list-style-type: none"> 1. Local public health agencies 2. Public and private schools or school boards 3. Women Infants and Children (WIC) and Head Start programs 4. Public and private hospitals and medical clinics 5. Pediatricians 6. Family planning clinics 7. Local welfare agencies

¹If you do not have a local public health agency, you should contact your State Health Department.

Tip: To obtain a list of organizations in your area, contact your local Public Health Agency. Additional informational resources of associations and licensing agencies of these organizations may be found in *Implementing the Public Education Provision of the Lead and Copper Rule: A Guide for Community Water Systems*; Appendix C.



Systems are required to contact their local Public Health Agencies directly (either in person or by phone).

Table 2. Required Methods of Delivery for Small and Large Community Water Systems (continued)

Small (<3,300 customers)	Large (>3,300 customers)
<p>Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of the organizations from the local Public Health Agencies, even if the agencies are not located within the water system service area:²</p> <ol style="list-style-type: none"> 1. Licensed childcare centers 2. Public and private preschools 3. Obstetricians-Gynecologists and Midwives 	<p>Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of the organizations from the local Public Health Agencies, even if the agencies are not located within the water system service area:²</p> <ol style="list-style-type: none"> 1. Licensed childcare centers 2. Public and private pre-schools 3. Obstetricians-Gynecologists and Midwives
<p>Provide information on or in each water bill (no less than quarterly or Primacy Agency can approve a separate mailing)^{3,4}</p>	<p>Provide information on or in each water bill (no less than quarterly or Primacy Agency can approve a separate mailing)^{3,4}</p>
<p>Submit press release to newspaper, television, and radio stations⁵</p>	<p>Submit press release to newspaper, television, and radio stations</p>
<p>Conduct one (1) activity from one of the following general categories:^{6,7}</p> <ul style="list-style-type: none"> • Public Service Announcements • Paid Advertisements • Display Information in Public Areas • Email to Customers • Public Meetings • Delivery to Every Household • Provide Materials Directly to Multi-family Homes • Other Methods Approved by the Primacy Agency 	<p>Conduct three (3) activities from one, two, or three of the following general categories:^{6,7,8}</p> <ul style="list-style-type: none"> • Public Service Announcements • Paid Advertisements • Display Information in Public Areas • Email to Customers • Public Meetings • Delivery to Every Household • Provide Materials Directly to Multi-family Homes • Other Methods Approved by the Primacy Agency
	<p>Post material on a publicly accessible Web site (for systems serving > 100,000 individuals)</p>

²For further clarification of a good faith effort, you should consult with your Primacy Agency.

³Primacy Agency may allow a separate mailing if you cannot place information on the water bill.

⁴You may add additional pages (e.g., public education brochure) to the Consumer Confidence Report if timing is appropriate. However, it may be rare that timing will coincide, given that the CCR must contain compliance data collected in the previous calendar year and the report must be provided to consumers no later than July 1 (i.e., the report issued by July 1, 2007 contains compliance data collected in calendar year 2006).

⁵Primacy Agency may waive this requirement as long as you distribute notices to every household served by your system.

⁶You should discuss/verify with your Primacy Agency to ensure fulfillment of all requirements.

⁷Appendix B of *Implementing the Lead Public Education Provision of the Lead and Copper Rule: A Guide for Community Water Systems* contains customizable templates for PE materials that may be used to meet these requirements.

⁸For example, you may do 3 PSAs or 3 public meetings if the Primacy Agency allows.

Table 3. Other Public Information Requirements – Regardless of An Action Level Exceedance

Consumer Confidence Report (CCR) Requirements¹

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

A system may write its own statement in consultation with the Primacy Agency.

Notification of Results – Reporting Requirements²

Must provide a consumer notice of lead tap water monitoring results to all persons served at the tap from which the sample was taken.

Must provide consumer notice as soon as practical, but no later than 30 days after system learns of tap monitoring results.

Must include the following information: results of lead tap water monitoring, an explanation of the health effects of lead (you may use the health effects language found in Table 1), list steps consumers can take to reduce exposure to lead in drinking water, and utility contact information. This notice must also include the maximum contaminant level goal (MCLG) for lead and the action level (AL) for lead and the following definitions for these two terms:

The MCLG for lead is zero and the action level is 15ppb. The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. The action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Must be provided to all persons served at the site by mail or other methods (subject to approval by the Primacy Agency). This includes those who do not receive a water bill.

¹CWSs in States where EPA is the Primacy Agency or have adopted the Revisions by December 2008 must begin including the lead informational statement in CCRs that are due to consumers by July 1, 2009 (i.e. the 2008 CCR). Otherwise, CWSs must begin to include this information in the 2009 CCR.

²Consumer Notification of Results templates are available in *Appendix B of Implementing the Lead Public Education Provision of the Lead and Copper Rule: A Guide for Community Water Systems*.

For Additional Information:

- ▶ *Implementing the Lead Public Education Provision of the Lead and Copper Rule: A Guide for Community Water Systems (EPA 816-R-08-007, June 2008).*
- ▶ EPA’s Website on Lead in Drinking Water – Lead and Copper Rule: www.epa.gov/safewater/lcrmr
- ▶ EPA’s Safe Drinking Water Hotline: (800) 426-4791
- ▶ Your Primacy Agency

Disclaimer: This document is designed for Community Water Systems; the guidance contained in this document does not substitute for provisions or regulations, nor is it a regulation itself. Thus, it does not impose legally-binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances.

Appendix I

Chapter 4 Lead/Copper Rule Lead Service Line Replacement (LSLR)

- Lead Service Line Replacement (LSLR) Requirement Overview (*Pg. I-2*)
- Collecting Lead Service Line Sample Instructions (*Pg. I-4*)
- Material Evaluation Instructions (*Pg. I-6*)
- Lead Service Line Materials Evaluation and Replacement Schedule Form (*Pg. I-9*)
- Lead Service Line Removal Form (*Pg. I-11*)
- Partial LSLR Homeowner “Opt From” Template (*Pg. I-12*)

Lead Service Line Replacement (LSLR) Requirement Overview

A CWS must begin replacing lead service lines if they continue to exceed the lead action level after installing corrosion control treatment and/or source water treatment. LSLR requirements are summarized below.

LSLR activities must immediately begin on the first day following the end of the monitoring period in which the lead action level was exceeded after installing the required treatment(s).

First Time Triggered into LSLR

Within the first 12 months, the CWS must submit to the Illinois EPA a material evaluation of their entire distribution system and a lead service line replacement schedule. The CWS is required to only replace the portion of the service line it owns (See Page I-3). You may use the “Lead Service Line Materials Evaluation and Replacement Schedule Form” when reporting this information.

AND

*Within the first 12 months, the CWS must replace (or sample to demonstrate line does not contribute to more than 0.015 mg/L lead) at a minimum of 7% of the total number of lead service lines owned (and partially owned) by the water supply.

AND

*At the end of the first 12 months, submit a letter to the Illinois EPA stating for the previous year, the number of lines scheduled to be replaced, the number and location of lines actually replaced, and if measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling. You may use the Illinois EPA “Lead Service Line Removal Form” when reporting this information.

After First Year of LSLR

You must continue to submit an annual letter to the Illinois EPA stating for the previous year, the number of lines scheduled to be replaced, the number and location of lines actually replaced, and if measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling. You may use the Illinois EPA “Lead Service Line Replacement Form” when reporting this information.

**Once you meet the lead action level during two consecutive monitoring periods, LSLR activities can stop. You must again start these activities immediately on the first day following the end of the monitoring period in which the lead action level is again exceeded. In addition, you must reconsider any lines previously determined to not require replacement (i.e., “replaced through testing”). Specifically, you must update your inventory of lead service lines to include those that were classified as “replaced through testing.” You will not be required to resubmit the materials evaluation.*

Important Information for those Conducting Partial Lead Service Line Replacement

As mentioned on the previous page, the LCR requires you to replace the portion of the lead service line that you own. You must offer to replace the customer's portion of the line at his/her expense. You are not required to replace the privately-owned portion of the line if the owner chooses not to pay the cost of replacing the privately-owned portion. In those instances where you do not replace the privately-owned portion of the line (i.e., conduct partial lead service line replacement), a temporary increase in lead levels may occur. Therefore, in addition to the requirements on the previous page, you must:

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

You do not have to routinely submit this particular result data/information notice to the Illinois EPA. However, the Illinois EPA reserves the right to request this information at any time to verify it was correctly completed.

Collecting Lead Service Line Samples

You can collect a lead service line sample using **one** of the following procedures. For each procedure, collect a 1-liter sample from the tap by filling the sample bottle to the 1-liter mark, then cap immediately.

- **Flushing a Specified Volume** - The sample should be collected from the building tap which is closest to the portion of the lead service line that was not replaced (i.e., the first tap in the building, most likely a kitchen or bathroom tap on the first floor). Flush the estimated volume of water between the service connection and the sample tap. You can estimate the volume of water by using Exhibit 1 (below), Pipe Volume Table. EPA recommends selecting the pipe diameter that is one size larger than the actual pipe size, since pipe material thickness can vary, affecting the interior diameter and the actual volume of water. You can also estimate the volume by measuring the length and diameter of piping from tap to connection and the length and diameter of the service connection itself into a graduated beaker or cylinder to ensure that you have collected the correct volume, and then close the tap.
- **Direct Service Line Samples** - In communities where the meters are located outside the buildings (or unmetered areas) service line taps may already exist. Prior to sampling, water should be run to flush the pipe that connects the faucet and the service line. If no tap exists, but the lead service line can be made accessible, a tap constructed of lead-free materials can be installed directly into the line for sample collection purposes. However, because installation of a tap directly into the lead service line could induce additional corrosion activity and is an expensive process as well, this option is not recommended when there are existing service line taps.
- **Temperature Variation** - This method is recommended if the temperatures of lead service line and interior piping are easily distinguishable (for example in a single-family home). A tap sample should be collected by gently opening the tap and running the water at a normal flow rate, keeping a hand/finger under the flowing water. When a change in water temperature is detected, a 1-liter sample should be collected by filling the sample bottle to the appropriate level and capping.

Exhibit I: Pipe Volume Table (Volumes Listed in Liters)						
Pipe Length (Feet)	Pipe Diameter (Inches)					
	3/8	1/2	5/8	3/4	1	1-1/2
2	0.06	0.09	0.14	0.19	0.32	0.50
3	0.09	0.14	0.21	0.29	0.49	0.74
4	0.11	0.18	0.27	0.38	0.65	0.99
5	0.14	0.23	0.34	0.48	0.81	1.24
6	0.17	0.27	0.41	0.57	0.97	1.48
7	0.20	0.32	0.48	0.67	1.14	1.73
8	0.23	0.36	0.55	0.76	1.30	1.98
9	0.26	0.41	0.62	0.86	1.46	2.22
10	0.28	0.45	0.69	0.95	1.62	2.47

Exhibit I: Pipe Volume Table (Volumes Listed in Liters)

Pipe Length (Feet)	Pipe Diameter (Inches)					
	3/8	1/2	5/8	3/4	1	1-1/2
11	0.31	0.50	0.75	1.05	1.78	2.72
12	0.34	0.55	0.82	1.14	1.95	2.96
13	0.37	0.59	0.89	1.24	2.11	3.21
14	0.40	0.64	0.96	1.33	2.26	3.46
15	0.43	0.68	1.03	1.43	2.43	3.71
16	0.46	0.73	1.10	1.52	2.60	3.95
17	0.49	0.78	1.16	1.62	2.76	4.20
18	0.51	0.82	1.23	1.71	2.92	4.45
19	0.54	0.86	1.30	1.81	3.08	4.70
20	0.57	0.91	1.37	1.90	3.24	4.94
25	0.71	1.14	1.71	2.38	4.06	6.18
30	0.86	1.36	2.06	2.85	4.87	7.41
35	1.00	1.59	2.40	3.33	5.68	8.65
40	1.14	1.82	2.74	3.80	6.49	9.88
60	1.43	2.27	3.43	4.76	8.11	12.36

Notes:

1. Volumes can be added together for pipe lengths not listed.
2. Liters can be converted to gallons by dividing by 3.785.
3. EPA recommends selecting the pipe diameter that is one size larger than the actual pipe size, since pipe material thickness can vary, affecting the interior diameter and the actual volume of water.

Material Evaluation Instructions

Lead and Copper Rule

Distribution System Materials Evaluation and Replacement Schedule

Before your supply began monitoring for lead and copper, a materials survey of the distribution system was required in order to identify a pool of targeted sampling sites, i.e., lead service lines. The material evaluation picks up from where the initial materials survey left off. To complete the material evaluation, you will need to do **four** activities:

1. Identify the number of “initial” lead service lines in the distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins.
2. Identify the “owner” of each lead service line.
3. Establish a schedule for replacing lead service lines (7 percent of the total annually).
4. Complete and return the Illinois EPA Material Evaluation & Replacement Schedule reporting form to the Illinois EPA.

1. Identifying the number of lead service lines in the distribution system

The **first step** of the material evaluation is to identify the number of lead service lines within the distribution system. Use the potential sources of information listed below to assist in identifying the locations of the lines. The sources marked with an asterisk (*) are sources that must be researched.

- **Utility Records***
Historical and current records including maps, record drawings, maintenance records, meter installation records, historical documentation, and capital improvement master plans maintained by the supply could provide an excellent source of information on service line and connection materials in the distribution system.
- **Materials Evaluation for Lead/Copper Sample Site Plan***
Information collected for the selection of lead and copper sample sites. This material evaluation was required to be conducted at the beginning of the lead and copper monitoring program.
- **Permit Files***
Permit files should be reviewed to determine the presence and location of lead service lines. Pre-1940 documents are especially important. Recent records should also be reviewed to ascertain service line replacements and/or repairs.
- **Senior Personnel and Retirees**
CWS personnel experienced in the operation, maintenance, or material usage within the distribution system should be consulted. Additionally, local contractors or developers may have reliable information on the service line construction materials.

- **Community Survey**
A community survey may be helpful in identifying lead service line connections.
- **Other Sources**
Other sources, (i.e., piping suppliers, historical USGS maps, and aerial photography) may be available to the supply, and may be helpful in identifying the materials used in the distribution system.

In no instance are systems expected to use excavation as a means of identifying lead service lines.

If additional lead services lines are discovered after you have already submitted your initial material evaluation and replacement schedule form, a new evaluation and schedule form will be required with the annual LSLR removal verification form.

2. Identifying the “owner” of each lead service line

After identifying all lead service lines, you will need to identify relevant legal authorities (e.g., contracts, local ordinances) regarding the portion of each lead service line owned by the water supply. It is understood that the ownership and/or control of lead service lines are often split between the supply and the property owner. Depending on state laws or municipal ordinances, supplies may only own or control connections up to the property line, curb, or building. Others may own the entire service line.

On the material evaluation, each lead service line (LSL) should be classified in one of three ways:

1. LSL is entirely owned by the water supply.
2. LSL is partially owned by the water supply.
3. LSL is entirely owned by the home/building owner.

For all LSLs that are **not entirely owned by the water supply**, the supply must submit documentation/explanation that verifies the supply **does not** entirely own the lead line (as defined by state statutes, municipal ordinances, public service contracts or other applicable legal authority). This summary of documentation needs to be submitted with the material evaluation form.

3. Establishing a schedule for replacing lead service lines

Along with the material evaluation, the supply must also provide an “initial” replacement schedule for annually replacing at least 7 percent of the lead service lines **regardless of ownership**. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins.

The Lead and Copper Rule presumes all lead service lines contribute greater than 0.015 mg/l of lead to tap water and therefore need to be replaced.

For example, if a supply had identified 1500 lead service lines, the supply would have to choose 105 locations to be replaced **each year** ($1500 \times 0.07 = 105$).

The supply will have the opportunity (if desired) to demonstrate which lead service lines do not contribute more than 0.015 mg/l of lead to tap water levels by collecting a service line sample. If the result is below 0.015 mg/l, the line will not have to be replaced at that time. However, even though the line is no longer required to be replaced, it will still be used when calculating the total number of lead service lines replaced for the year.

For example, a supply had identified 1500 lead service lines in their material evaluation and would have to replace 105 lead service lines each year. At the beginning of the year, the supply sampled all 105 sites to determine whether or not the lines contribute more than 0.015 mg/l to tap water lead levels. The results indicated that 60 service lines had lead concentrations above 0.015 mg/l and need to be replaced by the end of the year. The other 45 sites were below 0.015 mg/l and would not have to be replaced. For each following year, the supply would sample the next 105 locations.

If the supply has demonstrated that they do not “own” the lead service line, the supply **must** offer to replace the line for the owner, but the supply is not required to bear the cost.

Again, if a system **meets the lead action level for two consecutive** six-month monitoring periods, and has properly submitted the results to the Illinois EPA, the system can **stop** the LSLR program regardless of what has been completed.

4. Completing the Illinois EPA Material Evaluation and Replacement Schedule reporting form

Attachment A of this document contains the LSLR Material Evaluation and Replacement Schedule reporting form. This form must be returned by the due date identified in your LSLR notification letter. This form is intended to **summarize** your material evaluation and replacement schedule. It is required that you maintain the following information for each lead service line location:

1. Lead service line address/location
2. Ownership of the service line (full, partial, or none)
3. Scheduled year of replacement (1st year, 2nd, 3rd, etc.)
4. Date lead service line replaced (if and when applicable)
5. Lead service line sample result (if and when applicable)

In addition to the material evaluation/ replacement schedule reporting form, **if** your supply does not fully “own” **any** of the lead service lines identified in the material evaluation, you will also be required to submit documentation/explanation that verifies your supply **does not** entirely own the lead line.

The form and any additional documentation should be sent to:

**Lead/Copper Coordinator
DWCU #19
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276**



Lead Service Line Materials Evaluation & Replacement Schedule

Please complete and return to: Illinois EPA, Drinking Water Compliance Unit #19, 1021 North Grand Ave. East, P.O. Box 19276, Springfield, IL 62794-9276 (217) 785-0561

Facility Number _____ PWS Name _____

Form prepared by _____ Telephone number (____) _____

The following resources have been explored to determine or estimate the number of lead service lines in the distribution system.

Date Completed (insert date)	Explored Resource
	Distribution Systems Maps and Record Drawings
	Materials Evaluation for Lead/Copper Sample Site Plan. Information collected for the selection of lead and copper sample sites.
	Capital improvements plans and/or master plans for distribution system development
	Current and historical standard operational procedures and/or operation and maintenance (O&M) manuals for the type of materials used to install service connections
	Utility records including meter installation records, customer complaint investigations and all historical documentation which indicate and/or confirm the location of lead service connections
	Existing water quality data for indicators of “trouble areas” (i.e., high lead results)
	Review permit files
	Interviews with senior personnel <i>(if available)</i>
	Perform community surveys <i>(if needed)</i>
	Review USGS maps and records <i>(if needed)</i>
	Interview pipe suppliers, contractors, and/or developers <i>(if needed)</i>

After exploring the resources above, it has been determined that the total number of “initial” lead service lines identified within our distribution system is _____ *(insert number of lead service lines)*. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins.

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center

Lead Service Line Inventory

Category	Insert number
Total Number of Lead Service Lines (LSL)	
Number of LSL entirely owned by PWS	
Number of LSL partially owned by PWS*	
Number of LSL not owned by PWS*	

*For all LSLs that are **not** entirely owned by the water supply, the supply must submit documentation that verifies the supply **does not** entirely own the lead line (as defined by state statutes, municipal ordinances, public service contracts or other applicable legal authority). This summary of documentation needs to be submitted with this material evaluation form.

Lead Service Line Replacement Schedule

Complete the following table:

Total number of LSL	7% replacement per year	Total number of LSL required to be replaced each year
<i>Example:</i> 25,000	<i>x 0.07</i>	<u>1,750</u>
	<i>x 0.07</i>	

Enter the total number of LSLs and multiply by 0.07.

Lead Service Line Records Kept by PWS

Your supply is required to maintain the following information for each lead service line location:

6. Lead service line address/location**
7. Ownership of the service line (full, partial, or none)**
8. Scheduled year of replacement (1st year, 2nd, 3rd, etc.)**
9. Date lead service line removed (if and when applicable)**
10. Lead service line sample result (if and when applicable)**

**You are not required to submit this information. However, the Illinois EPA reserves the right to request this information at any given time.

Signatures of Owner (or Official Custodian) and ROINC

To the best of my knowledge, I certify that the information contained in this document is correct and consistent with 40 CFR 141.84 (Lead Service Line Replacement) and 40 CFR 141.86 (a)(2) (Material Evaluation Requirements).

Owner's Signature _____

Date _____

ROINC's Signature _____

Date _____

Partial LSLR Homeowner “Opt From” Template

The LCR requires you to replace the portion of the lead service line that you own. You must offer to replace the property owner’s portion of the line at his/her expense. In addition, you are not required to replace the privately-owned portion of the line if the owner chooses not to pay the cost of replacing the privately-owned portion. In those instances where you do not replace the privately-owned portion of the line (i.e., conduct partial lead service line replacement), a temporary increase in lead levels may occur. Therefore, you must:

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

It is recommended that the homeowner sign an acknowledgement of having the opportunity to have their portion replaced as well as the water supply’s portion; however, they have refused the service because they do not want to pay for it. Below is a template that you may wish to use to document that the homeowner was asked but refused and was informed of the hazards of lead.

Lead Service Line Informational Form

PWS ID Number _____ Name _____

I _____ (*print name*) hereby state that I have been informed by the water supply _____ (*list water system*), on this day _____, that my residence located at _____, has a lead service line. I was informed of the hazards of lead in drinking water and the given the option of replacing the part of the lead service line I own at my own cost. However, I have opted to not have this part of my lead service line replaced.

Signature _____
Homeowner

Appendix J

Chapter 4 Lead/Copper Rule Notifying Customers of Test Results

- Illinois EPA “Lead Consumer Informational Notice Certification Form” (*Pg. J-2*)
- Informational Notice Templates (*Pg. J-3*)



**Illinois
Environmental Protection Agency**

Lead Consumer Informational Notice Certification Form

Please complete this form and return to: Lead/Copper Coordinator, Illinois EPA /BOW/CAS #19, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276. If you have questions, please call the Lead/Copper Coordinator at 217-785-0561.

PWS Name: _____ PWS No. _____
 Contact Person: _____ Phone : (____) _____
 Today's Date: _____

Monitoring period to which the notice applies (e.g., June – Sept. 2009): _____

The last result for the period was received from the laboratory on: _____

All results were provided to consumers by (date): _____

*Please **initial** each box verifying that the mandatory requirement was completed*

The water system also certifies that these results <u>and the following information</u> were provided to such persons within 30 days of receiving the test results from the laboratory:	
<input type="checkbox"/>	Individual tap results from lead tap water monitoring
<input type="checkbox"/>	An explanation of the health effects of lead
<input type="checkbox"/>	Steps that consumers can take to reduce exposure to lead in drinking water
<input type="checkbox"/>	Contact information for your water utility
<input type="checkbox"/>	The maximum contaminant level goals and action levels for lead, and the definitions of these two terms

DELIVERY METHOD

*Please **initial** each applicable box*

The result/information notice was distributed by the following method(s)	
<input type="checkbox"/>	By Direct Mail
<input type="checkbox"/>	By Hand Delivery
<input type="checkbox"/>	By Electronic mail
<input type="checkbox"/>	Other _____

Signature of Owner, Administrative Contact, or Official Custodian

I, _____, hereby certify that the lead consumer notice and result has been provided to each person it serves at the specific sampling site from which the sample was tested.

Signature _____ Date _____

Title _____

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center
 IL 532-2195 PWS 236

Lead Result Informational Notice Templates

There are five (5) templates to choose from. Depending on the results and the lead 90th percentile, you will need to choose the Information Notice template that best fits your situation. Before selecting a template, you will need to know the lead 90th percentile value for the sample period. If you do not know how to calculate the 90th percentile, Appendix C - Interpreting Results gives step by step instructions to calculating the 90th percentile value.

Once you have calculated the 90th percentile value for all the samples collected during the monitoring period, select the appropriate information notice template for each sample result. However, for simplicity, Template 1 is a generic template and can be used for all situations.

Template 1 can be used for all situations.

Template 1

This is a universal template (photocopy ready fill in the blank). This template can be used for all situations (wording cannot be changed since some of the language is mandatory).

The Templates below provide customized information

Template 2

Use this template if both the homeowner's result and the 90th percentile are below the lead action level of 0.015 mg/l.

Template 3

Use this template if the homeowner's result is below 0.015 mg/l; however, the 90th percentile is above the lead action level of 0.015 mg/l.

Template 4

Use this template if the homeowner's result is above 0.015 mg/l; however, the 90th percentile is below the lead action level of 0.015 mg/l.

Template 5

Use this template if both the homeowner's result and the 90th percentile are above the lead action level of 0.015 mg/l.

Important Note about Templates: For Templates 2 through 5, the information in *italics* is required/mandatory language and cannot be changed.

Remember the unit conversion: 0.015 mg/l (parts per million) = 15ug/l (parts per billion)

Notice of Lead Tap Water Results

Sample Location: _____ Date Collected: _____

Dear _____,

We would like to thank you for your participation in the lead tap monitoring program. Below is the lead result for the sample location listed above. Additional general information concerning lead in drinking water follows. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

If you need more information concerning this result, please call the _____ community water supply at _____ and ask for _____.

ONLY the statement that is checked below is applicable to your sample location.

_____ Lead was NOT DETECTED at this sample location.

_____ Lead was detected at _____ parts per billion (ppb). This result is BELOW the lead action level of 15 parts per billion.

_____ Lead was detected at _____ parts per billion (ppb). This result is ABOVE the lead action level of 15 parts per billion.

The 90 percentile value for our community water supply was _____ parts per billion (ppb).

What Does This Mean?

Under the authority of the Safe Drinking Water Act, EPA set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). The action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

If detected, your lead level may be due to conditions unique to your home, such as the presence of lead solder or brass faucets, fittings and valves that may contain lead. Our system works to keep the corrosivity of our water as low as possible (corrosive water can cause lead to leach from plumbing materials that contain lead) and there are actions you can take to reduce exposure. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water.

Should the current (or if in the future) lead 90 percentile for the community water supply exceeds the lead action level, you can rest assure that we are taking a number of steps to correct the problem. Such steps will or would include; monitor our source water, initiate controls to reduce the corrosivity of our water (corrosive water can cause lead to leach from plumbing materials that contain lead) and initiate lead service line replacement if needed.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead pipes, fixtures and solder.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

If you are concerned about the lead levels at your location, there are several things you can do:

- ***Run your water to flush out lead.*** If water hasn't been used for several hours, run water for 15-30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking. This will help flush lead-containing water from the pipes.
- ***Use cold water for cooking and preparing baby formula.*** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
- ***Do not boil water to remove lead.*** Boiling water will not reduce lead.
- ***Look for alternative sources or treatment of water.***
- ***Test your water for lead.*** Call us at the number below to find out how to get your water tested for lead.
- ***Identify if your plumbing fixtures contain lead.*** New brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as "lead free." Consumers should be aware of this when choosing fixtures and take appropriate precautions.

Consumer Notice of Tap Water Results Template

[Information in italics is required/mandatory language and cannot be changed]

Dear (Consumer's Name),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of *[insert data from the laboratory analysis of the sample collected-make sure the value is in pbb]* was reported for the sample collected on *[date]* at your location, *[insert address of customer]*.

We are happy to report that your result as well, as the 90th percentile value for our water system, is below the lead action level of 15 parts per billion.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, EPA set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety*.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult. Although your home's drinking water lead levels were below the action level, if you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

- ***Run your water to flush out lead.*** If water hasn't been used for several hours, run water for 15-30 seconds [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking. This flushes lead-containing water from the pipes.
- ***Use cold water for cooking and preparing baby formula.***
- ***Do not boil water to remove lead.***
- ***Look for alternative sources or treatment of water.***
- ***Test your water for lead.***
- ***Identify if your plumbing fixtures contain lead.***

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Template 3

Consumer Notice of Tap Water Results Template

[Information in italics is required/mandatory language and cannot be changed]

Dear (Consumer's Name),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of *[insert data from the laboratory analysis of the sample collected-make sure the value is in pbb]* was reported for the sample collected on *[date]* at your location, *[insert address of customer]*.

We are happy to report that your result was below the lead action level of 15 parts per billion. However, the 90th percentile value for our system was above the lead action level.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, EPA set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health*. MCLGs allow for a margin of safety.

We are taking a number of steps to correct the problem. We will begin sampling for lead every 6 months so we can closely monitor the lead levels in our water system. Your continued participation and support in our lead tap monitoring program is very important. In addition, we will initiate a Public Education campaign to ensure our customers know about the action level exceedance, understand the health effects of lead, the sources of lead and actions they can take to reduce exposure to lead in drinking water. We will also monitor our source water, initiate controls to reduce the corrosivity of our water (corrosive water can cause lead to leach from plumbing materials that contain lead) and initiate lead service line replacement.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult.

Although your home's drinking water lead levels were below the action level, if you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead pipes, fixtures and solder.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

- ***Run your water to flush out lead.*** If water hasn't been used for several hours, run water for 15-30 seconds [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking. This flushes lead-containing water from the pipes.
- ***Use cold water for cooking and preparing baby formula.***
- ***Do not boil water to remove lead.***
- ***Look for alternative sources or treatment of water.***
- ***Test your water for lead.***
- ***Identify if your plumbing fixtures contain lead.***

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Template 4

Consumer Notice of Tap Water Results

[Information in italics is required/mandatory language and cannot be changed]

Dear (Consumer's Name),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of *[insert data from the laboratory analysis of the sample collected-make sure the value is in pbb]* was reported for the sample collected on *[date]* at your location, *[insert address of customer]*.

Your result is greater than the lead action level of 15 parts per billion. However, the 90th percentile value for our water system was below the lead action level.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, EPA set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety*.

Your lead level may be due to conditions unique to your home, such as the presence of lead solder or brass faucets, fittings and valves that may contain lead. Our system works to keep the corrosivity of our water as low as possible (corrosive water can cause lead to leach from plumbing materials that contain lead) and there are actions you can take to reduce exposure. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

Although most lead exposure occurs when people eat paint chips and inhale dust, or from contaminated soil, EPA estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead pipes, fixtures and solder. However, new homes are also at risk: even legally “lead-free” plumbing may contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

- **Run your water to flush out lead.** If water hasn't been used for several hours, run water for 15-30 seconds [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking. This flushes lead-containing water from the pipes.
- **Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Look for alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on performance standards for water filters.
- **Test your water for lead.** Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Consumer Notice of Tap Water Results

[Information in italics is required/mandatory language and cannot be changed]

Dear (*Consumer's Name*),

[Insert name of your water system] appreciates your participation in the lead tap monitoring program. A lead level of *[insert data from the laboratory analysis of the sample collected-make sure the value is in pbb]* was reported for the sample collected on *[date]* at your location, *[insert address of customer]*.

Your result is greater than the lead action level and the 90th percentile value for our water system is also greater than the lead action level of 15 parts per billion.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, EPA set the action level for lead in drinking water at 15 ppb. This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile result). The action level is *the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow*. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is *the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety*.

We are taking a number of steps to correct the problem. We will begin sampling for lead every 6 months so we can closely monitor the lead levels in our water system. Your continued participation and support in our lead tap monitoring program is very important. In addition, we will initiate a Public Education campaign to ensure our customers know about the action level exceedance, understand the health effects of lead, the sources of lead and actions they can take to reduce exposure to leads in drinking water. We will also monitor our source water, initiate controls to reduce the corrosivity of our water (corrosive water can cause lead to leach from plumbing materials that contain lead) and initiate lead service line replacement.

Although we are taking action to reduce lead levels, your elevated lead level may also be due to conditions unique to your home, such as the presence of lead solder or brass faucets, fittings and valves that may contain lead. Our system works to keep the corrosivity of our water as low as possible (corrosive water can cause lead to leach from plumbing materials that contain lead) and there are actions you can take to reduce exposure. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water.

What Are The Health Effects of Lead?

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

What Are The Sources of Lead?

Although most lead exposure occurs when people eat paint chips and inhale dust, or from contaminated soil, EPA estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead pipes, fixtures and solder. However, new homes are also at risk: even legally “lead-free” plumbing may contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

What Can I Do To Reduce Exposure to Lead in Drinking Water?

- ***Run your water to flush out lead.*** If water hasn't been used for several hours, run water for 15-30 seconds [or insert a different flushing time if your system has representative data indicating a different flushing time would better reduce lead exposure in your community and if the State approves the wording] or until it becomes cold or reaches a steady temperature before using it for drinking or cooking,. This flushes lead-containing water from the pipes.
- ***Use cold water for cooking and preparing baby formula.*** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
- ***Do not boil water to remove lead.*** Boiling water will not reduce lead.
- ***Look for alternative sources or treatment of water.*** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on performance standards for water filters.
- ***Test your water for lead.*** Call us at [insert phone number for your water system] to find out how to get your water tested for lead. [Include information on your water system's testing program. For example, do you provide free testing? Are there labs in your area that are certified to do lead in water testing?]
- ***Identify if your plumbing fixtures contain lead.*** New brass faucets, fittings, and valves, including those advertised as “lead-free,” may contribute lead to drinking water. The law currently allows end-use brass fixtures, such as faucets, with up to 8% lead to be labeled as “lead free.” Consumers should be aware of this when choosing fixtures and take appropriate precautions.

For More Information

Call us at [insert your water system's phone number]. For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

CHAPTER

5

Volatile Organic Chemicals (VOCs)

Volatile Organic Chemicals (VOCs) are solvents that have been widely used as cleaning agents, degreasers, and as intermediate chemicals in manufacturing. There are 21 regulated VOCs. This chapter will discuss these 21 VOCs and explain the monitoring requirements.

Illinois EPA Assistance

In most cases, as a monitoring requirement approaches for a community water system (CWS), the Illinois EPA will send reminder notifications that detail the requirement and specific timeline for completion. Please remember that these are “reminder” notifications and does not relieve the CWS in meeting the monitoring schedule deadlines. If a CWS is unsure of its schedule or timeframe described in any Illinois EPA notification, it is very important that the CWS contact the Drinking Water Compliance Unit at 217/785-0561 for clarification. All VOC correspondence should be sent to:

VOC Coordinator
Illinois EPA /BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276
Telephone: 217-785-0561
Fax 217-557-1407

Sample Bottles

If your supply participates in the Community Water Supply Testing Fund (CWSTF), sample containers will be sent to your supply during the monitoring period. If your supply does **not** participate in the CWSTF, it is your responsibility to have all testing completed by an Illinois EPA certified laboratory and submitted on the correct reporting forms. The VOC certified laboratory reporting form is available on the Internet (see next page). This form must be submitted within 10 days after the end of a monitoring period. If the laboratory you choose submits data electronically, it is not necessary to submit a paper copy. However, it is the responsibility of the CWS to insure data reaches the Illinois EPA within 10 days of the end of the monitoring period.

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Certified Laboratory Result Reporting Forms can be downloaded at:

<http://www.epa.state.il.us/water/forms.html#compliance-and-enforcement-drinking-water>

If Internet access is unavailable, please contact the VOC Coordinator at 217-785-0561 for a copy of this form.

VOC Sample Locations

VOC samples must be collected at locations that represent each well or surface water source after all treatment but prior to entering the distribution system. If water from several sources is combined and treated at a common location, then one sample can be collected to represent all combined sources.

If a well pumps directly to the distribution system (no added treatment), then a representative sample must be collected prior to the first distribution location. This is not a common situation.

On occasion the Illinois EPA will require a VOC sample to be collected directly from a well prior to treatment. If the case, the sample collector will receive specific sample collection instructions.

Monitoring Requirements

Initially, per sample location as specified above, VOC samples are collected quarterly for a minimum of four consecutive quarters. Once a base line is established with no detections for a sample location, monitoring can be reduced to annual. After a total of three consecutive years of monitoring without detections, triennial monitoring will be considered.

Quarterly monitoring must be initiated for any new source of water (i.e. new well). Reduced monitoring for new sources will be considered once four consecutive quarterly samples are collected without detection.

Please remember that several factors influence monitoring requirements; such as, violation of regulations, new regulations, and/or contaminant detections. It is recommended that each CWS water operator and/or sample collector periodically (at least quarterly) download a new schedule since monitoring schedules change frequently. A CWS can download their most current monitoring schedule at:

<http://www.epa.state.il.us/water/compliance/drinking-water/sdwis/index.html>

Monitoring Requirements for Sample Locations with VOC Detections

Quarterly monitoring must continue for any detected VOC until results demonstrate “reliably and consistently” low results. Groundwater CWS must demonstrate results “reliably and consistently” below one half of the Maximum Contaminant Level (MCL) for a minimum of two consecutive quarters. Surface water system must demonstrate results “reliably and consistently” below the laboratory detection limit for a minimum of four consecutive quarters. Once this has been established, the CWS/sample location may qualify for reduced monitoring.

Reduced Monitoring

The Illinois EPA will periodically review sample data to determine if a sample location qualifies for reduced monitoring. If a sample location qualifies, the Illinois EPA will send written notification to the CWS that sampling has been reduced.

As mentioned, this is a periodic review. It is strongly recommended that the CWS routinely evaluate their data. If it is felt that a sample location qualifies for reduced monitoring, a request in writing should be sent to the VOC Coordinator (address on page 1 of this Chapter).

When a sample location is eligible for reduced monitoring, it will move from a quarterly frequency to an annual frequency. After three years of annual samples, the sample frequency may be further reduced to triennial if no detections have occurred regardless.

A sample location reduced from quarterly to annual monitoring must be scheduled to be collected during the calendar quarter in which the highest quarterly detection occurred for that contaminant. This is a requirement and if the sample is not collected during the specified quarter it will result in a monitoring violation.

EXAMPLE

A CWS is required to collect quarterly benzene samples due to a routine VOC sample detection. This CWS is a ground water supply, thus will need two consecutive quarters of results below $\frac{1}{2}$ the MCL for benzene to qualify for reduced annual sampling. The MCL for benzene is 5ug/L, so $\frac{1}{2}$ of the MCL would be 2.5ug/L.

Sample Location	Date Collected	Benzene Concentration (ug/l)
TP01 Well 1	01/06/07	3.2
TP01 Well 1	04/22/07	4.4
TP01 Well 1	08/02/07	Not Detected
TP01 Well 1	10/03/07	4.0
TP01 Well 1	01/16/08	0.6
TP01 Well 1	04/02/08	0.7
CWS now has two quarters of results “reliably and consistently” below $\frac{1}{2}$ the MCL (yellow). The CWS is now eligible for reduced annual monitoring. The annual sample must be collected during the calendar quarter in which the highest quarterly detection occurred (blue) or in this example, the April thru June quarter.		
TP01 Well 1	04/02/09	0.7
TP01 Well 1	04/22/10	Not Detected
TP01 Well 1	04/09/11	Not Detected
TP01 Well 1	4/15/12	Not Detected
Three annual sample with no detections qualifies for triennial monitoring		
TP01 Well 1	04/18/15	Not Detected
If at any time benzene is again detected above $\frac{1}{2}$ the MCL or any other detection, quarterly monitoring will resume.		

Monitoring Requirements for Emergency Wells

All wells that are active and are either on back-up or emergency status must be monitored every three years. If the CWS purchases its primary source of water from another CWS, annual samples are required from the well(s). There is no exception to this requirement.

If there is detection below the MCL, the CWS may be required to locate the source of the contamination and remediate.

If there is detection above the MCL, the CWS will be required to locate the source of the contamination and remediate in an established amount of time or properly abandon the well.

VOC Vulnerability Waiver Program

The Illinois EPA has a “vulnerability waiver” program that many systems already utilize which allows VOC monitoring to be reduced to one sample per sample location every six years.

The objective of the VOC vulnerability monitoring waiver program is to reduce monitoring, while assuring the safety of the drinking water currently provided by the public water supplies. The intent of this program is to recognize where natural protection exists by differentiating between confined and unconfined aquifer systems. A confined aquifer more readily qualifies for a waiver. For aquifers determined to be unconfined this program includes: mapping the 5-year recharge area; identifying potential sources and routes of contamination located within the recharge area; contingency planning; and managing potential sources and potential routes of contamination, thereby reducing vulnerability to contamination. The program requires the identification and sealing of potential routes of contamination located within 1,000 feet of wells.

To obtain a waiver, the PWS must evaluate the vulnerability of their wells to potential contamination sources. Systems vulnerable to contamination must develop a management program for controlling potential contamination sources and routes. If a CWS is interested and would like more information, please call the VOC coordinator at 217-785-0561. The application is on line at:

<http://www.epa.state.il.us/water/compliance/drinking-water/forms/phase-2-and-5-monitoring-waiver-application-and-instructions.pdf>

Compliance with the VOC Maximum Contaminant Levels (MCL)

Compliance is based on the running annual average of quarterly samples. This is calculated for entry point to the distribution system. If one sample location is out of compliance, the entire system is out of compliance unless that part of the system is entirely separate (no inter-connections) from the rest of the system.

If any single sampling result is high enough to cause the annual average to be exceeded, the supply is out of compliance immediately (for example, the analytical result is greater than four times the MCL or two analytical results are greater than twice the MCL, etc.).

Systems monitoring annually or triennially whose sample result exceeds the MCL, must revert to quarterly sampling for that contaminant the next quarter. Systems are only required to conduct quarterly monitoring at the sampling point at which the sample was collected and for the specific contaminant that triggered the system into the increased monitoring frequency. An exceedance is not necessarily a violation. Systems triggered into increased monitoring will not be considered in violation of the MCL until they have completed one year of quarterly sampling unless any sample collected during quarterly monitoring would result in the annual average exceeding the MCL.

Systems may monitor more frequently than quarterly. Samples must be clearly marked as “compliance/routine samples” prior to being submitted to the laboratory (and not after the results are known). If the case, all samples must be used when determining compliance (the system cannot pick and choose results). Samples marked as “special” samples will not be used for compliance and cannot later be changed to routine samples. There are no exceptions to this rule.

If a system does not collect all required quarterly samples, compliance will be based on the running annual average of the samples collected. If a sample result is less than the method reporting, zero will be used to calculate the annual average.

The Illinois EPA has the flexibility to require confirmation samples for positive or negative results. The Illinois EPA may require more than one confirmation sample to determine the average exposure. If confirmation samples are required by the Illinois EPA, the average of the analytical result and the confirmation sample will be used for compliance determinations.

Example 1: A ground water supply was on triennial monitoring at TP01 Well 1. Benzene was detected at 5.6ug/L in the sample collected on 10/18/2007. The detection triggered quarterly monitoring. The MCL for benzene is 5ug/L.

Sample Location	Date Collected	Single Result (ug/L)	*Quarterly Average	Running Annual Average
TP01 Well 1	10/18/07	5.6	5.6	$5.6 / 4 = 1.4$ (no MCL)
TP01 Well 1	01/05/08	5.9	5.9	$5.6 + 5.9 / 4 = 2.8$ (no MCL)
TP01 Well 1	04/20/08	6.3	6.3	$5.6 + 5.9 + 6.3 / 4 = 4.4$ (no MCL)
TP01 Well 1	07/08/08	6.2	6.2	$5.6 + 5.9 + 6.3 + 6.2 / 4 = 6$ (MCL Violation)
TP01 Well 1	10/02/08	5.4	5.4	$5.9 + 6.3 + 6.2 + 5.4 / 4 = 5.9$ (MCL Violation)
TP01 Well 1	01/05/09	2.4	2.4	$6.3 + 6.2 + 5.4 + 2.4 / 4 = 5.0$ (no MCL)

* Only one sample collected per quarter

The water supply had 2 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these two quarters (see Chapter 1 Public Notification for requirements).

In this example, the water supply would remain on quarterly monitoring until it could demonstrate reliably and consistently results below 2.5 ug/L for a minimum of two consecutive quarters. See “Monitoring Requirements for Sample Locations with VOC Detections” of this Chapter.

If more than one sample is collected during the quarter from the same sample location, the samples are averaged to calculate a quarterly average. See example below.

Example 2: A water supply was on triennial monitoring at TP02 Well 2. Dichloromethane was detected at 23.3ug/L in the sample collected on 10/18/2007. A confirmation sample was collected on 11/12/07 and was 27.2ug/L. The detections triggered quarterly monitoring. The MCL for dichloromethane is 5ug/L.

Sample Location	Date Collected	Single Result (ug/L)	Quarterly Average	Running Annual Average
TP02 Well 2	10/18/07	23.3	$23.3 + 27.2 / 2 = 25.2$	$25.2 / 4 = 6.3$ (MCL violation)
TP02 Well 2	11/12/07	27.2		
TP02 Well 2	2/12/08	6	6	$25.2 + 6 / 4 = 7.8$ (MCL Violation)
TP02 Well 2	04/20/08	4	4	$25.2 + 6 + 4 / 4 = 8.8$ (MCL Violation)
TP02 Well 2	07/08/08	18	$18 + 2 / 2 = 10$	$25.2 + 6 + 4 + 10 / 4 = 11.3$ (MCL Violation)
TP02 Well 2	8/2/08	2		
TP02 Well 2	10/02/08	No detect	0	$6 + 4 + 10 + 0 / 4 = 5$ (no MCL)
TP02 Well 2	01/05/09	No detect	0	$4 + 10 + 0 + 0 / 4 = 3.5$ (no MCL)

The water supply had 4 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these four quarters (see Chapter 1 Public Notification for requirements).

VOC Contaminants

Below are the 21 regulated VOCs.

Benzene	MCL = 5 ug/L (or 5 parts per billion)
Benzene is a clear, colorless aromatic liquid. It is highly flammable. The greatest use of benzene is as a building block for making plastics, rubber, resins and synthetic fabrics like nylon and polyester. Other uses include: as a solvent in printing, paints, dry cleaning, etc.	
Carbon Tetrachloride	MCL = 5 ug/L (or 5 parts per billion)
Carbon tetrachloride is a clear heavy organic liquid with a sweet aromatic odor similar to chloroform. Most of it is used to make chlorofluorocarbon propellants and refrigerants, though this has been declining steadily. Other uses have included: as dry cleaning agent and fire extinguisher, in making nylon, as a solvent for rubber cement, soaps, insecticides, etc.	
Chlorobenzene	MCL = 100 ug/L (or 100 parts per billion)
Chlorobenzene is a colorless organic liquid with a faint, almond-like odor. The greatest use of chlorobenzene is in the manufacture of other organic chemicals, dyestuffs and insecticides. It is also a solvent for adhesives, drugs, rubber, paints and dry-cleaning, and as a fiber-swelling agent in textile processing.	
Ortho-dichlorobenzene (o-DCB)	MCL = 600 ug/L (or 600 parts per billion)
Ortho-dichlorobenzene, (o-DCB) is a colorless organic liquid with a pleasant, aromatic odor. The greatest use of o-dichlorobenzene is as a chemical intermediate for making agricultural chemicals, primarily herbicides. Other present and past uses include: solvent for waxes, gums, resins, wood preservatives, paints; insecticide for termites and borers; in making dyes; as a coolant, deodorizer, and degreaser.	
Para-dichlorobenzene (p-DCB)	MCL = 75 ug/L (or 75 parts per billion)
Para-dichlorobenzene (p-DCB) is an organic solid of white crystals with a mothball-like odor. It is used mainly as an insecticidal fumigant against clothes moths and as a deodorant for garbage and restrooms. It is also used as an insecticide and fungicide on crops, and in the manufacture of other organic chemicals and in plastics, dyes, pharmaceuticals.	

1,2-Dichloroethane (1,2-DCA)	MCL = 5 ug/L (or 5 parts per billion)
1, 2-Dichloroethane (1, 2-DCA) is a colorless, oily, organic liquid with a sweet, chloroform-like odor. The greatest use of 1, 2-dichloroethane is in making chemicals involved in plastics, rubber and synthetic textile fibers. Other uses include: as a solvent for resins and fats, photography, photocopying, cosmetics, drugs; and as a fumigant for grains and orchards.	
1,1-Dichloroethylene (1,1-DCE)	MCL = 7 ug/L (or 7 parts per billion)
1, 1-Dichloroethylene (1,1-DCE) is an organic liquid with a mild, sweet, chloroform-like odor. Virtually all of it is used in making adhesives, synthetic fibers, refrigerants, food packaging and coating resins such as the saran types.	
cis- 1,2-Dichloroethylene	MCL = 70 ug/L (or 70 parts per billion)
trans- 1,2-Dichloroethylene	MCL = 100 ug/L (or 100 parts per billion)
1,2-Dichloroethylene (1,2-DCE) is an odorless organic liquid that has two slightly different forms, a "cis" form and a "trans" form. Both the cis and trans forms - usually as a mixture - are used as a solvent for waxes and resins; in the extraction of rubber; as a refrigerant; in the manufacture of pharmaceuticals and artificial pearls; in the extraction of oils and fats from fish and meat; and in making other organics.	
Dichloromethane (DCM)	MCL = 5 (or 5 parts per billion)
Dichloromethane (DCM) is a colorless organic liquid with a sweet, chloroform-like odor. The greatest use of DCM is as a paint remover. Other uses include: solvent and cleaning agent in a variety of industries, a fumigant for strawberries and grains; and to extract substances from foodstuffs.	
1,2-Dichloropropane (1,2-DCP)	MCL = 5 ug/L (or 5 parts per billion)
1,2-Dichloropropane (1,2-DCP) is a colorless organic liquid with a chloroform-like odor. The greatest use of 1,2-dichloropropane is in making other organic chemicals. It is also used in making lead-free gasoline, paper coating, soil fumigant for nematodes, and insecticide for stored grain.	
Xylene (Total)	MCL = 10,000 ug/L (or 10,000 parts per billion)
A xylene is any of a group of very similar organic compounds. They are clear liquids with a sweet odor. The greatest use of xylenes is as a solvent which is much safer than benzene. Other uses include: in gasoline as part of the BTX component (benzene-toluene-xylene); Xylene mixtures are used to make phthalate plasticizers, polyester fiber, film and fabricated items.	
Ethylbenzene	MCL = 700 ug/L (or 700 parts per billion)
Ethylbenzene is a colorless organic liquid with a sweet, gasoline-like odor. The greatest use - over 99 percent - of ethylbenzene is to make styrene, another organic liquid used as a building block for many plastics. It is also used as a solvent for coatings, and in making rubber and plastic wrap.	
Styrene	MCL = 100 ug/L (or 100 parts per billion)
Styrene is an oily organic liquid with an aromatic, almost floral odor. Initially, styrene was used primarily in the synthetic rubber industry, but it is currently used as a building block for polymers in making plastics, resins, coatings, and paints.	
Tetrachloroethylene (PCE)	MCL = 5 ug/L (or 5 parts per billion)
Tetrachloroethylene (PCE) is a colorless organic liquid with a mild, chloroform-like odor. Its greatest use is in the textile industry, and as a component of aerosol dry-cleaning products.	
Toluene	MCL = 1,000 ug/L (or 1,000 parts per billion)
Toluene is an organic liquid with a sweet, benzene-like odor. The largest chemical use for toluene is to make benzene and urethane.	

1,2,4-Trichlorobenzene (1,2,4-TCB)	MCL = 70 ug/L (or 70 parts per billion)
1,2,4-Trichlorobenzene (1,2,4-TCB) is an aromatic, colorless organic liquid. The greatest use of 1,2,4-trichlorobenzene is primarily as a dye carrier. It is also used to make herbicides and other organic chemicals; as a solvent; in wood preservatives; in abrasives. It was once used as a soil treatment for termite control.	
1,1,1-Trichloroethane (1,1,1-TCA)	MCL = 200 ug/L (or 200 parts per billion)
1,1,1-Trichloroethane (1,1,1-TCA) is an organic liquid with a chloroform-like odor. It is largely used as a solvent removing grease from machined metal products, in textile processing and dyeing and in aerosols.	
1,1,2-Trichloroethane (1,1,2-TCE)	MCL = 5 ug/L (or 5 parts per billion)
1,1,2-Trichloroethane (1,1,2-TCE) is an organic liquid with a chloroform-like odor. It is only used to make vinylidene chloride which is in turn used to make synthetic fibers and plastic wraps such as the saran wrap.	
Trichloroethylene	MCL = 5 ug/L (or 5 parts per billion)
Trichloroethylene is a colorless or blue organic liquid with a chloroform-like odor. The greatest use of trichloroethylene is to remove grease from fabricated metal parts and some textiles.	
Vinyl Chloride	MCL = 2 ug/L (or 2 parts per billion)
Vinyl chloride is a colorless organic gas with a sweet odor. It is used in the manufacture of numerous products in building and construction, automotive industry, electrical wire insulation and cables, piping, industrial and household equipment, medical supplies, and is depended upon heavily by the rubber, paper, and glass industries.	

MTBE (methyl-t-butyl ether) Monitoring

MTBE is a member of a group of chemicals commonly known as fuel oxygenates and is added to fuel to increase its oxygen content. MTBE is used in gasoline throughout the United States to reduce carbon monoxide and ozone levels caused by auto emissions. MTBE replaced the use of lead as an octane enhancer since 1979. Releases of MTBE to ground and surface water can occur through leaking underground storage tanks and pipelines, spills, emissions from marine engines into lakes and reservoirs, and to some extent from air deposition. In order to determine the extent of possible MTBE contamination, the Illinois EPA requests that MTBE be tested and reported in conjunction with your routine VOC samples. This additional test should not increase the lab cost to the CWS.

VOC Sample Collection – Things to Remember

Sample instructions should be supplied with the sample containers from the laboratory. If the laboratory fails to include sample instructions, contact the laboratory and request sample instructions. Some general practices to remember:

- A sample “blank” will accompany each sampling set (the blank will already be filled with water by the laboratory and should not be opened)
- Samples should be collected at the entry point to the distribution system after all treatment (finished water)

- Select a sampling faucet that does NOT have an aerator (sampling must be done with minimum aeration)
- Run the water until the temperature is as cold as it gets
- Just before sample collection, adjust to a very low flow. Do not change the flow while collecting sample
- When filling sample bottle, tip bottle slightly so that water flows down the side wall of the container. Bring bottle to an upright position as it fills. Fill just to the point of overflowing.
- Reinstall the cap and invert the sample bottle to check for an air bubble. If an air bubble is present, remove the cap and add a few additional drops of water. Continue checking and adding drops of water until the bubble is completely gone
- Call the laboratory if bottles are received broken (or break while collecting samples)
- If a sample location is out of service (for an extended period of time), notify the VOC Coordinator in writing or by phone at 217-785-0561
- The owner or operator of a water supply must maintain chemical analysis reports (results) or a summary of those reports for at least 10 years

CHAPTER

6

Synthetic Organic Chemicals (SOCs)

Synthetic Organic Chemicals (SOCs) are carbon-based compounds of man-made origin that can get into water through runoff from croplands or discharge from factories. SOCs may also come from urban storm water runoff and septic systems. There are 33 regulated SOCs (30 SOCs are both state and federally regulated while 3 are only regulated by the state). This chapter will discuss these 33 SOCs and explain the monitoring requirements.

Illinois EPA Assistance

In most cases, as a monitoring requirement approaches for a community water system (CWS), the Illinois EPA will send reminder notifications that detail the requirement and specific timeline for completion. Please remember that these are “reminder” notifications and does not relieve the CWS in meeting the monitoring schedule deadlines. If a CWS is unsure of its schedule or timeframe described in any Illinois EPA notification, it is very important that the CWS contact the Drinking Water Compliance Unit at 217/785-0561 for clarification. All SOC correspondence should be sent to:

SOC Coordinator
Illinois EPA /BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276
Telephone: 217-785-0561
Fax 217-557-1407

Sample Bottles

If your supply participates in the Community Water Supply Testing Fund (CWSTF), sample containers will be sent to your supply during the monitoring period. If your supply does **not** participate in the CWSTF, it is your responsibility to have all testing completed by an Illinois EPA certified laboratory and submitted on the correct reporting forms. The SOC certified laboratory reporting form is available on the Internet (see next page). This form must be submitted within 10 days after the end of a monitoring period. If the laboratory you choose submits data electronically, it is not necessary to submit a paper copy. However, it is the responsibility of the CWS to insure data reaches the Illinois EPA within 10 days of the end of the monitoring period.

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Certified Laboratory Result Reporting Forms can be downloaded at:

<http://www.epa.state.il.us/water/forms.html#compliance-and-enforcement-drinking-water>

If Internet access is unavailable, please contact the SOC Coordinator at 217-785-0561 for a copy of this form.

SOC Sample Locations

SOC samples must be collected at locations that represent each well or surface water source after all treatment but prior to entering the distribution system. If water from several sources is combined and treated at a common location, then one sample can be collected to represent all combined sources.

If a well pumps directly to the distribution system (no added treatment), then a representative sample must be collected prior to the first distribution location. This is not a common situation.

On occasion the Illinois EPA will require a SOC sample to be collected directly from a well prior to treatment. If the case, the sample collector will receive specific sample collection instructions.

Monitoring Requirements

Initially, per sample location as specified above, SOC samples are collected quarterly for a minimum of four consecutive quarters. Once a base line is established with no detections for a sample location, monitoring can be reduced to triennial for ground water supplies and annual for surface water supplies.

Ground water supplies on a triennial monitoring frequency serving more than 3,300 people must collect two SOC samples within a 12 month period in each three year cycle. The two samples cannot be collected within 90 days of each other.

Surface water supplies on an annual monitoring frequency are required to collect the SOC sample during the April through June period. Failure to do so would result in a monitoring violation.

Quarterly monitoring must be initiated for any new source of water (i.e. new well). Reduced monitoring for new sources will be considered once four consecutive quarterly samples are collected without detection.

Dioxin monitoring is only required if the Illinois EPA determines the contaminant was used in the proximity of the CWS source(s) of water. If the CWS is required to monitor, they will be notified in writing.

Please remember that several factors influence monitoring requirements; such as, violation of regulations, new regulations, and/or contaminant detections. It is recommended that each CWS water operator and/or sample collector periodically (at least quarterly) download a new schedule since monitoring schedules change frequently. A CWS can download their most current monitoring schedule at:

<http://www.epa.state.il.us/water/compliance/drinking-water/sdwis/index.html>

Monitoring Requirements for Sample Locations with SOC Detections

Quarterly monitoring must continue for any detected SOC until results demonstrate “reliably and consistently” low results. Groundwater CWS must demonstrate results “reliably and consistently” below one half of the Maximum Contaminant Level (MCL) for a minimum of two consecutive quarters. Surface water system must demonstrate results “reliably and consistently” below the laboratory detection limit for a minimum of four consecutive quarters. Once this has been established, the CWS/sample location may qualify for reduced monitoring.

Monitoring Requirements for Back-up and/or Emergency Wells

All wells that are active and are either on back-up or emergency status must be monitored every three years. If the CWS purchases its primary source of water from another CWS, annual samples are required from the well(s). There is no exception to this requirement.

If there is detection below the MCL, the CWS may be required to locate the source of the contamination and remediate.

If there is detection above the MCL, the CWS will be required to locate the source of the contamination and remediate in an established amount of time or properly abandon the well.

Reduced Monitoring Following Detections

The Illinois EPA will periodically review sample data to determine if a sample location qualifies for reduced monitoring. If a sample location qualifies, the Illinois EPA will send written notification to the CWS that sampling has been reduced.

As mentioned, this is a periodic review. It is strongly recommended that the CWS routinely evaluate their data. If it is felt that a sample location qualifies for reduced monitoring, a request in writing should be sent to the SOC Coordinator (address on page 1 of this Chapter).

When a sample location is eligible for reduced monitoring, it will move from a quarterly frequency to an annual frequency. For ground water supplies only, after three years of annual samples, the sample frequency may be further reduced to triennial if no detections have occurred. Surface water supplies are not allowed to be reduced to triennial.

A sample location reduced from quarterly to annual monitoring must be scheduled to be collected during the calendar quarter in which the highest quarterly detection occurred for that contaminant. This is a requirement and if the sample is not collected during the specified quarter it will result in a monitoring violation (example on next page).

EXAMPLE

A CWS is required to collect quarterly atrazine samples due to a routine SOC sample detection. This CWS is a ground water supply, thus will need two consecutive quarters of results below $\frac{1}{2}$ the MCL for atrazine to qualify for reduced annual sampling. The MCL for atrazine is 3ug/L, so $\frac{1}{2}$ of the MCL would be 1.5ug/L.

Sample Location	Date Collected	Atrazine Concentration (ug/l)
TP01 Well 1	01/06/07	2.9
TP01 Well 1	04/22/07	4.4
TP01 Well 1	08/02/07	Not Detected
TP01 Well 1	10/03/07	1.9
TP01 Well 1	01/16/08	0.6
TP01 Well 1	04/02/08	0.7

CWS now has two quarters of results “reliably and consistently” below $\frac{1}{2}$ the MCL (yellow). The CWS is now eligible for reduced annual monitoring. The annual sample must be collected during the calendar quarter in which the highest quarterly detection occurred (blue) or in this example, the April thru June quarter. If at any time atrazine is again detected above $\frac{1}{2}$ the MCL, quarterly monitoring will resume.

TP01 Well 1	04/02/09	0.7
TP01 Well 1	04/22/10	Not Detected
TP01 Well 1	04/09/11	Not Detected
TP01 Well 1	4/15/12	Not Detected

Three annual sample with no detections qualifies for triennial monitoring

TP01 Well 1	04/18/15	Not Detected
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At this point, any new detection would result in quarterly monitoring.

SOC Vulnerability Waiver Program

The Illinois EPA has a “vulnerability waiver” program that many systems already utilize which allows SOC monitoring to be reduced to one sample per sample location every nine years.

The objective of the SOC vulnerability monitoring waiver program is to reduce monitoring, while assuring the safety of the drinking water currently provided by the public water supplies. The intent of this program is to recognize where natural protection exists by differentiating between confined and unconfined aquifer systems. A confined aquifer more readily qualifies for a waiver. For aquifers determined to be unconfined this program includes: mapping the 5-year recharge area; identifying potential sources and routes of contamination located within the recharge area; contingency planning; and managing potential sources and potential routes of contamination, thereby reducing vulnerability to contamination. The program requires the identification and sealing of potential routes of contamination located within 1,000 feet of wells.

To obtain a waiver, the CWS must evaluate the vulnerability of their wells to potential contamination sources. Systems vulnerable to contamination must develop a management program for controlling potential contamination sources and routes. If a CWS is interested and would like more information, please call the SOC coordinator at 217-785-0561. The application is on line at:

<http://www.epa.state.il.us/water/compliance/drinking-water/forms/phase-2-and-5-monitoring-waiver-application-and-instructions.pdf>

Compliance with the SOC Maximum Contaminant Levels (MCL)

Compliance is based on the running annual average of quarterly samples. This is calculated for each entry point to the distribution system. If one sample location is out of compliance, the entire system is out of compliance unless that part of the system is entirely separate (no inter-connections) from the rest of the system.

If any single sampling result is high enough to cause the annual average to be exceeded, the supply is out of compliance immediately (for example, the analytical result is greater than four times the MCL or two analytical results are greater than twice the MCL, etc.).

Systems monitoring annually or triennially whose sample result exceeds the MCL, must revert to quarterly sampling for that contaminant the next quarter. Systems are only required to conduct quarterly monitoring at the sampling point at which the sample was collected and for the specific contaminant that triggered the system into the increased monitoring frequency. An exceedance is not necessarily a violation. Systems triggered into increased monitoring will not be considered in violation of the MCL until they have completed one year of quarterly sampling unless any sample collected during quarterly monitoring would result in the annual average exceeding the MCL.

Systems may monitor more frequently than quarterly. Samples must be clearly marked as “compliance/routine samples” prior to being submitted to the laboratory (and not after the results are known). All samples must be used when determining compliance (the system cannot pick and choose results) unless the samples are clearly marked as “special”. Samples marked as “special” samples will not be used for compliance and cannot later be changed to routine samples so that they will be counted for compliance. There are no exceptions to this rule.

If a system does not collect all required quarterly samples, compliance will be based on the running annual average of the samples that were collected. If a sample result is less than the reporting limit, zero will be used to calculate the annual average.

The Illinois EPA has the flexibility to require confirmation samples for positive or negative results. The Illinois EPA may require more than one confirmation sample to determine the average exposure. If confirmation samples are required by the Illinois EPA, the average of the analytical result and the confirmation sample will be used for compliance determinations.

Examples

Example 1: A ground water supply was on triennial monitoring at TP01 Well 1. Atrazine was detected in the sample collected on 10/18/2007 at 5.6ug/L. The detection triggered quarterly monitoring. The MCL for atrazine is 3ug/L.

Sample Location	Date Collected	Single Result (ug/L)	*Quarterly Average	Running Annual Average
TP01 Well 1	10/18/07	5.6	5.6	$5.6 / 4 = 1.4$ (no MCL)
TP01 Well 1	01/05/08	5.9	5.9	$5.6 + 5.9 / 4 = 2.8$ (no MCL)
TP01 Well 1	04/20/08	6.3	6.3	$5.6 + 5.9 + 6.3 / 4 = 4.4$ (MCL Violation)
TP01 Well 1	07/08/08	6.2	0.7	$5.6 + 5.9 + 6.3 + 0.7 / 4 = 4.6$ (MCL Violation)
TP01 Well 1	10/02/08	5.4	1.4	$5.9 + 6.3 + 0.7 + 1.4 / 4 = 3.5$ (MCL Violation)
TP01 Well 1	01/05/09	2.4	Not Detected	$6.3 + 0.7 + 1.4 + 0 / 4 = 2.1$ (no MCL)

* Only one sample collected per quarter

The water supply had 3 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these three quarters (see Chapter 1 Public Notification for requirements).

In this example, the water supply would remain on quarterly monitoring until it could demonstrate reliably and consistently results below 1.5 ug/L for a minimum of two consecutive quarters. See “Monitoring Requirements for Sample Locations with SOC Detections” of this Chapter.

If more than one sample is collected during the quarter from the same sample location, the samples are averaged to calculate a quarterly average. See example below.

Example 2: A water supply was on triennial monitoring at TP02 Well 2. Atrazine was detected at 23.3ug/L in the sample collected on 10/18/2007. A confirmation sample was collected on 11/12/07 and was 5.2ug/L. The detections triggered quarterly monitoring. The MCL for atrazine is 3ug/L.

Sample Location	Date Collected	Single Result (ug/L)	Quarterly Average	Running Annual Average
TP02 Well 2	10/18/07	23.3	$23.3 + 5.2 / 2 = 14.2$	$14.2 / 4 = 3.5$ (MCL violation)
TP02 Well 2	11/12/07	5.2		
TP02 Well 2	2/12/08	6	6	$14.2 + 6 / 4 = 5$ (MCL Violation)
TP02 Well 2	04/20/08	0.6	0.6	$14.2 + 6 + 0.6 / 4 = 5.2$ (MCL Violation)
TP02 Well 2	07/08/08	4	$4 + 0.9 / 2 = 2.4$	$14.2 + 6 + 0.6 + 2.4 / 4 = 5.8$ (MCL Violation)
TP02 Well 2	8/2/08	0.9		
TP02 Well 2	10/02/08	No detect	0	$6 + 0.6 + 2.4 + 0 / 4 = 2.2$ (no MCL)
TP02 Well 2	01/05/09	0.9	0.9	$0.6 + 2.4 + 0 + 0.9 / 4 = 0.9$ (no MCL)

The water supply had 4 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these four quarters (see Chapter 1 Public Notification for requirements).

SOC Contaminants

Below are the 33 regulated SOCs.

2,4-D <i>(State has imposed a more stringent MCL)</i>	MCL = 10 ug/L (or 10 parts per billion) (State) MCL = 70 ug/L (or 70 parts per billion) (Federal)
2,4-D is a colorless, odorless powder used as a herbicide for the control of broad-leaf weeds in agriculture, and for control of woody plants along roadsides, railways, and utilities rights of way. It has been most widely used on such crops as wheat and corn, and on pasture and rangelands.	
2,4,5-TP (Silvex)	MCL = 50 ug/L (or 50 parts per billion)
2,4,5-TP is a white organic powder with little odor. Its use has been banned since 1985. The greatest use of 2,4,5-TP was as a postemergence herbicide for control of woody plants, and broadleaf herbaceous weeds in rice and bluegrass turf, in sugarcane, in rangeland improvement programs, on lawns. Aquatic uses included control of weeds in ditches and riverbanks, on floodways, along canals, reservoirs, streams, and along southern waterways.	
Alachlor	MCL = 2 ug/L (or 2 parts per billion)
Alachlor is an odorless, white solid. The greatest use of alachlor is as a herbicide for control of annual grasses and broadleaf weeds in crops, primarily on corn, sorghum and soybeans. Alachlor is the second most widely used herbicide in the United States, with particularly heavy use on corn and soybeans in Illinois, Indiana, Iowa, Minnesota, Nebraska, Ohio, and Wisconsin.	
Aldrin <i>(This is only regulated by the State)</i>	MCL = 1 ug/L (or 1 part per billion) (State Only)
Aldrin's common source of contamination in drinking water includes runoff from use as an insecticide and has not been used since 1987.	
Atrazine	MCL = 3 ug/L (or 3 parts per billion)
Atrazine is a white, crystalline solid organic compound. It is a widely used herbicide for control of broadleaf and grassy weeds. Atrazine was estimated to be the most heavily used herbicide in the United States in 1987/89, with its most extensive use for corn and soybeans in Illinois, Indiana, Iowa, Kansas, Missouri, Nebraska, Ohio, Texas, and Wisconsin. Effective in 1993, its uses were greatly restricted.	
Benzo(a)pyrene (BaP)	MCL = 0.2 ug/L (or 0.2 parts per billion)
Benzo(a)pyrene, or BaP, is one of a group of compounds called polycyclic aromatic hydrocarbons (PAHs). They are not produced or used commercially but are very commonly found since they are formed as a result of incomplete combustion of organic materials.	
Carbofuran	MCL = 40 ug/L (or 40 parts per billion)
Carbofuran is a white crystalline solid with a slightly phenolic odor. This broad spectrum insecticide is sprayed directly onto soil and plants just after emergence to control beetles, nematodes and rootworm. The greatest use of carbofuran is on alfalfa and rice, with turf and grapes making up most of the remainder. Earlier uses were primarily on corn crops.	
Chlordane	MCL = 2 ug/L (or 2 parts per billion)
Chlordane is a viscous liquid, colorless to amber, with a slight chlorine-like aromatic odor. It was used on corn, citrus, deciduous fruits and nuts, vegetables; for home, garden and ornamentals; lawns, turf, ditchbanks and roadsides. It was applied directly to soil or foliage to control a variety of insect pests including parasitic roundworms and other nematodes, termites, cutworms, chiggers, leafhoppers. The only commercial use of chlordane products still permitted is for fire ant control in power transformers.	
Dalapon	MCL = 200 (or 200 parts per billion)
Dalapon is a colorless liquid with an acrid odor sold as sodium or magnesium salt. Dalapon is a herbicide used to control grasses in a wide variety of crops, including fruit trees, beans, coffee, corn, cotton and peas. It is also registered for use in a number of non-crop applications such as lawns, drainage ditches, along railroad tracks, and in industrial areas.	

Total DDT (<i>This is only regulated by the State</i>)	MCL = 50 ug/L (or 50 parts per billion) (State Only)
Total DDT's common source of contamination in drinking water includes runoff from use as a contact insecticide.	
Di(2-ethylhexyl) Adipate	MCL = 400 ug/L (or 400 parts per billion)
Di(2-ethylhexyl) Adipate is a light-colored, oily liquid with an aromatic odor. It is used in making plastics. It is also used as a solvent; in aircraft lubricants; as a hydraulic fluid; as a plasticizer or solvent in the following cosmetics: bath oils, eye shadow, cologne, foundations, rouge, blusher, nail-polish remover, moisturizers and indoor tanning preparations; in meat wrapping operations.	
Di(2-ethylhexyl) Phthalate (DEHP)	MCL = 6 ug/L (or 6 parts per billion)
Di (2-ethylhexyl) Phthalate, or DEHP, is the most commonly used of a group of related chemicals called phthalates or phthalic acid esters. The greatest use of DEHP is as a plasticizer for polyvinylchloride (PVC) and other polymers including rubber, cellulose and styrene. A number of packaging materials and tubings used in the production of foods and beverages are polyvinyl chloride contaminated with phthalic acid esters, primarily DEHP.	
Dibromochloropropane (DBCP)	MCL = 0.2 ug/L (or 0.2 parts per billion)
Dibromochloropropane, or DBCP is a dense yellow organic liquid with a pungent odor. It is used primarily as an unclassified nematocide for soil fumigation of cucumbers, summer squash, cabbage, cauliflower, carrots, snap beans, okra, aster, shasta daisy, lawn grasses and ornamental shrubs.	
Dieldren (<i>This is only regulated by the State</i>)	MCL = 1 ug/L (or 1 part per billion) (State Only)
Dieldren's common source of contamination in drinking water includes runoff from use as an insecticide and has not been used since 1987.	
Dinoseb	MCL = 7 ug/L (or 7 parts per billion)
Dinoseb is an organic solid - yellowish crystals with a pungent odor. Its greatest use is as a contact herbicide for post-emergence weed control in cereals, undersown cereals, seedling lucerne and peas. Dinoseb is also used as a corn yield enhancer and an insecticide and miticide.	
Dioxin (2,3,7,8-TCDD)	MCL = 0.00003 ug/L (or 0.00003 parts per billion)
Dioxin is an organic solid of white crystalline needles. Dioxin is not produced or used commercially in the US. It is a contaminant formed in the production of some chlorinated organic compounds, including a few herbicides such as silvex. It may also be formed during combustion of a variety of chlorinated organic compounds.	
Diquat	MCL = 20 ug/L (or 20 parts per billion)
Diquat is an organic solid of colorless or yellow crystals. A water solution is dark red-brown. Diquat is a herbicide that has been used extensively in the US since the late 1950s to control both crop and aquatic weeds. It is used on potatoes; as an aid in harvesting cotton, rapeseed and other oil seed crops; to wilt and dry out silage, standing hay, etc. for storage; a plant growth regulator and sugar cane-flowering suppressant.	
Endothall	MCL = 100 ug/L (or 100 parts per billion)
Endothall is an organic solid of white odorless crystals. Endothall is used as a defoliant for a wide range of crops and as a herbicide for both terrestrial and aquatic weeds. It is used as a desiccant on lucerne and on potato, for the defoliation of cotton, to control aquatic weeds and as an aquatic algicide growth regulator. It has been used for: sugar beets, turf, hops sucker suppression; alfalfa, clover desiccants; potato vine killers.	
Endrin	MCL = 2 ug/L (or 2 parts per billion)
Endrin is an organic solid of odorless white crystals. Endrin is an insecticide which has been used mainly on field crops such as cotton, maize, sugarcane, rice, cereals, ornamentals, and other crops. It has also been used for grasshoppers in non-cropland and to control voles and mice in orchards. Once widely used in the US, most uses were canceled in 1980.	

Ethylene Dibromide (EDB)	MCL = 0.05 ug/L (or 0.05 parts per billion)
Ethylene dibromide (EDB) is a colorless, heavy organic liquid with a mildly sweet chloroform-like odor. Ethylene dibromide is mainly used in anti-knock gasoline mixtures, particularly in aviation fuel. Other uses include: as a solvent for resins, gums, and waxes; in waterproofing preparations; in making dyes and drugs; and as a pesticide for grains and fruit.	
Glyphosate	MCL = 700 ug/L (or 700 parts per billion)
Glyphosate is an organic solid of odorless white crystals. It is a non-selective herbicide used on many food and non-food crops as well as non-crop areas such as roadsides. When applied at lower rates, it serves as a plant growth regulator. The most common uses include control of broadleaf weeds and grasses in: hay/pasture, soybeans, field corn; ornamentals, lawns, turf, forest plantings, greenhouses, rights-of-way.	
Heptachlor <i>(State has imposed a more stringent MCL)</i>	MCL = 0.1 ug/L (or 0.1 parts per billion) (State) MCL = 0.4 ug/L (or 0.4 parts per billion) (Federal)
Heptachlor is a white to tan waxy organic solid with a camphor-like odor. The epoxide is formed from heptachlor in the environment. It was once used as a non-agricultural insecticide. Most uses of the product were canceled in 1978. The only permitted commercial use of heptachlor products is for fire ant control in buried, pad-mounted electric power transformers, and in underground cable television and telephone cable boxes.	
Heptachlor Epoxide <i>(State has imposed a more stringent MCL)</i>	MCL = 0.1 ug/L (or 0.1 parts per billion) (State) MCL = 0.2 ug/L (or 0.2 parts per billion) (Federal)
Heptachlor Epoxide is a breakdown of heptachlor. Heptachlor is a white to tan waxy organic solid with a camphor-like odor. The epoxide is formed from heptachlor in the environment. It was once used as a non-agricultural insecticide. Most uses of the product were canceled in 1978. The only permitted commercial use of heptachlor products is for fire ant control in buried, pad-mounted electric power transformers, and in underground cable television and telephone boxes.	
Hexachlorobenzene (HCB)	MCL = 1 ug/L (or 1 parts per billion)
Hexachlorobenzene (HCB) is an organic solid of white crystalline needles. It is produced as a by-product from the manufacture of a variety of other regulated organic chemicals. It is also a contaminant in the production of some pesticides. The greatest use of HCB is in making other organic compounds such as rubber, dyes, wood preservatives. Other uses of include: as a fungicide on grains, especially wheat.	
Hexachlorocyclopentadiene (HEX)	MCL = 50 ug/L (or 50 parts per billion)
Hexachlorocyclopentadiene (HEX) is an oily, yellow-green organic liquid with a pungent odor. Its greatest use is as a raw material in manufacturing other chemicals, including pesticides, flame retardants, resins, dyes, pharmaceuticals, plastics, etc. HEX has no end uses of its own.	
Lindane	MCL = 0.2 ug/L (or 0.2 parts per billion)
Lindane is a white crystalline organic solid. Most uses being restricted in 1983, lindane is currently used primarily for treating wood-inhabiting beetles and seeds. It is also used as a dip for fleas and lice on pets, and livestock, for soil treatment, on the foliage of fruit and nut trees, vegetables, timber, ornamentals and for wood protection.	
Methoxychlor	MCL = 40 ug/L (or 40 parts per billion)
Methoxychlor is a colorless organic solid with a slightly fruity odor. It is an insecticide preferred to DDT for use on animals, in animal feed, and on DDT-sensitive crops such as squash, melons, etc. Since methoxychlor is more unstable than DDT, it has less residual effect. It has been used extensively in Canada for the control of biting flies, and is also effective against mosquitoes and houseflies.	
Oxamyl (Vydate)	MCL = 200 ug/L (or 200 parts per billion)
Oxamyl is a white crystalline organic solid with a slight sulfurous odor. It is widely used for control of insects, mites and nematodes on field crops, fruits and ornamentals. The majority of oxamyl is applied to apples, potatoes, and tomatoes.	

Pentachlorophenol (PCP)	MCL = 1 ug/L (or 1 parts per billion)
Pentachlorophenol (PCP) is a white organic solid with needle-like crystals and a phenolic odor. The greatest use of pentachlorophenol is as a wood preservative (fungicide). Though once widely used as an herbicide, it was banned in 1987 for these and other uses, as well as for any over-the-counter sales.	
Picloram	MCL = 500 ug/L (or 500 parts per billion)
Picloram is a crystalline organic solid with a chlorine-like odor. It is used in salt form as a systemic herbicide for controlling annual weeds on crops, and in combination with 2,4-D or 2,4,5-T against perennials on non-croplands for brush control. Picloram is used to control bitterweed, knapweed, leafy spurge, locoweed, larkspur, mesquite, prickly pear, and snakeweed on rangeland in the western states.	
Polychlorinated biphenyls (PCBs)	MCL = 0.5 ug/L (or 0.5 parts per billion)
Polychlorinated biphenyls (PCBs) are a group of organic chemicals which can be odorless or mildly aromatic solids or oily liquids. They were formerly used in the USA as hydraulic fluids, plasticizers, adhesives, fire retardants, way extenders, de-dusting agents, pesticide extenders, inks, lubricants, cutting oils, in heat transfer systems, carbonless reproducing paper.	
Simazine	MCL = 4 ug/L (or 4 parts per billion)
Simazine is an organic white solid, used as a pre-emergence herbicide used for control of broad-leaved and grassy weeds on a variety of deep-rooted crops such as artichokes, asparagus, berry crops, broad beans, citrus, etc., and on non-crop areas such as farm ponds and fish hatcheries. Its major use is on corn where it is often combined with AAtrex. Other herbicides with which simazine is combined include: paraquat, on apples, peaches; Roundup or Oust for noncrop use; Surflan on Christmas trees; Dual on corn and ornamentals.	
Toxaphene	MCL = 3 ug/L (or 3 parts per billion)
Toxaphene is an amber, waxy organic solid with a piney odor. Toxaphene was used as an insecticide for cotton and vegetables, and on livestock and poultry. These uses have been restricted, and toxaphene is now used only for special needs, mainly in southern states.	

SOC Sample Collection – Things to Remember

Sample instructions should be supplied with the sample containers from the laboratory. If the laboratory fails to include sample instructions, contact the laboratory and request sample instructions. Some general practices to remember:

- All freezer packs should be frozen for 24 hours prior to sample collection
- Samples should be collected at the entry point to the distribution system after all treatment (finished water)
- SOC sample kits will consist of several different size bottles. Some may require acid preservation immediately after sample collection. Acids can be dangerous if handled improperly. Goggles and acid-resistant gloves should be worn during the acid preservation process. Be sure to follow laboratory sample directions carefully
- A sample “blank” may accompany each sampling set (if included, the blank will already be filled with water by the laboratory and should not be opened)

- Select a sampling faucet that does NOT have an aerator (sampling must be done with minimum aeration)
- Run the water until the temperature is as cold as it gets
- Just before sample collection, adjust to a very low flow. Do not change the flow while collecting sample
- When filling sample bottle, tip bottle slightly so that water flows down the side wall of the container. Bring bottle to an upright position as it fills.
- After sample collection, cool the samples either by refrigeration or with ice.
- Call the laboratory if bottles are received broken (or break while collecting samples)
- If a sample location is out of service (for an extended period of time), notify the SOC Coordinator in writing or by phone at 217-785-0561
- The owner or operator of a water supply must maintain chemical analysis reports (results) or a summary of those reports for at least 10 years

CHAPTER

7

Inorganic Chemicals (IOCs)

Inorganic Chemicals (IOCs) consist of salts and metals, which may be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. There are 17 regulated IOCs (14 IOCs are both state and federally regulated while 3 are only regulated by the state). This chapter will discuss these 17 IOCs and explain the monitoring requirements. In addition, this chapter will also discuss the special monitoring requirements for sodium.

Illinois EPA Assistance

In most cases, as a monitoring requirement approaches for a community water system (CWS), the Illinois EPA will send reminder notifications that detail the requirement and specific timeline for completion. Please remember that these are “reminder” notifications and does not relieve the CWS in meeting the monitoring schedule deadlines. If a CWS is unsure of its schedule or timeframe described in any Illinois EPA notification, it is very important that the CWS contact the Drinking Water Compliance Unit at 217/785-0561 for clarification. All IOC correspondence should be sent to:

IOC Coordinator
Illinois EPA /BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276
Telephone: 217-785-0561
Fax 217-557-1407

Sample Bottles

If your supply participates in the Community Water Supply Testing Fund (CWSTF), sample containers will be sent to your supply during the monitoring period. If your supply does **not** participate in the CWSTF, it is your responsibility to have all testing completed by an Illinois EPA certified laboratory and submitted on the correct reporting forms. The IOC certified laboratory reporting form is available on the Internet (see next page). This form must be submitted within 10 days after the end of a monitoring period. If the laboratory you choose submits data electronically, it is not necessary to submit a paper copy. However, it is the responsibility of the CWS to insure data reaches the Illinois EPA within 10 days of the end of the monitoring period.

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Certified Laboratory Result Reporting Forms can be downloaded at:

<http://www.epa.state.il.us/water/forms.html#compliance-and-enforcement-drinking-water>

If Internet access is unavailable, please contact the IOC Coordinator at 217-785-0561 for a copy of this form.

IOC Sample Locations

IOC samples must be collected at locations that represent each well or surface water source after all treatment but prior to entering the distribution system. If water from several sources is combined and treated at a common location, then one sample can be collected to represent all combined sources.

If a well pumps directly to the distribution system (no added treatment), then a representative sample must be collected prior to the first distribution location. This is not a common situation.

On occasion the Illinois EPA will require an IOC sample to be collected directly from a well prior to treatment. If the case, the sample collector will receive specific sample collection instructions.

Monitoring Requirements (excluding Asbestos, Nitrate and Nitrite)

Per sample location as specified above, IOC samples are collected triennially for ground water supplies and annually for surface water supplies.

Please remember that several factors influence monitoring requirements; such as, violation of regulations, new regulations, and/or contaminant detections. It is recommended that each CWS water operator and/or sample collector periodically (at least quarterly) download a new schedule since monitoring schedules change frequently. A CWS can download their most current monitoring schedule at:

<http://www.epa.state.il.us/water/compliance/drinking-water/sdwis/index.html>

Monitoring Requirements for Sample Locations with IOC Detections

Quarterly monitoring is initiated for any detected IOC that was above the MCL until results demonstrate “reliably and consistently” low results. Groundwater CWS must demonstrate results “reliably and consistently” below the Maximum Contaminant Level (MCL) for a minimum of two consecutive quarters. Surface water system must demonstrate results “reliably and consistently” below the MCL for a minimum of four consecutive quarters.

Reduced Monitoring following a Detection

The Illinois EPA will periodically review sample data to determine if a sample location qualifies for reduced monitoring. If a sample location qualifies, the Illinois EPA will send written notification to the CWS that sampling has been reduced.

As mentioned, this is a periodic review. It is strongly recommended that the CWS routinely evaluate their data. If it is felt that a sample location qualifies for reduced monitoring, a request in writing should be sent to the IOC Coordinator (address on page 1 of this Chapter).

Monitoring Requirements for Sodium

The routine IOC sample will also include analysis for sodium. Sodium does not have a MCL; however, monitoring and reporting is required.

Sodium occurs in drinking water due to erosion of naturally occurring deposits. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If a consumer is on a sodium-restricted diet, they should consult their personal physician if they have concerns about the concentrations found in the drinking water.

It is important to note that sodium is an essential nutrient. The Food and Nutrition Board of the National Research Council recommends that most healthy adults need to consume at least 500 milligrams (mg)/day, and that sodium intake be limited to no more than 2400 mg/day.

Monitoring Requirements for Fluoride

In addition to the routine IOC analysis, if the CWS adds fluoride as part of the treatment process, monthly fluoride monitoring is also required.

Illinois Department of Public Health (IDPH) rules require all water systems to maintain a fluoride level of 0.9 -1.2 mg/L at each active entry point (EP) where fluoride is added. Each active EP (where fluoride is added) must be monitored daily for fluoride by using an on-site test kit. The on-site test results must be recorded on the monthly "Facility Operating Report" that is sent to the Illinois EPA Regional Office. In addition to the daily on site monitoring, once each month, a split-sample analysis must be performed by collecting one sample and splitting it into two separate vials. One vial is analyzed on-site using the test kit. This on-site result must be recorded on the Illinois EPA laboratory report form. The other vial must be sent to a certified laboratory. The purpose of the split sample is to verify the accuracy of the on-site test kit.

For CWSs that participate in Community Water Supply Testing Fund (CWSTF), a twelve-month supply of fluoride bottles is normally sent in May/June of each year. If a fluoride sample result exceeds 4mg/L, a new sample should be collected for analysis. The Illinois EPA Laboratory will automatically mail a new sample bottle to your facility. If additional bottles are needed, please call the Illinois EPA laboratory at 217-782-9780.

Monitoring Requirements for Nitrate and Nitrite

Like the other inorganic chemicals, nitrate/nitrite samples must be collected at locations that represent each well or surface water source after all treatment but prior to entering the distribution system. If water from several sources is combined and treated at a common location, then one sample can be collected to represent all combined sources.

Nitrate

Nitrate monitoring for a ground water system is annual. If any results are equal to or greater than 5 mg/L, quarterly monitoring must be initiated and continued until 4 consecutive quarterly results demonstrate levels below 5 mg/L (return to annual).

Initial nitrate baseline monitoring for a surface water system is quarterly. If after the initial four quarters of monitoring and all results are below 5 mg/L, then monitoring is reduced to annual. The annual samples must always be collected during the April through June period. If at any time the results are 5mg/L or greater, quarterly monitoring must resume.

Nitrite

Nitrite monitoring for a ground water system is triennial (once every three years). Nitrite monitoring for a surface water system is annual or triennial. If any results are equal to or greater than 0.5 mg/L, quarterly monitoring must be initiated and continued until 4 consecutive quarterly results for ground water systems and 4 consecutive quarterly results for surface systems demonstrate levels below 0.5 mg/L (return to triennial or annual).

Monitoring Requirements for Asbestos

Only supplies that have asbestos-cement (A-C) pipe within the distribution system (vulnerable to asbestos contamination) and have an aggressive water quality index of less than 12 must monitor once every nine years.

Every nine years the Illinois EPA will send each CWS an asbestos related questioner. In order for the Illinois EPA to verify the current number of water supply systems that have A-C pipe in the distribution system, it is necessary to check the materials inventory for your water supply and advise the Illinois EPA as to the presence or absence of A-C pipe within the system. The presence of A-C pipe does not automatically mean that your water supply will be required to monitor for asbestos; however, it will trigger testing to determine whether or not the water is corrosive. If the water quality index indicates the water is corrosive (index of less than 12), monitoring for asbestos will be required from a location served by A-C pipe. Quarterly monitoring will be required if any sample result exceeds 7 million fibers per liter.

If actual asbestos monitoring is required for your CWS, specific sampling instructions/requirements will be sent from the Illinois EPA to the CWS.

Monitoring Requirements for Back-up and/or Emergency Wells

All wells that are active and are either on back-up or emergency status must be monitored every three years. If the CWS purchases its primary source of water from another CWS, annual nitrate/nitrite samples are required from the well(s). There are no exceptions to this requirement.

If there is detection above the MCL, the CWS will be required to locate the source of the contamination and remediate in an established amount of time or properly abandon the well.

IOC (Cyanide Only) Vulnerability Waiver Program

This is only applicable to cyanide. The Illinois EPA has a “vulnerability waiver” program that many systems already utilize which allows cyanide monitoring to be reduced to one sample per sample location every nine years.

The objective of the cyanide vulnerability monitoring waiver program is to reduce monitoring, while assuring the safety of the drinking water currently provided by the public water supplies. The intent of this program is to recognize where natural protection exists by differentiating between confined and unconfined aquifer systems. A confined aquifer more readily qualifies for a waiver. For aquifers determined to be unconfined this program includes: mapping the 5-year recharge area; identifying potential sources and routes of contamination located within the recharge area; contingency planning; and managing potential sources and potential routes of contamination, thereby reducing vulnerability to contamination. The program requires the identification and sealing of potential routes of contamination located within 1,000 feet of wells.

To obtain a waiver, the PWS must evaluate the vulnerability of their wells to potential contamination sources. Systems vulnerable to contamination must develop a management program for controlling potential contamination sources and routes. If a CWS is interested and would like more information, please call the IOC Coordinator at 217-785-0561. The application is on line at:

<http://www.epa.state.il.us/water/compliance/drinking-water/forms/phase-2-and-5-monitoring-waiver-application-and-instructions.pdf>

Compliance with the IOC Maximum Contaminant Levels (MCL)

The following excludes nitrate and nitrite (see Chapter 7-8).

Compliance is based on the running annual average of quarterly samples. This is calculated for each entry point to the distribution system. If one sample location is out of compliance, the entire system is out of compliance.

If any single sampling result is high enough to cause the annual average to be exceeded, the supply is out of compliance immediately (for example, the analytical result is greater than four times the MCL or two analytical results are greater than twice the MCL, etc.).

Systems monitoring annually or triennially whose sample result exceeds the MCL, must revert to quarterly sampling for that contaminant the next quarter. Systems are only required to conduct quarterly monitoring at the sampling point at which the sample was collected and for the specific contaminant that triggered the system into the increased monitoring frequency. An exceedance is not necessarily a violation. Systems triggered into increased monitoring will not be considered in

violation of the MCL until they have completed one year of quarterly sampling unless any sample collected during quarterly monitoring would result in the annual average exceeding the MCL.

Systems may monitor more frequently than quarterly. Samples must be clearly marked as “compliance/routine samples” prior to being submitted to the laboratory (and not after the results are known). All samples must be used when determining compliance (the system cannot pick and choose results) unless the samples are clearly marked as “special”. Samples marked as “special” samples will not be used for compliance and cannot later be changed to routine samples so that they will be counted for compliance. There are no exceptions to this rule.

If a system does not collect all required of quarterly samples, compliance will be based on the running annual average of the samples that were collected. If a sample result is less than the reporting limit, zero will be used to calculate the annual average.

The Illinois EPA has the flexibility to require confirmation samples for positive or negative results. The Illinois EPA may require more than one confirmation sample to determine the average exposure. If confirmation samples are required by the Illinois EPA, the average of the initial sample and the confirmation sample will be used for compliance determinations.

Examples of Determining Compliance

Example 1: A ground water supply was on triennial monitoring at TP01 Well 1. Cadmium was detected at 5.6ug/L in the sample collected on 10/18/2007. The detection triggered quarterly monitoring. The MCL for cadmium is 5ug/L.

Sample Location	Date Collected	Single Result (ug/L)	*Quarterly Average	Running Annual Average
TP01 Well 1	10/18/07	5.6	5.6	$5.6 / 4 = 1.4$ (no MCL)
TP01 Well 1	01/05/08	5.9	5.9	$5.6 + 5.9 / 4 = 2.8$ (no MCL)
TP01 Well 1	04/20/08	6.3	6.3	$5.6 + 5.9 + 6.3 / 4 = 4.4$ (no MCL)
TP01 Well 1	07/08/08	6.2	6.2	$5.6 + 5.9 + 6.3 + 6.2 / 4 = 6$ (MCL Violation)
TP01 Well 1	10/02/08	5.4	5.4	$5.9 + 6.3 + 6.2 + 5.4 / 4 = 5.9$ (MCL Violation)
TP01 Well 1	01/05/09	2.4	2.4	$6.3 + 6.2 + 5.4 + 2.4 / 4 = 5.0$ (no MCL)

* Only one sample collected per quarter

The water supply had 2 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these two quarters (see Chapter 1 Public Notification for requirements).

In this example, the water supply would remain on quarterly monitoring until it could demonstrate reliably and consistently results below 5 ug/L for a minimum of two consecutive quarters.

If more than one sample is collected during the quarter from the same sample location, the samples are averaged to calculate a quarterly average. See example below.

Example 2: A water supply was on triennial monitoring at TP02 Well 2. Cadmium was detected at 23.3ug/L in the sample collected on 10/18/2007. A confirmation sample was collected on 11/12/07 and was 27.2ug/L. The detections triggered quarterly monitoring. The MCL for cadmium is 5ug/L.

Sample Location	Date Collected	Single Result (ug/L)	Quarterly Average	Running Annual Average
TP02 Well 2	10/18/07	23.3	$23.3 + 27.2 / 2 = 25.2$	$25.2 / 4 = 6.3$ (MCL violation)
TP02 Well 2	11/12/07	27.2		
TP02 Well 2	2/12/08	6	6	$25.2 + 6 / 4 = 7.8$ (MCL Violation)
TP02 Well 2	04/20/08	4	4	$25.2 + 6 + 4 / 4 = 8.8$ (MCL Violation)
TP02 Well 2	07/08/08	18	$18 + 2 / 2 = 10$	$25.2 + 6 + 4 + 10 / 4 = 11.3$ (MCL Violation)
TP02 Well 2	8/2/08	2		
TP02 Well 2	10/02/08	No detect	0	$6 + 4 + 10 + 0 / 4 = 5$ (no MCL)
TP02 Well 2	01/05/09	No detect	1	$4 + 10 + 0 + 1 / 4 = 3.7$ (no MCL)

The water supply had 4 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these four quarters (see Chapter 1 Public Notification for requirements).

Compliance with the Iron and Manganese MCL

Iron and manganese are state only regulated contaminants (no federal MCL exist). If levels are detected above the MCL, quarterly monitoring is initiated. Like other IOCs, quarterly monitoring must continue until results are below the MCL (two consecutive for ground water supplies and four consecutive quarters for surface water supplies).

The MCL for iron and manganese is only applicable to CWS suppliers that serve a population of more than 1000 persons OR have more than 300 service connections. The Illinois EPA may allow iron and manganese in excess of the MCL if sequestration is tried on an experimental basis and proves to be effective.

Compliance with the Nitrate and Nitrite MCL

Nitrate and nitrite MCLs are considered acute contaminants. This essentially means that infants less than six months of age drinking the water could have immediate health effects if levels are above the MCL. If a CWS has levels above the MCL, immediate (Tier 1) notification must be initiated. Please refer to *Chapter 1 Public Notification* for Tier 1 public notice requirements.

Compliance with the nitrate and nitrite MCL is determined immediately after the routine sample is collected and the laboratory has determined the result. If the routine sample is above the MCL, the water supply MUST collect a confirmation sample within 24 hours of being notified of the result. This notification most likely will be verbal (telephone) by the laboratory or the Illinois EPA.

The routine and confirmation samples will be averaged and if the average exceeds the MCL, Tier 1 requirements must be initiated. If the CWS is unable to collect the confirmation sample within 24 hours, public notice requirements must immediately be distributed.

It is recommended that routine nitrate and/or nitrite samples be collected on a Monday or a Tuesday. This will ensure a laboratory is available to analyze a confirmation sample if needed. There is no waiver from the 24-hour confirmation sample requirement. In many cases, the CWS official will drive the confirmation sample to the laboratory so that time constraints are met.

IOC Contaminants

Below are the 17 regulated IOCs.

Antimony	MCL = 6 ug/L (or 6 parts per billion)
Antimony is a metal found in natural deposits as ores containing other elements. The most widely used antimony compound is antimony trioxide, used as a flame retardant. It is also found in batteries, pigments, and ceramics/glass.	
Arsenic	MCL = 10 ug/L (or 10 parts per billion)
Arsenic's common sources of contamination in drinking water include erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes.	
Asbestos (Fiber > 10 micrometers)	MCL = 7 MFL
Asbestos is a fibrous mineral occurring in natural deposits. Because asbestos fibers are resistant to heat and most chemicals, they have been mined for use in over 3,000 different products, including roofing materials, brake pads, and cement pipe often used in distributing water to communities.	
Barium	MCL = 2,000 ug/L (or 2,000 parts per billion)
Barium is a lustrous, machinable metal which exists in nature only in ores containing mixtures of elements. It is used in making a wide variety of electronic components, in metal alloys, bleaches, dyes, fireworks, ceramics and glass. In particular, it is used in well drilling operations where it is directly released into the ground.	
Beryllium	MCL = 4 ug/L (or 4 parts per billion)
Beryllium is a metal found in natural deposits as ores containing other elements, and in some precious stones such as emeralds and aquamarine. The greatest use of beryllium is in making metal alloys for reactors and the aerospace industry.	
Cadmium	MCL = 5 ug/L (or 5 parts per billion)
Cadmium is a metal found in natural deposits as ores containing other elements. The greatest use of cadmium is primarily for metal plating and coating operations, including transportation equipment, machinery and baking enamels, photography, television phosphors. It is also used in nickel-cadmium and solar batteries and in pigments.	
Chromium	MCL = 100 ug/L (or 100 parts per billion)
Chromium is a metal found in natural deposits as ores containing other elements. The greatest use of chromium is in metal alloys such as stainless steel; protective coatings on metal; magnetic tapes; and pigments for paints, cement, paper, rubber, composition floor covering and other materials. Its soluble forms are used in wood preservatives.	
Cyanide (As Free Cyanide)	MCL = 200 ug/L (or 200 parts per billion)
Cyanide is a carbon-nitrogen chemical unit which combines with many organic and inorganic compounds. The most commonly used form, hydrogen cyanide, is mainly used to make the compounds needed to make nylon and other synthetic fibers and resins. Other cyanides are used as herbicides.	

Fluoride	MCL = 4 mg/L (or 4 parts per million)
Fluoride is a water additive which promotes strong teeth. Common sources of contamination in drinking water include erosion of natural deposits, discharge from fertilizer and aluminum factories.	
Iron (State Only)	MCL = 1,000 ug/L (or 1,000 parts per billion) (State Only)
Iron's common source of contamination in drinking water includes erosion of natural occurring deposits.	
Manganese (State Only)	MCL = 150 ug/L (or 150 parts per billion) (State Only)
Manganese's common source of contamination in drinking water includes erosion of natural occurring deposits.	
Mercury (Inorganic)	MCL = 2 ug/L (or 2 parts per billion)
Mercury is a liquid metal found in natural deposits as ores containing other elements. Electrical products such as dry-cell batteries, fluorescent light bulbs, switches, and other control equipment account for 50% of mercury used.	
Nitrate	MCL = 10,000 ug/L (or 10,000 parts per billion)
Nitrate is a nitrogen-oxygen chemical unit which combines with various organic and inorganic compounds. Once taken into the body, nitrates are converted into nitrites. The greatest use of nitrates is as a fertilizer.	
Nitrite	MCL = 1,000 ug/L (or 1,000 parts per billion)
Nitrite is a nitrogen-oxygen chemical unit which combines with various organic and inorganic compounds. Once taken into the body, nitrates are converted into nitrites. The greatest use of nitrates is as a fertilizer.	
Selenium	MCL = 50 ug/L (or 50 parts per billion)
Selenium is a metal found in natural deposits as ores containing other elements. The greatest use of selenium compounds is in electronic and photocopier components, but they are also widely used in glass, pigments, rubber, metal alloys, textiles, petroleum, medical therapeutic agents, and photographic emulsions.	
Thallium	MCL = 2 ug/L (or 2 parts per billion)
Thallium is a metal found in natural deposits as ores containing other elements. The greatest use of thallium is in specialized electronic research equipment.	
Zinc (State Only)	MCL = 5,000 ug/L (or 5,000 parts per billion) (State Only)
Zinc's common sources of contamination in drinking water include erosion of natural occurring deposits and discharge from metal factories.	

IOC Sample Collection – Things to Remember

Sample instructions should be supplied with the sample containers from the laboratory. If the laboratory fails to include sample instructions, contact the laboratory and request sample instructions. Some general practices to remember:

- Samples should be collected at the entry point to the distribution system after all treatment (finished water)

- Select a sampling faucet that does NOT have an aerator (sampling must be done with minimum aeration)
- Run the water until the temperature is as cold as it gets
- Just before sample collection, adjust to a very low flow. Do not change the flow while collecting the sample
- Routine nitrate and nitrite samples should be collected on a Monday or a Tuesday
- When filling sample bottle, tip bottle slightly so that water flows down the side wall of the container. Bring bottle to an upright position as it fills
- Call the laboratory if bottles are received broken (or break while collecting samples)
- If a sample location is out of service (for an extended period of time), notify the IOC Coordinator in writing or by phone at 217-785-0561
- The owner or operator of a water supply must maintain chemical analysis reports (results) or a summary of those reports for at least 10 years

CHAPTER

8

Radionuclide Contaminants (RADs)

A radionuclide is any naturally occurring or man-made radioactive element. A nuclide is a general term applicable to all atomic forms of an element. Nuclides are characterized by the number of protons and neutrons in the nucleus, as well as by the amount of energy contained within the atom. A radionuclide is an unstable form of a nuclide. They may occur naturally, but can also be artificially produced. There are 4 regulated RADs. This chapter will discuss these 4 RADs and explain the monitoring requirements.

Illinois EPA Assistance

In most cases, as a monitoring requirement approaches for a community water system (CWS), the Illinois EPA will send reminder notifications that detail the requirement and specific timeline for completion. Please remember that these are “reminder” notifications and does not relieve the CWS in meeting the monitoring schedule deadlines. If a CWS is unsure of its schedule or timeframe described in any Illinois EPA notification, it is very important that the CWS contact the Drinking Water Compliance Unit at 217/785-0561 for clarification. All RAD correspondence should be sent to:

RAD Coordinator
Illinois EPA /BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276
Telephone: 217-785-0561
Fax 217-557-1407

Sample Bottles

If your supply participates in the Community Water Supply Testing Fund (CWSTF), sample containers will be sent to your supply during the monitoring period. If your supply does not participate in the CWSTF, it is your responsibility to have all testing completed by a laboratory certified by the Illinois Environmental Laboratory Accreditation Program (for a list of accredited laboratories please visit the IL EPA website at <http://www.epa.state.il.us/labs/combinedlist.html>) and submitted on the correct reporting forms. Reporting forms must be submitted within 10 days after the end of a monitoring period. If the laboratory you choose submits data electronically, it is not necessary to submit a paper copy. However, it is the responsibility of the CWS to insure data reaches the Illinois EPA within 10 days of the end of the monitoring period.

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Certified Laboratory Result Reporting Forms can be downloaded at:

<http://www.epa.state.il.us/water/forms.html#compliance-and-enforcement-drinking-water>

If Internet access is unavailable, please contact the RAD Coordinator at 217-785-0561 for a copy of this form.

RAD Contaminants

Below are the 4 regulated RADs.

Beta/photon emitters	MCL = 4 mrem/yr
Decay of natural and man-made deposits. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.	
Alpha Emitters (Gross Alpha)	MCL = 15 pCi/L
Erosion of natural deposits. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.	
Combined Radium (Rad226 + Rad228)	MCL = 5 pCi/L
Erosion of natural deposits. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.	
Uranium	MCL = 30 ug/L
Erosion of natural deposits. Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.	

Background

RADs are considered chronic contaminants. It is important that the public understands that there are no immediate health risks from consuming drinking water containing a regulated chronic contaminant at levels below the MCL. Customers should be aware that chronic contaminant levels exceeding the MCL could cause certain health effects (see below). In addition, sensitive groups of people, such as the young, elderly, pregnant women, and cancer patients may be more susceptible to adverse health effects at any level of exposure.

Why do radionuclides occur in drinking water?

Certain rock formations contain naturally occurring radionuclides. In Illinois, they are mainly found in deep bedrock aquifers in Northern Illinois. Overtime, these radioactive elements dissolve into water from which communities pull water.

Most drinking water sources have very low levels of radioactive contaminants (“radionuclides”). These very low levels are not considered to be a public health concern. Of the small percentage of drinking water systems with radioactive contaminant levels high enough to be of concern, most of the radioactivity is naturally occurring. Some parts of the mid-West, including Illinois, have significantly higher average combined radium. While there are other radionuclides that have been known to occur in a small number of drinking water supplies, their occurrence is thought to be rare compared to radium-226 and radium-228.

A very small percentage of drinking water systems are located in areas that have potential sources of man-made radioactive contamination from facilities that use, manufacture, or dispose of radioactive substances. Drinking water contamination may occur through accidental releases of radioactivity or through improper disposal practices. Water systems that are vulnerable to this type of contamination are required to perform extensive monitoring for radioactive contamination to ensure that their drinking water is safe. These radionuclides are regulated under the “beta particle and photon radioactivity” standard.

The concentration of radionuclides in your drinking water is listed in your water supply’s annual Consumer Confidence Report (CCR). The CCR is an annual drinking water quality report that identifies all the contaminants found in your drinking water as well as the level found. To obtain a copy of your most recent CCR, contact your local water department. In addition, any water supply that exceeds a radionuclide standard is required by law to issue a quarterly public notice to every water customer as long as the condition exist.

What are the health effects?

Some types of radiation are more energetic. One type, non-ionizing, has enough energy to move atoms, but not enough energy to alter them chemically. Another type of radiation, ionizing, has enough energy to penetrate a human cell and may damage or change that cell over time. Changes in cells may lead to cancer.

Health effects from naturally occurring radionuclides in drinking water are attributed to ingestion. Bathing or other external contact is not a hazard. Long-term exposure to radionuclides in drinking water may cause cancer. People are diverse and respond differently to exposure due to metabolism and genetics. In addition, exposure time and levels can affect the rate of risk. Short-term exposure to naturally occurring radionuclides does not present any known health effects at levels found in Illinois potable water.

What is the risk?

USEPA has estimated that the additional lifetime risk of cancer associated with drinking water with gross alpha radiation levels of 15 pCi/L (MCL) or combined radium of 5pCi/L (MCL) is about 1 in 10,000. The analysis assumes consumption of 2 liters of water per day for 70 years. The risk doubles to 2 in 10,000 at 10 pCi/L of combined radium, and becomes 3 in 10,000 at 15pCi/L of combined radium.

Comparably and including all risks, the American Cancer Society indicates that approximately 4,400 in 10,000 Americans will develop cancer at some point in their lifetimes, and approximately 2,200 in 10,000 will die from cancer.

Can radionuclides be removed from drinking water?

Supplies that exceed a radionuclide standard are required to reduce the level below acceptable limits. This can be done in a variety of ways, such as:

- Install mechanical treatment to remove the radionuclide from the water
- Blend high-level radionuclide water with low-level radionuclide water (dilute)
- Connect to another local water supply
- Drill new radionuclide “free” wells.

All the options listed above are complex, require a lot of planning and permits, and are usually expensive. It is the responsibility of the water supply to study each option and determine which is most effective, both mechanically and financially. It is the responsibility of the Illinois EPA to ensure that when a system exceeds a radionuclide standard, the system aggressively explores treatment options and compliance is achieved in the shortest amount of time.

Certain water softeners, ion exchange, or reverse osmosis water treatment systems can also be installed in homes to reduce radium. Homeowners using these methods must be careful to maintain units according to the manufacturer’s instructions.

Does USEPA regulate tritium in drinking water?

Tritium is a beta particle emitter which forms in the upper atmosphere through interactions between cosmic rays (nuclear particles coming from outer space) and the gases comprising the atmosphere. Tritium can be deposited from the atmosphere onto surface waters via rain or snow and can accumulate in ground water via seepage. Tritium is also formed from human activities, including production of electricity, nuclear weapons, nuclear medicines used in therapy and diagnosis, various commercial products, as well as in various academic and government research activities. Natural tritium tends not to occur at levels of concern, but contamination from human activities can result in relatively high levels.

RAD Sample Locations

RAD samples must be collected at locations that represent each well or surface water source after all treatment but prior to entering the distribution system. If water from several sources is combined and treated at a common location, then one sample can be collected to represent all combined sources.

If a well pumps directly to the distribution system with no added treatment, then a representative sample must be collected prior to the first distribution location. This is not a common situation.

On occasion the Illinois EPA will require a RAD sample to be collected directly from a well prior to treatment. If the case, the sample collector will receive specific sample collection instructions.

Initial and Reduced Monitoring Requirements

New systems, and systems that begin using a new source of supply, must conduct initial monitoring for gross alpha, radium-226/228, and uranium during the calendar quarter that follows the quarter in which they begin using the new source of supply.

Initially, RAD samples are collected quarterly for a minimum of four consecutive quarters per sample location (or entry point). A RAD sample consists of a **gross alpha, radium-226, radium-228, and uranium** analysis. **However, the uranium analysis will NOT be required if the gross alpha result is below 15 pCi/L.** Most RAD certified laboratories will evaluate the gross alpha level at the time of analyses and determine whether or not the uranium analysis is needed (gross alpha > 15 pCi/L); but, please note, it is the responsibility of the water system to ensure all analyses are performed as required. If you are uncertain that the laboratory understands that they only need to run the uranium analysis if gross alpha level is over 15 pCi/L it is recommended that the water system discuss the uranium analysis with the laboratory prior to collecting samples.

After one year (or 4 quarters) and base line data is established for a sample location, monitoring many times can be reduced. The chart below describes the reduced monitoring requirements if the **average** of the four quarters at each sample location is.....

< detection limit	1 sample every 9 years
≥ detection limit and ≤ one-half MCL	1 sample every 6 years
> one-half MCL ≤ the MCL	1 sample every 3 years
> MCL	1 sample per quarter until results from 4 consecutive quarters ≤ MCL

Required Laboratory Detection Levels (pCi/L)

Gross Alpha	3
Gross Beta	4
Radium-226	1
Radium-228	1

Upon a request from the water system, the Illinois EPA may waive the third and fourth quarter of initial monitoring and place the system on reduced monitoring. One qualification, however, is that the first and second quarter results indication no detection for all RADs. Again, the request must come from the water system after the first two quarters with no detections.

Once on a reduced monitoring frequency, sample frequency is re-evaluated after each routine sampling event. The results of the each entry point sample will dictate the future monitoring frequency (as specified in the above chart).

Please also remember that several other factors may influence monitoring requirements; such as, violation of regulations, new regulations, and/or elevated detections. It is recommended that each CWS water operator and/or sample collector periodically (at least quarterly) download a new schedule since monitoring schedules change frequently. A CWS can download their most current monitoring schedule at:

<http://www.epa.state.il.us/water/compliance/drinking-water/sdwis/index.html>

Composite Monitoring

In the past, composite monitoring, which is allowing a water system to collect up to four consecutive quarterly samples from a single entry point and have the laboratory composite them temporally and then running one set analyses on the composite sample, was allowed. However, composite monitoring is no longer allowed. Every routine sample must be analyzed for each RAD parameter. Please contact the Radiological Coordinator if you would like to discuss composite monitoring in more detail.

Monitoring Requirements for Emergency Wells

All wells that are active and are either on back-up or emergency status must be monitored every three years. If the CWS purchases its primary source of water from another CWS, the purchasing system must collect annual samples from each well. There is no exception to this requirement. A RAD sample consists of a **gross alpha, radium-226, radium-228, and uranium** analysis. However, the **uranium** analysis will NOT be required if the gross alpha result is below 15 pCi/L.

If there is detection below the MCL, the CWS may be required to locate the source of the contamination and remediate.

If there is detection above the MCL, the CWS will be required to locate the source of the contamination and remediate in an established amount of time or properly abandon the well (or make treatment adjustment at the water treatment plant if applicable).

Monitoring Requirements for Beta Particle and Photon Emitters

The vast majority of systems will not be required to monitor for beta particle and photon emitters (man-made radionuclide contaminants). Beta particle and photon radioactivity monitoring is only required if:

- The system is designated by the State as vulnerable to man-made radionuclides. Vulnerable systems must collect quarterly samples for beta emitters and annual samples for tritium and strontium-90 at each entry point. Sampling must begin the quarter after the system is notified

by the Illinois EPA. The Illinois EPA most likely will require a system to speciate the sample for the most likely emitters associated with the nearby source.

- The system is designated by the State as utilizing waters contaminated by effluents from nuclear facilities. These systems must collect quarterly samples for beta emitters and iodine-131, and annual samples for tritium and strontium-90 at each entry point. More frequent monitoring is required if iodine-131 is found in finished water. Sampling must begin the quarter after the system is notified by the State. For the quarterly monitoring requirements for gross beta particle activity, samples must be collected and analyzed monthly or the composite of three monthly samples must be collected and analyzed. For the quarterly monitoring requirements for iodine-131, samples must be collected for five consecutive days, composited, and analyzed.

For the annual monitoring requirements for tritium and strontium-90, samples must be collected quarterly and analyzed or composited and analyzed. In all cases, laboratories should be responsible for compositing the samples prior to analysis.

- The Illinois EPA, at its own discretion, requires the system to collect samples.

Compliance with the RAD Maximum Contaminant Levels (MCL)

Compliance is based on the running annual average of quarterly samples. This is calculated for entry point to the distribution system. If one sample location is out of compliance, the entire system is out of compliance unless that part of the system is entirely separate (no inter-connections) from the rest of the system.

If any single sampling result is high enough to cause the annual average to be exceeded, the supply is out of compliance immediately (for example, the analytical result is greater than four times the MCL or two analytical results are greater than twice the MCL, etc.).

Systems on reduced monitoring whose sample result exceeds the MCL, must revert to quarterly sampling for that contaminant the next quarter. A single exceedance is not necessarily a violation. Systems triggered into increased monitoring will not be **considered in violation of the MCL** until they have completed one year of quarterly sampling unless any sample collected during quarterly monitoring **would result in the annual average exceeding the MCL**.

If a system does not collect all required quarterly samples, compliance will be based on the running annual average of the samples collected. If a system has a result that is more than four times the MCL, even if the next three quarters results are non-detect, the system mathematically will have an average of greater than the MCL. The water system will also commit a monitoring and reporting violation for the missed quarterly sample.

Water systems may choose to monitor more frequently than what is required of their system. Samples must be clearly marked as “compliance/routine samples” prior to being submitted to the laboratory (and not after the results are known). If the case, all samples must be used when

determining compliance (the system cannot pick and choose results). Samples marked as “special” samples will not be used for compliance and cannot later be changed to routine samples. There are no exceptions to this rule.

The Illinois EPA has the flexibility to require confirmation samples for positive or negative results. The Illinois EPA may require more than one confirmation sample to determine the average exposure. If confirmation samples are required by the Illinois EPA, the average of the analytical result and the confirmation sample will be used for compliance determinations.

Below are examples of calculating compliance:

Example 1				
Sample Location	Date Collected	Combined Radium (pCi/L)	*Quarterly Average	Running Annual Average
TP01 Well 1	10/18/07	5.6	5.6	$5.6 / 4 = 1.4$ (no MCL)
TP01 Well 1	01/05/08	5.9	5.9	$5.6 + 5.9 / 4 = 2.8$ (no MCL)
TP01 Well 1	04/20/08	6.3	6.3	$5.6 + 5.9 + 6.3 / 4 = 4.4$ (no MCL)
TP01 Well 1	07/08/08	6.2	6.2	$5.6 + 5.9 + 6.3 + 6.2 / 4 = 6$ (MCL Violation)
TP01 Well 1	10/02/08	5.4	5.4	$5.9 + 6.3 + 6.2 + 5.4 / 4 = 5.9$ (MCL Violation)
TP01 Well 1	01/05/09	2.4	2.4	$6.3 + 6.2 + 5.4 + 2.4 / 4 = 5.0$ (no MCL)
* Only one sample (Radium-226 and Radium-228) was collected per quarter. Combined radium equals the sum of Radium-226 plus Radium-228. The water supply had 2 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these two quarters (see Chapter 1 Public Notification for requirements).				

Example 2				
Sample Location	Date Collected	Combined Radium (pCi/L)	*Quarterly Average	Running Annual Average
TP01 Well 1	10/18/07	5.6	5.6	$5.6 / 4 = 1.4$ (no MCL)
TP01 Well 1	01/05/08	5.9	5.9	$5.6 + 5.9 / 4 = 2.8$ (no MCL)
TP01 Well 1	04/20/08	6.3	6.3	$5.6 + 5.9 + 6.3 / 4 = 4.4$ (no MCL)
TP01 Well 1	07/08/08	6.2	6.2	$5.6 + 5.9 + 6.3 + 6.2 / 4 = 6$ (MCL Violation)
TP01 Well 1	10/02/08	5.4	5.4	$5.9 + 6.3 + 6.2 + 5.4 / 4 = 5.9$ (MCL Violation)
TP01 Well 1	01/05/09	Fail to Sample	Mon Violation	$6.3 + 6.2 + 5.4 + \text{Viol} / 3 = 5.9$ (MCL Violation)
* Only one sample (Radium-226 and Radium-228) was collected per quarter. Combined radium equals the sum of Radium-226 plus Radium-228. The water supply had 2 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these two quarters.				

If more than one sample is collected during the quarter from the same sample location, the samples are averaged to calculate a quarterly average. See example below.

Example 3				
Sample Location	Date Collected	Combined Radium (pCi/L)	Quarterly Average	Running Annual Average
TP02 Well 2	10/18/07	23.3	$23.3 + 27.2 / 2 = 25.2$	$25.2 / 4 = 6.3$ (MCL violation)
TP02 Well 2	11/12/07	27.2		
TP02 Well 2	2/12/08	6	6	$25.2 + 6 / 4 = 7.8$ (MCL Violation)
TP02 Well 2	04/20/08	4	4	$25.2 + 6 + 4 / 4 = 8.8$ (MCL Violation)
TP02 Well 2	07/08/08	18	$18 + 2 / 2 = 10$	$25.2 + 6 + 4 + 10 / 4 = 11.3$ (MCL Violation)
TP02 Well 2	8/2/08	2		
TP02 Well 2	10/02/08	No detect	0	$6 + 4 + 10 + 0 / 4 = 5$ (no MCL)
TP02 Well 2	01/05/09	No detect	0	$4 + 10 + 0 + 0 / 4 = 3.5$ (no MCL)
The water supply had 4 quarters in which the running annual average exceeded the MCL; therefore, the water supply was in violation. Public notice is required for these four quarters (see Chapter 1 Public Notification for requirements).				

Exceeding the MCL

If your water system triggers a RAD MCL violation, in addition to public notification (as described in Chapter 1 of this Handbook), a Violation Notice (VN) will be issued. The VN will require that you submit a written response within 45 days of receipt. In the written response, you will need to propose a Compliance Commitment Agreement (CCA). A RAD CCA is an agreement between a water supply and the Illinois EPA that identifies activities needed to achieve compliance with the radionuclide rule, and establishes a tentative schedule for completing these activities.

One activity that you will need to commit to is hiring an engineer to research treatment options and submitting a compliance report to Illinois EPA. Once an option is selected, the preparation of plans and specifications, obtaining funding and right-of-ways, preparing and submitting construction permits, overseeing construction, obtaining operating permits must be completed and treatment/facility operational within a “reasonable” time period.

Any supply that fails to submit an acceptable RAD CCA within the allowed time constraints will invoke enforcement follow-up under Section 31 of the Act and an enforceable schedule may be developed in a judicial order. Furthermore, the relative risk of incurring sanctions would tend to increase commensurately with the length of delayed compliance.

Monitoring after the Installation of RAD Treatment

Once treatment is installed, quarterly monitoring will be required for a minimum of one year. After a year, future monitoring requirements will be dependent on the type of RAD treatment that was installed. In some cases, reduced monitoring will be granted following the rule guidelines specified on Page 7. In other cases, more frequent monitoring will be required to ensure that treatment is always optimal. In some extreme cases, surrogate monitoring in lieu of frequent radium testing will be allowed (e.g. after the installation of home water softeners).

CHAPTER

9

Ground Water Rule (GWR)

The U.S. Environmental Protection Agency (EPA) published the Ground Water Rule (GWR) on November 8, 2006. One goal of the GWR is to provide increased protection against microbial pathogens, specifically bacterial and viral pathogens, in public water systems that use ground water. Instead of requiring enhanced disinfection for all ground water systems (GWSs), the GWR establishes a risk-targeted approach to identifying GWSs that are susceptible to fecal contamination. The GWR requires systems at risk of microbial contamination to take corrective action to protect consumers from harmful bacteria and viruses.

Illinois EPA Assistance

If a CWS is unsure of its requirements as described in this Chapter or in any Illinois EPA notification, it is very important that the CWS contact the Drinking Water Compliance Unit at 217/785-0561 for clarification. All GWR correspondence should be sent to:

GWR Coordinator
Illinois EPA /BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276
Telephone: 217-785-0561
Fax 217-557-1407

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Ground Water Rule (GWR) Applicability

The GWR applies to all public water systems (PWSs) that:

- Rely entirely on one or more ground water source;
- are consecutive systems receiving ground water;
- mix surface and ground water, where ground water is added directly to the distribution system and delivered to consumers without treatment equivalent to the treatment provided for surface water.

Basic Requirements of the GWR

The basic requirements of the GWR include:

- Source water monitoring.
- Sanitary surveys.
- Compliance monitoring.
- Corrective actions.

Sanitary surveys are primarily the responsibility of the Illinois EPA, while ground water systems (GWSs) are responsible for the other requirements.

The remainder of this chapter of the Handbook will briefly describe the four GWR requirements.

Source Water Evaluation

The Illinois EPA has selected *E. coli* as the fecal indicator to detect microbial contamination in the raw source. GWSs have already been required to monitor every active (primary, back-up, or emergency) well each month for both total coliform and *E. coli*.

Based on the well integrity, the monthly sample results, and other hydrogeological reviews, the Illinois EPA has classified each well as either:

- a “**non-vulnerable**” source to microbial contamination (free of contamination),
- a “**vulnerable**” source to microbial contamination (confirmed *E. coli* and/or total coliform detections or other noted well defect/hydrogeological issues that may lead to microbial contamination);
- or “**under review**” (data is still being collected to make a determination).

This well classification is an on-going process and wells are re-evaluated each month as new sample data is collected.

Triggered Source Water Monitoring (TSWM) Special Exceptions Permit (SEP)

One requirement of the GWR is triggered source water monitoring (TSWM). This is required for a GWS (which does not provide 99.99 percent, 4-Log, inactivation or removal of viruses) that has a positive sample during the system's distribution Total Coliform Rule (TCR) monitoring. In brief, when a GWS is notified that a total coliform distribution sample collected under the TCR is positive, the water system must collect at least one source water sample for Escherichia coli (E. coli) from each ground water source (well) within 24 hours. If the TSWM sample is positive for E. coli, a treatment technique violation is issued and a Tier 1 public notice is required. Please note that this is in addition to the repeat requirement under the TCR rule.

TSWM monitoring may be waived by the Illinois EPA via a Special Exceptions Permit (SEP) if it is determined that the positive distribution sample was caused by a distribution system deficiency and not a contaminated source/well.

As mentioned, the majority of wells have been classified as a “**non-vulnerable**” source to microbial contamination. If all the active wells for a GWS are deemed “**non-vulnerable**”, the Illinois EPA will issue the GWS a **TSWM SEP**.

Summary of SWTM SEP

If a GWS has been issued a TSWM SEP, they will not be required to conduct TSWM. If a GWS does not qualify for a TSWM SEP or a TSWM SEP is revoked, the GWS must conduct TSWM when the GWS has a positive sample during the system's distribution Total Coliform Rule (TCR) monitoring.

Please call the GWR Coordinator at 217-785-0561 with any questions concerning the TSWM SEP status for your system.

Triggered Source Water Monitoring (TSWM) Requirements

The requirements described below are not applicable to those GWS that have been issued a TSWM SEP (see above).

Once the GWS is notified of a positive routine distribution total coliform sample from their laboratory or the Illinois EPA, in addition to the distribution repeat monitoring requirements, the GWS has 24-hours to collect at least one ground water source (raw) sample from EACH active source (well). This 24-hour source (well) sample is referred to as a “**triggered source water sample**”.

The 24-hour notification “start clock” begins with the telephone call from your coliform laboratory or the Illinois EPA (or notification from a satellite system of a distribution positive sample).

The Illinois EPA Recommends.....

That every PWS keep an extra supply of coliform bottles on hand in the event of unexpected monitoring. This will ensure 24-hour sampling requirements are met. If extra bottles are needed, please contact your laboratory to place an order for extra bottles.

If there are **multiple total coliform positive samples in the distribution system** then an equal number of source water samples must be collected from each source. The intent of the GWR is to identify contamination of the source. Multiple TC+ in the distribution system means more triggered samples are collected, which means a better body of data is available on the quality of that source. Again, only those sources (wells) in operation at the time of the distribution monitoring need to be sampled.

Example

A GWS with two wells takes 4 total distribution coliform samples each month for the TCR. If three of those samples are total coliform positive, the system would be required (within 24 hours) to take three fecal indicator samples at each well or a total of 6 source samples (and 9 repeat distribution samples per the TCR rule). The three well samples from each of the two wells can be collected one right after another.

If a GWS feels that for circumstances out of its control they cannot collect the initial triggered source water samples **within 24 hours**, the GWS must call the Illinois EPA Total Coliform Rule (or GWR) Coordinator at 217-785-0561 or their local Regional Illinois EPA Office and request a time extension. **This request must be made and granted prior to initial 24 hour due date and not after the fact.**

GWSs serving fewer than 1,000 people that have a total coliform-positive result under the TCR may use the TSWM sample collected from the ground water source to meet both the triggered source water monitoring requirement of the GWR as well as part of the repeat sampling requirement of the TCR (i.e., well sample will count for one of the four repeats).

GWSs providing at least 99.99 percent (4-log) treatment of viruses (using inactivation, removal, or a state-approved combination of inactivation and removal) of all of their ground water are not required to conduct triggered source water monitoring. Those systems are, however, required to conduct compliance monitoring to show they are providing consistent and sufficient treatment. **Compliance Monitoring** is discussed later in this Chapter.

Post Triggered Source Water Monitoring (TSWM)

If any of the TSWM well samples are positive for *E. coli*, the Illinois EPA will require the system to take corrective action or require that the GWS take five **additional samples** from the same source within 24 hours of notification of the *E. coli* indicator-positive result. If any of the five additional samples are *E. coli*-positive, the system must take corrective actions.

It is recommended that the GWS sample collector contact the GWR coordinator at 217-785-0561 ASAP following a positive TSWM sample for further instructions/discussions.

Triggered Source Water Monitoring (TSWM) and Public Notification (PN)

If a GWS is notified of **E. coli positive** ground water source sample (either the initial TSWM sample or any one of the five additional samples required by a positive triggered TSWM sample), then the GWS must issue a Tier 1 public notice within 24 hours. See *Chapter 1 Public Notice* of this Handbook for requirements and template.

Failure to collect TSWM samples discussed under this section within the 24 hours will result in a monitoring violation and require a Tier 3 PN. See *Chapter 1 Public Notice* of this Handbook for requirements and template.

Triggered Source Water Monitoring (TSWM) Requirements for Water Systems that Purchase Ground Water and their Parent Supply

Parent GWS (See Appendix A for Example)

The following requirements are for those GWS systems that do not have a TSWM SEP (see page 9-4).

A parent/wholesale GWS that receives notice from a consecutive system of a positive distribution total coliform result under routine monitoring of the TCR must follow all requirements listed under “Triggered Source Water Monitoring (TSWM) Requirements” on page 9-4.

If the TSWM is positive for **E. coli**, the parent/wholesale system must notify all consecutive systems served by that source within 24 hours of the positive sample result. The operator should document whom he notified at the purchase supplies as well as the telephone numbers, date, time, and a very brief description of the conversation/situation.

Purchase GWS (See Appendix B for Example)

A consecutive system with a positive routine total coliform result under the TCR must notify its wholesale/parent system(s) within 24 hours of being notified of the positive sample. The notification start clock begins with the telephone call from your coliform laboratory or the Illinois EPA. The operator should document whom he notified at the parent supply as well as the telephone number, date, time, and a very brief description of the conversation/situation. If the purchase GWS is notified by the parent GWS of an **E. coli** positive source sample, then the purchase GWS must issue a Tier 1 public notice within 24 hours.

Sanitary Surveys

A sanitary survey (or engineering evaluation) provides an on-site review of how a GWS is maintained and operated. The survey is conducted by trained Illinois EPA staff. The inspector will review the system's water source, equipment, facilities, and treatment procedures. The purpose of the survey is to:

- Ensure that the GWS' operational, monitoring, reporting, and recordkeeping practices are in compliance with drinking water regulations.
- Identify any significant deficiencies.
- Better ensure that safe drinking water is distributed to the public.

For more information regarding sanitary surveys, please see *Chapter 13 – Engineering Evaluations* of this Handbook.

Compliance Monitoring

Systems providing at least 99.99 percent (4-log) treatment of viruses (using inactivation, removal, or a state-approved combination of inactivation and removal) of all of their ground water must notify the Illinois EPA of this treatment and are not required to conduct triggered source water monitoring. Those systems are, however, required to conduct **compliance monitoring** to show they are providing consistent and sufficient treatment. Compliance monitoring requirements depend on the system's size and the type of treatment it is using. In addition, any GWS that is required to provide 4-log treatment of viruses as a corrective action must also conduct compliance monitoring to ensure that the 4-log treatment is functioning properly.

Those GWSs defined above that use chemical disinfection and **serve more than 3,300** people must continuously monitor their disinfectant concentration at a location approved by the Illinois EPA Agency and must record the lowest residual disinfectant concentration each day that water from the ground water source is served to the public. If continuous monitoring equipment fails, systems must take grab samples every 4 hours until the equipment is repaired. The equipment must be repaired within 14 days.

Those GWSs defined above that use chemical disinfection and **serve 3,300 people or fewer** must take daily grab samples at a location approved by the Illinois EPA and record the residual disinfection concentration each day that water from the ground water source is served to the public (or meet the continuous monitoring requirements described above for systems serving more than 3,300 people). If any daily grab sample measurement falls below the minimum Illinois EPA required residual disinfectant concentration, the system must take follow-up samples every 4 hours until the residual is restored to the required level.

Systems using membrane filtration for 4-log treatment of viruses must monitor the membrane filtration process according to Illinois EPA specified monitoring requirements and must operate the membrane filtration according to all Illinois EPA specified compliance requirements.

Systems may use alternative treatment technologies (e.g., ultraviolet [UV] radiation) approved by the Illinois EPA, if the alternative treatment technology, alone or in combination (e.g., filtration with UV, filtration with chlorination) can reliably provide at least 4-log treatment of viruses. Systems must monitor the alternative treatment according to Illinois EPA specified monitoring requirements, and must operate the alternative treatment according to compliance requirements established by the Illinois EPA.

Systems with ground water sources placed into service after November 30, 2009, must notify the Illinois EPA in writing that they provide at least 4-log treatment of viruses of those sources and must begin compliance monitoring within 30 days of placing the source in service or conduct triggered source water monitoring as described earlier in this Chapter.

QUESTIONS?

Any questions concerning membrane filtration, alternative treatment technologies, 4-log treatment, and virus inactivation/removal can be answered by calling the Illinois EPA Permit Section at 217-782-9470.

Failure to conduct compliance monitoring as discussed under this section will result in a monitoring violation and require a Tier 3 PN. See *Chapter 1 Public Notice* of this Handbook for requirements and templates.

Corrective Actions

If corrective actions are required, you will be notified by the Illinois EPA via **Non-compliance Advisory (NCA)** or **Violation Notice (VN)**. You will then be required to respond in writing within 30 or 45 days and provide a plan and time specific schedule to achieve compliance.

GWSs must take corrective action if:

- A significant deficiency* is identified, or
- Source sample has tested positive for total coliform (confirmed detections over a two-month period of time) or a single *E. coli* contamination (confirmed), or
- One of the five additional ground water source samples has tested positive for fecal contamination.

* A “significant deficiency” is defined as a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the state determines to be causing, or has potential for causing, the introduction of contamination into the water delivered to consumers.

As a response to the VN or NCA, the GWS must commit to implement at least one of the following corrective actions:

- Correct all significant deficiencies.
- Provide an alternate source of water.
- Eliminate the source of contamination.
- Provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a state-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

Violations (and Public Notice) Associated with the GWR

If a system is in violation of a GWR requirement, the GWS must notify the public. Below identifies GWR violations and public notice requirements.

Situation or Violation	Report to Illinois EPA	Notify Public ¹	Tier	PN Method
Source water monitoring sample fecal indicator-positive for E. coli, enterococci, or coliphage and not invalidated by the state	Within 24 hours	Within 24 hours	1	TV, hand-delivery, public postings, or other state-approved method (consult IEPA)
Failure to complete required corrective action	Within 48 hours	Within 30 days	2	Hand-delivery, direct mail, public postings, newspaper, or radio announcements
Failure to comply with a state-approved corrective action plan and schedule	Within 48 hours	Within 30 days	2	Hand-delivery, direct mail, public postings, newspaper, or radio announcements
For systems conducting compliance monitoring, failure to maintain 4-log treatment of viruses and restore 4-log treatment within 4 hours	Within 48 hours	Within 30 days	2	Hand-delivery, direct mail, public postings, newspaper, or radio announcements
Failure to conduct required source water monitoring (triggered, additional, or assessment)	Consult IEPA	Within 12 months	3	CCR
Failure to conduct required compliance monitoring	Consult IEPA	Within 12 months	3	CCR
Uncorrected significant deficiency	-	Annually	-	Special Notice
Unaddressed fecal contamination	-	Annually	-	Special Notice in CCR
1. Systems are required to send a copy of the PN to the state within 10 days of making the notification. 2. GWSs may use the Consumer Confidence Report (CCR) to make this notification if it meets the requirement to notify the public within 12 months.				

Please note: When a system has a ground water source with an E. coli positive sample, it is a situation and not a violation. In accordance with the GWR, the system must still meet the Tier 1 Public Notification (PN) requirements.

See *Chapter 1 Public Notice* of this Handbook for these requirements and templates.

CCR Requirements

GWSs are required to report GWR treatment technique violations and monitoring violations in their Consumer Confidence Reports (CCRs). In addition, the GWR has special notice requirements for GWS requiring them to report additional information in their CCRs. Below are various situations or violations that require CCR notification:

- Fecal indicator-positive ground water source sample (consecutive systems served by the ground water source must also notify the public).
- Failure to take corrective action.
- Failure to maintain at least 4-log treatment of viruses.
- Failure to meet monitoring requirements.
- Uncorrected significant deficiency (systems must continue to notify the public annually until the significant deficiency has been corrected).
- Unaddressed fecal indicator-positive ground water source sample (systems must put a notice in the CCR annually until the positive source water sample has been addressed).

For detailed CCR requirements, see Chapter 2 Consumer Confidence Reports of this Handbook for detailed requirements and examples.

Appendix A

Triggered Source Water Monitoring (TSWM) Requirements
Step-by-Step Example – Source Water Systems

Triggered Source Water Monitoring (TSWM) Requirements Source Water System Example

The following is a step-by-step guide of TSWM Procedures.

The Ground Water Supply (GWS) used for this example has two wells (well 1 and well 2). Each month the operator collects 3 routine distribution samples for total coliform and one raw sample from each well (well 1 and well 2) for total coliform and *E. coli*. This is a total of 5 samples each month.

On Tuesday December 12th, 2009 the GWS is contacted by the lab by telephone and notified that one of the three distribution samples collected on Monday December 11th is total coliform-positive (but fecal and/or *E. coli* negative). All the other routine distribution and well samples collected on December 11th are negative. Below describes the next steps the water operator must take.

Step 1

The operator must know if his water supply has been issued a triggered source water monitoring (TSWM) special exceptions permit (SEP). (*See page 9-4 of this chapter*)

YES, we do have a TSWM SEP issued by the Illinois EPA.

If this is the case, then no additional raw well samples are required for the month. The GWS will have to only collect the three distribution repeat samples. One repeat must be collected at total coliform (TC) positive location, the second within 5 service connections downstream of the TC positive location, and the third within 5 service connections upstream of TC positive sample. All must be collected within 24-hours, or in this example, by Wednesday December 13th).

NO, we do not have a TSWM SEP issued by the Illinois EPA (or our past TSWM SEP has been revoked). Proceed to Step 2.

Step 2

In addition to collecting the normal three repeat samples (one at the distribution total coliform (TC) positive location, the second within 5 service connections downstream of TC positive location, and the third within 5 service connections upstream of the TC positive sample); **one sample must be collected from each well (well 1 and well 2)**. Please note that this is in addition to the routine well samples already collected on December 11th.

If either well sample result comes back ***E. coli* positive**, proceed to Step 3.

If the well sample is negative for both total coliform and *E. coli*, no further well sampling is required for TSWM.

If any of the repeat distribution samples are positive, you will need to collect another set of three distribution repeats (regardless of the well sample results). This must continue until you get a clean set (as required under the Total Coliform Rule).

Step 3

Since one of the well repeat samples was *E. coli* positive, you must issue public notice immediately after notification of the positive result (and in no case later than 24-hours). Please see *Chapter 1 Public Notification Appendix C* of this Handbook for example template/requirements.

In addition to issuing the public notice, you must contact the Illinois EPA Ground Water Rule Coordinator at 217-785-0561 to discuss additional follow-up actions. Depending on your situation, you may be required to collect 5 additional samples from the well that had the *E. coli* positive result and/or initiate other remediation measures.

If you provide water to another community water supply, proceed to Step 4.

Step 4

Since one of the well repeat samples was *E. coli* positive, you must contact each water supply that receives your water (either directly or indirectly). This contact must be made immediately (within 24-hours). The satellite system must then also issue public notice immediately after your notification to them of the positive result (and in no case later than 24-hours). Please see *Chapter 1 Public Notification Appendix C* of this Handbook for example template/requirements.

Additional Notes

- (1) In the example above, only one routine distribution was originally positive that triggered TSWM. If multiple routine distribution samples are positive, then an equal number of source water samples must be collected from each source (Step 2).

For example, a system collects 4 total coliform each month for the TCR and two well samples. If three of the four samples are total coliform positive, the system would be required (within 24 hours) to take three *E. coli* samples at each well or a total of 6 source samples. The intent of the rule is to identify contamination of the source. Multiple TC+ in the distribution system means more triggered samples are collected, which means a better body of data is available on the quality of that source.

- (2) Under Step 1, a TSWM SEP is mentioned. How do I know if my GWS has one? How can I get one if we do not have one? When a GWS is initially issued a TSWM SEP by the Illinois EPA, they are sent written notification. This notification should be kept by the GWS. If still not sure, call the Illinois EPA Ground Water Rule Coordinator at 217-785-0561. Likewise, if you know you do not have a TSWM SEP and would like to discuss the evaluation criteria, please contact the Coordinator.
- (3) If you collect distribution routine samples throughout the month (and do not have a TSWM SEP) and have multiple distribution positives on different days, then the rule of thumb is to treat each as a new detection and conduct TSWM for each occurrence. If you think you have already established it is a distribution deficiency resulting in the multiple detections, please

contact the Ground Water Rule Coordinator at 217-785-0561 to discuss eliminating the TSWM until the distribution deficiency is resolved. However, please remember that TSWM sampling is due within 24-hours so any contact with the Illinois EPA must be made quickly to allow time for TSWM should your request be denied.

- (4) If you cannot meet the 24-hour TSWM sampling timeframe for reason beyond your control, please contact the GWR Coordinator at 217-785-0561 or your Illinois EPA Regional Office and request an extension (extension must be obtained prior to the 24-hours expiring, not after the fact).
- (5) In reference to Step 2, if a GWS collects only 1 routine distribution sample a month, they must collect 4 repeats. One repeat must be collected at total coliform (TC) positive location, the second within 5 service connections downstream of the TC positive location, and the third within 5 service connections upstream of TC positive sample. The fourth repeat can be collected anywhere within the distribution system. If the GWS is required to collect TSWM samples, the TSWM well sample may be used to satisfy the fourth repeat.

Appendix B

Triggered Source Water Monitoring (TSWM) Requirements
Step-by-Step Example
Purchase Water Systems & Parent Systems

Triggered Source Water Monitoring (TSWM) Requirements Purchase Water System Example

The following is a step-by-step guide of TSWM Procedures for a purchase water supply and their parent water supply.

A water supply purchases 100% of its water from a Ground Water System (GWS). Each month, this purchase GWS collects each month 3 routine distribution samples for total coliform.

On Tuesday December 12th, 2009 the purchase system is contacted by the lab by telephone and notified that one of the three distribution samples collected on Monday December 11th is total coliform-positive (but fecal and/or E. coli negative). All the other routine distribution samples collected on December 11th are negative. Below describes the next steps.

Step 1

The operator of the purchase system must collect three repeat samples. One distribution must be collected at total coliform (TC) positive location, the second within 5 service connections downstream of the TC positive location, and the third within 5 service connections upstream of TC positive sample. All must be collected within 24-hours, or in this example, by Wednesday December 13th.

The operator must also contact the originating ground water source system. This contact must be made within 24-hours of receiving notification of the TC positive sample from the laboratory or Illinois EPA. The operator should document whom he notified at the parent supply as well as the telephone number, date, time, and a very brief description of the conversation/situation.

Step 2

Once the parent supply is notified, the next action will depend on whether or not the parent supply has been issued a triggered source water monitoring (TSWM) special exceptions permit (SEP). (*See page 9-4 of this chapter*)

YES, the parent supply does have a TSWM SEP issued by the Illinois EPA.

The parent supply is done. The purchase system will only need to complete the requirements specified under the Total Coliform Rule for distribution repeat samples.

NO, the parent supply does not have a TSWM SEP issued by the Illinois EPA (or their past TSWM SEP has been revoked). **Proceed to Step 3.**

Step 3

The parent supply must conduct TSWM since they did not have a TSWM SEP. One total coliform and *E. coli* sample must be collected from each active well within 24-hours of notification from the purchase supply.

If the well sample result comes back *E. coli* positive, **proceed to Step 4.**

If the well sample is negative for both total coliform and *E. coli*, no further well sampling is required for TSWM.

Step 4

Since one of the well repeat samples was *E. coli* positive, the parent supply must issue public notice immediately after notification of the positive *E. coli* result (and in no case later than 24-hours). Please see **Chapter 1 Public Notification Appendix C** of this Handbook for example template/requirements.

The parent supply must also contact each water supply that receives their water (whether the water is received directly or indirectly). This contact must be made immediately (within 24-hours). The operator should document whom he notified at the purchase supply as well as the telephone number, date, time, and a very brief description of the conversation/situation.

The purchase system must then also issue public notice immediately after the notification to them from the parent system of the positive *E. coli* well result (and in no case later than 24-hours). Please see **Chapter 1 Public Notification Appendix C** of this Handbook for example template/requirements.

Additional Notes

- (1) In the example above, only one routine distribution was originally positive that triggered TSWM. If multiple routine distribution samples are positive, then an equal number of source water samples must be collected from each source (Step 3).

For example, a system collects 4 total coliform samples each month for the TCR. If three of those samples are total coliform positive, the parent GWS would be required (within 24 hours) to take three *E. coli* samples at each well or a total of 6 source samples. The intent of the rule is to identify contamination of the source. Multiple TC+ in the distribution system means more triggered samples are collected, which means a better body of data is available on the quality of that source. Please make sure the parent GWS is aware of the number of routine coliform samples that test TC+.

- (2) Under Step 2, a TSWM SEP is mentioned. How do I know if my GWS has one and/or how can I get one if we do not have one? First, the TSWM SEPs are not applicable to purchase systems since these SEPs are only applicable to raw water well testing. Secondly, when a parent GWS is initially issued a TSWM SEP by the Illinois EPA, they are sent written notification. This notification should be kept by the GWS. If still not sure, call the Illinois EPA Ground Water Rule Coordinator at 217-785-0561. Likewise, if you know you do not have a TSWM SEP and would like to discuss the evaluation criteria to obtain one, please contact the Coordinator.
- (3) If you collect distribution routine samples throughout the month (and do not have a TSWM SEP) and have multiple distribution positives on different days, then the rule of thumb is to treat each as a new detection and call the parent supply each time. If you think its already been established that it's a distribution deficiency resulting in the multiple detections, please contact the Ground Water Rule Coordinator at 217-785-0561 to discuss eliminating the TSWM until the distribution deficiency is resolved. However, please remember that TSWM sampling is due within 24-hours so any contact with the Illinois EPA must be made quickly to still allow time for TSWM should your request be denied.
- (4) If you cannot meet the 24-hour TSWM sampling timeframe for reason beyond your control, please contact the GWR Coordinator at 217-785-0561 or your Illinois EPA Regional Office and request an extension (extension must be obtained prior to the 24-hours expiring, not after the fact).

CHAPTER

10

Stage 2 Disinfectants and Disinfection Byproducts Rule

The Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR) rule is intended to reduce potential cancer and reproductive and developmental health risks from disinfection byproducts (DBPs) in drinking water. DBPs are formed when disinfectants are used to control microbial pathogens. The use of these disinfectants is considered a major advancement in public health in the 20th century. Since the addition of chlorine to drinking water at the beginning of the 20th century, the occurrence of cholera and typhoid outbreaks has been essentially eliminated.

While disinfectants are effective in controlling many harmful microorganisms, they react with organic and inorganic matter in water to form DBPs. Several epidemiological studies suggest a weak association between certain cancers and reproductive and developmental effects and exposure to chlorinated water. Disinfectants themselves may cause health problems if people are exposed to high levels over long periods of time. These health problems include neurological damage to the nervous system and damage to the blood and kidneys. More than 200 million people in this country consume water that is disinfected. Because of the large population exposed, potential health risks associated with DBPs and disinfectants are taken seriously.

Illinois EPA Assistance

In most cases, as a monitoring requirement approaches for a community water system (CWS), the Illinois EPA will send reminder notifications that detail the requirement and specific timeline for completion. Please remember that these are “reminder” notifications and does not relieve the CWS in meeting the monitoring schedule deadlines. If a CWS is unsure of its schedule or timeframe described in any Illinois EPA notification, it is very important that the CWS contact the Drinking Water Compliance Unit at 217/785-0561 for clarification. All DBP correspondence should be sent to:

DBP Coordinator
Illinois EPA /BOW/CAS #19
P.O. Box 19276
Springfield, IL 62794-9276
Telephone: 217-785-0561
Fax 217-782-0075

Sample Bottles

If your supply participates in the Community Water Supply Testing Fund (CWSTF), sample containers will be sent to your supply during the monitoring period. If your supply does **not** participate in the CWSTF, it is your responsibility to have all testing completed by an Illinois EPA certified laboratory and submitted on the correct reporting forms. The DBP certified laboratory reporting form is available on the Internet (see next page) and in **Appendix A**. This form must be submitted within 10 days after the end of a monitoring period. If the laboratory you choose submits data electronically, it is not necessary to submit a paper copy. However, it is the responsibility of the CWS to insure data reaches the Illinois EPA within 10 days of the end of the monitoring period.

Acronyms

CMP	Compliance Monitoring Plan
CWS	Community Water System
GWUNDI	Ground Water under the Influence of Surface Water
HAA5	Haloacetic Acids
IDSE	Initial Distribution System Evaluation
LRAA	Locational Running Annual Average
MCL	Maximum Contaminant Level
NTNCWS	Nontransient noncommunity water systems
OEL	Operational Evaluation Level
SMP	Standard Monitoring Plan
SSS	System Specific Study
Subpart H	Surface Water and GWUNDI systems
SW	Surface Water
SWP	Surface Water Purchase
TOC	Total Organic Carbon
TTHM	Total Trihalomethanes
VSS	Very Small System Waiver

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Certified Laboratory Result Reporting Forms can be downloaded at:

<http://www.epa.state.il.us/water/forms.html#compliance-and-enforcement-drinking-water>

If Internet access is unavailable, please contact the DBP Coordinator at 217-785-0561 for a copy of this form.

Stage 2 DBP Regulatory Background

Disinfectants are an essential element of drinking water treatment because of the barrier they provide against waterborne disease-causing microorganisms. However, disinfection byproducts (DBPs) form when disinfectants used to treat drinking water react with naturally occurring materials in the water (e.g., decomposing plant material). Total trihalomethanes (TTHM – chloroform, bromoform, bromodichloromethane, and dibromochloromethane) and haloacetic acids (HAA5 – monochloro-, dichloro-, trichloro-, monobromo-, dibromo-) are widely occurring classes of DBPs formed during disinfection with chlorine and chloramine. These DBPs generally form at much lower levels when chloramine is used instead of chlorine. The amount of trihalomethanes and haloacetic acids in drinking water from one water system can change from day to day, depending on the season, water temperature, amount of chlorine added, the amount of plant material in the water, and a variety of other factors.

At this time, EPA believes that the best way to control DBPs is both to regulate known byproducts and to limit the quantity of disinfection byproduct precursors (e.g., decomposing plant material) allowed to react with disinfectants. TTHM and HAA5 are useful indicators for measuring DBPs in chlorinated drinking water because they commonly occur at levels that can be easily measured.

The Stage 2 DBP rule builds incrementally on existing DBP rules. Many systems have already made significant progress in lowering their DBP levels. The Stage 2 DBP rule takes a risk-based targeted approach to require treatment changes by only those public water systems that are identified as having the greatest remaining risk. The first step is a multi-year process for systems to determine where higher levels of DBPs are likely to occur in their distribution system. These locations will become the system's new DBP monitoring sites. Under the Stage 2 DBP rule, systems will conduct an evaluation of their distribution systems, known as an Initial Distribution System Evaluation (IDSE), to identify the locations with high disinfection byproduct concentrations. These locations will then be used by the systems as the sampling sites for Stage 2 DBP rule compliance monitoring.

The Stage 2 DBP rule strengthens public health protection for customers of systems that deliver disinfected water by requiring such systems to meet maximum contaminant levels as an average at each compliance monitoring location (instead of as a system-wide average as in previous rules) for two groups of DBPs, trihalomethanes (TTHM) and five haloacetic acids (HAA5). The rule targets systems with the greatest risk and builds incrementally on existing rules. This regulation will reduce DBP exposure and related potential health risks while providing more equitable public health protection. The Stage 2 DBPR is being released simultaneously with the Long Term 2 Enhanced Surface Water Treatment Rule to address concerns about risk tradeoffs between pathogens and DBPs.

The remainder of the chapter details requirements for the most recent DBP rule, or the Stage 2 DBP Rule. If you have questions concerning the Stage 1 DBP Rule, please contact the DBP Coordinator at 217-785-0561.

Early Implementation

Initial Distribution System Evaluation (IDSE)

All community systems were required to do an evaluation to determine their best sampling locations. An IDSE is a study of DBP levels throughout the distribution system, based on source type, population, and historical TTHM & HAA5 results.

The Initial Distribution System Evaluation steps were to prepare/submit IDSE SMP or SSS (or apply for IDSE 40/30 or VSS waiver), conduct IDSE monitoring, then submit IDSE Report.

Standard Monitoring (SMP)

Standard monitoring is one year of increased monitoring for TTHM and HAA5 in addition to the data being collected under Stage 1 DBPR. This data will be used with Stage 1 DBPR data to select Stage 2 DBPR TTHM and HAA5 compliance monitoring locations. Any system may conduct standard monitoring to meet the IDSE requirements of the Stage 2 DBPR.

An IDSE report is required to fulfill the IDSE requirements.

System Specific Study (SSS)

Systems that have extensive TTHM and HAA5 data (Including Stage 1 DBPR compliance data) or technical expertise to prepare a hydraulic model may choose to conduct a system specific study to select Stage 2 DBPR compliance monitoring locations.

An IDSE report is required to fulfill the IDSE requirements.

Very Small System Waiver (VSS)

Systems that serve fewer than 500 people and have eligible TTHM and HAA5 data can qualify for a VSS waiver and would not be required to conduct IDSE monitoring. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.

Systems serving fewer than 500 people that receive a waiver for the IDSE from the IEPA must comply by submitting a Stage 2 Compliance Monitoring Plan (CMP).

40/30 Waiver

The term “40/30” refers to a system that during a specified time period has all individual Stage 1 DBPR compliance samples less than or equal to 0.040 mg/L for TTHM and 0.030 mg/L for HAA5 and has no monitoring violations during the same time period. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.

Systems that qualified for the 40/30 waiver from the IEPA should submit a Stage 2 Compliance Monitoring Plan (CMP).

Systems that completed an IDSE report should base their monitoring plan on the IDSE and any state modifications. Systems may revise their monitoring plan to reflect changes in treatment, distribution system operations and layout, or other factors that may affect TTHM or HAA5 formation. If there are any changes to the monitoring locations, systems must replace existing compliance monitoring locations with expected high TTHM or HAA5 levels.

Selecting Sampling Locations

Under the Stage 2 DBP rule, most systems will conduct an evaluation of their distribution systems, Initial Distribution System Evaluation (IDSE), to identify the locations with high disinfection byproduct concentrations. These locations will then be used by the systems to determine the sampling sites for Stage 2 DBP rule compliance monitoring. Systems that completed a System Specific Study (SSS) or Standard Monitoring Plan (SMP) did not need to complete a Compliance Monitoring Plan. Systems that received a Very Small System (VSS) Waiver or a 40/30 Waiver were required to submit a Compliance Monitoring Plan to determine sampling sites and dates.

Initial Distribution System Evaluation (IDSE)

The purpose of the IDSE was to help systems acquire adequate information about their distribution systems and DBP levels to select stage 2 DBPR compliance monitoring sites that represent high TTHM and HAA5 levels throughout the distribution center. There were a few IDSE options that all had different processes for selecting sampling locations.

For the Standard Monitoring Plan (SMP) systems were required to conduct standard monitoring by selecting a standard monitoring location and using the results and the final plan to justify the selection of the location. For the System Specific Study (SSS) there was an option to use existing DBP monitoring results (Existing Monitoring Plan) or an extended period simulation hydraulic model (Hydraulic Modeling Plan). For the Existing Monitoring Plan systems were required to provide a certain amount of past data that was determined by water system type and population and that was representative of the entire system to show that the selected sites should continue to be the sampling locations. For the Hydraulic Modeling Plan systems were required to simulate a 24-hour variation in demand and that this was a repeating pattern. From here the system had to justify their selected timing and number of samples based on the acquired data.

Compliance Monitoring Plan (CMP)

All systems that received a Very Small System (VSS) Waiver or a 40/30 Waiver had to submit a compliance monitoring plan within a time frame that was a determined by their population and treatment. This purpose of this plan was to determine the best sites to sample and their peak historical month (PHM) to determine their schedule for DBP sampling.

If a system makes any changes in treatment, distribution system operations and layout, or other factors that may affect TTHM and HAA5 formation, these changes may warrant a modification to their monitoring locations. In this case the system must revise their compliance monitoring plan. Templates for the Compliance Monitoring Plan can be found in **Appendix B**. The system must consult with the IEPA regarding the need for changes and the most appropriate modifications. Modifications may be initiated by the water system or IEPA.

Listed below are some tips for determining the best available sites for TTHM and HAA5 sampling:

Selecting High TTHM sites:	Selecting High HAA5 Sites:
<ul style="list-style-type: none"> • TTHM formation <ul style="list-style-type: none"> – Advanced residence time is primary factor • Good TTHM sites <ul style="list-style-type: none"> – Downstream of tanks and booster chlorination – Hydraulic and geographic dead ends (prior to last customer) – Sites with difficulty maintaining residual – Areas with low water use – Areas of high historic levels • Avoid <ul style="list-style-type: none"> – Dead ends with no users – Sites after the last hydrant or blowoff – Sites upstream of booster chlorination – The <i>last house</i> on a dead end 	<ul style="list-style-type: none"> • HAA5 formation <ul style="list-style-type: none"> – Residence time, but also consider biodegradation • Good HAA5 sites <ul style="list-style-type: none"> – Downstream of booster chlorination – Sites with low but detectable residual – Areas of high historic levels – Areas with high residence time • Avoid <ul style="list-style-type: none"> – Areas with known biofilm growth – Areas with difficulty maintaining a residual – The <i>last house</i> on a dead end

The minimum number of compliance monitoring locations and the minimum monitoring frequency for Subpart H systems (surface water/surface water purchase) and groundwater systems complying with the Stage 2 DBPR are listed in the tables below.

Minimum number of locations, samples, and frequency for **Subpart H systems**:

Population Size Category	Monitoring Frequency ¹	Total Monitoring Locations per Period	Highest TTHM locations	Highest HAA5 locations	Existing compliance locations
< 500	Per year	2 ²	1	1	
500 – 3,300	Every 90 days	2 ²	1	1	
3,301 – 9,999		2	1	1	
10,000 – 49,999		4	1	1	1
50,000 – 249,999		8	2	3	2
250,000 – 999,999		12	3	4	3
1,000,000 – 4,999,999		16	6	6	4
≥ 5,000,000		20	8	7	5

Minimum locations and monitoring frequencies for **ground water systems**:

Population Size Category	Monitoring Frequency ¹	Monitoring Locations per Period	Highest TTHM locations	Highest HAA5 locations	Existing compliance locations
< 500	Per year	2 ²	1	1	
500 – 9,999		2	1	1	
10,000 – 99,999	Every 90 days	4	2	1	1
100,000 – 499,999		6	3	2	1
≥ 5,000,000		8	3	3	2

¹ All systems must take at least one dual sample set during the month of highest DBP concentration. Systems on quarterly monitoring must take dual sample sets every 90 days.

² System is required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentration, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location.

Monitoring Requirements / Effective Dates

The Stage 2 DBP rule applies to all community and non-transient non-community water systems that add and/or deliver water that is treated with a primary or residual disinfectant other than ultraviolet light. The scheduling and monitoring for Stage 2 is different than that of Stage 1 in some major ways:

- **Stage 1 DBPR**
 - Scheduling based on source water type and population served
 - Monitoring based on source water type, population served, *and number of treatment plants/wells*

- **Stage 2 DBPR**
 - Scheduling based on source water type, population served, *and population of the largest system in combined distribution system (CDS)*
 - A combined distribution system (CDS) is the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water
 - Monitoring based on source water type and population served (excluding CDS)
 - Consecutive systems must comply

<i>If you are this kind of system:</i>	<i>Comply with Stage 2 DBPR Monitoring by:</i>
Systems serving 100,000 or more people OR belonging to a CDS in which the largest system serves 100,000 or more	Schedule 1: April 1, 2012
Systems serving 50,000 to 99,999 people OR belonging to a CDS in which the largest system serves 50,000 to 99,999	Schedule 2: October 1, 2012
Systems serving 10,000 to 49,999 people OR belonging to a CDS in which the largest system serves 10,000 to 49,999	Schedule 3: October 1, 2013
Systems serving fewer than 10,000 and not connected to a larger system	October 1, 2013 (if not monitoring for <i>Crypto</i>) October 1, 2014 (if monitoring for <i>Crypto</i>)

If your water system switches its source type, your new monitoring will begin with routine monitoring for the new source type at the beginning of the next sampling schedule. Please contact IEPA at 217-785-0561 for assistance or with any additional questions.

Minimum number of samples and monitoring frequencies for **ground water** systems:

Population Size Category	Monitoring Frequency ¹	Monitoring Locations per Period
< 500	Per year	2 ²
500 – 9,999		2
10,000 – 99,999	Per quarter	4
100,000 – 499,999		6
> 5,000,000		8

Minimum samples and monitoring frequencies for **Subpart H (SW/SWP and GWUNDI)** systems:

Population Size Category	Monitoring Frequency ¹	Monitoring Locations per Period
< 500	Per year	2 ²
500 – 3,300	Per quarter	2 ²
3,301 – 9,999		2
10,000 – 49,999		4
50,000 – 249,999		8
250,000 – 999,999		12
1,000,000 – 4,999,999		16
> 5,000,000		20

¹ All systems must take at least one dual sample set during the month of highest DBP concentration. Systems on quarterly monitoring must take dual sample sets every 90 days.

² System is required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentration, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location.

Please remember that several factors influence monitoring requirements; such as, violation of regulations, new regulations, and/or contaminant detections. It is recommended that each CWS water operator and/or sample collector periodically (at least quarterly) download a new schedule since monitoring schedules change frequently. A CWS can download their most current monitoring schedule at:

<http://www.epa.state.il.us/water/compliance/drinking-water/sdwis/index.html>

Reduced Monitoring

In order to be eligible for reduced monitoring the LRAA's at all monitoring locations must be less than or equal to 0.040 mg/L for TTHM and less than or equal to 0.030 mg/L for HAA5. In addition, subpart H systems must maintain annual average TOC levels less than or equal to 4.0 mg/L in source water at each treatment plant in order to qualify.

Once on reduced monitoring, systems on quarterly reduced monitoring LRAAs for TTHMs and HAA5 must stay below or equal to 0.040 mg/L and 0.030 mg/L, respectively in order to remain on reduced monitoring. Meanwhile systems on annual or less frequent monitoring LRAAs for TTHMs and HAA5 must be less than or equal to 0.060 mg/L and 0.045 mg/L, respectively.

In addition, subpart H systems must monitor TOC levels every 90 days and maintain annual average levels of less than or equal to 4.0 mg/L in source water at each treatment plant. In order to qualify for Reduced monitoring you must monitor for TOC every 30 days to qualify for reduced monitoring for at least 12 months. See below.

If reduced monitoring results indicate that the system is no longer eligible for the reduced monitoring, the system must resume routine monitoring the quarter immediately following the monitoring period in which the system exceeded the specified levels for reduced monitoring. Note that reduced monitoring is not allowed on a location-by-location basis. All sites must meet the criteria in order for the system to reduce monitoring.

Source Water TOC for reduced monitoring for DBPs

The Stage 2 DBPR specifies a sampling frequency for all systems taking TOC source water samples. Systems must take TOC samples every 30 days at a location prior to treatment to qualify for reduced monitoring. These samples must be averaged quarterly for the most recent 4 quarters, which are used to calculate an RAA. If the system's RAA for TOC is 4.0 mg/L or lower and it meets the criteria listed above for TTHM and HAA5, then the system qualifies for reduced monitoring.

Subpart H systems on a reduced Stage 1 DBPR monitoring schedule will need to conduct Stage 2 DBPR compliance monitoring on a routine monitoring schedule until they have collected sufficient TOC data to qualify for reduced monitoring.

Once the system is on reduced monitoring, it can reduce its TOC monitoring to every 90 days to remain on reduced monitoring.

Stage 2 DBPR Reduced Monitoring Requirements for All Systems

Source Water Type	Population Size Category	Monitoring Frequency ¹	Distribution System	Monitoring Location per Monitoring Period
Subpart H (Surface Water and Ground Water Under the Direct Influence of Surface Water)	<500	-	monitoring may not be reduced	
	500-3,300	per year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter. ²	
	3,301-9,999	per year	2 dual sample sets: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement	
	10,000-49,999	per quarter	2 dual sample sets at the locations with the highest TTHM and highest HAA5 LRAAs	
	50,000-249,999	per quarter	4 dual sample sets - at the locations with the two highest TTHM and two highest HAA5 LRAAs	
	250,000-999,999	per quarter	6 dual sample sets - at the locations three highest HAA5 and with the three highest TTHM LRAAs	
	1,000,000-4,999,999	per quarter	8 dual sample sets - at the locations with the four highest TTHM and four highest HAA5 LRAAs	
	≥ 5,000,000	per quarter	10 dual sample sets - at the locations with the five highest TTHM and five highest HAA5 LRAAs	
Ground Water	<500	Every third year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter. ²	
	500-9,999	per year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter. ²	
	10,000-99,999	per year	2 dual sample sets: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement.	
	100,000-499,999	per quarter	2 dual sample sets; at the locations with the highest TTHM and highest HAA5 LRAAs.	
	≥ 500,000	per quarter	4 dual sample sets at the locations with the two highest TTHM and two highest HAA5 LRAAs	

¹ All systems must take at least one dual sample set during the month of highest DBP concentration. Systems on quarterly monitoring must take dual sample sets every 90 days.

² System is required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentration, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location.

Increased monitoring

Systems with routine annual sampling must increase to quarterly if:

- TTHM sample is > 0.080 mg/L or
- HAA5 sample is > 0.060 mg/L

Systems on quarterly monitoring are not subject to increased monitoring and will instead complete an OEL report (see next page).

System is in violation of MCL if:

- TTHM or HAA5 LRAA exceeds MCL after 4 quarters of samples

System may return to routine monitoring if it conducts increased monitoring for at least 4 consecutive quarters and the LRAA for every monitoring location is less than or equal to 0.060 mg/L for TTHM and less than or equal to 0.045 mg/L for HAA5.

Systems on Stage 1 DBPR increased monitoring must remain on increased monitoring for Stage 2

- Must sample at frequency and locations required by increased Stage 2 DBPR
- Must remain on increased monitoring until Stage 2 DBPR requirements for returning to routine monitoring are met

If a system that is required to monitor annually or less frequently on routine monitoring exceeds the TTHM and HAA5 MCL at any location, this system must go to increased monitoring, dual sample sets every 90 days at all locations, in the quarter immediately following the monitoring period in which the system exceeded the MCL.

Compliance with the DBP Maximum Contaminant Levels (MCL) and Operational Evaluation Level (OEL)

Compliance with the maximum contaminant levels for two groups of disinfection byproducts (TTHM and HAA5) will be calculated for each monitoring location in the distribution system. This approach, referred to as the locational running annual average (LRAA), differs from current requirements, which determine compliance by calculating the running annual average of samples from all monitoring locations across the system.

The Stage 2 DBP rule also requires each system to determine if they have exceeded an operational evaluation level (OEL), which is identified using their compliance monitoring results. The operational evaluation level provides an early warning of possible future MCL violations, which allows the system to take proactive steps to remain in compliance. A system that exceeds an operational evaluation level is required to review their operational practices and submit a report to the state that identifies actions that may be taken to mitigate future high DBP levels, particularly those that may jeopardize their compliance with the DBP MCLs.

Once a system receives the third quarter of TTHM and HAA5 results they begin the process of calculating the OELs for **each** monitoring location. Thereafter, the determination of OELs will be completed with receipt of each subsequent set of results. A system will have exceeded the OEL if at any monitoring location where the sum of the two previous quarters' TTHM results plus twice the current quarter's TTHM result, divided by four to determine an average, exceeds 0.080 mg/L, or where the sum of the two previous quarters' HAA5 results plus twice the current quarter's HAA5 result, divided by four to determine an average, exceeds 0.060 mg/L.

$$\text{Formula: } 1Q + 2Q + (2 \times 3Q)/4$$

Below is an example of the OEL calculation of 4 sites:

Stage 2 DBPR Location	February	May	August	Operational Evaluation Value:
	A	B	C	D = (A+B+(2*C))/4
#1	0.065 mg/L	0.074 mg/L	0.087 mg/L	0.078 mg/L
#2	0.064 mg/L	0.072 mg/L	0.084 mg/L	0.076 mg/L
#3	0.068 mg/L	0.075 mg/L	0.093 mg/L	0.082 mg/L
#4	0.066 mg/L	0.070 mg/L	0.082 mg/L	0.075 mg/L

Example for location #3:

$$[0.068+0.075+ (0.093 \times 2)]/ 4 = 0.329/4$$

$$\text{OEL} = 0.329/4 = 0.08225$$

This is NOT a violation of the TTHM MCL, but 0.08225 mg/L exceeds the operational evaluation level.

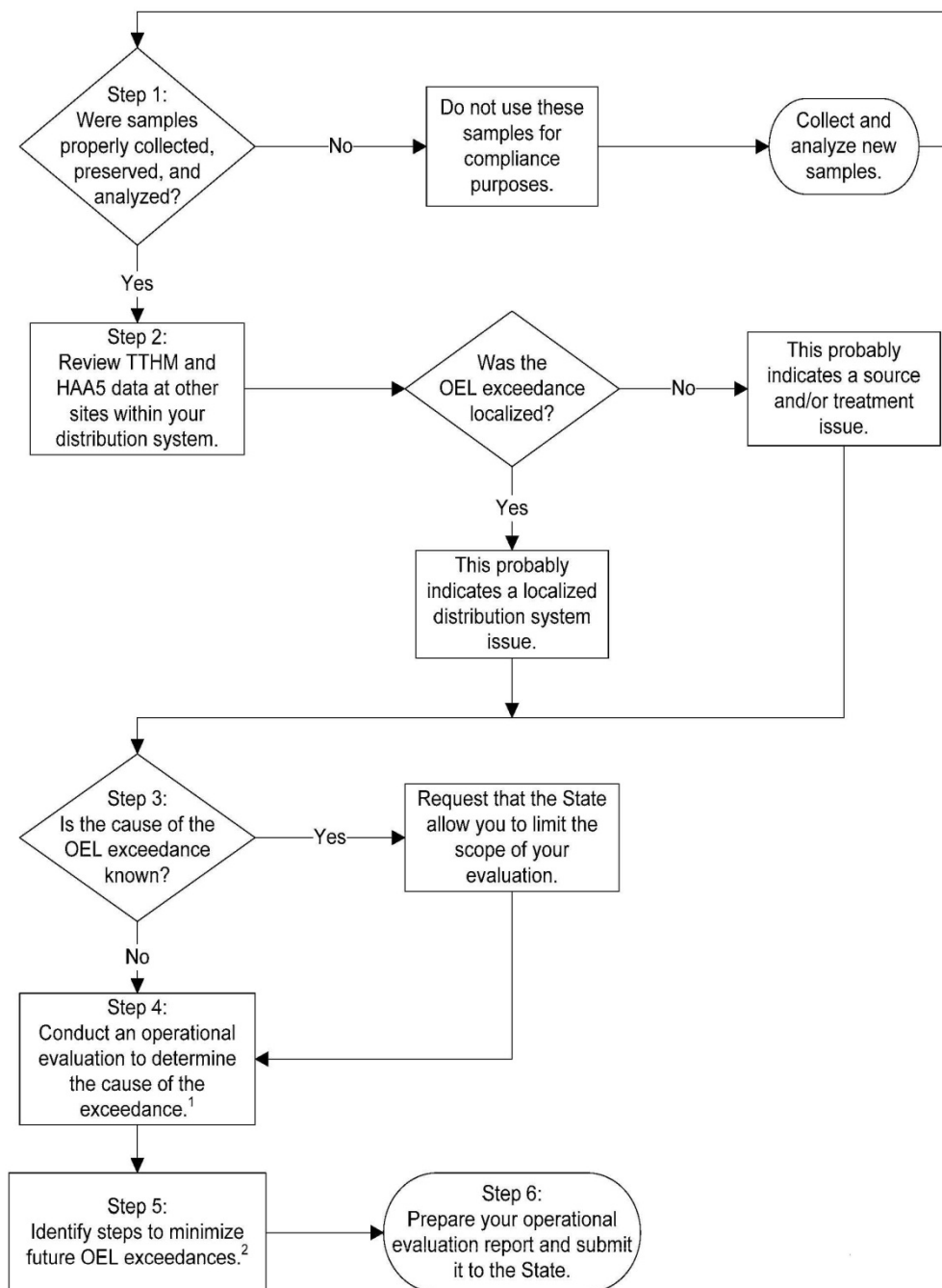
If your water system exceeds the OEL, you must conduct an operational evaluation and submit a written report of the evaluation to the Illinois EPA no later than 90 days after being notified of the analytical result that causes it to exceed the OEL. This written report must also be made available to the public upon request. The operational evaluation must include an examination of system treatment and distribution operational practices, including storage tank operations, excess storage capacity, distribution system flushing, changes in sources or source water quality, and treatment changes or problems that may contribute to TTHM and HAA5 formation and what steps could be considered to minimize future exceedence.

A water system may request to limit the scope of their evaluation if they are able to identify the cause of the operational evaluation level exceedence. The request to limit the scope of the evaluation does not extend the schedule for submitting the written report and the Illinois EPA must approve this limited scope of evaluation in writing.

- **Step 1:** Confirm that samples were properly collected, preserved, and analyzed
- **Step 2:** Report any operational evaluation level exceedences that occurred during the quarter to the State within 10 days of the end of the quarter
- **Step 3:** Determine whether exceedance is system-wide or localized by reviewing data at other sites
- **Step 4:** Request to limit scope of the evaluation, if cause of exceedance is known
- **Step 5:** Conduct operational evaluation
- **Step 6:** Identify steps to minimize exceedences and implement these recommendations
- **Step 7:** Prepare report and submit to state

OEL forms and additional information can be found in **Appendix B** or online at <http://www.epa.state.il.us/water/forms.html#compliance-and-enforcement-drinking-water>.

Suggested Steps for Performing an Operational Evaluation



Bromate and Chlorite

Different disinfectants form different byproducts. Chlorine and chloramines react with Natural Organic Material (NOM) to form TTHM and HAA5. Using ozone to disinfect (or oxidize) water containing bromide ions can form the byproduct bromate. Chlorine dioxide is unstable in water and rapidly dissociates into chlorite when mixed with NOM. The higher the dose, the more disinfectant is available for reaction with precursors. These disinfectants can react to form DBPs even if they are added to oxidize materials in water rather than to disinfect. Therefore, regardless of whether systems use these chemicals for disinfection or oxidation, they must comply with the applicable standards

Chlorite

Systems using chlorine dioxide, for disinfection or oxidation, must conduct monitoring for chlorite. Daily samples must be taken at the entrance to the distribution system. A 3-sample set each month in the distribution system.

Routine Monitoring that must be conducted from Stage 1 DBPR

Chemical	Frequency	Where monitoring must be conducted
Chlorite	Daily	Entrance to the distribution system
	One 3-sample set per month analyzed by a certified laboratory	Near first customer, location representative of average residence time, location representative of maximum residence time in distribution system.
	Additional: On any day following any daily sample that exceeds 1.0 mg/L, system must take 3 samples	Near first customer, location representative of average residence time, location representative of maximum residence time in distribution system. The system may use results to meet monthly 3-sample set monitoring requirement if the monthly 3- sample set has not yet been taken.
Chlorine Dioxide	Daily	Entrance to the distribution system
	Additional: For any daily sample that exceeds the Maximum Residual Disinfectant Level (MRDL) system must take 3 samples	For chlorine dioxide, chloramines, or chlorine used to maintain disinfectant residual and <u>NO booster chlorination</u> : all samples should be taken as close as possible to the first customer at intervals of at least 6 hours. If chlorine is used to maintain disinfectant residual <u>AND</u> booster chlorination: as close as possible to the first customer, location representative of average residence time, as close as possible to the end of the distribution.

Bromate

CWSs using ozone are required to conduct bromate monitoring. The MCL for bromate for systems using ozone remains 0.010 mg/L (measured as RAA) for samples taken at the entrance to the distribution system as established by the Stage 1 DBPR.

The criterion, however, for a system using ozone to qualify for reduced bromate monitoring has changed from demonstrating low levels of bromide in the source water, a precursor to bromate when ozonation is used, to demonstrating low levels of bromate in the finished water. Under the Stage 2 DBPR, reduced monitoring criteria are based on RAA of 0.0025 mg/L or less. New analytical methods that are more sensitive than older methods have become available, allowing bromate to be measured to levels of 0.001 mg/L or lower.

Reduced Monitoring for Bromate

Under the Stage 2 DBPR, systems must have 1 year of data with bromate samples analyzed using the new analytical method to qualify for reduced bromate monitoring, now that more sensitive methods are available. Starting in 2009 systems were required to have a bromate RAA of 0.0025 mg/L or less based on 1 year of monthly data to qualify for reduced monitoring. Therefore systems sampling for bromate under Stage 1 needed to collect new data to qualify for reduced monitoring under Stage 2 DBPR.

Stage 1 Disinfectants and Disinfection Byproducts Rule

The Stage 2 DBPR does not replace Stage 1 DBPR in its entirety. There are some requirements that were set up in the original Stage 1 DBPR that are unchanged in Stage 2.

- Systems using chlorine dioxide, for disinfection or oxidation, must conduct monitoring for chlorite. Daily samples must be taken at the entrance to the distribution system. In addition a 3-sample set each month in the distribution system.
- Systems using ozone for disinfection or oxidation under routine monitoring must take one bromate sample per month for each treatment plant.
- There are specific monitoring requirements for Chlorite and Bromate, see page 10-17 and 10-18 for further instruction.
- Subpart H systems using conventional filtration treatment must operate with enhanced coagulation or enhanced softening to achieve the TOC percent removal levels unless at least one alternative compliance criteria is met.
- Systems must continue to monitor for and meet maximum residual disinfection levels. Chlorine and chloramine residuals must be measured in the distribution systems at the same point and time total coliform samples are collected. CWS and NTNWCS using chlorine dioxide must take daily distribution system entry point samples.

MRDLs

<u>Disinfectant</u>	<u>MRDL</u>
Chlorine	4.0 mg/L
Chloramines	4.0 mg/L
Chlorine Dioxide	0.8 mg/L

MCLs

<u>Disinfection Byproduct</u>	<u>MCL</u>
Bromate	0.010 mg/L
Chlorite	1.0 mg/L
TTHM	0.080 mg/L
HAA5	0.060 mg/L

DBP Sample Collection – Things to Remember

ATTENTION: THE BOTTLES CONTAIN PRESERVATIVES IN EITHER CRYSTAL OR LIQUID FORM. TO ENSURE PROPER SAMPLE PRESERVATION, PLEASE DO NOT DUMP, SPILL, OR OVERFLOW BOTTLES WHEN COLLECTING A SAMPLE.

SAMPLING PROCEDURE FOR EACH SAMPLING LOCATION

- 1. Remove ice-packs and freeze 24 hours prior to sample collection.** Thorough freezing of the ice packs will help to ensure the integrity of your sample.
- 2. Three sixty mL amber vials for HAAS.** The sampling source must not be connected to an aerator. If an aerator is present, it must be removed before the sample is collected.
 - A) Allow the cold water to run until the temperature is as cold as it will get (approximately 3-5 min). Adjust to low flow. Do Not adjust flow while collecting sample. Open one sample vial. Tip vial slightly so that water flows down wall of container. Bring vial to upright position as it fills. Bottle must be filled completely. Do not overflow.
 - B) Seal vial so that no air bubbles are trapped in it. Make sure that the Teflon side (shiny side) of the cap is in contact with the water. The Teflon side should be in the correct position upon the arrival of the bottle.
 - C) Turn vial upside down and gently tap on solid surface. Observe for air bubbles. If air bubbles are present then remove cap and add more water. Repeat steps B & C.
 - D) Repeat steps B & C for remaining vials.
- 3. Three forty mL clear vials for THMS.** The sampling source must not be connected to an aerator. If an aerator is present, it must be removed before the sample is collected.
 - A) Allow the cold water to run until the temperature is as cold as it will get (approximately 3-5 min). Adjust to low flow. Do Not adjust flow while collecting sample. Open one sample vial. Tip vial slightly so that water flows down wall of container. Bring vial to upright position as it fills. Bottle must be filled completely. Do not overflow.
 - B) Seal vial so that no air bubbles are trapped in it. Make sure that the Teflon side (shiny side) of the cap is in contact with the water. The Teflon side should be in the correct position upon the arrival of the bottle.
 - C) Turn vial upside down and gently tap on solid surface. Observe for air bubbles. If air bubbles are present then remove cap and add more water. Repeat steps B & C.
 - D) Repeat steps B & C for remaining vials.
- 4. Replace the filled sample vials in the foam block, place foam block in the cooler with frozen ice-packs on the side.**
- 5. Place completed analytical form sheet in plastic sleeve and place on the top of the ice-packs. Secure lid with box tape.**

6. Return the collected sample to the laboratory the same day it was collected. Use a mailing service that will get the sample to the laboratory the day after it is collected. It is recommended (not required) that you **refrigerate the filled sample bottles** (do not freeze) for two to three hours before shipping. Your refrigerator must be free of any volatile organic compounds i.e. gasoline petroleum products.
7. **Do not ship the sample(s) to the laboratory on Fridays or the day before holiday.** If samples sit over weekends or holidays, they will become too warm and need to be resampled.

SPECIAL NOTES

- A. All of the information must be completed on the analytical form sheet.
- B. Samples must be collected within the prescribed sample period. If samples cannot be collected during this period due to an unavoidable circumstance (such as a well being temporarily out of service), an extension of the period must be obtained by calling (217) 785-0561.
- C. Please remember to return analysis form and instruction sheet with samples.
- D. Any questions regarding this program can be answered by calling the Compliance Assurance Section at (217) 785-0561. Any questions about sampling and analytical results can be answered by calling the IEPA Laboratory at (217) 782-9780 or 557-0274 if your water system is in Community Water Supply Testing Fund, if not call your contract laboratory.

Appendix A

Chapter 10: Disinfectants and Disinfection Byproduct Rule

Laboratory Reporting Forms

- DBP's
- TOC
- Chlorite
- Bromate



Water System Name: _____

Water System Number: _____

Analysis Report Form

-Water System Section-

Water System Name: _____

Water System Number: _____

-Sampling Point Section-

WSF State Asgn ID: _____ / Descript.: _____

Sampling Point: _____ / Descript.: _____

Collection Date (MMDDYYYY): _____

Collection Time: _____

Sample Collector Name/Telephone No.: _____

Sample Purpose (Circle One): **Routine (RT)** **Repeat (RP)** **Special (SP)**

Sample Type (Circle One): **Finished (FN)** **Raw (RW)**

- Required Sampling at Sample Point _____ -

Analyte Group Code: **THM_HAA**

w/ Units of Measurement*

Analyte	Analyte Code	Method Code*	Lab Reporting Level	Concentration
CHLOROFORM	2941			
DICHLOROBROMOMETHANE	2943			
CHLORODIBROMOMETHANE	2944			
BROMOFORM	2942			
MONOCHLOROACETIC ACID	2450			
DICHLOROACETIC ACID	2451			
TRICHLOROACETIC ACID	2452			
MONOBROMOACETIC ACID	2453			
DIBROMOACETIC ACID	2454			



**Illinois
Environmental Protection Agency**

Water System Name: _____

Water System Number: _____

-Laboratory Section-

Laboratory State ID Number: _____

Laboratory Name: _____

Lab Sample Number: _____

Date Lab Rcpt.: _____

Complete Date: _____

Complete Time: _____

Comments (Data Quality Issues): _____

**Mail Results to: Illinois Environmental Protection Agency
Drinking Water Compliance Unit, Mailstop #19
1021 North Grand Avenue East, P.O. 19276
Springfield, IL 62704-9276**

Questions Call: (217) 785-0561

Fax: (217) 557-1407

Signature of Analyst or Official _____

Date Forwarded _____

*** See List of Permitted Values**

The Agency is authorized to require this information under Illinois Revised Statute, 1987, Chapter 111 1/2, Section 1004(E). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues; a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.



Water System Name: _____

Water System Number: _____

Analysis Report Form

-Water System Section-

Water System Name: _____

Water System Number: _____

-Sampling Point Section-

WSF State Asgn ID: TOCRAW / Descript.: _____

Sampling Point: TOCRAW / Descript.: _____

Collection Date (MMDDYYYY): _____

Collection Time: _____

Sample Collector Name, Telephone No.: _____

Sample Purpose (Circle One): **Routine (RT)** **Repeat (RP)** **Special (SP)**

Sample Type (Circle One): **Raw (RW)**

- Required Sampling at Sample Point TOCRAW -

Analyte Group Code: **TOCA**

*w/ Units of Measurement**

Analyte	Analyte Code	Method Code*	Lab Reporting Level	Concentration
ALKALINITY, TOTAL	1927			
CARBON, TOTAL ORGANIC (TOC)	2920			



Water System Name: _____

Water System Number: _____

-Laboratory Section-

Laboratory State ID Number: _____

Laboratory Name: _____

Lab Sample Number: _____

Date Lab Rcpt.: _____

Complete Date: _____

Complete Time: _____

Comments (Data Quality Issues):

Mail Results to: Illinois Environmental Protection Agency
 Drinking Water Compliance Unit, Mailstop #19
 1021 North Grand Avenue East, P.O. 19276
 Springfield, IL 62704-9276

Questions Call: (217) 785-0561

Fax: (217) 557-1407

Signature of Analyst or Official _____

Date Forwarded _____

*** See List of Permitted Values**

This Agency is authorized to require this information under Illinois Revised Statute, 1987, Chapter 111 1/2, Section 1004(E). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues; a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.



Illinois
Environmental Protection Agency

Water System Name: _____

Water System Number: _____

-Sampling Point Section-

WSF State Asgn ID: _____ / Descript.: _____

Sampling Point: _____ / Descript.: _____

Collection Date (MMDDYYYY): _____

Collection Time: _____

Sample Collector Name Telephone No.: _____

Sample Purpose (Circle One): **Routine (RT)** **Repeat (RP)** **Special (SP)**

Sample Type (Circle One): **Finished (FN)**

- Required Sampling at Sample Point _____ -

Analyte Group Code: **TOC**

w/ Units of Measurement*

Analyte	Analyte Code	Method Code*	Lab Reporting Level	Concentration
CARBON, TOTAL ORGANIC (TOC)	2920			

CARBON, TOTAL ORGANIC (TOC)	2920			
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Program: Chlorite (DBPs)

Analysis Report Form

-Water System Section-

Water System Name: _____

Sampling Period: _____

Water System Number: IL _____

-Sampling Point Section-

WSF State Asgn ID: DISTRIBUTION / Description: _____

Sampling Point: DBPMAX Description: _____

Collection Date (MMDDYYYY): _____

Collection Time: _____

Sample Collector Name Telephone No.: _____

Sample Purpose (Circle One): **Routine (RT)** **Repeat (RP)** **Special (SP)**

Sample Type (Circle One): **Finished (FN)** **Raw (RW)** **Distribution (DS)**

- Required Sampling at Sample Point -- DBPMAX

Analyte	Analyte Code	Method Code*	w/ Units of Measurement*	
			Lab Reporting Level	Concentration
CHLORITE	1009			



-Laboratory Section-

Laboratory State ID Number: _____
Laboratory Name: _____
Lab Sample Number: _____
Date Lab Rcpt: _____
Complete Date: _____
Complete Time: _____
Comments (Data Quality Issues): _____

Mail Results to: Illinois Environmental Protection Agency
Drinking Water Compliance Unit, Mailstop #19
1021 North Grand Avenue East, P.O. 19276
Springfield, IL 62794-9276

Questions Call: (217) 785-0561
Fax: (217) 557-1407

Signature of Analyst or Official _____
Date Forwarded _____

*** See List of Permitted Values**

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues; a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.



Analysis Report Form

-Water System Section-

Water System Name: _____

Sampling Period: _____

Water System Number: IL _____

-Sampling Point Section-

WSF State Asgn ID: DISTRIBUTION / Description: _____

Sampling Point: LD_CLO3 / Description: _____

Collection Date (MMDDYYYY): _____

Collection Time: _____

Sample Collector Name Telephone No.: _____

Sample Purpose (Circle One): **Routine (RT)** **Repeat (RP)** **Special (SP)**

Sample Type (Circle One): **Finished (FN)** **Raw (RW)** **Distribution (DS)**

- Required Sampling at Sample Point LD_CLO3 -

Analyte	Analyte Code	Method Code*	w/ Units of Measurement*	
			Lab Reporting Level	Concentration
CHLORITE	1009			



-Laboratory Section-

Laboratory State ID Number: _____

Laboratory Name: _____

Lab Sample Number: _____

Date Lab Rcpt: _____

Complete Date: _____

Complete Time: _____

Comments (Data Quality Issues): _____

Mail Results to: Illinois Environmental Protection Agency
Drinking Water Compliance Unit, Mailstop #19
1021 North Grand Avenue East, P.O. 19276
Springfield, IL 62794-9276

Questions Call: (217) 785-0561

Fax: (217) 557-1407

Signature of Analyst or Official _____

Date Forwarded _____

*** See List of Permitted Values**

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.



Analysis Report Form

-Water System Section-

Water System Name: _____

Sampling Period: _____

Water System Number: IL _____

-Sampling Point Section-

WSF State Asgn ID: DISTRIBUTION / Description: _____

Sampling Point: MD_CLO3 / Description: _____

Collection Date (MMDDYYYY): _____

Collection Time: _____

Sample Collector Name Telephone No.: _____

Sample Purpose (Circle One): **Routine (RT)** **Repeat (RP)** **Special (SP)**

Sample Type (Circle One): **Finished (FN)** **Raw (RW)** **Distribution (DS)**

- Required Sampling at Sample Point MD_CLO3

Analyte	Analyte Code	Method Code*	w/ Units of Measurement*	
			Lab Reporting Level	Concentration
CHLORITE	1009			



-Laboratory Section-

Laboratory State ID Number: _____

Laboratory Name: _____

Lab Sample Number: _____

Date Lab Rcpt: _____

Complete Date: _____

Complete Time: _____

Comments (Data Quality Issues): _____

Mail Results to: Illinois Environmental Protection Agency
Drinking Water Compliance Unit, Mailstop #19
1021 North Grand Avenue East, P.O. 19276
Springfield, IL 62794-9276

Questions Call: (217) 785-0561

Fax: (217) 557-1407

Signature of Analyst or Official _____

Date Forwarded _____

*** See List of Permitted Values**

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.



Program: Bromide/ Bromate (DBPs)

Analysis Report Form

-Water System Section-

Water System Name: _____

Sampling Period: _____

Water System Number: IL _____

-Sampling Point Section-

WSF State Asgn ID: TP _____ / Description: _____

Sampling Point: TP _____ / Description: TREATMENT PLANT - FINISHED

Collection Date (MMDDYYYY): _____

Collection Time: _____

Sample Collector Name Telephone No.: _____

Sample Purpose (Circle One): **Routine (RT)** **Repeat (RP)** **Special (SP)**

Sample Type (Circle One): **Finished (FN)** **Raw (RW)** **Distribution (DS)**

- Required Sampling at Sample Point TP01 -

Analyte	Analyte Code	Method Code*	w/ Units of Measurement*	
			Lab Reporting Level	Concentration
BROMATE	1011			



-Laboratory Section-

Laboratory State ID Number: _____

Laboratory Name: _____

Lab Sample Number: _____

Date Lab Rcpt: _____

Complete Date: _____

Complete Time: _____

Comments (Data Quality Issues): _____

Mail Results to: Illinois Environmental Protection Agency
Drinking Water Compliance Unit, Mailstop #19
1021 North Grand Avenue East, P.O. 19276
Springfield, IL 62794-9276

Questions Call: (217) 785-0561

Fax: (217) 782-0075

Signature of Analyst or Official _____

Date Forwarded _____

*** See List of Permitted Values**

This Agency is authorized to require this information under Illinois Revised Statutes, 1987, Chapter 111 1/2, Section 1004(H). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

Appendix B

Chapter 10: Disinfectants and Disinfection Byproduct Rule

Monthly Reporting Forms

- Chlorite
- Chlorine Dioxide

DAILY CHLORITE DISTRIBUTION MONITORING REPORT

Facility Name: _____

Facility No.: _____ Month/Year: _____

System/Treatment Plant: _____

DAILY CHLORITE

Use this form for daily distribution measurements only. If additional samples are taken due to an exceedence of the MRDL you MUST complete the form on the back of this page and use a certified laboratory to take the additional 3 required samples.

A. Total number of distribution chlorite measurements = _____

B. Total number of distribution chlorite measurements exceeding the MRDL of 1.0 mg/L = _____

To the best of my knowledge, the above information is complete and accurate.

Signature of ROINC: _____ Date: _____

Mail or Fax Report to:

IEPA/BOW/CAS/DWU #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/785-0561
Fax 217/557-1407

Daily chlorite Distribution Report Form: Page 1 of 1

This Agency is authorized to require this information under ILLINOIS REVISED STATUTES, 1979, Chapter 111 1/2, Sec. 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

DAILY CHLORITE DISTRIBUTION SYSTEM REPORT IF MRDL IS EXCEEDED

Facility Name: _____

Facility No.: _____ Month/Year: _____

System/Treatment Plant: _____

Date	No. of Sites Where Chlorite was Measured	No. of Sites Where Chlorite MRDL was exceeded	Result of measurement from location as close as possible to first customer	Result of measurement from location representative of average residence time	Result of measurement from location as close as possible to end of distribution system
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Total					

To the best of my knowledge, the above information is complete and accurate.

Signature of ROINC: _____ Date: _____

Daily chlorite Distribution Report Form: Page 2 of 2

This Agency is authorized to require this information under ILLINOIS REVISED STATUTES, 1979, Chapter 111 1/2, Sec. 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

DAILY CHLORINE DIOXIDE DISTRIBUTION MONITORING REPORT

Facility Name: _____

Facility No.: _____ Month/Year: _____

System/Treatment Plant: _____

DAILY CHLORINE DIOXIDE

Use this form for daily distribution measurements only. If additional samples are taken due to an exceedence of the MRDL you MUST complete the form on the back of this page and use a certified laboratory to take the additional 3 required samples.

A. Total number of distribution chlorine dioxide measurements = _____

B. Total number of distribution chlorine dioxide measurements exceeding the MRDL of 0.8 mg/L = _____

To the best of my knowledge, the above information is complete and accurate.

Signature of ROINC: _____ Date: _____

Mail or Fax Report to:

IEPA/BOW/CAS/DWU #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/785-0561
Fax 217/557-1407

Daily chlorine dioxide Distribution Report Form: Page 1 of 1

This Agency is authorized to require this information under ILLINOIS REVISED STATUTES, 1979, Chapter 111 1/2, Sec. 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

DAILY CHLORINE DIOXIDE DISTRIBUTION SYSTEM REPORT IF MRDL IS EXCEEDED

Facility Name: _____

Facility No.: _____ Month/Year: _____

System/Treatment Plant: _____

Date	No. of Sites Where chlorine dioxide was Measured	No. of Sites Where chlorine dioxide MRDL was exceeded	Result of measurement from location as close as possible to first customer	Result of measurement from location representative of average residence time	Result of measurement from location as close as possible to end of distribution system
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Total					

To the best of my knowledge, the above information is complete and accurate.

Signature of ROINC: _____ Date: _____

Daily chlorine dioxide Distribution Report Form: Page 2 of 2

This Agency is authorized to require this information under ILLINOIS REVISED STATUTES, 1979, Chapter 111 1/2, Sec. 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

Appendix C

Chapter 10: Disinfectants and Disinfection Byproduct Rule

Compliance Monitoring Plan Resubmittal

- Resubmittal Instructions
- Compliance Monitoring Plan

If a system makes any changes in treatment, distribution system operations and layout, or other factors that may affect TTHM and HAA5 formation, these changes may warrant a modification to their monitoring locations. In this case the system must revise their compliance monitoring plan. The system must consult with the IEPA regarding the need for changes and the most appropriate modifications. Modifications may be initiated by the water system or IEPA.

Compliance Monitoring Plan

General Information

IL _____

Water System Name: _____

Direct Population: _____

Source Type: _____

Contact (Sample Collector) NAME: _____

ADDRESS: _____

CITY: _____, IL ZIP CODE: _____

Who to Call Regarding this Report: _____

telephone: _____

email address: _____

Signature (Water System Official): _____ Date: _____

I Required Stage 2 Compliance Monitoring Frequency and Locations :

IL _____

Number / Frequency (during Peak Historical Month) NUMBER FREQUENCY

High THM Sites Required: X

High HAA Sites Required: X

Stage 1 Sites Required: X

II Information Below is used to Assist in Site Selection:

Indicate the peak historical month, the month with the warmest water temperature, or if on quarterly monitoring, the month of the highest sample results.

Peak Historical Month (PHM) _____

Basis for PHM Selection _____

Compliance Monitoring Plan

Review your current Stage 1 DBPR monitoring location with the following guidance to verify whether this location is adequate for Stage 2 DBPR compliance monitoring:

What makes a good Total Trihalomethanes (TTHMs) Site ---

TTHM formation is strongly influenced by residence time. In addition, TTHM formation generally increases with increasing pH. TTHM sites should not be located at dead ends with no users. The sampling should be representative of water that is being consumed, not stagnant water. In addition, sites should be upstream of booster chlorination and after the last hydrant or blowoff.

- ✓ Excellent sites for high TTHM include: Tanks – down-gradient of storage facilities, which have increased residence time;
- ✓ Low flows – sparsely populated areas with low flows;
- ✓ Geographic dead ends – areas that are physically located at the end of a water main or group of water mains without looping back to the main portion of the distribution system. However, do not sample stagnant water after the last customer. The purpose is to sample water that customers are consuming.
- ✓ Hydraulic dead ends and mixing zones – areas in which there is little movement of water. After booster chlorination – where formation will have increased due to more available disinfectant.
- ✓ Low or no residual (i.e., relative to initial disinfectant levels) – likely advanced residence time.
- ✓ Low water use in general – lightly developed areas where water is allowed to age.
- ✓ Areas with high historic TTHM levels

What makes a good High Haloacetic Acid (HAA) Site ---

Different systems may find high HAA5 sites in locations with different characteristics. HAA5 formation and decomposition seems to follow a pattern that is different from that of TTHM in the distribution system. While TTHM concentrations are generally highest at the points in the system with the longest residence times, research suggests that HAA5 seem to form and then decompose. The consumption of HAA5 by microorganisms is known as biodegradation, which is more likely to occur when disinfectant residual levels are low or non-existent, particularly in warmer months. Therefore, a high HAA5 site will not necessarily be the site with the longest residence time, and may even be at a site with shorter residence time.

- ✓ Low but detectable residual (i.e., relative to initial levels) – likely advanced residence time but not sites likely to have biofilm.
- ✓ After booster chlorination – where formation will have increased due to more available disinfectant and where any biodegradation will be halted.
- ✓ Areas with high historic HAA5 levels
- ✓ Tanks – increased residence time.
- ✓ Dead ends – low flows. However, do not sample stagnant water after the last customer. The purpose is to sample water that customers are consuming.
- ✓ Hydraulic dead ends and hydraulic mixing zones.

Compliance Monitoring Plan

Compliance Calculation Procedures:

- III The Stage 2 DBPR changes the way compliance is determined with MCLs by changing the way sampling results are averaged. Stage 2 DBPR determines compliance with the MCL on an Locational Running Annual Averages. LRAA instead of the system-wide RAA as is used under the Stage 1 DBPR. The primary objective of the LRAA is to reduce exposure to high DBP levels. For an LRAA, an annual average is calculated at each monitoring site.

The Illinois EPA's State / Safe Drinking Water Information System (SDWIS) calculates LRAA.

Compliance Monitoring Plan

IV Please indicate site selection and rationale for site selection and monitoring date below: see page 1, section I to determine # of sites needed

Make copies of this sheet, if additional spaces are needed. Must have rationale for each site selected for Stage 2 compliance monitoring.

Site Type	Site Address, Justification for Selection, and Monitoring Date
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	
<input type="checkbox"/> Highest TTHM	
<input type="checkbox"/> Highest HAA5	

V

A Distribution Schematic is required to be submitted. This a map of the distribution system showing-- coliform sites, water flow, booster chlorination stations, pressure zones, storage tanks, entry point(s), water source and your chosen Stage 2 sampling sites.

Appendix D

Chapter 10: Disinfectants and Disinfection Byproduct Rule

Operational Evaluation Level Forms

- Additional OEL Information
- Operational Evaluation Level Forms
 - Operational Evaluation Report*
 - Source Water Checklist*
 - Treatment Process Evaluation Checklist*
 - Distributional System Evaluation Checklist*

Systems are required to complete all of the following forms if they exceed the OEL. If your water system exceeds the OEL, you must conduct an operational evaluation and submit a written report of the evaluation to the Illinois EPA no later than 90 days after being notified of the analytical result that causes it to exceed the OEL. A water system may request to limit the scope of their evaluation if they are able to identify the cause of the operational evaluation level exceedence.

I. GENERAL INFORMATION

A. Facility Information

Facility Name: _____ PWSID: _____
 Facility Address: _____
 City: _____ State: _____ Zip: _____

B. Report Prepared by:

(Print): _____ Date prepared: _____
 (Signature): _____
 Contact Telephone Number: _____

II. MONITORING RESULTS

A. Provide the Compliance Monitoring Site(s) where the OEL was Exceeded.

Note: The site name or number should correspond to a site in your Stage 2 DBPR compliance monitoring plan.

B. Monitoring Results for the Site(s) Identified in II.A (include duplicate pages if there was more than one exceedance)

1. Check TTHM or HAA5 to indicate which result caused the OEL exceedance. TTHM HAA5
2. Enter your results for TTHM or HAA5 (whichever you checked above).

	Quarter			Operational Evaluation Value
	Results from Two Quarters Ago	Prior Quarter's Results	Current Quarter	
	A	B	C	
				$D = (A+B+(2*C))/4$
Date sample was collected				
TTHM (mg/L)				
HAA5 (mg/L)				

Note: The operational evaluation value is calculated by summing the two previous quarters of TTHM or HAA5 values plus twice the current quarter value, divided by four. If the value exceeds 0.080 mg/L for TTHM or 0.060 mg/L for HAA5, an OEL exceedance has occurred.

C. Has an OEL exceedance occurred at this location in the past? Yes No

If NO, proceed to item D. If YES, when did exceedance occur?

Was the cause determined for the previous exceedance(s)? Yes No

Are the previous evaluations/determinations applicable to the current OEL exceedance? Yes No

III. OPERATIONAL EVALUATION FINDINGS

A. Did the State allow you to limit the scope of the operational evaluation? Yes No
If NO, proceed to item B. If YES, attach written correspondence from the State.

B. Did the **distribution system** cause or contribute to your OEL exceedance(s)? Yes No
 Possibly
If NO, proceed to item C. If YES or POSSIBLY, explain (attach additional pages if necessary):

C. Did the **treatment** system cause or contribute to your OEL exceedance(s)? Yes No
 Possibly
If NO, proceed to item D. If YES or POSSIBLY, explain (attach additional pages if necessary):

D. Did **source water quality** cause or contribute to your OEL exceedance(s)? Yes No
 Possibly
If NO, proceed to item E. If YES or POSSIBLY, explain (attach additional pages if necessary):

E. Attach all supporting operational or other data that support the determination of the cause(s) of your OEL exceedance(s).

F. If you are unable to determine the cause(s) of the OEL exceedance(s), list the steps that you can use to better identify the cause(s) in the future (attach additional pages if necessary):

G. List steps that could be considered to minimize future OEL exceedances (attach additional pages if necessary)

H. Total **Number of Pages** Submitted, Including Attachments and Checklists: _____

NO DATA AVAILABLE

System Name: _____
 Checklist Completed by: _____ Date: _____

A. Do you have source water temperature data? Yes No
 If **NO**, proceed to item B. If **YES**, was the source water temperature high? Yes No
 If **NO**, proceed to item B. If **YES**, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Was the raw water storage time longer than usual?
<input type="checkbox"/>	<input type="checkbox"/>	Did you place another water source on-line?
<input type="checkbox"/>	<input type="checkbox"/>	Were river/reservoir flow rates lower than usual? If yes, indicate the location of lower flow rates and the anticipated impact on the OEL exceedance.
<input type="checkbox"/>	<input type="checkbox"/>	Did point or non-point sources in the watershed contribute to the OEL exceedance?

B. Do you have data that characterizes organic matter in your source water (e.g., TOC, DOC, SUVA, color, THM formation potential)? Yes No
 If **NO**, proceed to item C. If **YES**, were these values higher than normal? Yes No
 If **NO**, proceed to item C. If **YES**, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Did heavy rainfall or snowmelt occur in the watershed?
<input type="checkbox"/>	<input type="checkbox"/>	Did you place another water source on-line?
<input type="checkbox"/>	<input type="checkbox"/>	Did lake or reservoir turnover occur?
<input type="checkbox"/>	<input type="checkbox"/>	Did point or non-point sources in the watershed contribute to the OEL exceedance?
<input type="checkbox"/>	<input type="checkbox"/>	Did an algal bloom occur in the source water?
<input type="checkbox"/>	<input type="checkbox"/>	If algal blooms were present, were appropriate algae control measures employed (e.g. addition of copper sulfate)?
<input type="checkbox"/>	<input type="checkbox"/>	Did a taste and odor incident occur?

C. Do you have source water bromide data? Yes No
 If **NO**, proceed to item D. If **YES**, were the bromide levels higher or lower than normal? Yes No
 If **NO**, proceed to item D. If **YES**, answer the following questions for the time period prior to the OEL exceedance.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Has saltwater intrusion occurred?
<input type="checkbox"/>	<input type="checkbox"/>	Are you experiencing a long-term drought?
<input type="checkbox"/>	<input type="checkbox"/>	Did heavy rainfall or snowmelt occur in the watershed?
<input type="checkbox"/>	<input type="checkbox"/>	Did you place another water source on-line?
<input type="checkbox"/>	<input type="checkbox"/>	Are you aware of any industrial spills in the watershed?

Source Water Evaluation Checklist

D. Do you have source water turbidity or particle count data? Yes No
If NO, proceed to item E. If YES, were the turbidity values or particle counts higher than normal? Yes No
If NO, proceed to item E. If YES, answer the following questions for the time period prior to the OEL exceedance.
Yes No
 Did lake or reservoir turnover occur?
 Did heavy rainfall or snowmelt occur in the watershed?
 Did logging, fires, or landslides occur in the watershed?
 Were river/reservoir flow rates higher than normal?

E. Do you have source water pH or alkalinity data? Yes No
If NO, proceed to item F. If YES, was the pH or alkalinity different from normal values? Yes No
If NO, proceed to item F. If YES, answer the following questions for the time period prior to the OEL exceedance.
Yes No
 Was there an algal bloom in the source water?
 If algal blooms were present, were algae control measures employed?
 Did heavy rainfall or snowmelt occur in the watershed?
 Has the PWS experienced diurnal pH changes in source water?

F. Conclusion

Did source water quality factors contribute to your OEL exceedance? Yes No
 Possibly

If YES or POSSIBLY, explain below.

This Agency is authorized to require this information under 415 ILCS 5. Failure to disclose this information may result in a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This has been approved by the Forms Management Center.
IL532-2980 PWS 293 01/2013

Treatment Process Evaluation Checklist

Page 1 of 4

NO DATA AVAILABLE

Facility Name: _____
Checklist Completed by: _____ Date: _____

- A. Review finished water data for the time period prior to the OEL exceedance(s) and compare to historical finished water data using the following questions:
- Were DBP precursors (TOC, DOC, SUVA, bromide, etc.) higher than normal? Yes No
- Was finished water pH higher or lower than normal? Yes No
- Was the finished water temperature higher than normal? Yes No
- Was finished water turbidity higher than normal? Yes No
- Was the disinfectant concentration leaving the plant(s) higher than normal? Yes No
- Were finished water TTHM/HAA5 levels higher than normal? Yes No
- Were operational and water quality data available to the system operator for effective decision making? Yes No

- B. Does the treatment process include pre-disinfection? Yes No

If NO, proceed to item C. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Was disinfected raw water stored for an unusually long time? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were treatment plant flows lower than normal? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were treatment plant flows equally distributed among different trains? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were water temperatures high or warmer than usual? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were chlorine feed rates outside the normal range? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was a disinfectant residual present in the treatment train following pre-disinfection? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were online instruments utilized for process control? |
| <input type="checkbox"/> | <input type="checkbox"/> | Did you switch to free chlorine as the oxidant? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there a recent change (or addition) of pre-oxidant? |
| <input type="checkbox"/> | <input type="checkbox"/> | Did you change the location of the pre-disinfection application? |

- C. Does your treatment process include presedimentation? Yes No

If NO, proceed to item D. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Were flows low? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were flows high? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were online instruments utilized for process control? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was sludge removed from the presedimentation basin? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was sludge allowed to accumulate for an excessively long time? |
| <input type="checkbox"/> | <input type="checkbox"/> | Do you add a coagulant to your presedimentation basin? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there a problem with the coagulant feed? |

D. Does your treatment process include coagulation and/or flocculation? Yes No

If NO, proceed to item E. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes | No | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Were there any feed pump failures or were feed pumps operating at improper feed rates? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were chemical feed systems controlled by flow pacing? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were there changes in coagulation practices or the feed point? |
| <input type="checkbox"/> | <input type="checkbox"/> | Did you change the type or manufacturer of the coagulant? |
| <input type="checkbox"/> | <input type="checkbox"/> | Do you suspect that the coagulant in use at the time of the OEL exceedance did not meet industry standards? |
| <input type="checkbox"/> | <input type="checkbox"/> | Did the pH or alkalinity change at the point of coagulant addition? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were there broken or plugged mixers? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were flow rates above the design rate or was there short-circuiting? |

E. Does your treatment process include sedimentation or clarification? Yes No

If NO, proceed to item F. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes | No | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Were there changes in plant flow rate that may have resulted in a decrease in settling time or carry-over of process solids? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were settled water turbidities higher than normal? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there any disruption in the sludge blanket that may have resulted in carryover to the point of disinfection? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there any maintenance in the basin that may have stirred sludge from the bottom of the basin and caused it to carry over to the point of disinfectant addition? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was sludge allowed to accumulate for an excessively long time or was there a malfunction in the sludge removal equipment? |

F. Does your treatment process include filtration? Yes No

If NO, proceed to item G. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes | No | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Was there an increase in individual or combined filter effluent turbidity or particle counts? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there an increase in turbidity or particle loading onto the filters? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there an increase in flow onto the filters or malfunction of the rate of flow controllers? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were any filters taken off-line for an extended period of time that caused the other filters to operate near maximum design capacity and creating the conditions for possible breakthrough? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were any filters operated beyond their normal filter run time? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were there any unusual spikes in individual filter effluent turbidity (which may indicate particulate or colloidal TOC breakthrough) in the days leading to the excursion? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were all filters run in a filter-to-waste mode during initial filter ripening? |
| <input type="checkbox"/> | <input type="checkbox"/> | If GAC filters are used, is it possible the adsorptive capacity of the GAC bed was reached before reactivation occurred (leave blank if not applicable)? |
| <input type="checkbox"/> | <input type="checkbox"/> | If biological filtration is used, were there any process upsets that may have resulted in the breakthrough of TOC (leave blank if not applicable)? |

G. Does your treatment process include primary disinfection by injecting chlorine prior to a clearwell? Yes No

If NO, proceed to item H. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Was there a sudden increase in the amount of chlorine fed or an increase in the chlorine residual? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there an increase in clearwell holding time? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was the plant shut down or were plant flows low? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there an increase in clearwell water temperature? |
| <input type="checkbox"/> | <input type="checkbox"/> | Did you switch to free chlorine recently as the primary disinfectant? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was the inactivation of <i>Giardia</i> and/or viruses exceptionally high? |
| <input type="checkbox"/> | <input type="checkbox"/> | Was there a change in the mixing strategy (i.e. mixers not used, adjustment of tank level)? |

H. Does your plant recycle spent filter backwash or other streams? Yes No

If NO, proceed to item I. If YES, answer the following questions for the period in which an OEL exceedance occurred:

- | Yes | No | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Did a change in the recycle stream quality contribute to increased DBP precursor loading that was not addressed by treatment plant processes? |
| <input type="checkbox"/> | <input type="checkbox"/> | Did a recycle event result in flows in excess of typical or design flows? |

I. Do you inject a disinfectant after your clearwell to maintain a distribution system residual? Yes No

If NO, proceed to item J. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes No

- Was there a sudden increase in the amount of chlorine fed?
- Was there a switch from chloramines to free chlorine for a burnout period?
- If using chloramines, was the chlorine to ammonia ratio in the proper range?
- Was there a problem with either chlorine or ammonia mixing?

J. Did concern about complying with a rule other than Stage 2 DBPR, such as the Lead and Copper rule, the LT2ESWTR, or any other rule constrain your options to reduce the DBP levels at this site? For example, are you limited by other treatment targets/requirements in your ability to control precursors in coagulation/flocculation? Yes No

If NO, proceed to item K. If YES, explain below and consult EPA's *Simultaneous Compliance Guidance Manual* for alternative compliance approaches.

K. Conclusion

Did treatment factors and/or variations in the plant performance contribute to the OEL exceedance(s)? Yes No
 Possibly

If YES or POSSIBLY, explain below.

Distribution System Evaluation Checklist

Page 1 of 2

System Name: _____
Checklist Completed by: _____ Date: _____

A. Do you have disinfectant residual or temperature data for the monitoring location where you experienced the OEL exceedance? Yes No

If NO, proceed to item B. If YES, answer the following questions for the period in which an OEL exceedance occurred:

Yes No

Was the water temperature higher than normal for that time of the year at that location?

Was the disinfectant residual lower than normal for that time of the year at that location?

Was the disinfectant residual higher than normal for that time of the year at that location?

B. Do you have maintenance records available for the time period just prior to the OEL exceedance? Yes No

If NO, proceed to item C. If YES, answer the following questions:

Yes No

Did any line breaks or replacements occur in the vicinity of the exceedance?

Were any storage tanks or reservoirs taken off-line and cleaned?

Did flushing or other hydraulic disturbances (e.g., fires) occur in the vicinity of the exceedance?

Were any valves operated in the vicinity of the OEL exceedances?

C. If your system is metered, do you have access to historical records showing water use at individual service connections? Yes No

If NO, proceed to item D. If YES, was overall water use in your system unusually low, indicating higher than normal water age? Yes No

D. Do you have high-volume customers in your system (e.g., an industrial processing plant)? Yes No

If NO, proceed to item E. If YES, was there a change in water use by a high-volume customer? Yes No

E. Is there a finished water storage facility hydraulically upstream from the monitoring location where you experienced the OEL exceedance? Yes No

If NO, proceed to item F. If YES, review storage facility operations and water quality data to answer the following questions for the period in which the OEL exceedance occurred:

Yes No

Was a disinfectant residual detected in the stored water or at the tank outlet?

Do you know of any mixing problems with the tank or reservoir?

Does the facility operate in "last in-first out" mode?

Was the tank or reservoir drawn down more than usual prior to OEL exceedance, indicating a possible discharge of stagnant water?

Was there a change in water level fluctuations that would have resulted in increased water age within the tank or reservoir?

Distribution System Evaluation Checklist

F. Does your system practice booster chlorination? Yes No
If NO, proceed to item G. If YES, was there an increase in booster chlorination feed rates? Yes No

G. Did you have customer complaints in the vicinity of the OEL exceedance? Yes No
If NO, proceed to item H. If YES, explain.

H. Did concern about complying with a rule other than Stage 2 DBPR, such as the Lead and Copper rule, the TCR, or any other rule constrain your options to reduce the DBP levels at this site? For example, are you limited by the need to maintain a detectable disinfectant residual in your ability to control DBP levels in the distribution system? Yes No
If NO, proceed to item I. If YES, explain below and consult EPA's *Simultaneous Compliance Guidance Manual* for alternative compliance approaches.

I. Conclusion

Did the distribution system cause or contribute to the OEL exceedance(s)? Yes No
 Possibly

If NO, proceed to evaluations of treatment systems and source water. If YES or POSSIBLY, explain below.

CHAPTER

13

Engineering Evaluations (Sanitary Surveys)

An engineering evaluation (or in Federal vernacular sanitary survey) consists of an on-site inspection followed by the preparation of an evaluation report regarding the overall performance of a public water supply. The purpose of the evaluation is to determine if a community water supply is complying with State Regulations and related standards and review operation and maintenance of the water supply. The primary goal of the evaluation is to identify sanitary risks that may interrupt the multiple barriers of protection at a water supply. The Illinois EPA recognizes the importance of these evaluations and strives to inspect all community water systems as frequently as possible (at least once every three years). The Illinois EPA staff has adopted procedures to ensure that the eight essential elements of a sanitary survey (as defined by the EPA/State Joint Guidance on Sanitary Surveys, the interim enhanced surface water treatment rule and ground water rule) are addressed.

Specifically, the Illinois EPA evaluates the following at the time of the survey:

- water source;
- treatment;
- distribution system;
- finished water storage;
- pumps, pump facilities and controls;
- monitoring, reporting and data verification;
- water system management and operations;
- operator certification with State regulations.

Additionally, as part of the evaluation, Illinois EPA inspectors conduct proactive reviews of community water system cross-connection control programs, security measures and financial (to a limited degree), managerial and technical capacity.

Significant Deficiencies

Following completion of the engineering evaluation, significant deficiencies are reported by mail to respective water supplies as alleged violations of state law and regulations. Water supply officials are required to formally respond to the Illinois EPA with a plan to correct these deficiencies on a

timely basis. (For practical purposes, these apparent violations are identified in Attachment A of a noncompliance advisory letter issued to the water supply owner and operator.) If corrective actions cannot be taken in a timely fashion or a dispute arises, the Illinois EPA may follow-up the noncompliance advisory letter with a notice of violation. Once the violation notice is issued, the formal enforcement process is initiated, as noted in the Illinois Environmental Protection Act.

Another significant element of the engineering evaluation involves technical recommendations made by Illinois EPA inspectors to aid in the water supply capacity development. (Not violations, these recommendations are identified in Attachment B of a noncompliance advisory letter issued to the water supply owner and operator.) The Illinois EPA inspectors point out to water system officials that failure to act on these recommendations may ultimately lead to possible contamination events and future violations as described previously.

Commonly asked questions/concerns:

Who is responsible for completing the engineering evaluation?

Believe it or not, while the Illinois EPA staff conducts all engineering evaluations in Illinois, each water system, according to federal and state regulations is responsible for having a current (every three year) evaluation of their system. The Illinois EPA has even been criticized by federal auditors for not taking enforcement action against water systems with outdated evaluations. Obviously, a lack of state staff is the reason for delays in these assessments and is not the fault of the water systems.

What should a water system do to prepare for an engineering evaluation?

Very little. If your water system is operating as it should, little preparation is necessary. You should have records of your systems performance and various program activities (e.g., cross-connection control, lead and copper, total coliform site plans, etc.) available for review. Other records that may be helpful are past evaluation reports, source water assessments, monitoring and maintenance records, construction details of system infrastructure components, and operations and management-related records. Furthermore, you may receive a capacity development survey to complete prior to your engineering evaluation visit. By completing this form, and reviewing the included elements, you may identify areas that need your attention. By completing this prescreening form, you will likely somewhat expedite the evaluation process.

On the day of my evaluation, what should I do and what should I expect?

Once again, very little. Be prepared to take some time with the Illinois EPA inspector and make sure to request identification when they arrive at your facility. There have been several incidents where unscrupulous individuals have passed themselves off as state employees. Once identification has been established to your satisfaction, open your door and your books.

You should expect the Illinois EPA inspector to be courteous and inquisitive. Depending on the complexity of your water supply and the thoroughness/accessibility of your records, you should anticipate spending up to several hours with the inspector. You should not be offended by probing questions or requests to check certain records. Remember, the stakes are high with direct public health consequences.

What do I do after my engineering evaluation?

Following your engineering evaluation (usually within 30 days), you will be formally presented in writing the Illinois EPA's findings regarding your water supply. As described above, you will need to closely review this document. Any apparent violations (Attachment A) contained within the noncompliance advisory must be formally addressed with a written corrective action plan submitted to the Illinois EPA Regional Office originating the evaluation. You will also be asked to respond to the recommendations identified in the evaluation of your water system (Attachment B).

Remember to be prompt. You will normally be asked to respond back to the Illinois EPA within 45 days of receiving your evaluation. Failure to respond promptly or completely on your part, no matter how minor you feel the apparent violation is, leaves no option for the Illinois EPA Regional Office staff but to refer the matter to the Central Office for issuance of a notice of violation. Once again, this initiates the formal enforcement process.

What if I don't understand something or disagree with a finding within the evaluation?

Call the Illinois EPA Regional Office and ask for help or discussion. If this fails, call the Springfield Central Office and ask to speak to the Division of Public Water Supplies Field Operations Section Manager. Please see the *Introduction* section of the Handbook for a listing of Illinois EPA contact information.

CHAPTER

14

Operator Certification (OpCert)

Drinking water operator certification is critical for the protection of public health and the maintenance of safe, optimal, and reliable operations of water treatment and distribution facilities. In order to safeguard the health and well being of the populace, every community water supply in Illinois must have on its operational staff at least one person “certified” as competent as a water supply operator under the provisions of the Public Water Supply Operations Act. This Chapter discusses the certification process.

Illinois EPA Assistance

Any questions concerning operator certification can be directed to:

Illinois EPA – Operator Certification
BOW/CAS #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276
Telephone: 217-785-0561
Fax 217-782-0075

The Illinois EPA is pleased to announce a web service specifically designed for both drinking water and waste water operators. An operator can now perform the following tasks via the Internet:

- Update personal information such as address, place of employment, email address, etc.;
- Manage/update training credit hours for drinking water certification renewal (no longer required to submit training forms to Illinois EPA unless specifically requested);
- Search approved training courses and training providers; and,
- Search examination schedule/locations.

To begin using this application, you must first register. To register, please read Appendix C.

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Operator Certification (OpCert) Overview

A "**water supply operator**" means any person trained in the treatment or distribution of water who has practical working knowledge of the chemical, biological, and physical sciences essential to the practical mechanics of water treatment or distribution and who is capable of conducting and maintaining the water treatment or distribution processes in a manner which will provide safe, potable water for human consumption.

Class "A" Certification

This level of certification includes individuals experienced/trained with coagulation, lime softening, or sedimentation as a part of the primary treatment process. This includes experience with pathogen removal/inactivation related treatment processes. All surface water facilities and ground water facilities under the direct influence of surface water require a Class A operator.

Class "B" Certification

This level of certification includes individuals experienced/trained with filtration, aeration and filtration, reverse osmosis, or ion exchange equipment as a part of the primary treatment process.

Class "C" Certification

This level of certification includes individuals experienced/trained with only chemical feeding as a part of the treatment process.

Class "D" Certification

This level of certification includes individuals experienced/trained with only pumpage, storage, or distribution of water.

With the exception of exempt community water supplies (CWS), all portions of a CWS system must be under the direct supervision of a properly certified water supply operator. The classification level of an individual the CWS is required to employ is dependent on the complexity of the water treatment process. For example, all surface water systems treatment process involves coagulation, possibly lime softening, and sedimentation as a part of its primary treatment process. Therefore, all surface water systems in Illinois must employ at least one individual with a Class A certification.

An "**exempt**" CWS is defined as any CWS that **meets all** of the following requirements:

- (1) consists only of distribution and storage facilities and does not have any collection and treatment facilities;
- (2) obtains all of its water from, but is not owned or operated by, a community water supply that is required to employ a Class A, Class B, Class C, or Class D community water supply operator;
- (3) does not sell water to any person; and
- (4) is not a carrier that conveys passengers in interstate commerce.

A CWS may hire an operator that has a “higher” certification level to operate a less complicated treatment process; however, a CWS may not hire an operator of a lower certification level to operate a more complicated treatment process. For example, a CWS may hire a Class A, B, C, or D operator to run/oversee a system which includes only storage and distribution of water. A CWS cannot hire only a Class C operator to run/oversee treatment that involves ion exchange. An ion exchange treatment process requires oversight of a Class B certified operator. A CWS may employ multiple operators of different classification levels; however, at least one operator must meet the minimum certification requirements to oversee operations.

To become certified in Illinois, a person must meet minimum experience requirements for each classification and pass a written examination. There are four levels of certification:

Class “A” Certification
<p>A "Class A" Water Supply Operator Certificate shall be issued to those persons who demonstrate the necessary skills, knowledge, ability, and judgment of the chemical, biological, and physical sciences essential to the practical mechanics of coagulation, lime softening, or sedimentation, and distribution in a manner which will provide safe, potable water for human consumption. This includes experience with pathogen removal/inactivation related treatment processes. All surface water facilities and ground water under the direct influence of surface water require a Class A operator. The operators will also demonstrate the necessary skills, knowledge, ability, and judgment of the treatment processes outlined under “Class B”, “Class C”, and “Class D” certification.</p>
<p><u>Education and Experience</u> Certificates require graduation from high school* or equivalent (GED) and not less than three (3) years of acceptable study, training, and responsible experience in Class A water supply operation or management.</p>

Class “B” Certification
<p>A "Class B" Water Supply Operator Certificate shall be issued to those persons who demonstrate the necessary skills, knowledge, ability, and judgment of the chemical, biological, and physical sciences essential to the practical mechanics of filtration, reverse osmosis, aeration and filtration, or ion exchange systems, and distribution in a manner which will provide safe, potable water for human consumption. The operators will also demonstrate the necessary skills, knowledge, ability, and judgment of the treatment processes outlined under “Class C” and “Class D” certification.</p>

Education and Experience

Certificates require graduation from high school* or equivalent (GED) and not less than three (3) years of acceptable study, training, and responsible experience in Class B water supply operation or management.

Class “C” Certification

A "Class C" Water Supply Operator Certificate shall be issued to those persons who demonstrate the necessary skills, knowledge, ability, and judgment of the chemical, biological, and physical sciences essential to the practical mechanics of chemical feeding and disinfection and distribution in a manner which will provide safe, potable water for human consumption. The operators will also demonstrate the necessary skills, knowledge, ability, and judgment of the treatment processes outlined under “Class D” certification.

Education and Experience

Class "C" Water Supply Operator Certificates require graduation from high school* or the equivalent (GED) and not less than one year of acceptable study, training, and responsible experience in Class C water supply operation or management.

Class “D” Certification

A "Class D" Water Supply Operator Certificate shall be issued to those persons who demonstrate the necessary skills, knowledge, ability, and judgment of the chemical, biological, and physical sciences essential to the practical mechanics of pumpage, storage, and distribution in a manner which will provide safe, potable water for human consumption.

Education and Experience

Class "D" Water Supply Operator Certificates require graduation from high school* or equivalent (GED) and not less than 6 months of acceptable study, training, and responsible experience in Class D water supply operation or management

**The requirement for graduation from high school or the equivalent shall be waived for CWS operators certified prior to July 9, 1999.*

Every CWS operator certified by the Illinois EPA shall be capable of performing his or her duties without endangering the health and well being of the consumers; shall be able to read and write English; and shall produce evidence acceptable to the Illinois EPA as to his or her character and his or her ability to maintain and operate properly the structures and equipment entrusted to the operator's care.

Responsible Operator in Charge (ROINC)

As mentioned previously, every CWS must employ a certified operator with the appropriate classification level. "Responsible Charge" means active, on-site charge or performance of operation of the treatment plant or distribution system of a public water supply or comparable water supply. The Owner or Administrative Contact (defined as any person who owns, leases, controls, or supervises a community water supply) of a CWS is required to appoint an operator of appropriate classification "in responsible charge" or "ROINC" to run and oversee daily water treatment and distribution operations. The ROINC is carbon copied on most Illinois EPA correspondence sent to the CWS. The ROINC may have limited signature authority (i.e., signing monthly operational reports, signing sample collection forms, sample site plans, issuing boil orders, etc.). The ROINC does not have signature authority for Violation Notice (VN) related enforcement documents or construction/operational permits UNLESS he/she is also designated as Official Custodian or Administrative Contact.

Some CWS choose to employ more than one ROINC. In this case, one ROINC may be in charge of the water treatment process while another person may be in charge of the distribution system. For example, a surface water system must employ a Class A operator (and designate them as treatment ROINC) to oversee the treatment process, but in addition, can employ a second operator with any level of certification to serve as the distribution system (no treatment) ROINC.

The Owner, Official Custodian, or Administrative Contact must complete a "Notification of Responsible Operational Personnel" form when adding or replacing ROINC's. This form can be found in *Appendix A* of this Chapter or at:

<http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/notification-of-ownership.pdf>

Contract Operators

A CWS may satisfy operator requirements by contracting the services of a certified operator of the required class (or higher). A CWS that employs a contract operator must have a written contract. As of August 1, 2012, any new/revised contract must be approved by the Illinois EPA and meet the requirements specified in *Appendix E*. Contracts existing prior to August 1, 2012 will be reviewed by an Illinois EPA Regional Field Inspector during the CWS routine engineering evaluation. Existing contracts must also meet all conditions listed in *Appendix E*. Please refer to *Appendix E* for the detailed requirements.

Meeting the Experience Requirements for Certification

Water supply operating experience is a key part of the Water Supply Operator Certification Law. The Law calls for a minimum of half the total experience of an operator to be in “responsible experience” of a public water supply. This is defined as follows:

- “Responsible” means “Active, on-site charge and/or performance of operation of the treatment plant or distribution system of a public water supply or comparable water supply system.”
- “Hands-on” means the applicant has been actually operating a water plant and/or working on the distribution system has performed routine tests, collected samples, completed operational reports, etc. It means that the knowledge possessed was, at least in part, gathered from daily operating experience, not merely from text book study.

Under the Water Supply Operator Certification Law, an operator certified as competent by the Illinois EPA is capable of performing duties without endangering the health and well being of the populous. To determine this competency, the Illinois EPA must evaluate whether the operator “has the ability to maintain and operate properly the structures and equipment entrusted to his care”. The Law specifically designates four requirements for evaluation of competency.

1. Past experience.
2. A minimum education level.
3. Evidence acceptable to the Agency as to character and applicable experience.
4. Successful completion of a written examination.

In evaluating applications for certification, the need has arisen to more specifically define what “responsible (hands-on) experience” means. This experience is critical in the evaluation of the operator since, of the total time required for certification as provided in Section 14, half the total experience must be hands-on. This is substantiated by referring to Section 15, Part C which states “Not more than **one-half** of the experience requirements for the various certificate classes shall be satisfied by the granting of any equivalent experience credit”. This equivalent experience credit can be in the form of seminars, short courses, and applicable correspondence courses or a baccalaureate degree in some curriculum associated with a phase of water supply operation. Further, this equivalent experience can only be credited with a corresponding amount of hands-on experience. The portion of equivalent credit can never exceed the amount of hands-on experience.

Responsible experience is therefore defined as the actual hands-on experience required to operate and maintain a water supply or comparable system. Ability in the actual use of water supply equipment to deliver drinking water or a comparable product must be demonstrated.

Character/experience as defined by the Illinois EPA refers to both the letter of verification and the required three character references. The letter of verification (see page 11) should be written by the operator's supervisor, water commissioner, or other village official. The person giving verification must be able to attest to the operator's competency in the waterworks field, include dates of employment as a water supply operator, and include a listing of the routine duties performed or the process-control decisions made by the applicant.

In summary, meeting the experience requirement means "hands-on" experience. "Hands-on" or necessary skills, knowledge, ability, and judgment means the knowledge acquired from daily operating experience rather than from text book study or supervisory observation or in other words, the applicant must have actually operated a water plant/treatment technology and/or has experience with all aspects of the distribution system.

As mentioned, to help an operator satisfy the experience requirements, the certification program allows up to one year of credit for non-college course works and up to 1.5 years for work leading up to a College degree (for a Baccalaureate Degree in a curriculum associated with a phase of water supply operation). However, this credit can never exceed one-half of actual "hands-on" experience.

Example
An operator has completed two years of coursework at the Environmental Resource Training Center (ERTC) in water treatment. If the operator was applying for a Class "A" certificate, this education may count up to one year (maximum allowed) of the 3 year's experience and training needed (the remaining 2 years must come from "hands-on" experience). Likewise, if the same operator was applying for a Class "D" certificate, this education may count up to 3 months (cannot exceed one-half of actual hands-on training) of the 6 month's experience and training needed (the remaining 3 months must come from "hands-on" experience).

For more information, see Title 35: Environmental Protection, Subtitle F, Chapter II, Part 680, Water Supply Operator Certification. This can be found at:

<http://www.ilga.gov/commission/jcar/admincode/035/03500680sections.html>

Operator Certification Written Examinations

Prior to April 1, 2014, an individual had to meet hands-on experience requirements prior to being eligible to take the certification examination. This has changed. Now at any time, an individual can request to take any one of the four certification exams (A, B, C, or D) without meeting the hands-on-experience (see "Eligibility Requirements for Examination" on page 9). Any person who wishes to take the water supply operator examination must submit an examination request to the Illinois EPA at least 30 days prior to the examination date. Instructions and the request form entitled "*Drinking Water Operator Certification Examination Request*" can be found in **Appendix F** of this Chapter.

All questions must be answered on the examination request form and the request form must be signed before any decision regarding exam eligibility will be issued. The examination request must be accompanied by a non-refundable exam fee of **\$10**.

The Illinois EPA shall review an examination request and shall determine a person's eligibility on the basis of the information contained in the request within 30 days of receipt of the request, unless that deadline is waived by the applicant. If the Illinois EPA determines a person is eligible to take the water supply operator examination, the requestor will be sent a **Letter of Admission (LOA)**. Each LOA shall be valid for one examination conducted within one year of the date of issuance. If the LOA expires, the applicant must submit another examination request form and the \$10 examination fee and the Illinois EPA will issue a new LOA. If the Illinois EPA determines a person is not eligible to take the water supply operator examination, the Illinois EPA will send written notice explaining the decision.

Any person who does not agree with the Illinois EPA's determination of his or her eligibility to take the water supply operator examination may make a written request to the Illinois EPA that the Advisory Board review the Illinois EPA's eligibility determination. The Advisory Board shall review the examination request and shall make a recommendation to the Illinois EPA for reconsideration or confirmation of the Illinois EPA determination.

Eligibility Requirements for Examination

Any person who meets the following requirements shall be eligible to take a water supply operator examination:

- 1) the applicant has graduated from high school or has the equivalent to a high school education;
- 2) the applicant is able to read and write English;
- 3) the applicant has submitted evidence of his or her character; and
- 4) the applicant has paid the required \$10 fee.

Any person who has had or has been exposed to typhoid fever or amoebic dysentery will be required to demonstrate that they are not a carrier. If the person is a carrier, that person will not be allowed to take the water supply operator examination.

Examination Admission

A person who has received an LOA must schedule the examination at least seven days prior to the examination. The Illinois EPA shall provide instructions for scheduling the examination with the LOA. Each person with an LOA will be admitted to one water supply operator examination. **The LOA and one state government issued photo ID must be presented to the examination proctor to take the examination (you will not be allowed to test without either).** The operator may also want to bring a calculator (non-programmable and incapable of storing alphanumeric data). **No cell phones are allowed in the testing center.**

Any person seeking to take a water supply operator examination for more than one class of certification must obtain an LOA for each water supply operator examination. A separate examination request and fee must be provided to the Illinois EPA for each examination before an LOA will be issued.

Examination Results

The Illinois EPA will send each person who takes the water supply examination notification of whether the person obtained a passing score. The passing score for each examination shall be 70 percent of the points available.

Passing test scores shall be valid for six years from the date of Illinois EPA notification of examination results. The Illinois EPA will not issue a Certificate of Competency to any person whose most recent qualifying examination scores are older than six years.

Reexamination

An individual who fails a written examination must submit a new examination request (see *Appendix F*), pay the examination fee, and obtain a new LOA before scheduling/retaking the examination. The Illinois EPA will issue an LOA for an examination once the new examination request and non-refundable fee of \$10 is received (please allow 15 days for processing).

Operator in Training (OIT) Classification

Any person who passes the water supply operator examination shall be considered an **“Operator in Training” (OIT)** for the class of examination passed. The Illinois EPA's notification of a passing score on a water supply operator examination shall constitute evidence that the person is an OIT.

A person may hold a Certificate of Competency for one class of certification and be an OIT for a higher class of certification.

There are no **renewal training requirements** for persons who hold only an OIT. The OIT classification is valid for six years from the date of Illinois EPA notification of a passing score. If the OIT has not obtained full certification after 6 years for the class of examination passed, the exam process must be started over.

As mentioned previously, the Owner or Administrative Contact of a CWS is required to appoint an operator of appropriate classification “in responsible charge” or “ROINC” to run and oversee daily water treatment and distribution operations. An operator with only OIT status cannot fulfill this requirement.

Certification Application

Once an operator has passed the written examination and feels he/she meets the hands-on experience eligibility requirements for certification, the next step is submitting an **“Application for Certification as a Public Water Supply Operator”** to the Illinois EPA along with a **\$30.00** application review fee. Please note that this fee is non-refundable

The “*Application for Certification as a Public Water Supply Operator*” is included in Appendix B of this chapter. It is also available on the web at:

<http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/application-certification.pdf>

Letter of Verification

To confirm “hands-on” experience has been met, the applicant must include a **Letter of Verification** with the application from a current or past employer(s) verifying the “hands-on” water treatment experience. This letter must be prepared by a water supply official, and must contain that official’s original signature (fax and photo copies of signatures are not acceptable). The letter must completely describe the duties performed as a water supply operator and/or as a distribution system operator and include the date the applicant began employment. To receive credit for any previous water treatment “hands-on” employment experience, the applicant must have a similar letter of verification from each of the previous employers which includes employment dates, a description of job duties, and an original signature. As part of the application, a **Letter of Verification template** has been provided. It is recommended this template be used to help expedite the review process.

Once the application review is completed (on average two weeks) and is determined that the applicant meets all eligibility requirements, the Illinois EPA will issue by mail a ***Certificate of Competency*** for the Certification Class. **The certificate will be valid for up to three years.**

If an applicant does not agree with the Illinois EPA’s determination of the applicant’s experience qualifications, they may write to the Illinois EPA and requesting that the application be presented to the Advisory Board for its review and recommendations (see Advisory Board, page 21 of this Chapter). The Advisory Board shall review these applications and shall make a recommendation to the Agency for reconsideration, or confirmation of the Illinois EPA’s determination.

Certificate Renewal and Expiration

Certificates must be renewed every three years. Operators must obtain a specified amount of on-going training in order to qualify for certificate renewal. **Class A and Class B** operators are required to obtain **30** renewal training credit (RTC) hours and **Class C and Class D** operators are required to obtain **15** RTC hours before the certificate expiration date.

By March 31st of the year a certificate is due to expire, the Illinois EPA will mail a **Renewal Application Form (RAF)** to the operator. The RAF shall specify the certificate expiration date, fees due, training requirements for certificate renewal, and an itemization of the completed training on file with the Illinois EPA.

The RAF must be signed and returned along with a **\$10.00 non-refundable renewal fee** to the Illinois EPA on or before June 30th. If the operator misses the June 30th deadline, a 30 day grace period will automatically be given. In this case, the operator will have until August 1st to submit the RAF and the \$10.00 renewal fee. If the RAF is received on or after August 1st, an additional \$10.00

restoration fee will be assessed (to make the total fee \$20.00).

Failure to meet the June 30th renewal date will result in expiration of the operator's current class certificate. In this case, the operator will no longer be recognized by the Illinois EPA as being certified. The certification will be expired until the renewal and restoration fee is paid and a new card is issued by the Illinois EPA.

The Illinois EPA will not process RAFs that are not signed by the operators seeking renewal. Falsification of a RAF shall result in denial of certificate renewal and/or certificate revocation. Failure to receive the renewal application from the Illinois EPA does not exempt a certified water supply operator from meeting the June 30th deadline.

Once the renewal application is processed and accepted, a wallet card/acknowledgement with the new certificate expiration date will be sent.

If an operator is short RTC hours by the certification expiration date, he will have 2 years from the expiration date to complete the needed training, submit the RAF, and pay the \$20 renewal/restoration fee. It is important to note though, the certification will remain expired until the conditions stated above are met and a new certification card is issued. A restored certificate expires on the original certificate expiration date.

Example

Joe Smith's certification for Class B operator expired July 1, 2011. As of June 30, 2011, he has 28 hours of renewal credit training hours (needs 30 hours). On July 1, 2011, his certificate expired. On January 5, 2012, he completed 4 hours of renewal credit training hours. Joe then contacts the Illinois EPA in writing to renew his Class B certification. Joe must then submit a \$10.00 renewal fee, \$10.00 restoration fee (\$20.00 total), and the Renewal Application Form. For the 2 hours he is missing, he must submit the training provider name, name of course or training event, training description or course content summary, drinking water related competencies developed or maintained, location of training, dates of training (beginning and ending), and total training hours completed. **Two of the four hours will be used to renew the expired certification and the other two hours can go towards meeting the next expiration period.** No exam is needed. Please note that once renewed, the certification period will still be the July 1, 2011 through June 30, 2014, BUT the effective date will be the date he receives the wallet card/acknowledgement of renewed certification from the Illinois EPA. The Illinois EPA will not recognize Joe's certificate as valid during July 1, 2011 through the date of our acknowledgement of renewed certification.

An individual whose certificate has been expired for **two (2) or more** years must reapply and obtain a passing score on an examination in order to be certified as a water supply operator.

In an extreme hardship case, the Illinois EPA may grant a waiver from the renewal training requirement when it is demonstrated and documented that it was impossible for an operator to obtain the required training. Examples of extreme hardship may include serious medical conditions or extended military service. Individuals applying for a training waiver must provide the Illinois EPA with a written request for an Advisory Board review within two years of the certificate expiration date.

Summary of Certification Events

Event	When	
Individual request Letter of Admission (LOA) into examination	At least <u>30 days</u> prior to the examination date Fee \$10	
Illinois EPA will send LOA or denial	Within 30 day of receipt	
Once operator receives Letter of Admission, call testing center for reservation	At least 7 days in advance of testing day	
Bring: -LOA -Photo Identification -Calculator (non-programmable and incapable of storing alphanumeric data)	Day of testing **NO CELL PHONES**	
Receive Operator in Training (OIT) status <i>Good for six years</i>	21 days after testing with passing grade (=>70%)	
After OIT obtains hands-on experience operator submits application for certification (+ <i>Letter of verification from employer</i>) (+ <i>Minimum of three references</i>)	Within 6 years of passing exam Fee \$30	
If Illinois EPA approves application, Certificate of Competency issued certification expires 3 years later (July 1 st)	N/A	
Continued educational training now required for renewal 30 RTC hours for Class A and B Operator 15 RTC hours for Class C and D Operator	Every 3 Years	
Illinois EPA Renewal Application form sent	By March 31 st of Expiration Year	
Operator completes and returns renewal application form	By June 30 th of expiration year	Renewal fee \$10.00
Renewal form returned late (current certificate expired)	Between 7/1 and 7/31	Grace period, renewal fee still only \$10.00
Renewal form returned late	After 7/31	Renewal fee \$10.00 restoration fee: <u>\$10.00</u> \$20.00
Renewed certificate issued	Within 45 days	N/A

Acceptable Training for Certificate Renewal

Until July 1, 2017, certified drinking water operators are required to obtain the following training in order to qualify for certificate renewal:

- 1) Class A and Class B operators are required to obtain **30 hours** of training during the 3 year certificate period before the certificate expiration date.
- 2) Class C and Class D operators are required to obtain **15 hours** of training during the 3 year certificate period before the certificate expiration date.

Beginning July 1, 2017, certified drinking water operators are required to obtain the following specified amount of training in order to qualify for certificate renewal:

- 1) Class A and Class B operators are required to obtain **30 hours** of training before the certificate expiration date. A minimum of 20 hours of training must relate to the technical aspects of water treatment and distribution. The Illinois EPA will accept a maximum of 10 hours of training relating to the professional responsibilities of the operator and to safety.
- 2) Class C and Class D operators are required to obtain **15 hours** of training before the certificate expiration date. A minimum of 10 hours of training must relate to the technical aspects of water treatment and distribution. The Illinois EPA will accept a maximum of 5 hours of training relating to the professional responsibilities of the operator and to safety.

Note: A Class A or Class B operator who fails to complete the 30 hours of renewal training, but completes 15 hours of renewal training may not be granted a renewal Certificate of Competency as a Class C or D operator.

Training Topics – Technical Aspects

Allowable training topics relating to potable water treatment and distribution include, but are not limited to:

- Coagulation and Flocculation
- Corrosion Control
- Demineralization
- Disinfection
- Distribution System
- Distribution System Facilities
- Drinking Water Permits, Laws, Rules and Regulations
- Drinking Water Related Computer Courses
- Electrical Maintenance
- Filtration
- Fluoridation

Ground Water Protection
 Ground Water Treatment
 Instrumentation
 Iron and Manganese Control
 Laboratory Procedures
 Membrane Technology
 Process Waste Handling and Disposal
 Pumps and Hydraulics
 Reservoir Management and Intake Structures
 Reverse Osmosis
 Sampling and Operating Reports
 SCADA Training
 Sedimentation
 Surface Water Protection
 Surface Water Treatment
 Taste and Odor Control
 Trihalomethanes
 Water Quality
 Water Softening
 Water Sources & Treatment
 Water Storage Facilities
 Water Supply Math and Chemistry Calculations
 Water Supply Operation and Maintenance
 Wells

Training Topics – Professional Responsibilities

Allowable training topics relating to the professional responsibilities of the operator and safety include, but are not limited to:

- Computer Workshops
- Emergency Planning and Preparation
- First Aid
- Safety
- Utility Administration Management

<p><u>Training Exclusions</u> The following are not considered training for the purpose of meeting the certificate renewal training requirements</p>
<ul style="list-style-type: none"> -Entertainment or recreational activities; -On the job work or apprenticeships; -Personal self-improvement courses; -Plant tours (unless drinking water related training is integrated into the tour); -Portions of meetings and conferences when drinking water related training is not provided (i.e., business session, lunch, breaks, etc.); -Time spent viewing conference/meeting exhibits; and -Travel time to and from training activities

Training may be provided by any of the variety of organizations equipped to provide such training, such as colleges and universities, technical institutes, educational units of governmental or industrial agencies, professional operator organizations, and equipment suppliers and manufacturers. Training that meets the criteria, regardless of the location of the training or training provider, is allowed for renewal training credit.

Acceptable training formats include classroom courses, teleconferences, courses offered via the Internet, workshops, seminars, correspondence courses, in-house training programs, and drinking water related training sessions at conferences/meetings of professional operator organizations. Training credit is also allowed for teachers or presenters of training for the first time a course is taught or a drinking water related presentation is made.

Training courses must be approved by the Illinois EPA. Training providers or sponsors must request approval of training from the Illinois EPA before the training is offered. All training courses approved will be assigned an Illinois EPA course number.

Training providers can contact the Illinois EPA to register on-line and have their courses approved on-line as well (normally within days). Go to:

<http://dataservices.epa.illinois.gov/operatorcertification/opcertwelcome.aspx>

If Internet access is not available, course approval may be requested by submitting a “**Training Provider Form**” prior to the training event. This form is also available on the web at:

<http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/operator-training-provider-application.pdf>

Appendix D provides instructions on navigating the OpCert web site and includes the “Training Provider Form”. Training providers should request course approval a minimum of 10 days in advance of training. Upon Illinois EPA approval, the training provider will receive a course/event identification (ID) number by email confirmation. **At the beginning of the course/event, the instructor should give this ID number to the attending trainees.** The trainee should keep this course ID number and record it on any documents submitted to the Illinois EPA. Operators should verify that classes are Illinois EPA approved for training credit BEFORE attending or paying registration fees. Please contact the Operator Certification Coordinator at 217-785-0561 for any questions concerning registration online and the approval process.

Drinking water related training from another state will be allowed for credit provided the above criteria are met. In-house training programs provided at drinking water supplies are also allowed for training credit provided all training criteria are met and proof (course ID number) of training documentation is provided to the trainees.

Meetings and Conferences of Professional Operator Organizations

Operators may receive training credit for certificate renewal by attending sessions presented at

meetings and conferences of professional operator organizations. In order to receive training credit, each training session attended during a meeting or conference must be added to the operators training credit records. Each operator can add his or her training credit hours online at: <http://dataservices.epa.illinois.gov/operatorcertification/opcertwelcome.aspx>

More information including instructions for online entry can be found in **Appendix C**.

If an operator does not have access to the Internet, they may submit via U.S. Mail an “**Operator Training Submission Form**” (see Appendix C) listing the courses they attended.

Please remember, conference/meeting providers should get **prior** Illinois EPA confirmation/approval for a meeting or conference. In most cases, a conference is a reoccurring event, prior to each time the event is held, Illinois EPA approval is needed since the agenda/speakers will change.

College Course Credit

Quarter hours or semester hours are usually assigned for courses offered by colleges and universities. For the purpose of calculating actual classroom hours for renewal training credit, the following conversions should be used:

- 1 Semester Hour = 15 hours of training credit
- 1 Quarter Hour = 10 hours of training credit.

Submission of Training Hours

Operators can manage and update training credit hours for their drinking water certification renewal online at: <http://dataservices.epa.illinois.gov/operatorcertification/opcertwelcome.aspx>

Those who manage their training credit hours online are not required to submit hard-copy training forms to Illinois EPA unless they are specifically requested. Please read **Appendix C** for web site instructions.

Operators that do not have access to the Internet may submit completed training for renewal credit to the Illinois EPA using **Operator Training Submission Forms** (Appendix C) or something comparable. Submission of training hours must occur prior to certificate renewal. **Operators must include the course ID number when submitting training documents to the Illinois EPA to receive credit (training documents will be returned if the course ID is missing).** If the operator does not have a course ID number, they should contact the training provider and request the course ID number. If the course has not been approved, the training provider should submit the necessary paperwork for course approval as discussed on the previous page.

The operator is responsible for documenting accumulated training hours as described on page 11 under “Certificate Renewal and Expiration”.

Operator Obligations - Proof of Training Records, Record Keeping, Audits

Operators are required to maintain their own proof of training records for a period of six (6) years from the date of the training. The Illinois EPA may audit proof of training records by random selection or when additional information is required. Failure to provide proof of training documentation when specifically requested by the Agency may result in denial of certificate renewal, denial of certificate restoration, or certificate revocation. Proof of training records must include:

- a) Records showing the name of the course or training activity, course ID number, name of the training provider, the instructor's or speaker's name, the location of training, the dates of training, and the total training hours completed (specified actual hours, Continuing Education Units, or Quarter Hours/Semester Hours);
- b) A program/course out-line, conference/meeting agenda, or narrative summary of training;
- c) Attendance verification records, such as completion certificates, diplomas, grade slips, registration payment receipts, or other documents to verify attendance for training where official documents are provided, or name, address, and telephone number of training provider where official documents are not provided.

Reciprocity

Reciprocity applies to operators seeking Illinois certification who would like to use the certification obtained in another state as experience/justification for Illinois certification. The Illinois EPA may grant water supply operators certified by another state, territory or possession of the United States, or any other country, reciprocal certification in Illinois without examination provided all requirements are met.

An individual seeking reciprocity must submit an application that includes the following information:

- 1) All applicants for reciprocity must submit the "Application for Certification as a Public Water Supply Operator" along with a \$30 application review fee, and a \$10 reciprocal certificate of competency fee,
- 2) Indicate the classification of Illinois certification for which the application is being made;
- 3) a detailed description of the qualifications to obtain certification from the other certifying jurisdiction;
- 4) evidence that the certificate issued by the other certifying jurisdiction is in good standing and has not expired;
- 5) a representative copy of the regulations and examination of the other certifying jurisdiction for comparison with Illinois' regulations and examinations; and

Applicants must include a letter granting the Illinois EPA permission to contact the certifying authority which issued the applicant's current certificate. This will enable the Illinois EPA:

- to determine the qualifications which the applicant was required to meet to become certified;
- to determine whether or not the certificate is in good standing; and
- to obtain a representative copy of the regulations and examination of the certifying authority for comparison with Illinois' regulations and examinations.

Reciprocity Determination

An applicant for a Class A, Class B, Class C or Class D Certificate of Competency who possesses a valid certificate issued under the laws of another certifying jurisdiction will be issued an Illinois Certificate of Competency, without examination, provided:

- 1) The Illinois EPA may determine by reviewing the other certifying jurisdiction's requirements that the applicant has met minimum standards equivalent to or more stringent than the standards specified in the Illinois EPA "*Application for Certification as a Public Water Supply Operator*" prior to receiving the certificate from the other certifying jurisdiction;
- 2) The other certifying jurisdiction that issued the certificate to the applicant accepts, by reciprocity, certificates issued by the Illinois EPA; and
- 3) The applicant resides in Illinois or is employed at a public water supply in Illinois.

An applicant satisfying (1) and (2) above, but failing to meet the residency requirements of (3), shall be issued a notice of intent to grant reciprocity. The applicant must submit proof of Illinois residency or employment at a public water supply in Illinois within 90 days after the issuance of the notice of intent. Upon receipt of such proof, the Illinois EPA shall issue an Illinois Certificate of Competency. Should that applicant fail to submit proof of the requirements in (3) within 90 days after issuance of the notice, the notice of intent shall become void.

Applications for reciprocity described above shall be reviewed by the Illinois EPA as follows:

- 1) The Illinois EPA shall review each applicant's education and experience to determine the levels of certification for which the applicant is eligible;
- 2) The Illinois EPA shall contact the certifying officials from the other certifying jurisdiction to determine the level of certification of the applicant for reciprocity and whether the certificate is currently valid;
- 3) The Illinois EPA Agency shall compare the applicant's qualifications and the other certifying jurisdiction's eligibility requirements to determine appropriate level of certification; if so, reciprocity shall be granted at the appropriate level;
- 4) If it is determined that reciprocity should be granted, the Illinois EPA shall issue the appropriate class of Certificate of Competency to the applicant and shall notify a certifying official from the other certifying jurisdiction; and
- 5) If it is determined that reciprocity should not be granted, the Illinois EPA shall notify the applicant and a certifying official from the other certifying jurisdiction, and provide reasons for the decision.

If a Certificate of Competency that has been issued through reciprocity is suspended or revoked, the Illinois EPA shall notify a certifying official from the other certifying jurisdiction.

An applicant who is denied reciprocity or who is given a lower level of certification than the one requested shall have an opportunity for a hearing with the Advisory Board. The Advisory Board shall review the determination and provide a recommendation to the Illinois EPA.

The Illinois EPA shall consider the Advisory Board's recommendation and notify the applicant in writing of the Agency's final decision within 45 days after the receipt of the Advisory Board's recommendation. This decision is appealable to the Illinois Pollution Control Board.

An applicant who does not have a valid certificate from another state but has “hands-on” experience from another state must submit the “**Application for Certification as a Public Water Supply Operator**” along with a \$30 application review fee and follow the process as if a new operator.

Operator ID Numbers

In the past, the operator’s ID number was their social security number. This is no longer the case. The Illinois EPA will assign a random identification (ID) number to each operator who is certified or applies to take a water operators certification exam. This number should be recorded on all documents submitted to the Illinois EPA. An operator’s social security number should never be recorded on any forms or documents submitted to the Illinois EPA. Most Illinois EPA certification related correspondence sent to the operator will include the operator’s ID number.

Operator Certification Advisory Board

The operator certification advisory board assists in the formulation and review of the policies of the Illinois EPA Operator Certification Program. In addition, the Advisory Board will make recommendations and provide the Illinois EPA with technical advice and assistance as needed.

The Advisory Board consists of the Illinois EPA Director (or representative) and five other members appointed by the Governor. The five appointed members are persons having an active interest and wide background in water supply management and operation from a practical and technical standpoint. The Advisory Board meets at least once a year.

In matters dealing with operator sanctions, the Advisory Board shall be notified of the hearing. A copy of the hearing transcript shall be sent to the operator and to the Advisory Board. The Advisory Board shall recommend on the basis of the hearing transcript whether sanction is appropriate.

The Advisory Board also has the authority to review contested Illinois EPA reciprocity determinations. The Advisory Board must provide applicants who are denied reciprocity with an opportunity to appear before the Board. The Advisory Board shall review the decision to deny reciprocity and must provide a recommendation to the Agency.

Contesting Illinois EPA Renewal, Restoration, and Training Determinations

Operators, training providers, and training sponsors may contest Illinois EPA determinations regarding denial of certificate renewal or restoration, denial of training credit, and determinations regarding the amount of training credit to be awarded for a specific training event. Contested Illinois EPA determinations will be forwarded to the Advisory Board for recommendation. Individuals contesting an Illinois EPA determination must provide the Agency with a written request for an Advisory Board review within 30 days of the Illinois EPA determination. The written request shall state the name and address of the individual, the Illinois EPA determination being contested, and any information to support the individual's position. For more information concerning contesting Illinois EPA determinations, please contact the Operator Certification Coordinator at 217-785-0561.

Operator Sanctions

Certification shall be subject to sanctions of revocation or suspension upon a showing of cause by a preponderance of the evidence. Such sanctions shall not be a bar to any civil or criminal proceedings. Causes for sanction shall include but are not limited to:

- a) having obtained, renewed or restored, or attempted to obtain, renew or restore, a Certificate of Competency by fraud or deceit;
- b) any gross negligence, misconduct, or incompetency in the operation of a public water supply;
- c) falsification of reports required to be submitted to the Illinois EPA;
- d) willful violation of the Environmental Protection Act or any rules there under; or
- e) a final judgment in a civil action or a conviction in a criminal action that the operator has performed any of the acts listed in subsections (a) through (d) above.

If the Illinois EPA determines that a sanction procedure is warranted, either on the basis of a valid complaint or on its own motion, it shall notify the operator by certified mail.

For more information concerning Operator Sanctions, please contact the Operator Certification Coordinator at 217-785-0561.

Appendix A

Chapter 14 Operator Certification “Notification of Responsible Operational Personnel” form

This form is also available on the web at:

<http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/notification-of-ownership.pdf>



Illinois Environmental Protection Agency

Notification of Responsible Operational Personnel

Please use this form to make community water supply (CWS) contact changes.

CWS Name: _____ Number : **IL** _____

REASON FOR CHANGE (check all applicable boxes)

<input type="checkbox"/>	Change in Owner and/or Official Custodian Information	<input type="checkbox"/>	Change in Administrative Contact Information	<input type="checkbox"/>	Change of Sample Collector Information
<input type="checkbox"/>	Change in Responsible Operator in Charge Information	<input type="checkbox"/>	Updating phone, mailing address, and/ or E-Mail information only	<input type="checkbox"/>	This is a NEW CWS

OWNER (OW) If the CWS is **privately owned**, identify the **individual** (and contact information) exercising direct supervision over the CWS in accordance with 35 Ill. Adm. Code 603.101 (e.g., Mobile Home Park, Apartment Complex, or Private Business, etc.). This individual must sign.

If the CWS is publically owned or owned by private corporation, or regularly organized body, identify the entity exercising direct supervision over the CWS in accordance with 35 Ill. Adm. Code 603.101 (e.g., Municipality, Water District, Water Corporation, Water Cooperative, Conservancy District, Subdivision, or Association). If an entity, **only complete Entity Name, Business #, and Address** (no signature required) and then complete OFFICIAL CUSTODIAN (OC) box.

Name (Individual) <u>or</u> Entity Name (Municipality, Water District, Assoc., etc.)	Business Address
Title: <i>(if applicable)</i> _____	_____
Cell#: (____) _____ Business#: (____) _____	_____
Home#: (____) _____ Fax#: (____) _____	_____
E-Mail: _____	_____
If Individual, Signature: _____ <i>(Signature of Individual)</i>	Date: _____

OFFICIAL CUSTODIAN (OC) If the owner is an Entity as listed above (Municipality, Water District, Water Corporation, Water Cooperative, Conservancy District, Subdivision or Association, etc.) identify a person who acts on behalf and is responsible for the supply. This person should be an elected official of a municipality, member of the board, or an officer of the organization that runs the supply (mayor, president, chairman, etc.).

Name: <i>(print)</i> _____	Business Address
Title <i>(if applicable)</i> _____	_____
Cell # (____) _____ Business#: (____) _____	_____
Home# (____) _____ Fax#: (____) _____	_____
E-Mail: _____	_____
Signature: _____ <i>(Signature of Official Custodian)</i>	Date: _____

ADMINISTRATIVE CONTACT (AC) An owner or official custodian may designate an administrative contact to oversee daily managerial operations of the CWS. Any notice provided by the Agency to the AC shall be considered notice to the owner or official custodian. These notices may include, but are not limited to Sample Demand Letters, Public Notice Advisories, Violation Notice, Notice of Intent to Pursue Legal Action, and notices of regulatory requirements and permitting transactions.

Name: <i>(print)</i> _____	Business Address
Title: _____	_____
Cell#: (____) _____ Work#: (____) _____	_____
Home#: (____) _____ Fax#: (____) _____	_____
E-Mail: _____	_____
Signature: _____ <i>(Signature of AC)</i>	Date: _____

Signature of the Owner or Official Custodian is required before Illinois EPA will add or change an AC contact:

I hereby duly authorize _____ (print) as my Agent, with actual authority to conduct legal transactions arising from the daily managerial operations of the CWS on my behalf.

Signature: _____ <i>(Signature of Owner or Official Custodian)</i>	Date: _____
--	-------------



Illinois Environmental Protection Agency

RESPONSIBLE OPERATOR IN CHARGE (ROINC) Identify the certified operator(s) designated pursuant to 35 Ill. Adm. Code 603.103 in responsible charge of the CWS operations. The ROINC runs and oversees daily water treatment and distribution operations. A CWS must select only one designated ROINC for treatment and one designated ROINC for distribution. The treatment ROINC and distribution ROINC may be the same person.

Current ROINC on File: _____ (print name)
Please check box that best describes status of current ROINC on File

<input type="checkbox"/>	Current ROINC on file will no longer be employed or under contract with PWS effective _____
<input type="checkbox"/>	Current ROINC on file is still working with PWS but will no longer serving as ROINC.

NEW ROINC 1 Please Check One: Full Time Employee or Contract Operator (*include copy of contract*)

Name: (print) _____ Business Address _____

Circle Certificate Class: A B C D _____

Circle One: Treatment & Distribution Treatment Only Distribution Only _____

Cell#: () _____ Work#: () _____

Home#: () _____ Fax#: () _____

E-Mail: _____

Signature: _____ Date: _____
(Signature of ROINC 1)

NEW ROINC 2 Please Check One: Full Time Employee or Contract Operator (*include copy of contract*)

Name: (print) _____ Business Address _____

Circle Certificate Class: A B C D _____ Circle One: Distribution Only _____

Cell#: () _____ Work#: () _____

Home#: () _____ Fax#: () _____

E-Mail: _____

Signature: _____ Date: _____
(Signature of ROINC 2)

Signature of Owner, Official Custodian, or Administrative Contact is required before Illinois EPA will add or change a ROINC contact(s).

As Owner/Official Custodian or Administrative Contact, I _____ (print name), accept and assign the duties and responsibilities for the proper operation and maintenance of the public water supply facilities by the operator(s) listed above as being in responsible charge.

Signature: _____ Date: _____
(Signature of Owner/Official Custodian or Administrative Contact)

Sample Collector/Bottle Recipient Identify the person employed by the CWS that will collect samples and complete the paperwork associated with sampling.

Name: _____ (print) Bottle Mailing Address _____

Cell#: () _____ Work#: () _____ **No P.O.Box Numbers Allowed**

Home#: () _____ Fax#: () _____

E-Mail: _____

Signature: _____ Date: _____
(Sample Collector's Signature)

Completion of this form shall indicate acceptance of the duties and responsibilities for the proper operation and maintenance of the public water supply facilities by both the owner or official custodian and the certified operators designated as being in responsible charge pursuant to 35 Ill. Adm. Code 603.101(d). Please be advised that it is the responsibility of the owner, official custodian and the certified operator(s) in responsible charge to notify this office within 15 days of any changes in responsible personnel. Completion and submittal of this form will satisfy the notification of responsible personnel requirements of Title 35: Environmental Protection, Subtitle F: Public Water Supplies, Chapter I: Pollution Control Board, Part 603, Sections 603.101, 603.102, and 603.103.

Be sure to retain copies of this document for your files. Should you need additional forms, please call (217)785-0561 or download at <http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/notification-of-ownership.pdf>. Return this completed form to:

Illinois Environmental Protection Agency, Bureau of Water #19, 1021 North Grand Ave East, P.O. Box 19276, Springfield, IL 62794-9276

This Agency is authorized to require this information under 415 ILCS 5/4(b)(2012). Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$1,000.00. Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Appendix B

Chapter 14 Operator Certification “Application for Certification as a Public Water Supply Operator” Form

This form is also available on the web at:

<http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/application-certification.pdf>



Illinois Environmental Protection Agency

APPLICATION FOR CERTIFICATION AS A PUBLIC WATER SUPPLY OPERATOR

In order to safeguard the health and well being of the populace, every community water supply in Illinois shall have on its operational staff one natural person certified as competent as a water supply operator under the provisions of the Public Water Supply Operations Act 415 ILCS 45.

INSTRUCTIONS

1. Attach a check, draft or money order made payable to the Illinois Environmental Protection Agency.
The fee to review and process this application is \$30. This fee is non-refundable.
2. Make certain that your **Letter of Verification** and payment are enclosed with your completed application.
3. Return completed application and payment to:

**Illinois Environmental Protection Agency
Operator Certification/BOW/CAS #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276**

APPLICANT INFORMATION

CAREFULLY READ AND COMPLETE ALL ITEMS (TYPE OR PRINT)

Name-Last, First, Middle Initial		Mr. Ms. (circle one)	Operator ID (if known)	
HOME MAILING ADDRESS				
Street		City		State
				Zip
Home Phone Number (include area code)	Date of Birth ____/____/____		County in Which You Live	
Business Phone Number (include area code)	E-MAIL Address			

EDUCATION

Lack of completion of high school or GED certificate **will prevent** certification as a public water supply operator.

1. Are you a High School Graduate? (Circle One) YES (Year Obtained _____) NO
2. If No, have you obtained a GED Certificate? (Circle One) YES (Year Obtained _____) NO
3. Have you obtained a 4-year college degree? YES NO

If YES to question 3, complete the following information for each school attended:

<u>Name of College or University</u>	<u>Date Graduated</u>	<u>Degree</u>

GENERAL QUESTIONS

No.	Question	Circle One or Fill in Blank	
1.	Have you ever had Typhoid Fever <u>or</u> lived with an individual who has had Typhoid Fever?	YES NO	
2.	Have you ever had Amoebic Dysentery (AD) <u>or</u> lived with an individual who has had AD?	YES NO	
3.	Can you read and write English?	YES NO	
4.	Have you ever been sanctioned pursuant to the Water Supply Operations Act?	YES NO	
5.	Have you ever been convicted of violating the Illinois Environmental Protection Act?	YES NO	
6.	Have you ever been convicted of terrorism, making a terrorist threat, or causing a catastrophe?	YES NO	
<i>Please thoroughly explain all "yes" responses for Items 1-6 on a separate piece of paper and attach to this application.</i>			
7.	What level of certification are you requesting? (circle only one)	A B C D	
8.	When did you pass the written exam for the certification level that you are requesting? MM/YY <i>*If you are applying for Illinois certification via reciprocity (hold a valid drinking water certificate in another state), you do not need to complete this question.</i>	___ / ___*	
9.	Do you presently hold any certifications?	YES NO	
<i>If yes, please provide the following information for all certifications</i>			
Certification Level / Name <i>Example: Operator-in-Training (OIT) Cert C</i>	Date Certified <i>3/1/2014</i>	Issued By <i>Illinois EPA</i>	Expiration Date <i>06/30/2020</i>

EQUIVALENT TRAINING

“Hands-on” or necessary skills, knowledge, ability, and judgment mean the knowledge acquired from daily operating experience rather than from text book study or supervisory observation, or in other words, the applicant must have actually operated a water plant/treatment technology and/or has experience with all aspects of the distribution system. However, there are certain types of school courses or training workshops (drinking water related) that can be used to help an operator meet minimum “hands-on” experience credit. This specific training is called equivalent training.

The certification program allows up to one year credit for non-college course work and up to 1.5 years for work leading up to a college degree (for a Baccalaureate Degree in a curriculum associated with a phase of water supply operation). However, credit for equivalent training can never exceed one-half of actual “hands-on” requirements. If you would like for us to review past college courses you have completed and passed for possible credit, please include a copy of your college transcript.

If you feel you may have earned equivalent training by attending an Illinois approved course as described above, please complete the last page of this application.

CURRENT PUBLIC WATER SUPPLY OPERATOR EXPERIENCE

LEAVE THIS SECTION BLANK IF NOT CURRENTLY EMPLOYED AS A PWS OPERATOR

Current Employment – Complete the following section as related to your current water supply employment. If you had more than one position with the same employer, complete this section to reflect your present position only. Other positions must be considered as ‘Past Employment’ (see next page) and appropriately listed in the section for Previous Public Water Supply Operator Experience. YOU MUST DESCRIBE IN DETAIL YOUR JOB DUTIES AND RESPONSIBILITIES AS A WATER PLANT OR DISTRIBUTION SYSTEM OPERATOR. **Without a description of hands-on water treatment experience, your application cannot be accepted.**

Name of Public Water Supply (PWS) Where Currently Employed		PWS Facility Number
PWS Mailing Address		
PWS Phone Number (include area code)	Name of Person You Report To	
Start Date of Employment	Employment (Circle One) FULL Time (>20 hours/week) PART Time Contractual	Hours Worked Per Week at PWS
<i>To help us determine your level of hands-on experience, please complete the table below by checking the column that best describes your level of experience with the activity listed</i>		
	Level of Experience	
Activity	NONE	I am familiar and is an activity I routinely perform or assist others with
Coagulation (A operator activity)		
Lime Softening (A operator activity)		
Sedimentation (A operator activity)		
Pathogen Removal/Inactivation (A operator activity)		
Reverse Osmosis (B operator activity)		
Aeration (B operator activity)		
Filtration (B operator activity)		
Ion Exchange (B operator activity)		
Chemical Feeding (C operator activity)		
Disinfection (C operator activity)		
Pump Operation (D operator activity)		
Storage (D operator activity)		
Distribution (sampling, pipes, main repairs, etc.) (D operator activity)		
Other Job Duties not Listed Above (BE SPECIFIC)		

PREVIOUS PUBLIC WATER SUPPLY OPERATOR EXPERIENCE

COMPLETE THIS SECTION ONLY IF PAST EMPLOYMENT WAS AS A PWS OPERATOR

PREVIOUS Employment – Complete the following section as related to past water supply employment. YOU MUST DESCRIBE IN DETAIL YOUR JOB DUTIES AND RESPONSIBILITIES AS A WATER PLANT OR DISTRIBUTION SYSTEM OPERATOR. Without a description of hands-on water treatment experience, your application cannot be accepted.

Name of Public Water Supply (PWS) Where Previously Employed		PWS Facility Number
PWS Mailing Address		
PWS Phone Number (include area code)	Name of Person You Reported To	
Start Date and End Date of Employment at PWS _____ to _____	Employment (Circle One) FULL Time (>20 hours/week) PART Time Contractual	Hours Worked Per Week at PWS
<i>To help us determine your level of hands-on experience, please complete the table below by checking the column that best describes your level of experience with the activity listed</i>		
	Level of Experience	
Activity	NONE	I am familiar and is an activity I routinely perform or assist others with
Coagulation (A operator activity)		
Lime Softening (A operator activity)		
Sedimentation (A operator activity)		
Pathogen Removal/Inactivation (A operator activity)		
Reverse Osmosis (B operator activity)		
Aeration (B operator activity)		
Filtration (B operator activity)		
Ion Exchange (B operator activity)		
Chemical Feeding (C operator activity)		
Disinfection (C operator activity)		
Pump Operation (D operator activity)		
Storage (D operator activity)		
Distribution (sampling, pipes, main repairs, etc.) (D operator activity)		
Other Job Duties not Listed Above (BE SPECIFIC)		

EXPERIENCE VERIFICATION REFERENCES

List the name, address, and telephone number of three (3) individuals who can verify your experience. If you do **not** list three (3) individuals, your application will be returned to you.

Name	Address	Telephone
1.		
2.		
3.		

LETTER OF VERIFICATION

A letter of verification **MUST** accompany your application. **The last page of this application is a Letter of Verification template.** This template must be prepared by a water supply official, and must contain that official's original signature. (Fax and photo copies of signatures are not acceptable.) The letter of verification must **completely describe your duties** as a water supply operator and/or as a distribution system operator. This letter must include **the date you began your employment in water treatment and/or distribution.**

To receive credit for previous water treatment employment, you must have a similar letter of verification **from each** of your previous employers which includes your employment dates, a description of your job duties, and an original signature.

NOTE: If the proper Letter of Verification is not submitted, or if required information is not included in the Letter of Verification, your application will be denied.

APPLICANT SIGNATURE

*****READ CAREFULLY BEFORE SIGNING*****

I hereby certify that the statements made in this application are true and accurate to the best of my ability. I understand that any statement made by me that is not accurate may be grounds for ineligibility for this certificate or loss of this certificate. Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Signature: _____

Date: _____

Operator Certification Equivalent Training Form

Include this form with your Application for Certification as a PWS Operator; use a separate form for each course. College courses may be eligible for equivalent training credit. If applicable, submit copy of transcripts with Application.

Name of Training _____		
Name of Training Provider _____		
If training was pre-approved by the Illinois EPA, there would be an Illinois EPA course number assigned. If you have this course number, enter the number here: _____		
Beginning Date of Training _____		Ending Date of Training _____
Location _____		
If applicable, approximately how many times did you meet during a <u>day</u> / <u>week</u> / <u>month</u> (circle one)? _____		
During each session, approximately how much time was spent? _____ hours _____ minutes		
If this was an Internet, DVD, or PC course, approximately how much time was spent per week on the course? _____ Hours _____ Minutes		
Any optional comments on training frequency: _____		
What best describes the format/type of training completed? (Circle one)		
Conference/Seminar	Classroom/College	On-line Class
Other (please describe) - _____		

It is important for us to know the general topics covered in this training. Please complete the table below by checking the appropriate column.

Activity	Not Covered	Covered
Coagulation (A operator activity)		
Lime Softening (A operator activity)		
Sedimentation (A operator activity)		
Pathogen Removal/Inactivation (A operator activity)		
Reverse Osmosis (B operator activity)		
Aeration (B operator activity)		
Filtration (B operator activity)		
Ion Exchange (B operator activity)		
Chemical Feeding (C operator activity)		
Disinfection (C operator activity)		
Pump Operation (D operator activity)		
Storage (D operator activity)		
Distribution (sampling, pipes, main repairs, etc.) (D operator activity)		

Did this course include any hands-on experience with actual drinking water related equipment? Yes No
If yes, please describe in detail what was taught (use reverse side if needed): _____

Approximately, what percentage of this course was hands-on with drinking water related equipment? _____%

Please attach any relevant documentation such as an Agenda that will help describe training and attach any certificates of completion.

LETTER OF VERIFICATION

This template must be completed by a water supply official, and must contain that official's original signature. (Fax and photo copies of signatures are not acceptable.) The letter of verification must completely describe the duties of the applicant.

Information about official completing this form:

Water Supply Official's Name: _____
 Position or Title: _____
 Water Supply Name: _____
 Water Supply Number: _____
 Phone Number: _____
 Email Address: _____

Information about applicant:

This letter of verification is for: _____
 Start Date of Employment: _____
 End Date of Employment: _____ *(leave blank if still employed)*
 Circle one that best describes his/her employment status: Full Time (=>20 hours per week)
 Part Time: _____ *(include approximate hours per week)*

To help us determine level of hands-on experience, please complete the table below by checking the column that best describes the activities the applicant is/was routinely involved in:

Activity	Applicant's Level of Experience	
	NONE	Familiar and is an activity he/she routinely performs or assist others with
Coagulation (A operator activity)		
Lime Softening (A operator activity)		
Sedimentation (A operator activity)		
Pathogen Removal/Inactivation (A operator activity)		
Reverse Osmosis (B operator activity)		
Aeration (B operator activity)		
Filtration (B operator activity)		
Ion Exchange (B operator activity)		
Chemical Feeding/Dosage (C operator activity)		
Disinfection (C operator activity)		
Pump Operation (D operator activity)		
Storage (D operator activity)		
Distribution (sampling, pipes, main repairs, etc.) (D operator activity)		
Other Job Duties not Listed Above (BE SPECIFIC). Please write on reverse side or add attachment if additional space is needed.		

Signature of PWS Official

I hereby certify that the statements made on this form are true and accurate to the best of my ability.

Signature: _____ Date: _____

Appendix C

Chapter 14 Operator Certification

Web Instructions – Registration & Updating Training Credit Hours *Operator Training Submission*

Certificates must be renewed every three years. Operators are required to obtain a specified amount of training in order to qualify for certificate renewal. Class A and Class B operators are required to obtain 30 renewal training credit (RTC) hours and Class C and Class D operators are required to obtain 15 RTC hours before the certificate expiration date.

Water operators can submit/update the training courses they attended at the following web site. Registration instructions begin on next page.

Previously, water operators submitted their training courses/credits on prescribed Illinois EPA forms (“**Operator Training Submission Form**”). If you go online and log in your training credits, you no longer have to submit these paper forms. However, you are required to keep these forms and/or similar proof of training for your own personal records and may be asked to submit/provide them during a records audit.

If you do not have access to the Internet, completed **Operator Training Submission Forms** or something comparable may still be submitted to the Illinois EPA. Submission of training hours must occur prior to certificate renewal. The Operator Training Submission Form is attached to the last page of this Appendix and is also available on the web at:

<http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/operator-training-submission-form.pdf>

Note: Training providers, or training sponsors, must get Illinois EPA approval for each course they offer. Upon Illinois EPA approval, the training provider will receive a **course identification (ID) number**. At the beginning of the course/event, the instructor should give this ID number. The trainee should keep this course ID number and record it on any training documents.

Registration

Step 1: Register

Go to: <http://dataservices.epa.illinois.gov/OperatorCertification/OpCertWelcome.aspx>

You will see the “Operator Certification Login” page. Click on the green button (bottom right) “Register”, which takes you to the “**Register**” page.

Next, read and check the box “**I accept terms of this agreement**”.

Next, check the box “**Operator**”.

Once you select the “**Operator**” box, you will be asked to enter some of your contact information. All fields must be completed. A couple of things to remember/consider:

- 1) If you currently are certified and/or have an Illinois EPA identification number, be sure to include it in the box. If your ID number begins with zeros, you do not have to type these in. Leading zeros have been eliminated in the new system.
- 2) The email address you enter in the first box is considered your USER NAME when logging into the website. Make sure it is a valid email capable of receiving email correspondence from this website and IEPA staff.
- 3) All fields are required and must be filled in.
- 4) Your password must be at least 7 characters with **1 non-alphanumeric character** (some examples of non-alphanumeric characters are @, #, \$, *, !). An example of acceptable password: Water32#

Once you have entered all the contact information, click the “**Create User**” box at the bottom right hand corner. Then click “**Continue**” when prompted. After completing the above steps, you will be automatically logged out of the application until you are approved by the Illinois EPA.

The Illinois EPA MUST approve your registration before you can log back into the application. Do **NOT** try to log back in until you receive an email from the Illinois EPA indicating that you have been approved. Please only register **one time**. Your Illinois EPA approval email should be received within 72 hours of registration.

Step 2: First Login after Illinois EPA Approval

Go to: <http://dataservices.epa.illinois.gov/OperatorCertification/OpCertWelcome.aspx> and click **Login**. (Log in with the same email address and password that you used during registration)

When you first Login after you have been approved, the “*My Home*” page will appear. If you do not see this information, call the Illinois EPA OpCert Coordinator at 217-785-0561.

On the “*My Home*” page, click the “**Personal Information**” tab that is just below and all the way to the left under the “*My Home*” page header. This will open the contact information page. You should review

and update all fields. Please note; the information that is currently in the boxes was migrated from the legacy tracking system; therefore, some of the information may not look correct or make sense. Simply make corrections and then click the “**Save**” tab at the bottom right to update your records.

Next, on the “*My Home*” page, click the “**Experience**” tab that is just below the “*My Home*” page header. This will open the experience/work history page. You should review and update all fields. Again note: the information that is currently in the boxes was migrated from the legacy tracking system; therefore, some of the information may not look correct or make sense. Simply make corrections and then click the “**Save**” tab at the bottom right to update your records.

After you complete the two processes above, feel free to explore. If you come across any data that is incomplete or needs updated, simply edit the data and remember to always click the save button that is on the bottom left.

Adding Training Credit Hours for Certificate Renewal

You must complete steps 1 and 2 above before you can add training credit hours to your file.

- 1) After login, you will be taken to the “*My Home*” page. Click the “**Assigned Training**” tab that is just below the “*My Home*” page header. This will take you to the “Assigned Training Courses” page. While on this page, you will see all course/training credit hours that have been recorded to-date for your current three-year certification renewal cycle. For example, if you must renew your certification by 7/1/2014, all courses which you have attended since 7/1/2011 will appear on the page. If nothing has been recorded, you will see the message “No Data Found”.
- 2) When on the “Assigned Training Courses” page, click the “**Add Renewal Training**” tab. A Search menu will appear. You will need to input the **course number**. If you do not know the course number, you will need to contact the course provider for the number. All courses must be approved before the actual training has occurred (and course number assigned).
- 3) Once you perform the search above, the course you attended should appear. Just to the **LEFT of the Provider name (on the same row)**, click the small “select” button. Once this select button is clicked, the course name will change to a **BOLD** type. Once the course name is bolded, click the larger “Select” button located on the bottom right of the window.
- 4) Once you click the “**Select**” button on the bottom right, another pop-up window will appear. You must then enter the date you attended the training (Date Course Taken) and the town in which the event occurred (Location). Once you entered this information, click the “**Save**” tab. Once you click the “**Save**” tab, the course will appear on your “Assigned Training Courses” page.

Things to Know When Adding Training Events

- 1) If a single training course goes beyond one day, enter the first day of training in the **Date Course Taken** box.
- 2) If the course is a PC or Internet course, enter the town in which you live in the Location box.
- 3) When you attend training, always ask for the course ID number. All training courses must be pre-approved. Course ID numbers are always assigned during the approval process. If you need to know a course ID number, please contact the Training Provider and not the Illinois EPA. If the course was not pre-approved, only the Training Provider can have the course approved and number assigned (see Appendix D).
- 4) A set amount of hours/minutes for each course are approved and cannot be adjusted by the operator. The amount of time approved was based on what the Trainer Provider requested. If a course goes plus or minus 10 minutes, the Training Provider (not the operator) must call the Illinois EPA and have the time adjusted. Therefore, it's important that you stay at the course for the entire time allotted.
- 5) If you cannot find a course when trying to add training credit to your record OR the number of approved minutes does not match the amount of time you spent at the course, you will need to submit a hard copy "Operator Training Submission Form" and we will manually add it for you. You do not need to call the Illinois EPA, simply submit the form and we will make the adjustments.

If you do not have access to the Internet, operators may still submit completed training for renewal credit to the Illinois EPA using the "**Operator Training Submission Form**" or something comparable. Submission of training hours must occur prior to certificate renewal. The Operator Training Submission Form is attached.

Since your training credit hours are now available to be viewed via the Internet, the Illinois EPA will no longer mail out an annual summary letter to operators UNLESS your certificate expires that year. In this case, you will still receive a certificate renewal application and course summary in March. If you do not have access to the Internet, you may call 217-785-0561 and request a course summary be mailed.

If you have any questions, please call the OpCert Coordinator at 217-785-0561.



Illinois EPA – Operator Certification
 BOW/CAS#19
 1021 North Grand Avenue East, PO Box 19276
 Springfield, Illinois 62794-9276 Telephone 217-785-0561



OPERATOR TRAINING SUBMISSION FORM

Operator Name *(please print)* _____

Water Operator ID Number (not Social Security Number) _____

*Course ID Number	Name of Company or Organization Providing Training		Course Training Name
Date(s) of Training	Hours/Minutes	City (Where Training Occurred)	

*Course ID Number	Name of Company or Organization Providing Training		Course Training Name
Date(s) of Training	Hours/Minutes	City (Where Training Occurred)	

*Course ID Number	Name of Company or Organization Providing Training		Course Training Name
Date(s) of Training	Hours/Minutes	City (Where Training Occurred)	

**You must include Course ID Number or form will be returned*

I certify that the above information is true and accurate and that I have successfully completed the above listed training. I understand that proof of training records must be maintained by me for a period of four years. I further acknowledge that falsification of this form or any form used in the certificate renewal process may result in denial of certificate renewal or restoration and is a cause of certificate revocation and/or suspension. Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Signature: _____ Date: _____ Daytime Phone: (____) _____

Appendix D

Chapter 14 Operator Certification Training Provider Information/Instructions

Training must directly relate to water distribution, water treatment, or the professional responsibilities of the operator. Training activities that are excluded from renewal training credit include the following: entertainment or recreational activities; on the job or work apprenticeships; personal self-improvement courses; plant tours (unless drinking water related training is integrated into the tour); portions of meetings and conferences when drinking water related training is not provided (i.e. business session, lunch, breaks, etc.); time spent viewing conference/meeting exhibits; and travel time to and from training activities. Training providers, or training sponsors, must get Illinois EPA training course approval prior to offering the course.

Training providers can now register online through the Illinois EPA Trainer Provider Coordinator, and once approved as a training provider, can submit course pre-approval on the web in lieu of submitting a paper request. Please read the instructions that follow to register online and begin course pre-approvals at the following web address:

<http://dataservices.epa.illinois.gov/operatorcertification/opcertwelcome.aspx>

If you do not have access to the Internet, you may submit a “**Training Provider Form**” which is included as the last page of this Appendix. The form is also available at:

<http://www.epa.state.il.us/water/operator-cert/drinking-water/forms/operator-training-provider-application.pdf>

Upon Illinois EPA approval, the training provider will receive a **course (event) identification (ID) number**. At the beginning of the course/event, the instructor should give this ID number to the attending trainee. The trainee should keep this course ID number and record on any documents submitted to the Illinois EPA. Training providers should request Illinois EPA approval at a minimum of 10 days in advance of training. Please contact the OpCert Coordinator at 217-785-0561 for any questions concerning the course approval process.



FACT SHEET FOR TRAINING PROVIDERS

- Training must directly relate to water distribution, water treatment, or the professional responsibilities of the operator. Courses should be pre-approved prior to the training event. Upon Illinois EPA approval, the training provider will receive a **course/event identification (ID) number**. At the beginning of the course/event, the instructor should give this ID number to the attending trainee. The trainee should keep this course ID number and record on any documents submitted to the Illinois EPA. Training providers should submit the form 10 days in advance of training for approval. **See next page for course approval instructions.**
- Operators **must** include the course ID number when submitting training documents to the Illinois EPA to receive credit. Training documents will be returned to the operator if missing course ID. If the operator does not have a course ID number, they will be instructed to contact the training provider for course ID number.
- You must provide operators with some proof of course/training.
- The “proof of training” must include course ID number, the title of training, location, date, number of training hours, and instructor’s name.
- Remind those in attendance that the “proof of training” is to be must be retained by the operator for a period of four years.
- Reporting operator course attendance/credit to the Illinois EPA is to be completed **by the operator** on-line at the following web site.

<http://dataservices.epa.illinois.gov/operatorcertification/opcertwelcome.aspx>

If an operator does not have access to the Internet, he/she can submit an **Operator Training Submission Form** (see Appendix C).

- The operator may report their training hours to the IEPA at any time during their required renewal cycle.
- If a training provider does not have access to the Internet, they can request course approval by submitting a **Training Provider Form** prior to the training event. This form can be submitted by mail, fax, or email (paul.connolly@illinois.gov).

REGISTRATION

Before you begin, it is important to note that only one representative should register per organization and serve as contact. Other representatives from your organization will be able to search course/provider records without registering at site. Registration should be reserved to a single person elected to maintain and update course records.

Only first time users must complete steps 1. After initial registration and log-in, you can proceed to Step 2.

Step 1: Register (You may skip this step if you are already registered.)

Please complete the information below and send to (preferably by email):

By Email: Paul.Connelly@illinois.gov (you do not have to use the actual form below if emailing request; however, all the requested information detailed below must appear in the email text)

By Fax: 217-782-0075

By Mail: Illinois EPA
 DW Operator Certification #19
 1021 North Grand Avenue East
 P.O.Box 19276
 Springfield, IL 62794 Attn: Paul Connelly

PLEASE PRINT CLEARLY *Indicates Required Field

Organization Name*:	
Address 1*:	
Address 2:	
City*:	
State*:	
Zip Code*:	
Telephone*:	
County*:	
Organization URL	
Have you provided training to operators for certificate renewal credit in the past 2 years? <input type="checkbox"/> Yes <input type="checkbox"/> No	

Contact Name*:	First:	Middle:
	Last:	Suffix:
Last 4 SSN Digits:		
Email Address*:	_____@_____	
Address 1*:		
Address 2:		
City*:		
State*:		
Zip Code*:		
Telephone	() -	
County:		

Once you are approved, the Illinois EPA will provide you via email an User Name and Password

Step 2: First Login after Illinois EPA Approval as Training Provider

Go to: <http://dataservices.epa.illinois.gov/operatorcertification/OpCertLogin.aspx>

When you first Login after you have been approved, the “*My Home*” page will appear listing all active courses that have been approved to-date. If you do not see this information, call the Illinois EPA OpCert Coordinator at 217-785-0561.

On the “*My Home*” page, click the “**Personal Information**” tab that is just below and to the left. This will open the contact information page. You should review and update all fields. The boxes marked with **red asterisks (*)** must be completed. Please note: some of the information that is currently in the boxes was migrated from the legacy tracking system; therefore, some of the information may not look correct or make sense. When the case, make corrections and click the “**Save Trainer Provider**” tab at the bottom right.

After your personal information has been updated and saved (see above), you can edit current course information or request new courses to be approved. Once a course is approved, do not change the number of hours or minutes at any time. If you need to make a change to the number of approved hours/minutes, call the Illinois EPA OpCert Coordinator at 217-785-0561. You can, however, update the other course information fields without calling for approval.

If you wish to request a new course for approval, go to Step 3.

Step 3: Requesting Course Approval

Note: If the training event consists of more than one presentation and operators have the option to come and go to each presentation, you will need a separate course number for each presentation.

On the “*My Home*” page, select **Add New Training Class**. This will be directed to **Training Class Edit** page. You must provide all information for the fields with a **red asterisk (*)**.

Some tips to follow:

- **Course Training Name:** Please avoid lengthy dissertation-style names and be brief as possible. Also avoid non-alpha numeric characters such as a dash or hyphen.
- **Training Content:** Enter a very brief description of the course material as relating to a drinking water topic.
- **Training Credit Hours:** Always enter “0” (zero) for training credit hours even if the event is longer than one hour. See next tip.
- **Training Credit Minutes:** Enter the total number of training minutes for the course (minutes will convert to hours automatically after you finish and save the information.) For example if a speaker is giving a presentation for an hour and a half, enter 90. If you are requesting 90 hours of training for a 3 month course, then enter 5400 (90x60 minutes = 5400). Courses will always be approved for a fixed amount of time based on what is requested. Operators will no longer have the option to change the number of hours/minutes they spent attending the course. Therefore, it's important that each course last the amount of time requested and that the operator remain in the course for the duration. However, if a course goes plus or minus 10 minutes over the approved time amount, the TRAINING PROVIDER (not operator) must contact the Illinois EPA OpCert Coordinator at 217-785-0561 and request a time adjustment to the course. This adjustment request cannot be made online.

- **Begin and End Dates:** Please enter both a start and end date. If the event is a one-day event, enter the same date for both the start and end date. If the same course is being offered at different locations and dates, it will be advantageous to get a separate course number for each separate event. (Operators will be able to search and find available courses by county – see “Location County” below).
- **Training Format:** This is a drop down box; select the format that best describes your event. Be sure to select HANDS-ON if the event has a hands-on component or segment.
- **Select YES** for the Drinking Water Box or a course number will not be assigned. You can also select Waste Water if the course is drinking water-related.
- **Course instructor:** You must enter the course instructor’s name.
- **Location County:** If the event is a one-time event enter the county in which the event was held. Please remember that operators can now search on county for training opportunities; therefore, it is important to include a county (when applicable) so that the course will appear in their county search. Select “No County” if the event is to be held in more than one county or is a webinar, etc.

*****Important*****

If the same course is offered at a different location or date but the course time varies by plus or minus 10 minutes, you must request separate course approval and course number. This is to insure that the operators receive the appropriate credited time for courses they have attended.

After reviewing your information carefully, select **Save Training Class** (bottom left of page). You will get a message from the website that the submittal was successful. If you scroll to the top of the page you will find the assigned Course Number; however, please note that the course has not yet been approved. Illinois EPA staff will review your submittal, and when approved, a confirmation email notification will be sent directly from the website to the email contact for the organization. Please allow a few days for review and approval.

It will be possible to edit certain details in **Training Class Edit** after your course has been approved, but this is not recommended. **PLEASE DO NOT CHANGE OR EDIT TRAINING CREDIT HOURS OR MINUTES AFTER IEPA COURSE APPROVAL. CHANGING THE HOURS OR MINUTES AFTER IEPA APPROVAL WILL CAUSE TRACKING ERRORS FOR THOSE OPERATORS WHO ATTENDED THE COURSE AND WILL RESULT IN DISCREPANCIES IN THEIR TRAINING RENEWAL RECORDS.** If you need to change the hours or minutes for a course, please submit a new course approval request, contact the Illinois EPA at 217-785-0561, or email Paul.Connelly@Illinois.gov.

If you wish to add another course, scroll up and select “Training Classes”. (You should see the course you have just submitted.) Click on “Add Training Class” to begin again.



Illinois Environmental Protection Agency

Operator Certification TRAINING PROVIDER FORM

Mail this form to: Illinois EPA-Operator Certification, BOW/CAS #19, 1021 North Grand Ave. East, PO BOX 19276, Springfield, IL 62794-9276

Training Provider or Sponsor			Contact Name
Address			Contact Email Address
City	State	Zip	Daytime Telephone Number

Confirmation of course approval can be sent either by email, fax or direct mail. Please indicate which method (**check preference**)

<input type="checkbox"/>	Please send by mail to address listed above.
<input type="checkbox"/>	Please send to the following email address: _____
<input type="checkbox"/>	Please fax to (_____) _____ - _____

Training Event Name _____			
<i>Workshops, seminars, and/or conferences should always be considered one-time events unless the subject matter (agenda) stays the same.</i>			
Is this training a one- time event? YES NO (circle one)			
If YES, Date(s) of Training _____ and Location _____			
If NO, what best describes the frequency/location of training: _____			
What best describes the format/type of training that is involved? (circle all that could apply)			
Conference/Seminar	Classroom (college)	Actual Hands-On	Operator's Group Meeting/Workshop
ERTC	ISAWWA	IL Rural Water	Regional/Association Group Workshop
If actual hands-on training is involved, please describe:			

What general water related content will this training provide? (circle all that apply)		
Regulatory Update	Coagulation	Reverse Osmosis
Lime Softening	Pathogen Removal/Inactivation	Filtration
Aeration	Reverse Osmosis	Ion Exchange
Chemical Feeding and/or Calculations	Pumps	Storage
Collecting Samples	Water Mains and/or Service Connections	Disinfection
Safety	Emergency and/or Disaster Related	Wastewater Related
Please describe here If nothing above applies OR describe any additional content that will be covered in training: 		
If applicable, please attach any relevant documentation such as an Agenda that will help describe training.		

For this training, I am requesting that _____ total hours and/or _____ minutes of training credit be issued to all attendees. (If this training is an extended event covering weeks or months, I request _____ weeks or _____ months of credit be issued).
--

I certify that the above information is true and accurate. I further acknowledge that any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Signature: _____ Date: _____

----Official Use Only-----

Approved By:	Start Date:	End Date:	Course ID Number:
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Appendix E

Chapter 14 Operator Certification Contract Operator Requirements

A Community Water Supply (CWS) may satisfy operator certification requirements by contracting the services of a properly qualified certified operator of the required class (or higher). A CWS that employs a contract operator must have a written contract delegating joint responsibility and authority between the owner and the contract operator. In addition to the already required Notification of Ownership and Responsible Operational Personnel form, beginning August 1, 2012, the owner of the CWS must submit the contract delegating joint responsibility and authority between the owner and the contract operator to the Illinois EPA within 30 days following the execution of the contract. The Illinois EPA will have 45 days following receipt of the contract to either approve or disapprove the contract.

The Illinois EPA has 45 days to review/approve any new or modified contract. At times, this may cause an overlap from the date a contract starts to the date the Illinois EPA has approve it. It is very important that a CWS have a properly credentialed certified operator at all times. With that in mind, a CWS should go forward with the contractual agreement even if the Illinois EPA approval of the contract has yet to be given. The CWS will be considered in compliance with the operator certification requirements during the contract review/approval process.

If a contract that has been previously approved by the Illinois EPA is terminated by the CWS before the expiration date written in the contract, the CWS must provide written notice to the Illinois EPA no less than 15 days before the contract is terminated. If any contract approved by the Illinois EPA is terminated by the certified operator before the expiration date in the contract, the operator must notify both the Illinois EPA and the CWS and then the CWS will have to obtain the services of another properly qualified operator and submit a new contract for review/approval as soon as possible. Remember, a CWS should always have a designated operator in charge. Therefore, in an ideal situation, when one contract ends, another should immediately begin. However, when an operator abruptly quits or develops medical conditions in which he can no longer provide his services, the CWS should immediately contact the Illinois EPA and obtain an interim or permanent operator within 15 days.

Contracts already existing prior to August 1, 2012 will be reviewed/approved by an Illinois EPA Regional Office at the time of the next scheduled routine engineering evaluation. A contract in place prior to August 1, 2012 may need to be modified as it must meet all conditions listed in this appendix.

If a CWS modifies or extends an existing contract, it is treated as if it's a new contract and must be submitted within 30 days following the execution of the revised/extended contract to the Illinois EPA for approval and cannot be held until the next engineering evaluation.

New contracts, and any existing contracts that are extended or modified, must be submitted to the following address for approval:

Illinois EPA – Operator Certification
BOW/CAS #19
1021 North Grand Avenue East
Springfield, IL 62702

Remember, a contract in effect prior to August 1, 2012, does not need to be submitted to the Agency until it is modified or extended. These existing contracts will be reviewed at the time of the water system's next routine engineering evaluation (so please have a copy of the contract readily available at the time of the inspection).

Contract Requirements

The contract between the community water supply and the contract operator must delegate joint responsibility and authority between the contract operator and the designated owner. The contract must include all of the following five elements:

1. The parties involved (owner and operator), including names, addresses and phone numbers of each;
2. The specific starting and expiration dates of the contract;
3. The minimum number of site visits the contract operator must make each week to the community water supply (*see next page for details*);
4. The duties and responsibilities, when applicable, of each party involved including, at a minimum, the party responsible for:
 - proper operation of the community water supply;
 - compliance with all construction and operating permit requirements;
 - compliance with all NPDES permit effluent requirements;
 - compliance with Subtitle F of this Title, including but not limited to the following:
 - Design, Operation and Maintenance Criteria, 35 Ill. Adm. Code 653;
 - Raw and Finished Water Quality and Quantity, 35 Ill. Adm. Code 654;
 - Primary Drinking Water Standards, 35 Ill. Adm. Code 611;
 - Permits, 35 Ill. Adm. Code 652; and
 - Emergency operation requirements found in 35 Ill. Adm. Code 607.103;
 - daily equipment checks;
 - collection of required samples and submission of these samples to a certified laboratory;
 - maintaining booster pump stations and high service pumps;
 - maintaining spare parts inventory;
 - maintaining and timely submitting to the Agency all required operating records and reports, including but not limited to:

- consumer confidence reports;
- drinking water compliance monitoring reports (e.g. sample results, etc.);
- discharge monitoring reports; and
- monthly operating reports;
- providing labor and materials for correcting any maintenance and operational problems;
- maintaining and implementing emergency operating plans;
- performing preventive maintenance on equipment as recommended by the manufacturer;
- performing routine operational control testing as recommended by the Agency;
- issuing public notices when required by 35 Ill. Adm. Code 653.403;
- issuing boil orders to the public, and contacting the regional office and local health department whenever boil orders are issued; and
- responding to Agency requests for information or site visits;

5. The signatures of the contract operator and the owner or official custodian of the community water supply.

Minimum Number of Visits

Several factors need to be considered when determining an adequate minimum number of site visits needed to ensure that the water system is properly functioning. Such factors would include, but are not limited to, type/complexity of water treatment, size/complexity of the distribution system, number of full/part time staff available at the CWS location around the clock, and “availability” of the contract operator in charge to the CWS in conjunction with the availability of full and part time staff.

The “availability” of the contract operator in charge is very important. The availability of the contract operator to the CWS officials and on-site staff should be 24 hours/seven days a week in the event of an emergency. Likewise, CWS officials and on-site staff availability to the contract operator should be 24 hours/seven days a week in the event of an emergency. A satisfactory contract should include this availability requirement and contact information to access one another during the off-hours should be provided.

The capabilities and water supply experience of existing on-site staff is also very important to consider when determining the minimum number of visits the contract operator must make. **It is the responsibility of the certified contract operator and owner to oversee on-site staff and insure they have been properly trained in the necessary/designated job duties.** The contract operator must sign off on all operational documents which should provide for a minimum of one visit to the CWS each month. For example, when deciding how often to visit the CWS, the contract operator and owner should consider:

- Is current on-site staff certified by the Illinois EPA?
- How familiar is on-site staff with the treatment process/equipment?
- Can on-site staff recognize early signs of trouble, such as loss of pressure or low chlorine residuals and take appropriate corrective action?
- Will on-site staff hesitate to call the contract operator at any time if they feel something may be wrong?
- How responsible is current on-site staff?

If the contract operator and CWS owner are confident with current on-site staff, then less frequent visits will be needed. However, if either party does not have that level of confidence, more frequent visits should be made. Always remember, it's the contract operator's and the CWS owner's responsibility to be confident of the on-site staff's capabilities of ensuring the safety of the public water supply when neither party is present.

The Illinois EPA does not require a specific number of visits; however, it is the responsibility of the CWS owner and the contract operator to evaluate all the factors above and determine what the appropriate number of site visits should be to ensure a properly functioning/safe community water supply. As already mentioned, regulations now require that a specific minimum number of site visits be included in the contract.

Illinois EPA Review of Contract

As previously mentioned, the owner of the CWS must submit the new contract to the Illinois EPA within 30 days following the execution of the contract. Once the contract is received, the Illinois EPA will have 45 days to provide written notice to the CWS of its decision to approve or disapprove the contract.

The Illinois EPA will approve the contract agreement when:

1. the contractual operator is properly certified;
2. all the provisions listed on the previous page under “**Contract Requirements**” are satisfied; and
3. the contract provisions assure proper operation and oversight of the CWS.

The Illinois EPA will withdraw an approval of the contract at anytime when it is determined that the contract provisions are not being met or are found to be inadequate to assure proper operation of the community water supply. The Illinois EPA shall provide written notice to the CWS of its decision to withdraw approval.

Failure to have an Illinois EPA approved contractual agreement will result in a Non-Compliance Advisory to the CWS resulting in possible enforcement action.

Contract Example

The Illinois Rural Water Association (IRWA) has posted a template of a “Certified Water System Operator Contract” at: [http://www.ilrwa.org/Downloads/Certified Water Plant Operator Contract.doc](http://www.ilrwa.org/Downloads/Certified%20Water%20Plant%20Operator%20Contract.doc)

Appendix F

Chapter 14 Operator Certification

Letter of Admissions Request for Examination

In order to take an examination, a examination request must be sent to the Illinois EPA. The Illinois EPA will review the request to determine a person's eligibility on the basis of the information contained in the request within 30 days of receipt of the request, unless that deadline is waived by the applicant. If the Illinois EPA determines a person is eligible to take an examination, the person will be sent a **Letter of Admission (LOA)**. Each LOA shall be valid for one examination conducted within one year of the date of issuance. If the LOA expires, the applicant must submit another examination request form and the \$10 examination fee and the Illinois EPA will issue a new LOA. If the Illinois EPA determines a person is not eligible to take the water supply operator examination, a written notice will be sent explaining the decision.

Attached is the examination request form. When ready to test, please complete this form and return to the Illinois EPA and include the \$10 examination fee (check or money order). Failure to include the examination fee will result in your request being denied.

Once we process your request, an LOA will be sent to the applicant.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-2829

PAT QUINN, GOVERNOR

LISA BONNETT, DIRECTOR

Drinking Water Operator Certification Examination Request

As specified under Title 35 Ill. Adm. Code 681.310, any person who wishes to take the water supply operator examination must submit an examination request to the Illinois EPA. This form must be used when making such request. All examination requests must be submitted to the Illinois EPA at least 30 days prior to the examination date. This examination request must be accompanied by the non-refundable exam fee of \$10. Examination requests must be complete before any decision regarding eligibility will be issued. Please return this completed form and exam payment in form of check or money order made payable to the Illinois Environmental Protection Agency to:

**Illinois Environmental Protection Agency
Operator Certification/BOW/CAS #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276**

Examination requests must be complete before any decision regarding eligibility will be issued. Once an eligibility decision is made, a Letter of Admission (LOA) will be issued in order to test. Any person wishing to take an examination **must** bring a valid LOA to the testing center on the day of examination.

Please complete all the following:

Name-Last, First, Middle Initial		Mr. Ms. (circle one)		Operator ID (optional - if you have one)	
Home Address - Street			City		State
Home Phone Number (____)____-_____			Date of Birth ___/___/___		E-MAIL Address:
I am requesting to take the following certification examination (<i>Circle only one</i>)					
CLASS A		CLASS B		CLASS C	
CLASS D					

Questions	(Check Applicable YES / NO Box)	YES	NO
1. Have you ever had Typhoid Fever <u>or</u> lived with an individual who has had Typhoid Fever?			
2. Have you ever had Amoebic Dysentery (AD) <u>or</u> lived with an individual who has had AD?			
3. Are you a High School Graduate OR have you obtained a GED Certificate?			
4. Can you read and write English?			
5. Have you ever been sanctioned pursuant to the Water Supply Operations Act?			
6. Have you ever been convicted of violating the Illinois Environmental Protection Act?			
7. Have you ever been convicted of terrorism, making a terrorist threat, or causing a catastrophe?			
<i>If you answered Yes to Questions 5, 6, or 7, please attach a written explanation.</i>			

APPLICANT SIGNATURE

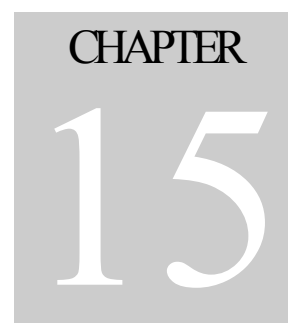
I hereby certify that the statements made in this application are true and accurate to the best of my ability. I understand that any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Signature: _____

Date: _____

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Mall St., Collinsville, IL 62234 (618)346-5120

9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
5407 N. University St., Arbor 113, Peoria, IL 61614 (309)693-5462
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601 (312)814-6026



Boil Orders

What is a Boil Order?

A “Boil Order” is a notice issued to water consumers to boil all drinking and culinary water **for at least five minutes** before use. A boil order is issued by proper drinking water authorities to the consumers of a public water supply whenever analysis results indicate the water being supplied may have or has become microbiologically contaminated, the sanitary integrity of the water system may have been compromised, or following an occurrence of low water pressure. A boil order can be a necessary and required precaution to help prevent a possible water-borne illness outbreak. If certain conditions exist in the water supply that warrant a boil order, drinking water authorities should not hesitate to issue a boil order. These conditions are explained further in this chapter.

Illinois EPA Assistance

After reading this chapter, if you are still unsure or encounter a situation that was not covered, please contact your Illinois Regional Field Office.

Champaign Regional Office	217-278-5800
Elgin Regional Office	847-608-3131
Rockford Regional Office	815-987-7760
Springfield Regional Office	217-557-8761
Collinsville Regional Office	618-346-5120
Marion Regional Office	618-993-7200

For major contamination or outages that occur on weekends, holidays or after office hours, please contact the Illinois EPA Emergency Response Unit at 217-782-3637.

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Appendix A – Boil Order Example

Appendix B – Boil Order Lifted Example

Appendix C – Boil Order Door Tag Example

What is a Boil Order?

A “Boil Order” is an immediate notification to all affected customers to boil all drinking and culinary water for at least five minutes before use until further notice for at least **five** minutes before use. There are two types of boil orders:

- 1) System wide boil order (all consumers must be advised to boil water)
- 2) Localized or partial boil order (issued for users in an isolated areas within a section of the distribution system shut down by the use of valves, usually for repair or maintenance)

For localized boil orders, care must be taken after repairs are completed to keep the area under boil order isolated from the remainder of the distribution system until the sanitary quality of the water has been verified. This is accomplished by restoring water to the area under boil order by opening only one of the valves closed to isolate the area. Opening more valves may allow potentially unsafe water to flow to other areas of the distribution system which likely means a system wide boil order must be issued.

When Should a Boil Order Be Issued?

A Boil Order **MUST** be immediately issued when one or more of the following five events occur:

- 1) Water pressure drops below 20 pounds per square inch (PSI) in any portion of the distribution system. A loss of pressure in the system can allow contaminants outside the water lines to enter the water system. Pressure loss can result from **mechanical failure, power outage, main break, valve replacement, or high demand** on an undersized water main.

In the event of pressure loss, a water system may take advantage of a “boil order exception” if there is historical data that indicates that an adequate and reliable chlorine residual was maintained in the system and the affected area, along with a written record of turbidity measurements in the affected area.. A certified laboratory either on-site or otherwise readily available is required to immediately analyze the required coliform samples. A condition of the “boil order exception” also requires that turbidity readings following any repair must not vary from the historical levels. Also, you will need to follow all instructions and procedures listed at this web link:

<http://www.epa.state.il.us/water/field-ops/drinking-water/boil-order-exception-criteria.pdf>

- 2) Surface water that has entered wells or finished water storage reservoirs that are in operation at the time of flooding events. Depending on the available water treatment capabilities and the type of contamination that potentially occurred, a “do not drink” order may need to be issued. If a well that is out of service is flooded it must be tested for bacteriological quality to insure it has not become contaminated prior to use.
- 3) Any major disruption of required surface water treatment such as inadequate disinfection or the finished water turbidity exceeds 1 NTU.

- 4) Direct knowledge or suspicion that a water supply has become contaminated.
- 5) An E. coli positive sample occurs at a chlorine exempt water supply.

There are other times when a boil order may be issued. Boil orders should be issued if:

- 1) Routine distribution system water analysis results are total coliform or E. coli positive. Issuing a boil order in this case is a judgment call that is dependent on several factors:
 - number and location(s) of the contaminated samples,
 - the size of the water system,
 - results of any raw samples,
 - finished water,
 - other distribution system samples collected on the same day, and
 - location where the contamination was detected.

Issuance of a boil order may be delayed if adequate chlorine residual is present, no problems that could have affected the sanitary quality of the water were known to have occurred, and the repeat samples are promptly collected. Immediately consider increasing the chlorine residual above your normal operating levels when you are notified that any finished or distribution samples are found to be coliform positive.

- 2) In the event of sudden loss of residual or persistent low chlorine residual especially if the source has a history of coliform detection.
- 3) Indicators are present when coliform samples were taken such as; low chlorine residual, unusual turbidity, color, taste, odor, etc. and total coliform is detected during these unusual water conditions.
- 4) A single well or finished water sample and a distribution sample test positive for total coliform bacteria followed by positive distribution repeat sample(s). If multiple routine samples from one distribution area test positive, issuing a localized boil order should be strongly considered.
- 5) Water storage tank is being cleaned or inspected and cannot be isolated from the distribution system during this maintenance. If sampling is conducted according to AWWA C652, and results indicate no coliform detections and proper chlorine residual, and turbidity measurements from water in the tank that is being inspected / cleaned do not increase during the operation, a boil order is not required. Always contact your regional Illinois EPA field office for any additional requirements prior to doing such work. If the water storage tank can be isolated, no boil order is required if all requirements specified in AWWA C652 are followed. Additional information can be found at: <http://www.epa.state.il.us/water/field-ops/drinking-water/index.html>

Boil orders can be somewhat discretionary; however, it is ALWAYS best to err on the side of caution. Most operators know their system and its limitations. **If you feel something may be wrong as described above, immediately consult with the Illinois EPA Regional office. If you are unable to contact them, issue the boil order and protect yourself and the consumers.** If you are unable to contact the Illinois EPA beforehand, contact them immediately during and afterwards.

How Soon Must a Boil Order Be Issued?

Immediately after one of the conditions as specified above are met. If unsure, please immediately contact your Regional Illinois EPA office or the Division Office Headquarters in Springfield at 217-782-1020. Again, if in doubt, it is always best to err on the side of safety and issue a boil order.

Who Must Receive a Boil Order Notice?

All affected customers must be advised of a boil order. Pay special attention to major or sensitive customers: schools, nursing homes, hospitals, restaurants, food processors, and consecutive (satellite) water systems.

As soon as possible, but within 2 hours, the boil order should be reported to the County and/or local health department and to the appropriate Illinois EPA Regional office.

What Must Be Included in a Boil Order?

A boil order should be written on the water supply's letterhead and include the following information:

- Boil Order "Effective" Date and Time – All boil orders should be issued until further notice
- Affected area (system wide or isolated to certain area)
- Water Supply Contact (should be able to be reached throughout duration of boil order)
- Telephone number for additional information
- Very brief summary/explanation of problem
- What the consumer should do (boil water for at least 5 minutes)
- If possible, provide an estimate to when the boil order may be over

See Appendix A for boil order example.

How Should a Boil Order Be Distributed?

The objective to issuing a boil order is to inform ALL affected customers as quickly as possible not to drink the water without boiling it first. Water systems vary quite differently in size, distribution system network, and consumer dynamics. Each water supply should have an effective plan of distributing notification to reach the most people in the shortest amount of time. Some notification methods may include but are not limited to:

- Local radio and television stations
- Hand delivery to each customer (small towns, mobile home parks, homeowner associations, subdivisions, partial system boil orders following isolated water main repairs, etc.)
- Road signs
- Conspicuous postings in local restaurants, libraries, schools, and/or government offices, etc.
- Telephone (reverse 911)
- Email/text messaging

When direct notification is not practical, it is recommended that multiple other delivery methods be used to reach as many customers as possible. There is no requirement on how many methods must be used; however, it is the responsibility of the water system's owner, administrative contact, and operator to notify consumers in both the quickest and most effective manners to ensure public safety.

When Can a Boil Order Be Lifted and How Many Samples Do I Need to Collect?

A boil order must remain in effect until microbiological samples demonstrate that the water is safe for domestic use, or until appropriate corrective action approved by the Illinois EPA is taken. Bacteriological samples must be taken after the problem is corrected.

System Wide Boil Orders including Pre-cautionary Boil Orders	
Problem	<ul style="list-style-type: none"> -Water pressure drops below 20 PSI in any portion of the distribution system -Multiple routine distribution system analysis results are total coliform positive or confirmed E. coli positive -A well, storage tank, water main, or other treatment component undergoing repair or maintenance is placed into service before obtaining the required satisfactory sample results. -Flooding that has allowed surface water to enter wells or finished water storage reservoirs that are in operation at the time of the flooding. Depending on the available water treatment capabilities and the type of contamination that potentially occurred a “do not drink” order may need to be issued. If a well that is out of service is flooded it should be tested to insure it has not become contaminated prior to use. -Any major disruption of required surface water treatment such as inadequate disinfection or the finished water turbidity is above 1 NTU. -Direct knowledge or suspicion that a water supply has become contaminated. -E. coli positive sample at a chlorine-exempt water supply. -Sudden loss of residual or persistent low chlorine residual especially if the source has a history of coliform detection. -Indicators are present when coliform samples were taken such as; low chlorine residual, unusual turbidity, color, taste, odor, etc. and total coliform is detected during these unusual water conditions. -Source water or finished water <u>and</u> a distribution sample test positive for total coliform bacteria or if multiple samples from one area test positive
To Lift	<p>Two sets of bacteriological samples collected approximately 24 hours apart show satisfactory results when turbidity, flooding or coliform contamination is involved. Samples can be analyzed by any approved analytical method.</p> <p>One Set of bacteriological samples show satisfactory results when pressure drops below 20 psi occur (i.e. water main repairs, or a power outage or pump failure, causes low pressure, localized or system wide outage, etc.)</p> <p>Population <=4,900; <u>1 set</u> = 5 representative samples throughout the distribution system. <i>Sample Locations: If at all possible, primary and alternate sites from the coliform site plan should be used.</i></p> <p><i>Note: very small systems with fewer than 100 service connections may collect fewer than five distribution samples, based on consultation with your Regional Office. (i.e.: A very small system with 25 service connections may collect three distribution samples, rather than five distribution samples to lift a boil order)</i></p> <p>Population >4,900; <u>1 set</u> = samples equal to the routine monthly requirement <i>Sample Locations: If at all possible, primary and alternate sites from the coliform site plan may be used, but we also suggest that you use additional sites from the suspect area.</i></p> <p><i>See Appendix B for “boil order lifted” notification example.</i></p>

Localized Boil Orders	
Problem	-For boil orders affecting localized areas – typically main breaks, valve replacements, etc. –
To Lift	<p>One set of bacteriological samples collected from representative areas and all have satisfactory results.</p> <p>1 set = a minimum of one, and up to 5 representative samples. At least one sample MUST be collected in the immediate area of the break or valve replacement. Contact your Illinois EPA Regional Office.</p> <p><i>NOTE: Two sets of samples collected approximately 24 hours apart are required if any of the initial samples show coliform contamination. The entire sample set must be repeated if any sample shows coliform is present. When coliform is detected, the boil order must remain in effect until samples collected approximately 24 hours apart show no coliform.</i></p> <p><i>See Appendix B for “boil order lifted” notification example.</i></p>

Remember; do not collect coliform samples until the problem has been fixed. Give chlorine time to work. We do not need samples to confirm that a problem is still present. We need sample results to show that the problem has been fixed.

What Can I do in Advance to Be Prepared to Issue a Boil Order

Every water supply can expect to issue a boil order at one time or another. Most boil orders are issued as a precaution but do not be caught off guard. You should have a notification plan ready to implement, know how to contact affected customers, keep a list of current phone numbers for local health departments, the Illinois EPA, and major and sensitive customers. For large area boil orders a water supply should also plan for a media news release and be prepared for possible interviews from the media. It is important to also keep customers up to date on further developments. Keep a supply of bacteriological bottles and contact information for laboratories.

For smaller, localized areas it may be beneficial to include the following in your plan:

- Door hangers to distribute to affected customers
- Road signs and other postings
- Personal contact with major or sensitive customers
- A calling service

For larger areas

- Electronic media – television and radio
- Reverse 911 if available
- A calling service
- Personal contact with major or sensitive customers
- Conspicuous postings

Note: Keep a supply of door hangers available for use when localized outages caused by water main repairs occur.

What if the Problem Occurs After Hours or on a Weekend?

Owners and operators of community water supplies must immediately notify the Illinois EPA at the appropriate Regional Office when there is knowledge or suspicion that a water supply has become contaminated. For major contamination or outages that occur on weekends, holidays or after office hours the Agency may be reached through the IEPA Emergency Response Unit at 217/782-3637 or the Illinois Emergency Management Agency at 1-800-782-7860.

What is a “Do Not Drink Order”?

Boiling is the recommended action for microbiological and most volatile organic chemical contamination, but is not advised for nitrate, inorganic chemicals and non-volatile contaminants. Therefore, a “Do Not Drink Order” may be necessary as a result of a backflow incident, major spill, surface water flooding, or following many complaints of poor water quality. Use discretion regarding customer complaints. With widespread complaints of unusual taste, color, or odor it may be best to issue a Do Not Drink Order until the investigation is complete. Some contaminants may be increased by boiling.

Can Boil Order Samples Be Used to Meet Monitoring Requirements for the Routine Monthly Total Coliform Rule (TCR) Samples?

No. Boil order samples are for boil orders. They can NOT be used to satisfy any monitoring requirements specified in the TCR. No exceptions.

Should I Ever Collect My Monthly Total Coliform Rule (TCR) Samples While Under a Boil Order?

No. If a system is under a boil order, it is strongly recommended NOT to collect TCR samples since bacteriological water quality maybe compromised and sampling would not reflect normal operating conditions. TCR sampling under compromised conditions may trigger a coliform (or Fecal/E. Coli) maximum contaminant level (MCL) violation.

Will I Be in Violation if I am Unable To Collect My Monthly TCR Samples Due to an Extended Boil Order?

Yes. Failure to collect your required routine number of TCR distribution samples (and/or repeats if applicable) will result in a monitoring violation for the monitoring period. If you know in advance that monitoring requirements will not be met, it is recommended to issue the monitoring violation public notice at the same time as the boil order notice; coordinating notifications can help reduce consumer confusion and may help reduce cost.

If you decide to “chance” collecting routine TCR samples while under a boil order to avoid a monitoring violation, these sample results will always count towards compliance. If the results are coliform positive, you will not be able to invalidate results because a boil order was in effect when the routine samples were collected. Likewise, any samples labeled as “special boil order” will never count towards meeting routine coliform monitoring requirements.

Appendix A

Chapter 15 Boil Orders

Boil Order Notification Example

The following example should be printed on the Public Water Supply Letterhead

*****Public Water Supply Boil Order in Affect*****

DATE: January 5, 2012
TO: Affected Main Street Area Water Customers
FROM: John Smith, Water Superintendent, Springton Water
Commission
SUBJECT: **BOIL ORDER**

A water main break occurred early this morning on Main Street south of Washington Street. Repairs are underway and we anticipate that service will be restored late this afternoon or early this evening, Monday January 5, 2012.

It was necessary to shut down the water main on Main Street between Washington Street and Adams Street. Once service is restored, **Customers in that area who are NOW experiencing a service outage should boil water at least FIVE minutes before using.**

The **BOIL ORDER** will remain in effect until laboratory sampling confirms that water quality has been fully restored. This will be Tuesday afternoon at the earliest. You will receive notification at that time.

Please call our Utility Office at 555-1212 if you have any questions or need further information.

Appendix B

Chapter 15 Boil Orders

Boil Order Lifted Notification Example

The following example should be printed on the Public Water Supply Letterhead

*****Boiling Water No Longer Required*****

DATE: January 7, 2012
TO: Affected Main Street Area Water Customers
FROM: John Smith, Water Superintendent
SUBJECT: **BOIL ORDER LIFTED**

A water main break occurred early Monday on Main Street south of Washington Street. Service was interrupted for customers on Main Street between Washington Street and Adams Street.

Repairs are complete and the necessary flushing and purification verification steps have also been completed.

Water samples have been confirmed to be free of coliform bacteria by a certified laboratory. You may return to normal use of your water service.

Please call 555-1212 if you have any questions. The Springton Water Commission apologizes for any inconvenience.

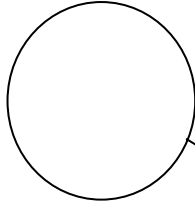
John Smith
Water Superintendent
Springton Water Commission

Appendix C

Chapter 15 Boil Orders

Door Tags Example

SAMPLE BOIL ORDER DOOR TAGS FOR
SMALL AREA WATER OUTAGES



BOIL ORDER NOTICE

From the _____
Water Department

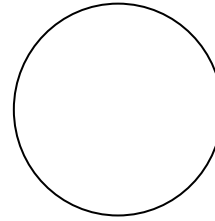
Date: _____ Time: _____

A Boil Order has been issued
due to _____

Boil all water used for drinking or
cooking for 5 minutes before use.

This notice is in effect
until further notice.

Call Mr. (Ms.) _____
At phone number _____
if you have questions.



**STOP BOILING WATER
NOTICE**

From the _____
Water Department

Date: _____ Time: _____

The Boil Order Has Been Lifted

You may stop boiling your drinking water.

The _____
Water Department apologizes for any
inconvenience the boil order
may have caused.

Call Mr. (Ms.) _____
At phone number _____
if you have any questions