

LEAD AND COPPER RULE

BY TIFFANY HUA

Compliance Assistance Coordinator, Drinking Water Monitoring and Protection Unit

1991—

- EPA published the lead and copper rule
- Standard of 50 ppb at the EPDS
- Set Treatment Techniques to reduce corrosion in the Distribution System

2000—

- EPA published revisions to streamline and to reduce monitoring and reporting burdens

2007—

- “Short Term Revisions” – EPA revised the LCR to enhance implementation of monitoring, treatment, customer awareness, and lead service line replacement
- Public education requires that drinking water customers receive meaningful, timely, and useful information

2021*—

- Long Term Revisions – to improve public health protection by making substantive changes and to streamline the rule requirements

LEAD CAN AFFECT ALMOST EVERY ORGAN AND SYSTEM IN YOUR BODY.



Children –

- Six years old and younger are most susceptible to the effects of lead;
- Can affect behavior and learning problems, lower IQ and hyperactivity, slowed growth, hearing problems, anemia;
- In rare cases, ingestion of lead can cause seizures, coma and even death.

Pregnant Women

- Lead can accumulate in bones along with calcium.
- During pregnancy, lead is released from the mother's bones along with calcium and can pass from the mother exposing the fetus or the breastfeeding infant to lead.
 - Cause the baby to be born too early or too small;
 - Hurt the baby's brain, kidney's, and nervous system;
- Increase the likelihood of learning or behavioral problems; and
 - Put the mother at risk for miscarriage.



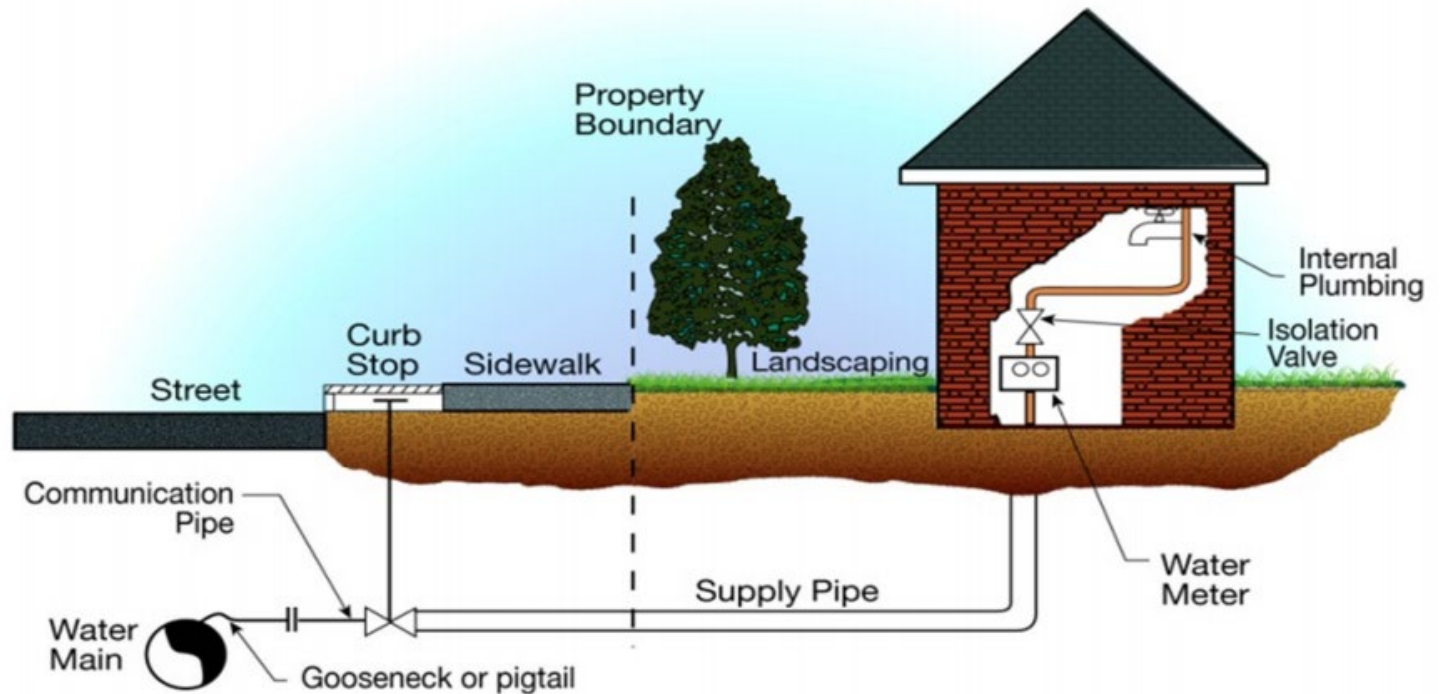
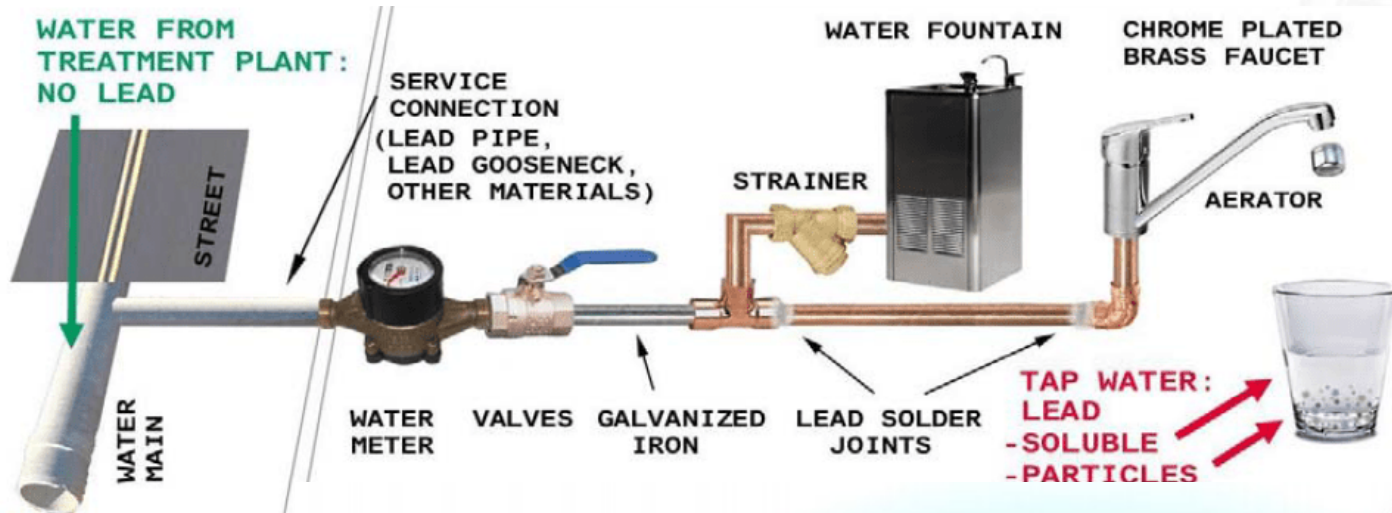
Other Adults

- Can suffer from: cardiovascular effects, increased blood pressure and incidence of hypertension; decreased kidney function; reproductive problems (in both men and women)



Copper exposure can cause stomach and intestinal distress, liver or kidney damage, and complications of Wilson's disease in genetically predisposed people.

SOURCES OF LEAD



Protect public health by minimizing **lead (Pb)** and **copper (Cu)** levels in drinking water primarily by reducing water corrosivity.

This is a collective effort between the State, the public water system, and the homeowner/community.

Lead and copper enter drinking water mainly from the corrosion of plumbing materials containing lead and copper.

There are currently an estimated 6.3 to 9.3 million homes served by lead service lines (LSLs) in thousands of communities, and millions of older buildings with lead solder and faucets nationwide that were constructed prior to the restrictions on the use of plumbing materials that contained lead.

Corrosion is a reaction between water and metal surfaces and materials

Corrosion process is an oxidation/reduction reaction that returns metal (your piping) into their more stable state (dissolved or particulates of ore/rock)

- Scaling protects the plumbing material by building a layer of passivating scale or deposited scale naturally on metal surfaces
- There are different types of pipes that are scale forming and non-scale forming
- Layers and characteristics of the scale dictate the amount of lead or copper released into the water
 - Can be influenced by treatment history
 - Can be vulnerable for lead particulate release following physical disturbance and/or water chemistry change
- Iron, manganese, and biofilms are good indicators of other regulated metals present in scale

THIS RULE APPLIES TO:

Non-Transient, Non-Community (NTNC) Water System

- 15 or more connections used by same people for more than 6 months/yr, or
- Serves the same 25 or more people for at least 6 months/yr.

Community Water System (CWS)

- 15 or more connections used by same people year round, or
- Serves the same 25 or more people year round

POPULATION SIZE DIFFERENCES DETERMINE APPLICABILITY AND DEADLINES OF SOME OF THE REQUIREMENTS:

Large:

Greater than
50,000 people

Medium:

3,301 to 50,000
people

Small:

Less than or equal
to 3,300 people

Newly Large:

Gaining population over 50,000 people

Lead AL: 0.015 mg/L or 15 ppb and **Copper AL:** 1.3 mg/L
Lead PQL: 0.005 mg/L or 5 ppb and **Copper PQL:** 0.050 mg/L



TAP MONITORING AND SAMPLE SITE SELECTION

Materials Inventory Development Identification:

Types of Buildings:

- Single Family Residences,
- Multi-family Residences,
- Buildings/Commercial Buildings

Plumbing Materials:

- Lead Service Lines,
- Lead pipes,
- Copper pipes,
- Lead Solder,
- Lead goosenecks

Applicable Locations:

- Drinking Water sites,
- Food Prep Sites,
- Kitchen Sinks
- Bathroom faucets

By using: Plumbing codes; Plumbing permits; Distribution Maps/Drawings; Inspection and Maintenance Records; Meter Installation records; Standard Operating Procedures; Operation and maintenance manuals; Permit files; Existing water quality data; Interviews with senior personal, building inspectors, and retirees; Community Surveys

BUT WAIT! My PWS only has PVC pipes, why do I still need to sample for Lead and Copper?

- Metals accumulation was still found on plastic pipes
- Some faucets and piping that join the pieces together are still made of metal

BUT WAIT! I have a mobile home/RV Park that come and go unexpectedly, so my locations aren't always the same!

- ADEQ recommends sampling at the tap prior to the mobile home.

BUT WAIT! I have a stand-pipe system, and its available at all times of day. What do I do?

- Since there is no *real* stagnation time, ADEQ recommends sampling on different days to catch variability

Tier 1 - High risk sites

Consists of
single* family
structures that:

Contain copper
pipes with lead
solder installed
after 1982 or
contain lead
pipes; and/or,

Are served by a
lead service line.
(collect 50% of
samples from
LSLs)

Tier 2 sampling pool consists of buildings including multiple family residences that:

Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or, are served by a lead service line.



Tier 3 sampling pool consists of single* family structures that:

Contain copper pipes with lead solder installed before 1983.

* May include multiple-family residences in sampling pool when they comprise at least 20 percent of structures served.

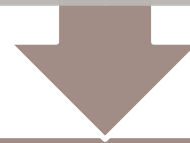


Use representative sites throughout distribution system if insufficient number of tiered sampling sites are available.

Tier 1 - High risk sites

Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or,

Are served by a lead service line. (collect 50% of samples from LSLs)



Tier 2

Contain copper pipes with lead solder installed before 1983.



Use representative sites throughout distribution system if insufficient number of tiered sampling sites are available.

FORM LCR.C: Compliance Sampling



Form LCR-C Lead & Copper Compliance Sampling

Supplemental Reporting Form to DWAR 8
40 CFR § 141.90 (a) (i)

Instructions: Complete and submit one page per sample site.

Sampling Sites		
Location of Sample Site:	<input type="text"/>	
Type of Structure:	<input type="text"/>	
Criteria or Plumbing Material:	<input type="text"/>	
New Location of Sample Site:	<input type="text"/>	
Type of Structure:	<input type="text"/>	
Criteria or Plumbing Material:	<input type="text"/>	
*Distance Between Sites:	<input type="text"/>	
Reason for Change (attach additional pages if necessary)	<input type="text"/>	
<p>*Note: The new site must meet the same criteria as the original site when a replacement site is necessary to meet the LCR sampling requirements.</p>		
Signature		
Printed Name	Title	Date

SAMPLING “PLAN”

- PWS Information
- Results of Tap Sampling
- Location of Tap Site
- Type of Structure
- Tier-ing Criteria /Plumbing Material
- New locations/ Reasons for Change

DO NOT USE ANY OF THE FOLLOWING SITES:

A MOP SINK, OUTSIDE FAUCET, OR A TAP THAT IS NOT GENERALLY USED OR INTENDED FOR HUMAN CONSUMPTION

A SITE WHICH IS VACANT

A SITE WHICH HAS UNDERGONE RECENT (WITHIN THE LAST 6 MONTHS) PLUMBING IMPROVEMENTS OR CHANGES INCLUDING FAUCETS AT THE SPECIFIC SAMPLE LOCATION

A TAP THAT HAS ANY TYPE OF TREATMENT INCLUDING POINT-OF-USE OR POINT-OF-ENTRY DEVICES THAT REMOVE INORGANIC CONTAMINANTS.

A SITE WHERE THE OWNER OR RESIDENT IS UNCOOPERATIVE

BUT WAIT! Can I change my sample sites??

- Yes, some reasons why you would want to change your sampling locations:
 - Homeowner abandons their home
 - Homeowner doesn't want to participate anymore
 - You find a higher tier location / a lead service line that you were unaware of

FIRST-DRAW SAMPLES:



Directions for Homeowner Tap Sample Collection Procedures Lead and Copper Rule (LCR)

Part 1: Purpose

Lead and Copper samples are being collected to determine the lead and copper levels in your tap water served by your public water system. This sampling effort is required by the federal Lead and Copper Rule and is being accomplished through the cooperation of homeowners and residents.

Samples are most representative when the tap has not been used for at least 6 hours. The best time to collect samples is first thing in the morning or returning from work in the evening. Samples should be collected from the kitchen or bathroom cold-water tap that has been used for drinking water consumption in the past few weeks. The collection procedure is described in more detail below:

Part 2: Collection Procedures

- Dates will be set for sample kit delivery and pick-up by your public water system.** Prior arrangements with your water system will be made with you to coordinate the sample collection event.
- There should be a minimum of 6 hours during which no water is being used at the kitchen or bathroom cold-water tap that is closest to the front of your residence. **Do not intentionally flush the water line before the start of the 6 hour period, as this can alter sampling results.**
- Use a kitchen or bathroom cold-water faucet for sampling. If you have water softeners on your kitchen taps, collect your sample from the bathroom tap that is not attached to a water softener, or point-of-use filter, if possible. **Do not remove the aerator before sampling, as this can alter sampling results.**
- 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. Tightly cap the sample bottle and place in the sample kit provided.
- Review the sample kit label to ensure that all information on the label is correct.
- If any plumbing repairs or replacement to the drinking water lines 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.
- Schedule with your public water system to pick up the sample kit from the residence.
- Lead Consumer Notification:** Results from this monitoring effort and information about lead will be provided to you from your water system as soon as practical but no later than 30 days after results of the tap monitoring results come back. However, if excessive lead and/or copper levels are found, immediate notification will be provided (usually 1-2 working days after the water system learns of the tap monitoring results).

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

Part 3: To Be Completed By Resident

Water was last used:	Time:	Date:
Sample was collected:	Time:	Date:
Sample Address:		
Sample Location & Faucet (e.g. Bathroom Sink):		
I have read the above directions and have taken a tap sample in accordance with these directions.		
Signature _____		Date _____

MINIMUM OF 6-

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COLD WATER (INTERIOR) TYP

- (Examples: kitchen, ba

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COLLECTED BY THE

- If residences taking sa properly trained and pro

Size Category	System Size	Number of Tap Sites
Large	>100,000	100
	50,001 – 100,000	60
Medium	10,001 – 50,000	60
	3,301 – 10,000	40
Small	501 – 3,300	20
	101 – 500	10
	≤ 100	5

- ADEQ recommends to take different tap locations per each 6 months to build your materials inventory
- **Monitoring Periods:**
 January 1 to June 30 *and* July 1 to December 31

INITIAL MONITORING TO ANNUAL REDUCED MONITORING

- The 90th percentile meets or is **below** lead and copper action levels (ALs) for 2 consecutive 6-month monitoring periods; or
- Meets optimal WQPs (OWQPs) and with a 90th percentile that is at or below the lead AL for 2 consecutive 6-month monitoring periods.
- Begins in calendar year (CY) after criteria are met

INITIAL MONITORING TO TRIENNIAL REDUCED MONITORING

- The 90th percentile meets or is **below** lead and copper detection levels (ALs) for 2 consecutive 6-month monitoring periods (0.005 mg/L for lead and 0.65 mg/L for copper)
- Begins in calendar year (CY) after criteria are met

REDUCED MONITORING MUST ALWAYS BE REQUESTED AND GRANTED IN WRITING, DO NOT SELF-REDUCE!

Size Category	System Size	Number of Tap Sites
Large	>100,000	50
	50,001 – 100,000	30
Medium	10,001 – 50,000	30
	3,301 – 10,000	20
Small	501 – 3,300	10
	101 – 500	5
	≤ 100	5

- Samples must be taken between **June and September**
- Pick the taps from the highest risk sites, and had the highest results
- *Reduced monitoring is a privilege, and can be retracted.*

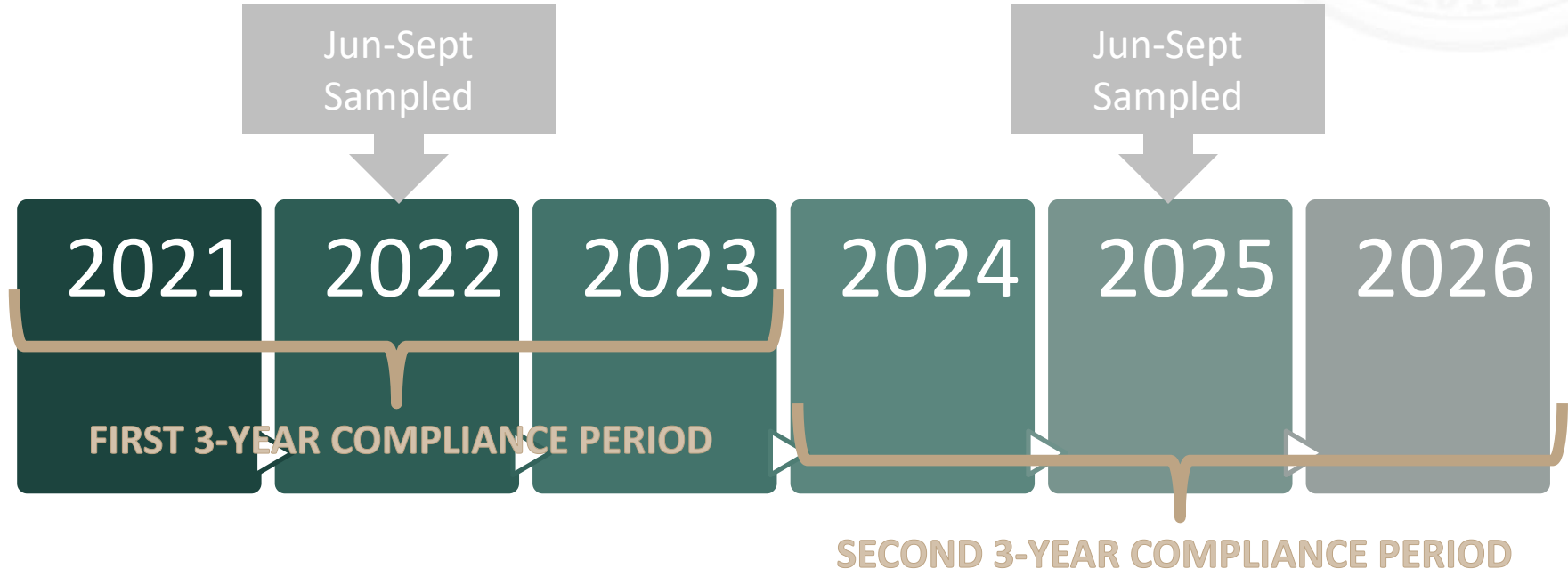
ANNUAL TO TRIENNIAL REDUCED MONITORING

- Small or Medium systems qualify if the 90th percentile meets or is below **both** lead and copper action levels (ALs) for 3 consecutive years of annual monitoring*; or
- Any system that meets OWQP specifications and the 90th percentile meets or is below the **lead** AL for 3 consecutive years of annual monitoring; or
- Begins January 1 of calendar year (CY) after meet criteria;

REDUCED MONITORING MUST ALWAYS BE REQUESTED AND GRANTED IN WRITING, DO NOT SELF-REDUCE!

REDUCED MONITORING - Triennial

- Monitoring must occur once during each 3-year compliance period
- Monitoring period is June – September of the same calendar year
- **Cannot** exceed 3 years between sampling events



Example: If PWS last sampled in 2022, the next set of samples are due in 2025

If your PWS is on a triennial monitoring and is serving 50 residents, and last sampled on 2018, when and how many do you sample next?

- A.) 2020, with 5 samples
- B.) 2021, with 10 samples
- C.) 2021, with 5 samples
- D.) 2019, with 5 samples

BUT WAIT! What if I have snowbirds and most of my residents/tap locations leave before June and do not come back till December?

- Let your CAC know the details of your situation
- A different monitoring period date needs to be approved by your regulating agency prior to the monitoring period

BUT WAIT! All my tap sample sites have only water softeners!

- Don't collect samples from taps at homes with water softeners or other point-of-use or point-of-entry devices for inorganic removal.
- If the only available sites have these devices, collect samples from the sites with the highest tier rating (Tier 1, followed by Tier 2 and then Tier 3).

BUT WAIT! I don't have enough taps to sample!

- Identify All taps available
- First draw samples on different days in the monitoring period
- Minimum 6 hour stagnation time
- ... Until minimum number of tap samples collected

The State can invalidate a lead or copper tap water sample if any one of the following is true:

- The laboratory establishes that improper analysis caused errors;
- The State determines that the sample site did not meet the site selection criteria;
- The sample container was damaged in transit; or
- Substantial reason exists to believe that the sample was tampered with.

A sample cannot be invalidated due to:

- Alleged homeowner error in sample collection
- Excessive stagnation periods

To request sample invalidation, system must provide:

- All sample results to the State and documentation for samples to be invalidated

State's decision to invalidate sample must be in writing

- Cannot be on the grounds that a follow-up sample result is higher or lower than that of the original sample

Invalidated samples are not counted for compliance

Replacement samples must be taken

- If needed to meet minimum sampling requirements as soon as possible but no later than 20 days after invalidation or by end of monitoring period (whichever is later)
- From the same locations as the invalidated samples (if possible)
- If not possible, at locations *not* already used for sampling during the monitoring period
- Will be included in the 90th percentile
- Cannot be used to satisfy requirements for a subsequent monitoring period.

What is the MCL for Copper?

- A.) 10 mg/L
- B.) 1.3 mg/L *BUT ITS AN ACTION LEVEL, NOT MCL!*
- C.) 0.015 mg/L
- D.) 0 mg/L

What is the Action Level for Lead?

- A.) 10 mg/L
- B.) 1.3 mg/L
- C.) 0.015 mg/L
- D.) 0 mg/L



DETERMINING COMPLIANCE

Compliance is based on your 90th percentile, compared to the Action Level or Practical Quantitation Level*

There is no violation attached to exceeding the action level

90th Percentile is at or below action levels

- Conduct periodic lead and copper tap monitoring

90th Percentile exceeds lead action levels

- Begin CCT Steps
- Conduct standard lead and copper tap monitoring, WQP monitoring, source water monitoring
- Conduct Public Education

90th Percentile exceeds copper action levels

- Begin CCT Steps
- Conduct standard lead and copper tap monitoring, WQP monitoring, source water monitoring

90th percentile used to determine compliance

- Value where 10% of samples collected have a greater concentration than the Action Level

Action Levels

- Lead Action Level = 0.015 mg/L or 15 ppb
Lead PQL = 0.005 mg/L or 5 ppb
- Copper Action Level = 1.3 mg/L
Copper PQL = 0.005 mg/L

* PQL = Practical Quantitation Level

REPORTING – 90th Percentile

Gather Data and rank from lowest to highest in concentration
(Include any/all non-detects)

Number the results from lowest to highest in numerical order

Total number of results multiplied by 0.9 = X

The result that matches the X - value is the 90th Percentile

Compare the 90th Percentile to the action level

FUN QUESTION TIME!

**Your water system collects 10 samples every year, below are your results.
Which house matches your 90th percentile?**

Site Location	Results (mg/L)
House 1 – Kitchen	0.001
House 4 – Upstairs Bathroom	0.001
House 9 – Kitchen	0.0056
House 6 – Bathroom	0.0063
House 3 – Kitchen	0.0062
House 8 – Kitchen	0.007
House 2 – Bathroom	0.008
House 10 – Basement Kitchen	0.023
House 7 – Downstairs Bathroom	0.023
House 5 – Kitchen	0.055

Your water system collects 5 samples every 3 years, below are your results. What is your 90th percentile?

Site Location	Results (mg/L)
House 1 - Kitchen	0.001
House 4 – Upstairs Bathroom	0.001
House 5 - Kitchen	0.0056
House 2 - Bathroom	0.008
House 3 - Kitchen	0.023

A.) 0.00462 mg/L

C.) 0.0155 mg/L

B.) 0.0386 mg/L

D.) 0.023 mg/L

DETERMINING THE 90TH PERCENTILE

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Number of Tap Samples	Math	90 th Percentile Corresponding Result
100	100×0.9	90 th highest result
60	60×0.9	54 th highest result
60	60×0.9	54 th highest result
50	50×0.9	45 th highest result
40	40×0.9	36 th highest result
20	20×0.9	18 th highest result
10	10×0.9	9 th highest result
5	5×0.9	Average of the 4 th and 5 th highest result

90th PERCENTILE: INTERPOLATION

LOCATION NAME	RESULT (MG/L)
House 1	0
House 2	0
House 3	0
House 4	0
House 5	0
House 6	0
House 7	0
House 8	0
House 9	0
House 10	0
House 11	0
House 12	0.00037
House 13	0.0004
House 14	0.00043
House 15	0.00045
House 16	0.00057
House 17	0.00058
House 18	0.00074
House 19	0.00078
House 20	0.00095
House 21	0.00272
House 22	0.00305

1. Rearrange your results from lowest to highest.
2. Subtract the difference of the two samples between which your 90th percentile falls.
 - In this example, the 90th percentile level for lead is 19.8. You would subtract the 19th sample result of 0.00078 mg/L from the 20th sample result of 0.00095 mg/L, for a difference of 0.00017 mg/L.
3. Subtract the difference between the 90th percentile level ranking (19.8) and the lower of the two sample rankings between which the 90th percentile level falls (19), for a difference of 0.8.
4. Multiply the difference of what you got from Step 2 (0.00017 mg/L) by what you got from Step 3 (0.8) = 0.000136 mg/L.
5. Add Step 4 (0.000136 mg/L) to the lower of the two sample results (the 19th sample: 0.00078 mg/L), and you would get 0.000916 (or 0.00092 by rounding)
6. Thus, the 90th percentile lead level is 0.00092 mg/l or 0.92 ppb.

A PWS is “deemed” when it has demonstrated to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps

If 90th Percentile meets the AL

- Tell your regulatory agency
- PWS will be considered “deemed” to have corrosion control
- PWS can resume a reduced annual monitoring schedule in the calendar year following standard monitoring

DEEMED

If 90th Percentile does not meet the AL

- PWS will have to be designated corrosion control treatment *by ADEQ*
- PWS will have to get an ATC building the treatment, and conduct monitoring
- PWS will apply to get an AOC
- ADEQ will designate OWQP to ensure proper corrosion is controlled

NOT
DEEMED

LEAD CONSUMER NOTICES

- Applies only after Sample Collection and Analysis

PUBLIC EDUCATION

- Applies only after a lead action level exceedance

PUBLIC NOTICES

- Applies only after treatment technique violations, or missed monitoring violations

CONSUMER CONFIDENCE REPORTS

- Applies to only Community Water Systems

Lead sample results must be provided to all persons served at the sampling site, not just the one who receives the water bill.

Even if lead levels do not exceed 15 ppbs;
Even if lead levels were non-detected

Timing – As soon as practical, but no later than 30 days after the lab sends you the results

Content – results, health effects, reduce exposure tips, contact info, and definitions

BUT WAIT! I only have two buildings and no residential homes. How do I deliver my Lead Consumer Notices?

- You can take our template, or create your own with all the required content. And post the results next to the notice at bulletin boards or at the sample taps so that everyone is informed.

Lead Consumer Notice (LCN)
Arizona Department of Environmental Quality

PWS ID #: AZ04 [redacted] DATE: [redacted]

PWS NAME: [redacted]

ANALYTICAL RESULT FOR LEAD TAP WATER MONITORING

Our public water supply system is required to periodically collect tap water samples to determine the lead levels in our system. Your residence was selected for this monitoring as part of our system's sampling plan. This notice is provided to you with the analytical results of the tap water sample collected at your home.

Sample address: [redacted]

Sample collection date: [redacted]

Analytical Lead result, in ppb (parts per billion): [redacted]

Definitions

The MCLG or Maximum Contaminant Level Goal for lead is zero and the action level is 15 ppb. The MCLG is the level of 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 actions which a water system must follow.

What are the health effects of lead?

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [redacted] is responsible for providing drinking water that meets all federal and state standards, but cannot control the variety of materials used in plumbing components.

How can I reduce exposure to lead?

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 the water and using only cold 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 and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (602) 771-9200 or at <http://www.epa.gov/safewater/lead>. When replacing your bathroom or kitchen faucet, consider a "lead-free" faucet that meets NSF/ANSI Standard 61 Annex G, which allows no more than 0.01% lead by weight.

Who can I contact at my water system for more information?

Phone number at our public water supply system: [redacted]

E-mail address at our public water supply system: [redacted]

Notice Content –

- Results of the *lead* tap water monitoring for the tap that was tested
- Explanation of the health effects of lead
- Steps consumers can take to reduce exposure to lead in drinking water
- Contact information for the water utility
- MCLG and AL for lead and their definitions*



Lead Consumer Notice (LCN)
Arizona Department of Environmental Quality

PWS ID #: AZ04 [redacted] DATE: [redacted]

PWS NAME: [redacted]

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Who can I contact at my water system for more information?
Phone number at our public water supply system: [redacted]

E-mail address at our public water supply system: [redacted]



Lead Consumer Notice (LCN) Certification Form

PWS ID #: AZ04 [redacted]

PWS NAME: [redacted]

...ing period to which the notice applies: [redacted]
...results were received from laboratory: [redacted]
...results were provided to consumers: [redacted]

...system named above hereby certifies that its lead consumer notice has been
...each person it serves at the specific sampling site from which the sample was
...water system also certifies that these results and the following information were
...such persons within 30 days of receiving the test results from the laboratory:

...dual tap results from lead tap water monitoring carried out under the
...requirements of 40 CFR §141.86.

...planation of the health effects of lead.

...at consumers can take to reduce exposure to lead in drinking water.

...formation for our water utility.

...imum contaminant level goals and action levels for lead, and the definitions of
...terms.

[redacted]
[redacted]
[redacted] Date: [redacted]

(Instructions on Back)

DUE DATE SUMMARY

COMPLIANCE RUN	STANDARD MONITORING	REDUCED MONITORING
TAP MONITORING	Jan-June: July 10 July-Dec: January 10	October 10
LEAD CONSUMER NOTICES	Jan-June: September 30 July-Dec: March 30	December 31
PUBLIC EDUCATION	Jan-June: August 31 July-Dec: February 28	November 30
WATER QUALITY PARAMETERS	Jan-June: July 10 July-Dec: January 10	December 10
OCCT/SOWT REC/STUDY	Jan-June: June 31 July-Dec: December 31	March 31

The Lead and Copper Rule
is based on Treatment Techniques,
not health limits

THERE IS ***NO SAFE LEVEL*** FOR LEAD

A PWS is “deemed” when it has demonstrated to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps

If 90th Percentile meets the AL

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If 90th Percentile does not meet the AL

- PWS will have to be designated corrosion control treatment *by ADEQ*
- PWS will have to get an ATC building the treatment, predict no more monitoring
- PWS will apply to get an AOC
- ADEQ will designate OWQP to ensure proper corrosion is controlled

NOT
DEEMED

If you are **NOT DEEMED**,
then you have an
Action Level Exceedance
and need to take action
(OCCT Steps):

Tell your Regulating Agency!
(Immediately)

Take WQP Samples at the EPDS and DS
(Within 60 Days)

Take a Lead and Copper sample at the EPDS
(Within 6 Months)

Public Education
(LEAD Only - Within 60 Days)

* These are the immediate steps to follow from the end of the monitoring period, but there are more follow-up monitoring and reporting requirements

- PWS will be put back on **Standard Monitoring**
 - Starting the next 6 full Months (Jan-June, Jul-Dec)
 - Take lead and copper in the *standard* number of tap sample sites
- PWS will have to do **WQP Monitoring**
 - Starting the next full 6 Months (Jan-June, Jul-Dec)
 - 2 sets per site every 6 months, sets recommended 2 weeks apart
 - 2 sets per every EPDS, each set recommended 2 weeks apart
- PWS will have to submit **OCCT/SOWT Recommendations**
 - Within 6 months from end of Monitoring Period
 - Compare sample results to previous rounds of lead and copper tap monitoring and water quality parameters with what best fits for your system.

TAP MONITORING – Standard

DITAT DEUS

Size Category	System Size	Number of Tap Sites
Large	>100,000	100
	50,001 – 100,000	60
Medium	10,001 – 50,000	60
	3,301 – 10,000	40
Small	501 – 3,300	20
	101 – 500	10
	≤ 100	5

OCCT REQUIREMENT - Timeline

Step	Activity	Deadline
1	PWS submits treatment recommendation to ADEQ	6 months after end of monitoring period with Pb or Cu ALE*
2	ADEQ determines whether a corrosion control study is required	12 months after end of monitoring period with Pb or Cu ALE*
3	PWS conducts corrosion control study (if required by ADEQ)	18 months after ADEQ decides study is needed
4	ADEQ makes determination on corrosion control treatment	If study is required: <ul style="list-style-type: none">• 6 months after study is completed If no study is required: <ul style="list-style-type: none">• Medium systems: 18 months after end of monitoring period with ALE• Small systems: 24 months after end of monitoring period with ALE

***Deadline is based on end of monitoring period in which AL exceedance occurred.**



WATER QUALITY PARAMETERS

Water Quality Parameters (WQP)

Optimal Water Quality Parameters (OWQPs)

PURPOSE

- To assist in determining water corrosivity
- To identify appropriate corrosion control treatment
- To determine whether corrosion control treatment is being properly maintained

APPLICABILITY

- Required for all large and newly large systems
- Required for small/medium systems that exceed the action level
- Sample site locations:
 - Representative locations (e.g., coliforms and disinfectant residual sites)
 - Entry point to the distribution system

WATER QUALITY PARAMETERS (WQP)

*** WATER QUALITY PARAMETERS ANALYSIS ***
 >>> TO BE COMPLETED BY LABORATORY PERSONNEL <<<

Analysis Method	Contaminant Name	Cont. Code	Analysis Run Date	Result
FIELD	pH **	1925	_____	_____
FIELD	Temperature (°C) **	1996	_____	_____
_____	Alkalinity	1927	_____	_____
_____	Calcium *	1019	_____	_____
_____	Conductivity	1064	_____	_____
_____	Orthophosphate *	1044	_____	_____
_____	Silica *	1049	_____	_____
_____	Iron ***	1025	_____	_____
_____	Manganese ***	1032	_____	_____
_____	Chloride ***	1017	_____	_____
_____	Sulfate ***	1055	_____	_____

REQUIRED

HIGHLY

RECOMMENDED

DWAR02A – Water Quality Parameters

** Taken in the field | *** ADEQ Recommended

WQP MONITORING – Initials/Standard

DITAT DEUS

Size Category	System Size	Number of Tap Sites	Number of Samples
Large	>100,000	25	50
	50,001 – 100,000	10	20
Medium	10,001 – 50,000	10	20
	3,301 – 10,000	3	6
Small	501 – 3,300	2	4
	101 – 500	1	2
	≤ 100	1	2

Accurate pH and alkalinity/DIC data is important for determining the feasibility of some treatments

Calcium, Magnesium, sulfate, iron, and other water quality may help define constraints on some treatment because of scale build-up issues

Presence of iron and/or manganese may interfere with the effectiveness of CCT

Presence of calcium may limit the ability to raise pH due to scaling problems

pH: As pH decreases, corrosion increases

Alkalinity: As alkalinity increases, corrosion decreases.

Conductivity: As conductivity increases, corrosion increases.

Total Dissolved Solids (TDS): As TDS increases, corrosion increases.

Temperature: As temperature increases, corrosion increases.

Dissolved Oxygen (DO): As DO increases, corrosion increases.

Chloride, Sulfates, Nitrates: As these increase, corrosion increases.

Chlorine: As Chlorine gas increases, corrosion increases.



PUBLIC EDUCATION

- **Applicability:**
 - Only when exceeding the Lead Action Level
- **Conditions:**
 - Must deliver public education materials
 - Must sample the tap of any customer who requests it (not required to pay for collecting or analyzing the sample, nor is required to collect and analyze the sample itself)

FOR NTNC and CWS

- Information Statement *
- Health Effects of Lead *
- Sources of Lead
- Steps to Reduce Exposure
- Explain What Happened and What is Being Done
- For More Information *
- Tell consumers how to get their water tested **
- Discuss lead in plumbing components and difference between low lead and lead free **

*** MUST USE MANDATORY LANGUAGE**

**** ADDITIONAL FOR CWS**

HEALTH EFFECTS OF LEAD

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

This program includes:

1. Public education content
2. Corrosion control treatment (treats water to make it less likely that lead will dissolve into the water)
3. Source water treatment (removing lead at the time it leaves the treatment facility)

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.

percent wetted surface lead to be labeled as "lead-free."

4. 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.

5. Get your child's blood tested

Contact the state or local health department or healthcare provider to find out how you can get your child tested for lead, if you are concerned about exposure.

6. 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.

any lead in its source water or water mains in the

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 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] 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 and federal water system ID, somewhere on the notice.]

Lead in Drinking Water



Printed Material to all bill paying customers and:

- 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
- Local welfare agencies

Within 60 days from end of monitoring period

If ongoing ALE, provide information on water bill at least quarterly

Systems serving > 100,000 must post PE materials on web site

Lead in Drinking Education & Community Public W

PWS Name: _____

County: _____

A public water system that has a lead action level exceedance (A) and provide information to consumers in the areas served by the end of the monitoring period in which the exceedance occurred. public education materials to the Arizona Department of Environmental Quality. Retain a copy of this report and education materials for a minimum of 12 years.

Required methods of Public Education

(Repeat delivery frequencies are listed in parentheses for each delivery method listed below and shall continue as long as the PWS exceeds the action level.)

Distribute written Public Education information on lead in drinking water all bill paying customers. To be distributed within 60 days from the end of the monitoring period.

(Repeat once every twelve months.)

Provide information on or in water bill.

(Required each billing cycle, but no less often than quarterly.)

Within 60 days, implement at least three* activities from the categories listed below:

- Public service announcement
- Paid advertisements
- Public area information displays
- E-mails to customers
- Public meetings
- Household deliveries
- Targeted individual customer contact
- Direct material distribution to all multi-family homes and institutions
- Other methods approved by the director

*A CWS serving 3300 or less people shall implement at least one activity

(Required to repeat at least three* activities every twelve months.)

Required methods of Public Education (Cont.)	Distribution / Activity Date
<p>Within 60 days of receipt of results, contact customers who are most at risk by:</p> <ol style="list-style-type: none"> a. Deliver education material to local public health agencies along with an informational notice that encourages distribution to all potentially affected customers or users of the water system. b. Deliver education material to the following organizations listed below along with an informational notice that encourages distribution to all the organization's potentially affected customers or users. <ol style="list-style-type: none"> i. Public and private schools or school boards. ii. Women, infant and children (WIC) and head start programs. iii. Public and private hospitals and medical clinics. iv. Pediatricians. v. Family planning clinics. vi. Local welfare agencies and jobs and family services. c. Make a good faith effort to locate the following organizations within the service area and deliver education material along with an informational notice that encourages distribution to all potentially affected customers or users. <ol style="list-style-type: none"> i. Licensed childcare centers. ii. Public and private preschools. iii. Obstetricians, gynecologists and midwives. <p>CWSs serving 3300 or less people, may limit distribution under this section to facilities and organizations served by the system that are most likely to be visited regularly by pregnant woman and children unless notified in writing by the director.</p> <p>(Required once every twelve months.)</p>	<p>a. Date of delivery: _____</p> <p>b. Date of delivery: _____</p> <p>c. Date of delivery: _____</p>
<p>For Community PWSs with a population greater than 100,000 Post Public Education information on lead in drinking water on the PWS's web site.</p> <p>(Required continuously)</p>	<p>Date first posted: _____</p> <p>Web site address: _____</p>

The attached Public Education material is representative of what was issued.

I hereby certify that the Public Education material was distributed to all persons served by the water system. Distribution was made by the methods and dates indicated above.

Signature of Water System Representative

Date

Printed Name

Title of Water System Representative

For ADEQ, MCESD, or PDEQ use only PE verification form received date: _____

PE on time: _____ PE late: _____ PE Acceptable: _____ PE Not Acceptable: _____

Within 60 days from end of monitoring period

- If ongoing ALE, provide information on water bill every 12 months

PWS serving > 100,000 must post on web site

Printed material to all each person served

Post informational posters in public places/common areas in each building served

Public Education
Requirements
can *stop once* the PWS is
no longer exceeding the
Action Level for Lead



CORROSION CONTROL TREATMENT

■ **Applicability**

- Systems serving > 50,000 people (except those with naturally non-corrosive water)
- Systems serving 50,000 or fewer people that exceed the lead ALE or copper ALE

■ **Purpose**

- Control lead and copper at the tap by reducing water corrosivity

■ **Once installed, must be continuously operated and monitored**

pH, Alkalinity, and/or DIC Adjustment

Phosphate-based Corrosion Inhibitors

- Orthophosphate or Blended Phosphate

Silicate-based Corrosion Inhibitors

- Mixture of soda ash and silicon dioxide
- Mechanism is unclear because silicates also raise the pH of the water

OCCT REQUIREMENT - Timeline

Step	Activity	Deadline
1	PWS submits treatment recommendation to ADEQ	6 months after end of monitoring period with Pb or Cu ALE*
2	ADEQ determines whether a corrosion control study is required	12 months after end of monitoring period with Pb or Cu ALE*
3	PWS conducts corrosion control study (if required by ADEQ)	18 months after ADEQ decides study is needed
4	ADEQ makes determination on corrosion control treatment	If study is required: <ul style="list-style-type: none">• 6 months after study is completed If no study is required: <ul style="list-style-type: none">• Medium systems: 18 months after end of monitoring period with ALE• Small systems: 24 months after end of monitoring period with ALE

***Deadline is based on end of monitoring period in which AL exceedance occurred.**

Step	Activity	Deadline
5	Installation of Treatment	24 months after Step 4
6	Follow-up Monitoring	12 months after treatment installation (2 consecutive 6-month periods)
7	ADEQ reviews installation of treatment and designates OWQP	6 months after Step 6
8	Continue monitoring	Schedule is based on whether an AL is exceeded and/or compliance with OWQPs

- Small or Medium systems can discontinue their CCT steps if they are at or below both ALs for two consecutive 6-month monitoring periods. **(ONE TIME ONLY)**
- Must recommence CCT steps if subsequently exceed either AL again, beginning with last uncompleted step or as specified by the State.

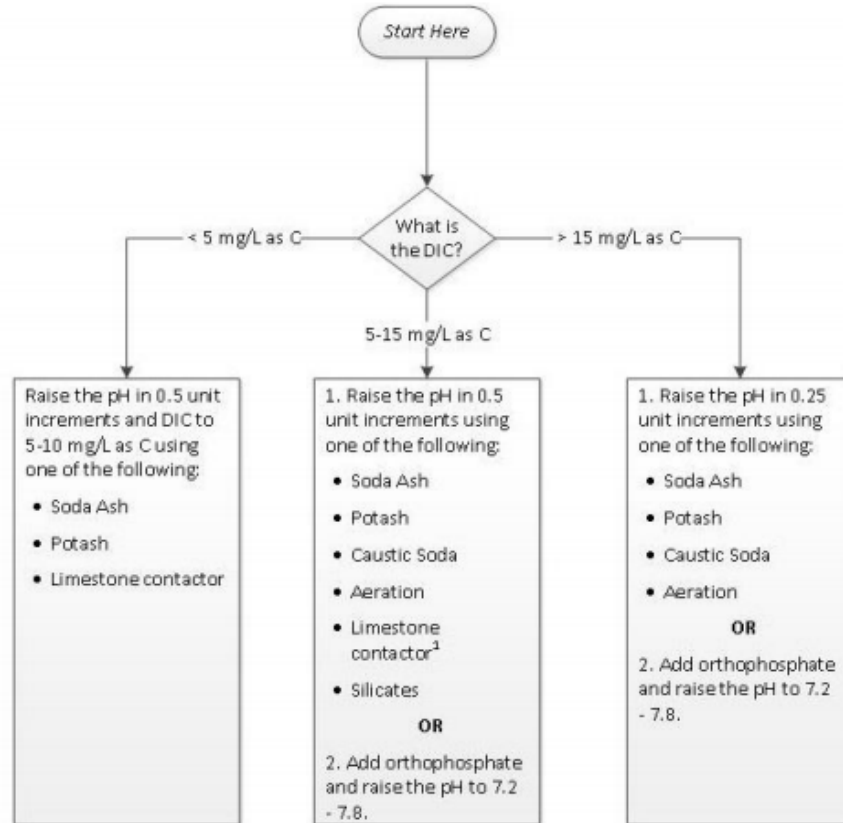
■ **Purpose:**

- All systems must *recommend* to the primacy agency a treatment option for designation as OCCT. You know your water system the best.
- ADEQ will help determine if your recommendation may impact compliance with other rules and negative side effects.

■ **Recommended for the OCCT Recommendation:**

- 1st 6-Month Lead and Copper Tap Monitoring
- 1st 6-Month WQP Tap Monitoring
- 1st 6-Month Lead and Copper EPDS Monitoring
- 1st 6-Month WQP EPDS Monitoring

Flowchart 1a: Selecting Treatment for Lead only or Lead and Copper with pH < 7.2



KEY:
 AL = Action Level
 Caustic soda = sodium hydroxide (NaOH)
 DIC = Dissolved Inorganic Carbon
 mg/L as C = milligrams per liter as carbon
 Potash = potassium carbonate (K₂CO₃)
 Soda ash = sodium carbonate (Na₂CO₃)

Footnote:
 1. Limestone contactors may not be appropriate when DIC > 10mg/L as C.

updated to reflect new research

to substitute for pilot studies and evaluate likely possibilities and do not. In particular, systems with LSLs should place it most effectively reduces lead release placement as recommended earlier in the presence of other chemicals in the calcium may interfere with CCT and control options.

ers and dose for the treatment options

reliminary CCT Selection

is the finished water pH?	Use This Flowchart ²
< 7.2	1a
7.2 - 7.8	1b
>7.8 - 9.5	1c
>9.5	1d
< 7.2	2a
7.2 - 7.8	2b
>7.8	2c
< 7.2	3a
≥ 7.2	3b

nd copper that also reduce iron and ie first, then using flowcharts 1a through 2c to

rically identifies filtration processes where o water.

ontrol 1 Technical r Privacy Water Systems

Obtain recommendations from other chemical suppliers

Check with other similar water plants

DO NOT EXPERIMENT ON YOUR DISTRIBUTION SYSTEM

CORROSION CONTROL TREATMENT CAN IMPACT COMPLIANCE WITH OTHER RULES AND MAY HAVE NEGATIVE SIDE EFFECTS

EPA has a helpful Optimal Corrosion Control Treatment Evaluation Technical Recommendations guidance document

ADEQ OCCT Recommendation Template



Lead and Copper Rule (LCR) Optimal Corrosion Control Treatment Recommendation Evaluation

Applicable for Systems serving less than 50,000 persons

Part 1: General Public Water System (PWS) and Monitoring Period Information

Community and Non-Transient Non-Community Public Water Systems are required to submit an optimal corrosion control treatment recommendation following a lead and/or copper action level exceedance. These recommendations must be made within 180 days of the end of the monitoring period.

ADEQ highly recommends reading the EPA's Optimal Corrosion Control Treatment and Public Water Systems: <https://www.epa.gov/lead-and-copper-rule/production/016003000>

Regulatory Agency: ADEQ PDEQ MCESD

PWS Name:

PWS Mailing Address:

Contact Person:

Email Address:

PWS Type (Select one): CWS NTNCWS

PWS Population Size: (Daily population served, include residents and non-transient)
 10,001 to 50,000 101 to 500
 3,301 to 10,000 < 100
 501 to 3,300

Part 2: Existing Treatment Information

General Treatment Information – Identify treatment processes used for each of the following treatment used? If no, skip to Part 3.

Treatment	EPDB#
Chlorine Gas	
Hypochlorite (liquid chlorine)	
Chlorine Dioxide	
Chloramines	
Other: _____	
Iron & Manganese Treatment	
Sequestration Chemical Name:	
Filtration	
Ion Exchange	
Other: _____	
Aeration	
Granular Activated Carbon	
Surface Water Filtration	
Coagulation	
Flocculation	
Sedimentation	
Filtration: List filter(s): _____	
Straw Medium	

Part 8: Potential of Scaling

The presence of calcium in the distribution system may limit the ability to raise pH. By maintaining water below the saturation pH, calcium carbonate precipitation should be minimal, thus preventing scaling problems. Because corrosion control treatment processes include the adjustment of pH, it is important to know if calcium carbonate scaling may become an issue. This may limit the upward adjustment of pH to below an effective range for certain types of treatment.

In order to identify the saturation pH, the calcium and the dissolved inorganic carbon (DIC) levels are used. Use the measured distribution pH and alkalinity levels from Part 5 to estimate DIC levels with the table in Appendix A.

DISSOLVED INORGANIC CARBON (DIC) ESTIMATION	
Average pH in your first 6 months:	Estimated DIC:
Average alkalinity in your first 6 months:	
CALCIUM SATURATION pH	
Average Calcium in your first 6 months:	Saturation pH:
Estimated DIC:	

Part 9: Recommendation/Proposed Corrosion Control Treatment

Potential corrosion control treatment options can be chosen by using the applicable flowchart and the information collected above. After selecting the appropriate flowchart using Appendix C, the flowcharts in Appendix D are used to identify the possible treatment options.

Is this a lead, copper, or lead and copper action level?	<input type="checkbox"/> Lead <input type="checkbox"/> Copper <input type="checkbox"/> Lead and Copper
Is there iron and manganese detected in the WQP DB Sample?	<input type="checkbox"/> Yes <input type="checkbox"/> No
What is the average pH from the Distribution System range?	<input type="checkbox"/> <7.2 <input type="checkbox"/> 7.2-7.8 <input type="checkbox"/> 7.8-9.5 <input type="checkbox"/> >9.5
According to Appendix C, what is the applicable flowchart?	<input type="checkbox"/> 1a <input type="checkbox"/> 1b <input type="checkbox"/> 1c <input type="checkbox"/> 1d <input type="checkbox"/> 2a <input type="checkbox"/> 2b <input type="checkbox"/> 2c <input type="checkbox"/> 3a <input type="checkbox"/> 3b <input type="checkbox"/> 3c
On the applicable flowchart, what range does the estimated DIC fall under? They are listed as (<6 mg/L as CaCO ₃ , 6 – 16 mg/L as CaCO ₃ , and >26 mg/L as CaCO ₃ , etc.)	
What are the identified corrosion control treatment options on the appropriate branch of the flowchart?	<input type="checkbox"/> Raise pH <input type="checkbox"/> Add Blended Phosphate <input type="checkbox"/> Raise DIC (Alkalinity) <input type="checkbox"/> Add Silicate <input type="checkbox"/> Add Orthophosphate

Part 10: Recommendation/Proposed Source Water Treatment

Highest EPDB sample was:	Lead (mg/L): _____	Copper (mg/L): _____
<input type="checkbox"/> No Treatment Necessary – EPDB samples do not show presence of lead and/or copper at levels of which are of concern. *You may only choose "no treatment necessary" if the lead and copper sample results are below 0.010 mg/L lead and 0.000 mg/L copper.		
<input type="checkbox"/> In-Cell Treatment – EPDB samples contain levels of lead and/or copper are above 0.010 mg/L lead and 0.000 mg/L copper. Pick one of the following:		
<input type="checkbox"/> Ion Exchange <input type="checkbox"/> Reverse Osmosis <input type="checkbox"/> Lime Softening <input type="checkbox"/> Coagulation/Filtration <input type="checkbox"/> Other		

Part 11: Submission of Treatment Recommendation Forms

I certify that all of the above is correct to the best of my knowledge.

Printed Name, Title _____

Signature _____

Date _____

ADEQ will determine, *in writing*, if any small or medium-size system that has an ALE to perform corrosion control studies.

PWSs shall evaluate the effectiveness of each of the following treatments/combinations of the following treatments to identify what OCCT is the best for the system:

Alkalinity and pH
adjustment;

Calcium hardness
adjustment;

A phosphate or
silicate based
corrosion inhibitor

After the study is completed, the PWS shall submit a new OCCT recommendation and rationale, in writing, to the ADEQ what they determine is the best treatment option that constitutes optimal corrosion control treatment for that system.

ADEQ will approve the CCT recommended by the PWS

or ADEQ will designate an alternative CCT option.

Then after installation of OCCT, ADEQ will designate *Optimal Water Quality Parameters*

Step	Activity	Deadline
5	Installation of Treatment	24 months after Step 4
6	Follow-up Monitoring	12 months after treatment installation (2 consecutive 6-month periods)
7	ADEQ reviews installation of treatment and designates OWQP	6 months after Step 6
8	Continue monitoring	Schedule is based on whether an AL is exceeded and/or compliance with OWQPs

- Small or Medium systems can discontinue their CCT steps if they are at or below both ALs for two consecutive 6-month monitoring periods. **(ONE TIME ONLY)**
- Must recommence CCT steps if subsequently exceed either AL again, beginning with last uncompleted step or as specified by the State.

Optimal water quality parameter (OWQPs) should reflect optimal corrosion control conditions for the system

**Required for all systems who have designated
Optimal Corrosion Control Treatment**

ADEQ Designation of OWQPs:

Minimums or ranges at taps and EPDSs to be maintained.

- We will determine the OWQP from submitted WQP and lead/copper tap monitoring data collected by the system, prior to and after CCT installation

After ADEQ designates OWQPs:

- Collect tap samples every 6 months (2 per tap site) for pH, alkalinity, and/or the inhibitor used
- Collect EPDS samples every 2 weeks for pH, alkalinity (if adjusted), and/or the inhibitor used
- PWS can qualify for reduced monitoring at the tap samples

WQP Monitoring Requirement Summary

DITAT DEUS

Monitoring Period	Parameters ²	Location	Frequency
Initial monitoring	pH, alkalinity, orthophosphate or silica ³ , calcium, conductivity, temperature	Taps and at entry point(s) to distribution system	Every 6 months.
After installation of corrosion control	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴	Taps	Every 6 months.
	pH, alkalinity, dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵	Entry point(s) to distribution system ⁶	No less frequently than every two weeks.
After State specifies parameter values for optimal corrosion control	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴	Taps	Every 6 months.
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵	Entry point(s) to distribution system ⁶	No less frequently than every two weeks.
Reduced monitoring	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴	Taps	Every 6 months, annually ⁷ or every 3 years ⁸ ; reduced number of sites.
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵	Entry point(s) to distribution system ⁶	No less frequently than every two weeks.



OTHER IMPORTANT THINGS TO NOTE

PWS with OCCT

- **REQUIRED** to notify ADEQ prior to installing

PWS without OCCT

- **RECOMMENDED** to notify ADEQ prior to installing

Your water system will go back on **STANDARD** monitoring.

Treatment Changes

-

- Switching

-

Source Changes

- Switching from a purchased treated water source to a different treated water source that requires treatment;
- Switching from a purchased treated water source to a different treated source;
- Changing from a ground to surface water source; and
- Adding a new source, such as a new ground water or purchased source, in the distribution system.

(and phosphate)

Lead and Copper Rule | Drinking Water Compliance Assistance

The Lead and Copper Rule (LCR) protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from plumbing materials containing lead and copper. All community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) are subject to LCR requirements.

What to Do If There's an Exceedance

Lead or Copper 90th Percentile Action Level

When the action level is exceeded at .015 milligrams per liter (mg/L) for lead and/or 1.3 mg/L for copper is exceeded, the water system triggers a series of treatment techniques called "the Corrosion Control Treatment Steps" and public water systems must:

- Conduct quality parameter monitoring
- Notify the public and provide educational materials
- Complete corrosion control treatment recommendation
- Execute corrosion control studies
- Install state-designated corrosion control treatment

EPA Resources for LCR Revisions

LCR Long-Term Revisions | [Visit EPA Page >](#)

Revised LCR Updates | [Visit EPA Page >](#)

Notice of Delay of Effective Date for LCR Revisions | [Visit Federal Register >](#)

Proposed Rule | [Visit Federal Register >](#)

[Compliance Assistance Coordinators Find by County >](#)

[DW Compliance Data Submittals Email >](#)

SEE MORE

[Public Education Pamphlet >](#)

[Lead in Drinking Water Poster >](#)

[Lead Education Program & Notification Requirement Update >](#)

[Lead Consumer Notification Fact Sheet >](#)

[Sample Collection Criteria Flow Chart >](#)

[Drinking Water Compliance Assistance Overview >](#)

[Drinking Water System Compliance Tips >](#)

FORMS/TEMPLATES/PLANS

[DWAR Q2A - WQ Parameters Report >](#)

[DWAR Q8 - Lead & Copper >](#)

[LCR-C Lead & Copper Sampling >](#)

[LCR-B Lead & Copper Sampling Pool >](#)

[Optimal Corrosion Control Treatment Template - 50k or fewer \(Exceed\) >](#)

[Optimal Corrosion Control Treatment Template - more than 50k \(Exceed\) >](#)

[Lead Public Education Certification >](#)

[Lead Consumer Notice >](#)

[Lead & Copper Sampling for Homeowners >](#)

PUBLIC NOTICE TEMPLATES

[Public Notice Requirements Flow Chart >](#)

[Certificate of Distribution >](#)

[Tier 3 Missed LCR Tap Sample >](#)

[Tier 3 Missed WQP Sample >](#)

ADDITIONAL RESOURCES



DEP

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRINKING WATER

COMPLIANCE ASSISTANCE

COORDINATORS

CONTACT

BY COUNTY

EMAIL

DATA

COMPLIANCE ASSISTANCE

COORDINATORS

CONTACT

BY COUNTY

EMAIL

DATA

COMPLIANCE ASSISTANCE

COORDINATORS

CONTACT

BY COUNTY

EMAIL

DATA



ANY QUESTIONS?

E-mail PBCU@azdeq.gov

