

Flint Impact: Now & Later



FLINT WATER PLANT

“Never let a crisis go to waste”

Winston Churchill

Flint Impact: Now



- **Corrosion Control**
- Sampling Protocol
- Reporting Requirements


Date Signed: November 3, 2015

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

MEMORANDUM

SUBJECT: Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems

FROM: Peter C. Grevatt, Director
Office of Ground Water and Drinking Water 

TO: EPA Regional Water Division Directors, Regions I-X

Clarified the LCR regarding corrosion control

- Which systems must show & maintain OCCT and continue meeting WQPs
- When to notify the State and get approval for upcoming changes in treatment or source

This memorandum addresses certain concerns raised about the application of the 1991 Lead and Copper Rule (LCR) to situations in which a large water system ceases to purchase treated water and switches to a new drinking water source. This memorandum clarifies how the LCR applies to this situation and eliminates the uncertainty for water systems and primacy agencies that may face these circumstances in the future.



Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems

March 2016

<https://www.epa.gov/sites/production/files/2016-03/documents/occtmarch2016.pdf>

- Actions to control lead and copper
- Water Quality Factors Affecting Release of Lead and Copper
- Physical and Hydraulic Factors Affecting Release of Lead and Copper
- Corrosion Control Treatment for Lead and Copper
- Technical Recommendations for Reviewing Water Quality Data & Selecting Treatment Alternatives
- Review of Corrosion Control Treatment Steps
- Impact of Changes to Source or Treatment
- Etc.

- ALSO on EPA website: [OCCT Evaluation Templates](#) in Excel



Flint Impact: Now



- Corrosion Control
- **Sampling Protocol**
- Reporting Requirements

LANCE R. LEFLEUR
DIRECTOR



ROBERT J. BENTLEY
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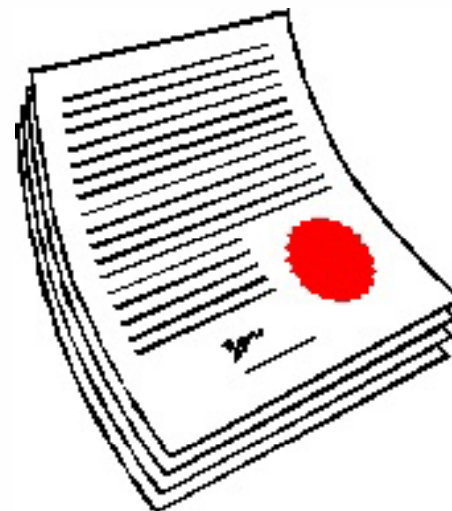
MEMORANDUM

Date: March 2, 2016

Attention: Drinking Water Manager

From: Dennis D. Harrison, Chief 
ADEM Drinking Water Branch

Ref: Lead and Copper Materials Inventory



**Update Lead/Copper Materials Inventory
and Sampling Plan
(to ADEM by May 31, 2016)**

How to Change a Site:

Required to get permission from ADEM

- Submit request to Laura Taylor - new address & why
- Document the change in your monitoring plan
- Include copy of request when report to ADEM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

FEB 29 2016

MEMORANDUM

SUBJECT: Clarification of Recommended Tap Sampling Procedures for Purposes of the Lead and Copper Rule

FROM: Peter C. Grevatt, Director
Office of Ground Water & Drinking Water

A handwritten signature in black ink, appearing to read "Peter C. Grevatt".

TO: **Clarified Lead/Copper sampling procedures**
Regions I - X

- Aerators
- Pre stagnation flushing
- Sample bottle
- Recommended sampling instructions

The Lead and Copper Rule, 40 CFR Part 141.91, requires monitoring at consumer taps to identify levels of lead in drinking water that may result from corrosion of lead-bearing components in a public water system's distribution system or in household plumbing. These samples help assess the need for, or the effectiveness of, corrosion control treatment. The purpose of this memorandum is to provide recommendations on how public water systems should address the removal and cleaning of aerators, pre-stagnation flushing, and bottle configuration for the purpose of Lead and Copper Rule sampling.

Removal and Cleaning of Aerators



YES

in general practice

NO

before sampling

Pre-stagnation Flushing

A close-up photograph of a hand turning a chrome faucet handle. Water is flowing out of the faucet. The background is a plain, light-colored wall.

YES

in general practice

NO

before sampling

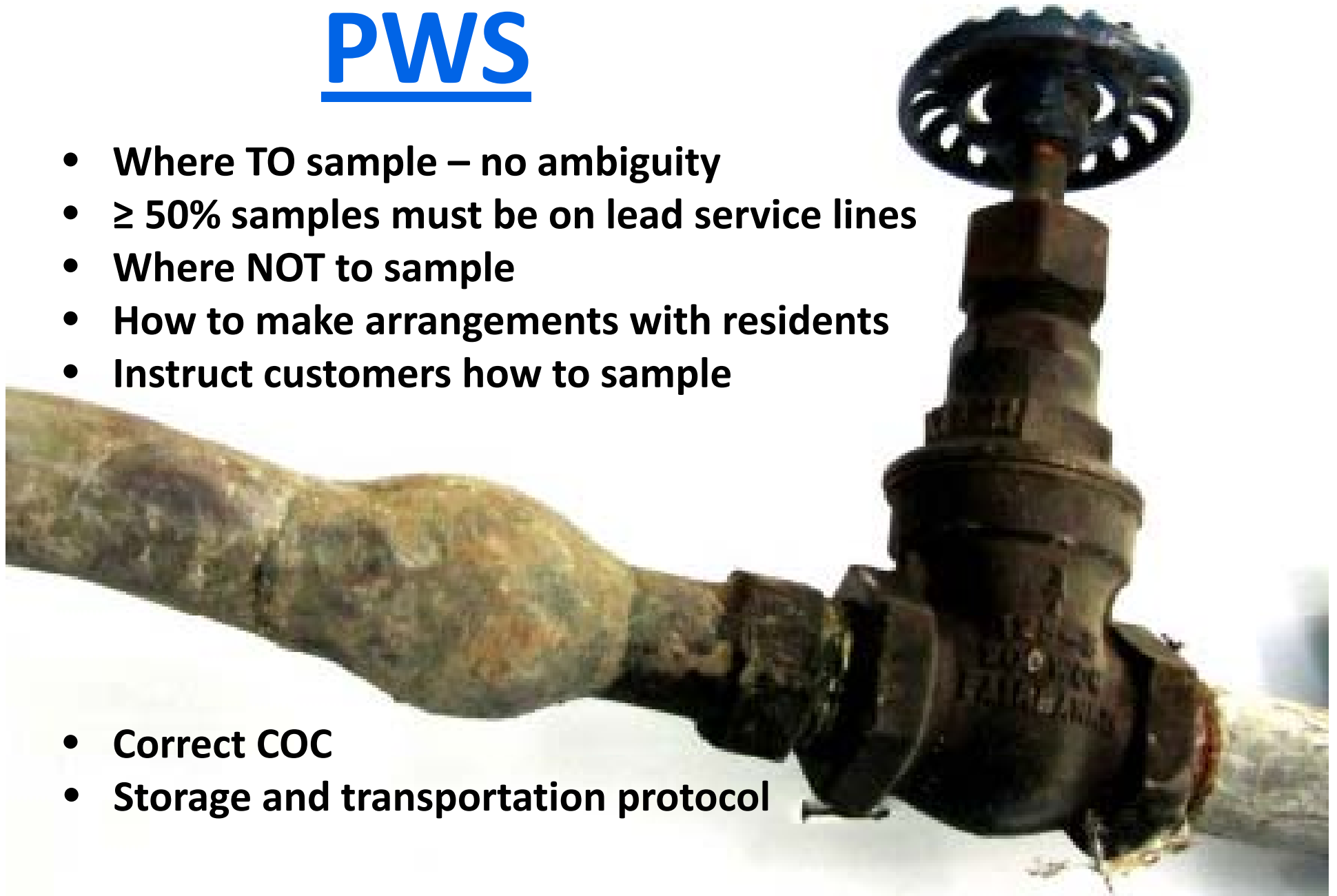
Sample Bottle



Sampling Instructions – PWS

- Where TO sample – no ambiguity
- $\geq 50\%$ samples must be on lead service lines
- Where NOT to sample
- How to make arrangements with residents
- Instruct customers how to sample

- Correct COC
- Storage and transportation protocol



Sampling Instructions – Residents



- Better details on:
 - Purpose for sampling
 - Cold water tap, human consumption
 - Correct sampling time (at least 6 hours)
 - NO FLUSHING (pre-stagnation or otherwise)
 - No filter on tap, and other details
 - How to fill the sample bottle and fill out form
- Inform customer when they will be provided the results
- Provide PWS contact info

Flint Impact: Now



- Corrosion Control
- Sampling Protocol
- **Reporting Requirements**

Reporting – no change for now

- Reporting requirements are the same;

however...be aware you cannot skip any steps

- If in doubt, ASK!

Labs must now notify ADEM of AL exceedances

Reporting to **ADEM**

Within 10 days:

Lab report to ADEM (October 10)

Within 90 days: send copies of:

1. ADEM Form 405
2. At least one copy of Consumer Notification of Lead/Copper Tap Monitoring Results (2 pages)
3. Lead and Copper Results Delivery Certification

Sample Result Invalidation

CLIENT:

Project: 2016 Lead/Copper Monitoring

Lab ID: -001

Client Sample

Analyses

Result

Limit

ICP METALS, TOTAL

Copper, as Cu

5.56

200.7

0.050

PB BY GFAA

Lead, as Pb

0.026

200.9

0.010

Only if:

- Bottle damage/tampering,
- Site did not meet sample site selection criteria or
- Lab error

- Submit supporting documentation

Reporting to Consumers

Within 30 days:

...and especially this

Report to customers

- Report to residents who sampled Lead/Copper
- Consumer Notification of Lead/Copper Tap Monitoring Results
- INCLUDE lead health effects & steps to reduce exposure to lead in DW

AL Exceedance:

Public Education

Removed from Reduced Monitoring

WQP & Source Monitoring

Install & Maintain CCT

Lead Service Line Replacement

Public Education

ACTION LEVEL (AL) = 0.015 mg/L
EXCEEDANCE if 90th Percentile > AL

PUBLIC EDUCATION if >10% samples exceed AL

- Within 60 days after receiving report – required language
- Notify all billing customers by mail
- Notify local health agencies by phone or in person
- Obtain prior ADEM approval of materials
- Report exceedance in CCR

Be transparent to the public in all you do.

A blue folder icon with a tab at the top and several white pages visible inside. The text "Record Keeping" is written in white on the front of the folder.

Record
Keeping

A yellow folder icon with a tab at the top and several white pages visible inside. The text "12 Years" is written in black on the front of the folder.

12 Years

- Make copies of *everything* & save electronically
- Keep organized files
- Know where your monitoring plan is and keep it up to date
- *Keep copies of all Lead/Copper records for at least 12 years.*

Flint Impact: Later

A large, dark water tower is the central focus of the image. The words "FLINT WATER PLANT" are visible on its side in a light color. The tower is set against a dark, cloudy night sky. A small red light is visible on top of the tower. The overall mood is somber and industrial.

NDWAC formed and asked to address:

- Sample site selection criteria;
- Lead sampling protocols;
- Public education for copper;
- Measures to ensure optimal CCT; and
- Lead service line replacement.

Flint Impact: Later

NDWAC recommended:

- Proactive lead service line replacements
- Strengthen corrosion control treatment
- More robust public education about lead
- Modify Monitoring Requirements
- Establish a Household Action Level
- Establish Separate Monitoring Requirements for Copper
- Establish appropriate compliance & enforcement mechanisms

A photograph of a large, white, cylindrical water tower at night. The tower is illuminated from below, and its top is lit with a red light. The words "FLINT WATER PLANT" are printed in black on the side of the tower. The background is a dark sky with some clouds.

IMPACT

FLINT WATER PLANT

NOW & LATER

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