

# DRINKING WATER SERVICES FIRESIDE CHAT

Action Level and Maximum Contaminant  
Level Compliance

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# What we're dealing with.



What we want in the end.



# Here's what to expect today

- ⦿ DWS automatically generated letters for frequent contaminants.
- ⦿ The typical compliance process for the different contaminants.
- ⦿ Questions and, hopefully, answers.

# Current DWS Automatically Generated Letters

- ⦿ Lead or copper exceeding the action level (AL)
- ⦿ *E. coli* confirmed in a groundwater source
- ⦿ Recurring coliform investigations triggering the installation of residual maintenance

# Lead or copper Exceeding the AL

- ⦿ The AL is exceeded when routine samples exceed the corresponding “90<sup>th</sup> percentile.”
  - Lead - 0.015 mg/L
  - Copper – 1.3 mg/L
- ⦿ Water quality parameters (WQP) – two rounds, two weeks apart (temperature, pH, alkalinity, conductivity, and calcium). Note that if treatment already exists, this could include orthophosphate or silica. If treatment already exists, this step is replaced with a review of treatment operations.
- ⦿ Public education (for lead only)
- ⦿ Entry point sample for lead and copper (this sample is only necessary once unless sources change)
- ⦿ Recommendation for corrosion control treatment
- ⦿ Submit construction plans for review and approval (for the treatment)
- ⦿ Install the treatment
- ⦿ Ensure treatment operation is effective with demonstration monitoring (both tap water samples and WQP).

# *E. coli* in a Groundwater Source

- ⦿ After coliform bacteria (or *E. coli*) are present in a routine sample, the water supplier must collect one triggered sample from every groundwater source active when the routine sample was collected (within 24 hours).
- ⦿ If *E. coli* are present in a triggered sample, five confirmation samples must be collected from the groundwater source (within 24 hours).
- ⦿ *E. coli* are confirmed in a groundwater source if *E. coli* bacteria are present in both a triggered and confirmation sample.
- ⦿ Public notice and corrective action to remove the source of contamination are required if *E. coli* are confirmed in a source.

# *E. coli* in a Groundwater Source

- ⦿ Required actions include public notice and correcting all deficiencies or submitting a corrective action plan.
  1. Public notice is required within 24 hours, and must be reported to DWS within 10 days.
  2. Corrective action or an approved plan is required within 120 days.

# Recurring Coliform Investigations

- If three coliform investigations are triggered in a rolling 12-month period; or
- Four investigations are triggered in a two-year period:
- Treatment to produce and maintain a disinfectant residual must be installed within six months unless an alternate schedule is approved.
- Note that ultraviolet light treatment is an acceptable alternative if the groundwater source is responsible for the recurring coliform in distribution.

# Proposed DWS Automatically Generated Letters

- ⦿ *E. coli* MCL violations
- ⦿ Nitrate exceeding the MCL
- ⦿ Arsenic exceeding the maximum contaminant level (MCL)
- ⦿ Disinfection byproducts exceeding the MCL

# *E. coli* MCL Violations

- After coliform bacteria (or *E. coli*) are present in a routine sample, the water supplier must collect three repeat samples (for each “positive” routine sample).
- A MCL violation occurs when:
  - A. An *E. coli*-positive repeat sample follows a total coliform-positive routine sample.
  - B. A total coliform-positive repeat sample follows an *E. coli*-positive routine sample.
  - C. All required repeat samples are not collected following an *E. coli*-positive routine sample.
  - D. Any repeat sample is not analyzed for *E. coli* when it tests positive for total coliform.
- Public notice must be issued within 24 hours of reporting sample results that result in the MCL violation.
- A level 2 coliform investigation must be completed. You should determine, if possible, the source of the *E. coli*.

# *E. coli* MCL Violations

- After samples cause an *E. coli* MCL violation, DWS will issue a letter within 14 days of the violation. The letter will require:
  1. Public notice be reported within 10 days (if not already reported to DWS);
  2. Compliance with the expected coliform investigation; and
  3. Removal of the source of contamination or shock chlorination (or some other appropriate corrective action) within 30 days.

# Nitrate Exceeding the MCL

- After a routine sample exceeds the MCL, a confirmation sample is required within 24 hours.
- A MCL violation occurs if the average of the routine and confirmation exceeds the 10 mg/L (or if the confirmation sample is not collected).
- Public notice must be issued within 24 hours of reporting sample results or not collecting a confirmation sample.
- DWS will issue a letter within 14 days of the violation, requiring the public notice be reported within 10 days (if not already reported to DWS) and a corrective action plan (CAP) be submitted within 60 days.

# Arsenic Exceeding the MCL

- After a routine sample exceeds the MCL, monitoring is increased to once every calendar quarter.
- A MCL violation occurs when the running annual average (RAA) of samples exceeds 0.010 mg/L. Note that one sample can immediately cause a violation.
- Public notice must be issued within 30 days of a violation.
- DWS will issue a letter within 14 days of the violation, requiring the public notice be reported within 30 days (if not already reported to DWS) and a corrective action plan (CAP) be submitted within 90 days.

# Disinfection Byproducts Exceeding the MCL

- After a routine sample exceeds the MCL, monitoring is increased to once every calendar quarter. If an initial distribution system evaluation was conducted (or EPA did not issue a waiver), monitoring must occur at two sample locations.
- A MCL violation occurs when the locational running annual average (LRAA) for any sample point exceeds 0.060 mg/L for HAA5 or 0.080 mg/L for TTHM.
- Public notice must be issued within 30 days of a MCL violation.
- DWS will issue a letter within 14 days of the violation, requiring the public notice be reported within 30 days (if not already reported to DWS) and a corrective action plan (CAP) be submitted within 90 days.

# Other Chemical Contaminants

- MCL violations for most chemical contaminants occur similarly to arsenic (by running annual average). Copper, lead, nitrate and nitrite are exceptions.
- MCL violations for other chemical contaminants are very rare and will be handled in a similar manner as are violations for arsenic or disinfection byproducts.

# Letter Requirements

- ◎ The aforementioned compliance letters will require public notice be issued and a copy submitted to DWS.
  1. For nitrate, the notice must be received by DWS within 10 days.
  2. For other contaminants, the notice must be received by DWS within 30 days.
- ◎ A corrective action plan must also be submitted to DWS within:
  1. 60 days for nitrate violations; or
  2. 90 days for other chemical MCL violations.
- ◎ If treatment already exists for the contaminant, it must be restored to effective operation or a CAP submitted within 30 days.

# Escalating to Formal Enforcement

- If water suppliers don't complete corrective action or do not submit an approvable action plan on time as prescribed by a warning letter, DWS may proceed with formal enforcement.
  1. If the water supplier is cooperative and making reasonable attempts to resolve the situation, then a compliance agreement will be used.
  2. If the water supplier is uncooperative or proposes unreasonable delays for treatment installation or restoration, DWS may issue an administrative order.

# Resources

- Oregon's rules for public water systems:
  - <https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DINKINGWATER/RULES/Pages/rules.aspx>
- Public notice information and templates:
  - <https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DINKINGWATER/OPERATIONS/Pages/publicnotices.aspx>
- Data online landing page:
  - <https://yourwater.oregon.gov/wssearch.php>

# QUESTIONS?