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Rulemaking Hearing Rule(s) Filing Form

Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing (Tenn. Code Ann. § 4-5-205).

Pursuant to Tenn. Code Ann. § 4-5-229, any new fee or fee increase promulgated by state agency rule shall take effect on July 1, following the expiration of the ninety (90) day period as provided in § 4-5-207. This section shall not apply to rules that implement new fees or fee increases that are promulgated as emergency rules pursuant to § 4-5-208(a) and to subsequent rules that make permanent such emergency rules, as amended during the rulemaking process. In addition, this section shall not apply to state agencies that did not, during the preceding two (2) fiscal years, collect fees in an amount sufficient to pay the cost of operating the board, commission or entity in accordance with § 4-29-121(b).

Agency/Board/Commission:	Board of Water Quality, Oil, and Gas
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Revision Type (check all that apply):

Amendment
 New
 Repeal
 Content based on previous emergency rule filed on _____
 Content is identical to the emergency rule

Rule(s) (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please make sure that **ALL** new rule and repealed rule numbers are listed in the chart below. Please enter only **ONE** Rule Number/Rule Title per row.)

Chapter Number	Chapter Title
0400-45-01	Public Water Systems
Rule Number	Rule Title
0400-45-01-.35	Consumer Confidence Reports.

Place substance of rules and other info here. Please be sure to include a detailed explanation of the changes being made to the listed rule(s). Statutory authority must be given for each rule change. For information on formatting rules go to <https://sos.tn.gov/publications/services/rulemaking-guidelines>.

Chapter 0400-45-01
Public Water Systems

Amendments

Rule 0400-45-01-.35 Consumer Confidence Reports is amended by deleting in its entirety and substituting instead the following:

0400-45-01-.35 Consumer Confidence Reports.

(1) Purpose and Applicability.

- (a) This rule establishes the minimum requirements for the content of ~~annual~~ reports that community water systems must deliver to their customers. These reports must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner. This rule also includes requirements for systems serving more than 100,000 persons to develop and annually update a plan for providing assistance to consumers with limited English proficiency.
- (b) This rule applies only to community water systems.
- (c) For the purpose of this rule, customers are defined as billing units or service connections to which water is delivered by a community water system. Consumers are defined as people served by the water system, including customers, and people that do not receive a bill.
- (d) For the purpose of this rule, “detected” means a contaminate found in water:
 - 1. at At or above the levels prescribed by Table 0400-45-01-.14(10)(d) for inorganic contaminants;_i
 - 2. at At or above the levels prescribed by Rule 0400-45-01-.26 for volatile organic chemicals;_i
 - 3. at At or above by Table 0400-45-01-.10(1)(r) for other organic chemicals;_i
 - 4. at At or above the DBP levels prescribed by ~~subparagraph (10)(d) part (10)(k)3~~ of Rule 0400-45-01-.14; ~~and or~~
 - 5. at At or above the levels prescribed by paragraph (1) of Rule 0400-45-01-.11 for radioactive contaminants.

(2) Effective Compliance Dates.

- (a) ~~The regulations in this rule shall become effective April 1, 1999, or the effective date of the rule whichever is later. Between the effective date of this rule and December 31, 2026, community water systems must comply with paragraphs (1) through (5) of this rule. Beginning January 1, 2027, community water systems must comply with this rule, except subpart (3)(h)8(i). Beginning November 1, 2027, community water systems must comply with the entirety of this rule.~~
- (b) Each existing community water system must deliver ~~its first report by October 19, 1999, its second report by July 1, 2000, and subsequent~~ reports by July 1 ~~annually thereafter~~ each year. ~~The first report must contain data collected during, or prior to, calendar year 1998 as prescribed in paragraph (3) of this rule. Each report thereafter must contain data collected during, or prior to, the previous calendar year, or the most recent calendar year before the previous year.~~
- (c) A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation ~~and annually thereafter~~.

(d) A community water system that sells water to another community water system must ~~deliver the applicable information required in paragraph (3) of this rule to the buyer system:~~

1. ~~No later than April 19, 1999, by April 1, 2000, and by April 1 annually thereafter or Deliver the information required in paragraph (3) of this rule to the purchaser by April 1, 2027, and annually thereafter; or on a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties; and~~
2. ~~On a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties~~ If the purchaser is required to report biannually according to subparagraph (5)(i) of this rule, the seller must provide the applicable information required in subparagraph (5)(i) of this rule by October 1, 2027, to the purchaser system, and annually thereafter, or on a date mutually agreed upon by the seller and the purchaser and specifically included in a contract between parties.

(3) ~~Contents of the Report~~ Content of the Reports.

(a) Each community water system must provide to its customers ~~an annual a~~ report(s) that contains the information specified in this paragraph and paragraph (4) of this rule, and include a summary as specified in paragraph (6) of this rule.

(b) Information on the source of the water delivered: ~~;~~

1. Each report must identify the source(s) of the water delivered by the community water system by providing information on:
 - (i) The type of the water: e.g., surface water, ground water; and
 - (ii) The commonly used name (if any) and location of the body (or bodies) of water.
2. If a source water assessment has been completed, the report must notify consumers of the availability of this information, the year it was completed or most recently updated, and the means to obtain it. In addition, systems are encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information. Where a system has received a source water assessment from the Department, the report must include a brief summary of the system's susceptibility to potential sources of contamination, using language provided by the ~~primacy agency~~ Department or written by the operator.

(c) Definitions.

1. Each report must include the following definitions:

- (i) Maximum Contaminant Level Goal or 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: ~~;~~
- (ii) Maximum Contaminant Level or 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: and
- (iii) Contaminant: Any physical, chemical, biological, or radiological substance or matter in water.

2. A report for a community water system operating under a variance or an exemption must include the following definition: Variances and Exemptions: Department or EPA permission not to meet an MCL or a treatment technique under certain conditions.

3. A report that contains data on contaminants that EPA regulates using any of the following terms must include the applicable definitions:
 - (i) Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
 - (ii) Action Level: The concentration of a contaminant ~~which~~ that, if exceeded, triggers treatment or other requirements which a water system must follow.
 - (iii) Maximum residual disinfectant level goal or 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.
 - (iv) ~~Maximum~~ Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.
 - (v) Hazard Index or HI: The Hazard Index is an approach that determines the health concerns associated with mixtures of certain PFAS in finished drinking water. Low levels of multiple PFAS that individually would not likely result in adverse health effects may pose health concerns when combined in a mixture. The Hazard Index MCL represents the maximum level for mixtures of PFHxS, PFNA, HFPO-DA, and PFBS allowed in water delivered by a public water system. A Hazard Index greater than 1 requires a system to take action.

4. A report that contains information regarding a Level 1 or Level 2 Assessment required under Rule 0400-45-01-.41 must include the applicable definitions:
 - (i) Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system-; and
 - (ii) Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

5. Systems must use the following definitions for the terms listed below if the terms are used in the report unless the system obtains written approval from the Department to use an alternate definition:

- (i) Pesticide: Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest; and
- (ii) Herbicide: Any chemical(s) used to control undesirable vegetation.

(d) Information on Detected Contaminants.

1. ~~The reports shall specify the following report~~ This subparagraph specifies the requirements for information to be included in each report for contaminants subject to mandatory monitoring (except Cryptosporidium):
 - (i) Contaminants subject to a MCL, action level, maximum residual disinfectant level, or treatment technique (regulated contaminants)-; and
 - (ii) Contaminants for which monitoring is required for unregulated contaminant monitoring by the Environmental Protection Agency. and;

~~(iii) Disinfection by products or microbial contaminants for which monitoring is required by the Information Collection Rule except as provided under part (e)1 of this paragraph and which are detected in the finished water.~~

2. The data relating to these contaminants must be ~~displayed~~ presented in the reports in a manner that is clear and understandable for consumers. For example, the data may be displayed in one table or in several adjacent tables. Any additional monitoring results ~~which that~~ a community water system chooses to include in its report must be displayed separately.

3. The data must be derived from data collected to comply with EPA and Department monitoring and analytical requirements during the previous calendar year, ~~1998 for the first report and subsequent calendar years thereafter or the most recent calendar year before the previous calendar year~~, except that: ~~(i) If where~~ a system is allowed to monitor for regulated contaminants less often than once a year, the table(s) contaminant data section must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with the regulations. No data older than ~~5~~ five years need be included.

~~(ii) Results of monitoring in compliance with the Information Collection Rule need only be included for 5 years from the date of last sample or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first.~~

4. For each detected regulated ~~contaminants~~ contaminant (listed in Appendix A ~~to~~ in paragraph (7) of this rule), the table(s) contaminant data section(s) must contain:

(i) The MCL for that contaminant expressed as a number equal to or greater than 1.0 (as provided in Appendix A in paragraph (7) of this rule);

(ii) The MCLG for that contaminant expressed in the same units as the MCL;

(iii) If there is no MCL for a detected contaminant, the table contaminant data section(s) must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant, and the report must include the definitions for treatment technique and ~~or~~ action level, as appropriate, specified in part (c)3 of this paragraph;

(iv) For contaminants subject to an MCL, except turbidity ~~total coliform, fecal coliform,~~ and E. coli, the contaminant data section(s) must contain the highest contaminant level used to determine compliance with an NPDWR and the range of detected levels, as follows:

(I) ~~If~~ When compliance with the MCL is determined annually or less frequently: The highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL; and

(II) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a monitoring location: the highest average of any of the monitoring locations and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. For the MCLs for TTHM and HAA5 in paragraph (6) of Rule 0400-45-01-.06, systems must include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the TTHM or HAA5 MCL, the system must include the locational running annual averages for all locations that exceed the MCL.

~~(III) — When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all monitoring locations; the average and range of detection expressed in the same units as the MCL. The system is required to include individual sample results for the IDSE conducted under Rule 0400-45-01-.37 when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.~~

(When rounding of results to determine compliance with the MCL is allowed by this chapter, rounding should be done prior to multiplying the results by the factor listed in Appendix A in paragraph (7) of this rule.)

- (v) For turbidity:
 - (I) ~~If When~~ it is reported pursuant to paragraph (3) of Rule 0400-45-01-.06: The highest average monthly value.
 - (II) ~~If When~~ it is reported pursuant to the requirements of paragraph (2) of Rule 0400-45-01-.31: the highest monthly value. The report should include an explanation of the reasons for measuring turbidity.
 - (III) ~~If When~~ it is reported pursuant to paragraph (4) of Rule 0400-45-01-.31: The highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in paragraph (4) of Rule 0400-45-01-.31 for the filtration technology being used. The report should include an explanation of the reasons for measuring turbidity;
 - (vi) For lead and copper: the 90th percentile value concentration of the most recent round(s) of sampling, and the number of sampling sites exceeding the action level, and the range of tap sampling results;
 - (vii) Reserved; For total coliform analytical results until March 31, 2016:
 - ~~(I) — The highest monthly number of positive samples for systems collecting fewer than 40 samples per month; or~~
 - ~~(II) — The highest monthly percentage of positive samples for systems collecting at least 40 samples per month;~~
 - (viii) Reserved; For fecal coliform and E. coli until March 31, 2016: The total number of positive samples;
 - (ix) The likely source(s) of detected contaminants to the best of the operator's knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments, and should be used when available to the operator. If the operator lacks specific information on the likely source, the report must include one or more of the typical sources for that contaminant listed in Appendix A ~~to~~ in paragraph (7) of this rule which are most applicable to the system; and
 - (x) For E. coli analytical results under Rule 0400-45-01-.41: The total number of positive samples.
5. If a community water system distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, the ~~table shall contain a separate column~~ contaminant data section(s) should differentiate contaminant data for each service area and the report ~~shall~~ should identify each separate distribution system, ~~unless such systems produce and deliver separate reports to the customers of each service area tailored to include data for that service area. For example, if displayed~~

in a table, it should contain a separate column for each service area. Alternatively, systems could produce separate reports tailored to include data for each service area.

6. The table(s) detected contaminant data section(s) must clearly identify any data indicating violations of MCLs, MRDLs, or treatment techniques, and the report must contain a clear and readily understandable explanation of the violation including: the length of the violation, the potential adverse health effects, and actions taken by the system to address the violation. To describe the potential health effects, the system must use the relevant language of Appendix A ~~to~~ in paragraph (7) of this rule.
 7. For detected unregulated contaminants for which monitoring is required—~~(except Cryptosporidium)~~, the table(s) reports must contain present the average and range at which the contaminant was detected. The report ~~may~~ must include a brief explanation of the reasons for monitoring for unregulated contaminants, such as:
 - (i) Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether the EPA should consider regulating those contaminants in the future; and
 - (ii) May use an alternate educational statement in the CCR if approved by the Department.
 8. For systems that exceed the lead action level in subparagraph (1)(c) of Rule 0400-45-01-.33, the detected contaminant data section must clearly identify the exceedance if any corrective action has been required by the Department during the monitoring period covered by the report. The report must include a clear and readily understandable explanation of the exceedance, the steps consumers can take to reduce their exposure to lead in drinking water, and a description of any corrective actions the system has or will take to address the exceedance.
- (e) Information on Cryptosporidium, radon, and other contaminants:
1. If the system has performed any monitoring for Cryptosporidium, ~~including monitoring performed to satisfy the requirements of the information collection rule, which that~~ indicates that Cryptosporidium may be present in the source water or the finished water, the report must include:
 - (i) A summary of the results of the monitoring; and
 - (ii) An explanation of the significance of the results.
 2. If the system has performed any monitoring for radon ~~which that~~ indicates that radon may be present in the finished water, the report must include:
 - (i) The results of the monitoring; and
 - (ii) An explanation of the significance of the results.
 3. If the system has performed additional monitoring ~~which that~~ indicates the presence of other contaminants in the finished water, systems are strongly encouraged to report any results ~~which that~~ may indicate a health concern. To determine if results may indicate a health concern, it is recommended that systems find out if EPA has proposed a national primary drinking water regulation (NPDWR) or issued a health advisory for that contaminant by calling the Safe Drinking Water Hotline (800-426-4791) or an alternative method identified on the website <http://www.epa.gov/safewater>. Detections above a proposed MCL or health advisory level are considered to indicate possible health concerns. For such contaminants, it is recommended that the report include:
 - (i) The results of the monitoring; and

- (ii) An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.

(f) Compliance with NPDWR. In addition to the requirements of part (d)7 of this paragraph, the report must note any violation that occurred during the year period covered by the report of a requirement listed in parts 1 through 7 of this subparagraph, and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the system has taken to correct the violation, as follows:

1. ~~A monitoring~~ Monitoring and reporting ~~requirement.~~ of compliance data;
2. Filtration and disinfection prescribed by Rules 0400-45-01-.17 and 0400-45-01-.31. For systems ~~which that~~ have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes ~~which that~~ constitutes a violation, the report must include the following language as part of the explanation of potential adverse health effects: 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;
3. Lead and copper control requirements prescribed by Rule 0400-45-01-.33. For systems ~~which that~~ fail to take one or more actions prescribed by subparagraph (1)(d), of Rule 0400-45-01-.33 or paragraph (2), (3), (4) or (5) of Rule 0400-45-01-.33, the report must include the applicable language of Appendix A ~~to~~ in paragraph (7) of this rule for lead, copper or both;
4. Treatment techniques for Acrylamide and Epichlorohydrin prescribed by paragraph (31) of Rule 0400-45-01-.17. For systems which violate the requirements of paragraph (31) of Rule 0400-45-01-.17, the report must include the relevant language from Appendix A ~~to~~ in paragraph (7) of this rule;
5. Requirements to keep records documenting compliance for specified periods;
6. Special monitoring requirements prescribed by unregulated contaminant monitoring by the Environmental Protection Agency and Rule 0400-45-01-.24; and,
7. Violation of the terms of a variance, an exemption, or an administrative or judicial order.

(g) Variances and Exemptions.

If a system is operating under the terms of a variance or an exemption issued under Federal Safe Drinking Water Act the report must contain:

1. An explanation of the reasons for the variance or exemption;
2. The date on which the variance or exemption was issued;
3. A brief status report on the steps the system is 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, or renewal, of the variance or exemption.

(h) Additional information: ~~;~~

1. The report must contain a brief explanation regarding contaminants ~~which that~~ may reasonably be expected to be found in drinking water including bottled water. This explanation may include the language of subparts (i) through (iii) of this part or systems may use their own comparable language. The report also must include the language of subpart (iv) of this part.

- (i) ~~The sources of drinking water (both Both~~ tap water and bottled water) ~~include come~~ from rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material. ~~The water, and~~ can also pick up and transport substances resulting from the presence of animals or from human activity. These substances are also called contaminants.
 - (ii) Contaminants are any physical, chemical, biological, or radiological substance or matter in water. Contaminants that may be present in source water include:
 - (I) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.;
 - (II) Inorganic contaminants, such as salts and metals, which can ~~be naturally-occurring~~ occur naturally in the soil or groundwater or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.;
 - (III) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.;
 - (IV) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.;
and
 - (V) Radioactive contaminants, which can ~~be naturally-occurring~~ occur naturally or be the result of oil and gas production and mining activities.
- (iii) ~~In order to ensure that tap water is safe to drink, EPA~~ To protect public health, the Environmental Protection Agency and the Tennessee Department of Environment and Conservation prescribe regulations which limit the amount of certain contaminants in tap water provided by public water systems. FDA The Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.
- (iv) 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 mean that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791) or visiting the website <http://www.epa.gov/safewater>.
2. The report must include the telephone number of the owner, operator, or designee of the community water system as a source of additional information concerning the report. If a system uses a website or social media to share additional information, the Department recommends including information about how to access such media platforms in the report.
 3. In communities with a large proportion of ~~non-English-speaking residents~~ customers with limited English proficiency, as determined by the Department, the report must contain information in the appropriate language(s) regarding the importance of the report ~~or and either~~ contain a telephone number or address where such residents information where such consumers may ~~contact the system to~~ obtain a translated copy of the report, or assistance in the appropriate language(s), or the report must be in the appropriate language(s).

4. The report must include information (e.g., time and place of regularly scheduled board meetings) about opportunities for public participation in decisions that may affect the quality of the water.
5. The systems may include such additional information as they deem necessary for public education consistent with, and not detracting from, the purpose of the report.
6. ~~A public water system's report must include a statement that the wellhead protection plan and source water assessment are available for public review and identify the contact person, location, and time available for review of the plan. Systems required to comply with the Ground Water Rule.~~
 - (i) Any ground water system that receives notice from the Department of a significant deficiency or notice from a laboratory of a fecal indicator-positive ground water source sample that is not invalidated by the Department under subparagraph (3)(h) of Rule 0400-45-01-.40 must inform its customers of any significant deficiency that is uncorrected at the time of the next reporting period or of any fecal indicator-positive ground water source sample in the next report or six-month update according to paragraph (5) of this rule. The system must continue to inform the public annually until the Department determines that particular significant deficiency is corrected or the fecal contamination in the ground water source is addressed under subparagraph (4)(a) of Rule 0400-45-01-.40. Each report must include the following elements:
 - (I) The nature of the particular significant deficiency or the source of the fecal contamination (if the source is known) and the date the significant deficiency was identified by the Department or the dates of the fecal indicator-positive ground water source samples;
 - (II) If the fecal contamination in the ground water source has been addressed under subparagraph (4)(a) of Rule 0400-45-01-.40 and the date of such action;
 - (III) For each significant deficiency or fecal contamination in the ground water source that has not been addressed under subparagraph (4)(a) of Rule 0400-45-01-.40, the Department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed; and
 - (IV) If the system receives notice of a fecal indicator-positive ground water source sample that is not invalidated by the Department under subparagraph (3)(h) of Rule 0400-45-01-.40, the potential health effects using the health effects language of appendix A in paragraph (7) of this rule.
 - (ii) If directed by the Department, a system with significant deficiencies that have been corrected before the next report is issued must inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction under subpart (i) of this part.
7. Systems required to comply with Rule 0400-45-01-.41.
 - (i) Any system required to comply with the Level 1 assessment requirement or a Level 2 assessment requirement that is not due to an E. coli MCL violation must include in the report the text found in items (I), (II), and (III) of this subpart as appropriate, filling in the blanks accordingly, and the text found in subitems (IV) I and II of this subpart if appropriate. Systems may use an alternative statement with equivalent information for items (II) and (III) of this part if approved by the Department.

- (I) Coliforms are bacteria that ~~are occur~~ naturally ~~present~~ in the environment and are used as an indicator that other, potentially harmful, waterborne ~~pathogens organisms~~ may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
- (II) ~~During the past year~~ Because we found coliforms during sampling, we were required to conduct [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] ~~Level 1~~ assessment(s) of the system, also known as a Level 1 assessment, to identify possible sources of contamination. [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s) were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.
- (III) ~~During the past year~~ Because we found coliforms during sampling, we were required by ~~conduct~~ [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] ~~Level 2 assessments were required to be completed for our water system~~ detailed assessments, also known as a Level 2 assessment, to identify possible sources of contamination. [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.
- (IV) Any system that has failed to complete all the required assessments or correct all identified sanitary defects is in violation of the treatment technique requirement and must also include one or both of the following statements, as appropriate:
- I. During the past year we failed to conduct all ~~of~~ the required assessment(s).
 - II. During the past year we failed to correct all identified defects that were found during the assessment.
- (ii) Any system required to conduct a Level 2 assessment due to an E. coli MCL violation must include in the report the text found in items (I) and (II) of this subpart, and health effects language in Appendix A in paragraph (7) of this rule, filling in the blanks accordingly, and the text found in subitems (III) and II of this subpart, if appropriate. Systems may use an alternative statement with equivalent information for items (I) through (III) of this subpart, if approved by the Department.
- (I) ~~E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.~~ We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s), also known as a Level 2 assessment, to identify problems and to correct any problems that were found during these assessments.
- (II) We were required to complete a detailed assessment of our water system, also known as a Level 2 assessment because we found E.coli in our water system. In addition, we were required to take [INSERT NUMBER OF

CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.

- (III) Any system that has failed to complete the required assessment or correct all identified sanitary defects is in violation of the treatment technique requirement and must also include one or both of the following statements, as appropriate:
 - I. We failed to conduct the required assessment.
 - II. We failed to correct all sanitary defects that were identified during the assessment that we conducted.
- (iii) If a system detects E. coli and has violated the E. coli MCL, in addition to completing the table as required in part (d)4 of this paragraph, the system must include one or more of the following statements to describe any noncompliance, as applicable:
 - (I) We had an E. coli-positive repeat sample following a total coliform-positive routine sample.
 - (II) We had a total coliform-positive repeat sample following an E. coli-positive routine sample.
 - (III) We failed to take all required repeat samples following an E. coli-positive routine sample.
 - (IV) We failed to test for E. coli when any repeat sample ~~tests~~ tested positive for total coliform.
- (iv) If a system detects E. coli and has not violated the E. coli MCL, in addition to completing the table as required in part (d)4- of this paragraph, the system may include a statement that explains that although they have detected E. coli, they are not in violation of the E. coli MCL.

8. Systems required to comply with Rule 0400-45-01-.33.

- (i) The report must notify consumers that complete lead tap sampling data are available for review and must include information on how to access the data.
- (ii) The report must include a statement that a service line inventory (including inventories where the publicly accessible inventory consists of a written statement that there are no lead, galvanized requiring replacement, or lead status unknown service lines, known lead connectors or connectors of unknown material) has been prepared and include instructions to access the publicly accessible service line inventory. If the service line inventory is available online, the report must include the direct link to the inventory.
- (iii) Beginning on October 17, 2027, for systems with lead, galvanized requiring replacement, or lead status unknown service lines in the system's inventory pursuant to 40 C.F.R. § 141.84(a) and (b) as published in the July 1, 2024, edition of the Federal Register, the report must include information on how to obtain a copy of the service line replacement plan or a direct link to the plan if the system is required to make the service line replacement plan available online.
- (iv) Beginning on October 17, 2027, the report must contain a plainly worded explanation of the corrosion control efforts the system is taking under Rule 0400-45-01-.33. Corrosion control efforts consist of treatment (e.g., pH adjustment, alkalinity adjustment, or corrosion inhibitor addition) and other efforts contributing to the control of the corrosivity of water (e.g., monitoring to assess the corrosivity

of water). The system may use one of the following templates or use their own explanation that includes equivalent information.

(I) For systems with State or EPA-designated Optimal Corrosion Control Treatment:

I. Corrosion of pipes, plumbing fittings, and fixtures may cause lead and copper to enter drinking water. To assess corrosion of lead and copper, [name of system] conducts tap sampling for lead and copper at selected sites [insert frequency at which system conducts tap sampling]. [Name of system] treats water using [identify treatment method] to control corrosion, which was designated as the optimal corrosion control treatment by [the State or EPA, as applicable]. To ensure the treatment is operating effectively, [name of system] monitors water quality parameters set by the [the State or EPA, as applicable] [insert frequency at which system conducts water quality parameter monitoring].

II. If applicable add: [Name of system] is currently conducting a study of corrosion control to determine if any changes to treatment methods are needed to minimize the corrosivity of the water.

(II) For systems without State or EPA-designated Optimal Corrosion Control Treatment:

I. Corrosion of pipes, plumbing fittings and fixtures may cause metals, including lead and copper, to enter drinking water. To assess corrosion of lead and copper, [name of system] conducts tap sampling for lead and copper at selected sites [insert frequency at which system conducts tap sampling].

II. If applicable, add: [Name of system] treats water using [identify treatment method] to control corrosion.

III. if applicable, add: [Name of system] is currently conducting a study of corrosion control to determine if any changes to treatment methods are needed to minimize the corrosivity of the water.

(v) The report must include a statement that the water system is required to sample for lead in schools and licensed child care facilities as requested by the facility and that directs the public to contact their school and child care facility for further information about potential sampling results.

(4) Required additional health information.

(a) All reports must prominently display the following language: "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 (800-426-4791) or on EPA's website <http://www.epa.gov/safewater>."

(b) A system that detects arsenic above 0.005 mg/L and up to and including ~~0.01 mg/L~~ 0.010 mg/L:

1. Must include in its report a short informational statement about arsenic, using language such as: ~~"While your drinking water meets EPA's standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to~~

~~research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Arsenic is known to cause cancer in humans. Arsenic may also cause other health effects such as skin damage and circulatory problems. [NAME OF UTILITY] meets the EPA arsenic drinking water standard, also known as a Maximum Contaminant Level (MCL). However, you should know that EPA's MCL for arsenic balances the scientific community's understanding of arsenic-related health effects and the cost of removing arsenic from drinking water. The highest concentration of arsenic found in [YEAR] was [INSERT MAX ARSENIC LEVEL per subpart (3)(d)4(iv) of this rule] ppb.~~

2. May ~~write its own use an alternative~~ educational statement, ~~but only in consultation with if approved by~~ the Department.

(c) A system ~~which that~~ detects nitrate at levels above 5 ~~mg/l~~ mg/L, but below the MCL:

1. Must include a short informational statement about the impacts of nitrate on children using language such as: ~~Even though [NAME OF UTILITY] meets the EPA nitrate drinking water standard, also known as the Maximum Contaminant Level (MCL), if you are caring for an infant and using tap water to prepare formula, you may want to use alternate sources of water or ask for advice from your health care provider. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. pose a particularly high health concern for infants under six months of age and can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness. Symptoms of serious illness include shortness of breath and blueness of the skin, known as "blue baby syndrome." Nitrate levels may rise quickly in drinking water can increase for short periods of time because due to high levels of rainfall or agricultural activity, therefore we test for nitrate [INSERT APPLICABLE SAMPLING FREQUENCY]. If you are caring for an infant you should ask advice from your health care provider. The highest level for nitrate found during [YEAR] was [INSERT MAX NITRATE LEVEL per subpart (3)(d)4(iv) of this rule] ppm.~~
2. May ~~write its own use an alternative~~ educational statement, ~~but must obtain approval from the Department for it in the CCR if approved by the Department.~~

(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 the 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>. Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. [INSERT NAME OF SYSTEM] is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold~~

water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact [INSERT NAME OF SYSTEM and CONTACT INFORMATION]. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.

2. A system may write its own educational statement, but only in consultation with the Department.

(e) Community water systems that detect TTHM above 0.08 mg/L, but below the MCL as an annual average, must include the health effects language for TTHMs prescribed in Appendix A ~~to~~ in paragraph (7) of this rule.

~~(f) Beginning in the report due by July 1, 2002, and ending January 22, 2006, a community water system that detects arsenic above 0.01 mg/L and up to and including 0.05 mg/L must include the arsenic health effects language prescribed by Appendix A to this rule.~~

~~(g) Any ground water system that receives notice from the Department of a significant deficiency or notice from the laboratory of a fecal indicator positive ground water source sample that is not invalidated by the Department under subparagraph (3)(h) of Rule 0400-45-01-.40 must inform its customers of any significant deficiency that is uncorrected at the time of the next report or of any fecal indicator positive ground water source sample in the next report. The system must continue to inform the public annually until the Department determines that a particular significant deficiency is corrected or the fecal contamination in the ground water is addressed under paragraph (4) of Rule 0400-45-01-.40. Each report must include the following elements:~~

~~1. The nature of the particular significant deficiency or the source of the fecal contamination (if known) and the date the significant deficiency was identified by the Department or the dates of the fecal indicator positive ground water source samples;~~

~~2. If the fecal contamination in the ground water source has been addressed under Rule paragraph (4) of Rule 0400-45-01-.40 and the date of such action;~~

~~3. For each significant deficiency or fecal contamination in the ground water source that has not been addressed under paragraph (4) of Rule 0400-45-01-.40, the Department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed;~~

~~4. If the system receives notice of a fecal indicator positive ground water source sample that is not invalidated by the Department under subparagraph (3)(h) of Rule 0400-45-01-.40, the potential health effects using the health effects language of Appendix A of this rule.~~

~~(h) If directed by the Department, a system with significant deficiencies that have been corrected before the next report is issued must inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction under subparagraph (g) of this paragraph.~~

(5) Report delivery, reporting, and recordkeeping.

(a) Except as provided in subparagraph (g) of this paragraph, each community water system ~~shall mail or otherwise~~ must directly deliver ~~one~~ a copy of the report to each customer.

1. Systems must use at a minimum, one of the following forms of delivery:

(i) Mail or hand deliver a paper copy of the report;

(ii) Mail a notification that the report is available on a website via a direct link;

- (iii) Email a direct link or electronic version of the report; or
 - (iv) Another direct delivery method approved in writing by the Department.
 - 2. Systems using electronic delivery methods in subpart 1(ii), 1(iii), or 1(iv) of this subparagraph must provide a paper copy of the report to any customer upon request. The notification method must prominently display directions for requesting such copy.
 - 3. For systems that choose to electronically deliver the reports by posting the report to a website and providing a notification by mail or email:
 - (i) The report must be publicly available on the website at the time notification is made;
 - (ii) Notifications must prominently display the link and include an explanation of the nature of the link; and
 - (iii) Systems may use a web page to convey the information required paragraphs (3), (4), and (6) of this rule.
 - 4. Systems that use a publicly available website to provide reports must maintain public access to the report for no less than three years.
- (b) The system shall make a good faith effort to reach consumers who do not get water bills, using means recommended by the Department. ~~EPA expects that an adequate~~ This good faith effort will be tailored to the consumers who are served by the system but are not bill-paying customers, such as renters or workers. A good faith effort to reach consumers ~~would include~~ includes a mix of methods ~~appropriate to the particular system to reach the broadest possible range of persons served by the water system~~ such as, but not limited to: posting the reports on the ~~Internet~~ internet; mailing ~~to postal patrons in metropolitan areas~~ reports or postcards with links to the reports to all service addresses and/or postal customers using an opt in notification system to send emails and/or texts with links to the reports to interested consumers; advertising the availability of the report in the news media and on social media; publication in a local newspaper or newsletter; posting a copy of the report or notice of availability with links (or equivalent, such as Quick Response (QR) codes) in public places such as cafeterias or lunch rooms of public buildings; delivery of multiple copies for distribution by single-biller customers such as apartment buildings or large private employers; delivery to community organizations; holding a public meeting to educate consumers on the reports.
 - 1. Where a system is aware that it serves a substantial number of non-bill-paying consumers, the system is encouraged to directly deliver the reports or notices of availability of the reports to service addresses.
 - 2. Where a system is aware of a substantial number of bill-paying consumers without access to electronic forms of the report, the system should use at least one non-electronic form of delivery.
- (c) No later than 10 days after the date the system is required to distribute the report to its customers, each community water system must ~~mail~~ provide a copy of the report to the Department, ~~followed within 3 months by a certification~~ and a certification that the report(s) has/have been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Department.
- (d) No later than the date the system is required to distribute the report to its customers, each community water system must deliver the report to any other agency or clearinghouse identified by the Department.
- (e) Each community water system must make its reports available to the public upon request. Systems should make a reasonable effort to provide the reports in an accessible format to anyone who requests an accommodation.

- (f) Each community water system serving ~~100,000~~ 50,000 or more persons must ~~make post~~ its current year's report ~~available for reading and downloading to a publicly-accessible site~~ on the ~~Internet~~ internet.
- (g) The ~~Governor of a State or his~~ governor of Tennessee or the governor's designee can waive the requirement of subparagraph (a) of this paragraph for community water systems serving fewer than 10,000 persons.
1. Such systems must:
 - (i) Publish the reports in one or more local newspapers or on one or more local online news sites serving the area in which the system is located;
 - (ii) Inform the customers that the reports will not be mailed, either in the newspapers in which the reports are published or by other means approved by the Department; and
 - (iii) Make the reports available to the public upon request.
 2. Systems serving 500 or fewer persons may forego the requirements of subparts 1(i) and (ii) of this subparagraph if they provide notice ~~at least once per year to their customers by mail, door-to-door delivery or by posting in an appropriate location that the report is available upon request~~ that the report is available upon request at least once per year to their customers by mail, door-to-door delivery or by posting in one or more locations where persons served by the system can reasonably be expected to see it.
- (h) ~~Systems shall~~ Any system subject to this rule must retain copies of its ~~consumer confidence reports~~ Consumer Confidence Report for no less than ~~3~~ three years.
- ~~(i) Systems serving 100,000 or more persons must develop a plan for providing assistance to consumers with limited English proficiency. The system must evaluate the languages spoken by persons with limited English proficiency served by the water system, and the system's anticipated approach to address translation needs. The first plan must be provided to the Department with the first report in 2027. Plans must be evaluated annually and updated as necessary and reported with the certification required in subparagraph (c) of this paragraph.~~
- ~~(j) Delivery timing and biannual delivery:~~
- ~~1. Each community water system must distribute reports by July 1 each year. Each report distributed by July 1 must use data collected during, or prior to, the previous calendar year using methods described in subparagraph (a) of this paragraph.~~
 - ~~2. Each community water system serving 10,000 or more persons must distribute the report biannually, or twice per calendar year, by December 31 using methods described in subparagraph (a) of this paragraph.~~
 - ~~3. Systems required to comply with part 2 of this subparagraph, with a violation or action level exceedance that occurred between January 1 and June 30 of the current year, or have received monitoring results from required monitoring under the Unregulated Contaminant Monitoring Rule, must include a six-month update with the second report with the following:~~
 - ~~(i) A short description of the nature of the six-month update and the biannual delivery;~~
 - ~~(ii) If a system receives an MCL, MRDL, or treatment technique violation, the six-month update must include the applicable contaminant section information in part (3)(d)4 of this rule, and a readily understandable explanation of the violation including: the length of the violation, the potential adverse health effects, actions taken by the system to address the violation, and timeframe the system expects to~~

complete those actions. To describe the potential health effects, the system must use the relevant language of appendix A in paragraph (7) of this rule;

- (iii) If a system receives any other violation, the six-month update must include the information in subparagraph (3)(f) of this rule;
- (iv) If a system exceeded the lead action level following monitoring conducted between January 1 and June 30 of the current year, the system must include information identified in subpart (3)(d)4(iv) of his rule and part (3)(d)8 of this rule; and
- (v) For systems monitoring under the Unregulated Contamination Monitoring Rule that become aware of results for samples collected during the reporting year but were not included in the reports distributed by July 1, the system must include information as required by part (3)(d)7 of this rule.

(6) Summary of Report Contents.

- (a) Each report must include a summary displayed prominently at the beginning of the report, including a brief description of the nature of the report.
- (b) Systems must include, at a minimum, the following information in the summary:
 - 1. Summary of violations and compliance information included in the report required by parts (3)(d)6 and (3)(d)8 of this rule, subparagraph (3)(f) of this rule, and parts (3)(h)6 and 7 of this rule; and
 - 2. Contact information for owner, operator, or designee of the community water system as a source of additional information concerning the report, per part (3)(h)2 of this rule.
- (c) If applicable, systems must include the following in the summary:
 - 1. For systems using delivery methods in subparts (5)(a)1(ii), (iii), or (iv) of this rule, the summary must include directions for consumers to request a paper copy of the report as described in part (5)(a)2 of this rule;
 - 2. For systems subject to part (3)(h)3 because they serve a large proportion of consumers with limited English proficiency, the summary must include information where consumers may obtain a translated copy of the report, or get assistance in the appropriate language(s); and
 - 3. For systems using the report to also meet the public notification requirements of Rule 0400-45-01-.19, the summary must specify that it is also serving to provide public notification of one or more violations or situations, provide a brief statement about the nature of the notice(s), and a brief description of how to locate the notice(s) in the report.
- (d) The summary should be written in plain language and may use infographics.
- (e) For those systems required to include a six-month update with the second report under part (5)(j)2 of this rule, the summary should include a brief description of the nature of the report and update, noting availability of new information for the current year (between January and June).
- (f) The report summary must include the following standard language to encourage the distribution of the report to all persons served:

Please share this information with anyone who drinks this water (or their guardians), especially those who may not have received this report directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this report in a public place or distributing copies by hand, mail, email, or another method.

APPENDIX A ~~TO Rule 0400-45-01-.35~~

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by units	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Microbiological contaminants: 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.
Total Coliform Bacteria ‡	TT		TT	NA	Naturally present in the environment.	Use language found in 0400-45-01-.35(3)(h)7.(i)l.
Fecal coliform and E. coli †	0		0	0	Human and animal fecal waste	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 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.
E. coli ‡	Routine and repeat samples are total coliform-positive <u>and either is E. coli-positive</u> or system fails to take repeat samples		Routine and repeat samples are total coliform-positive and either is E. coli-positive or system fails to take repeat samples	0	Human and animal fecal waste.	E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
	following E. coli-positive routine sample or system fails to analyze total coliform-positive repeat sample for E. coli.		following E. coli-positive routine sample or system fails to analyze total coliform-positive repeat sample for E. coli.			
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 by products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products 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.
Fecal Indicators (enterococci <u>or coliphage</u>)	TT		TT	N/A	Human and animal fecal waste	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.
<u>Total organic carbon (ppm)</u>	<u>TT</u>		<u>TT</u>		<u>Naturally present in the environment.</u>	<u>Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. 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</u>

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
						<u>effects, and may lead to an increased risk of getting cancer.</u>
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.
Radioactive contaminants: Beta/photon emitters (mem/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 <u>containing</u> beta particle and photon emitters <u>radioactivity</u> in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitter (pCi/l) (<u>pCi/L</u>)	15 pCi/l <u>pCi/L</u>		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) (<u>pCi/L</u>)	5 pCi/l <u>pCi/L</u>		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.
Uranium (pCi/L)	30 ug/l <u>ug/L</u>		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.
Inorganic contaminants: Antimony (ppb)	<u>0.006</u>	1,000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
						blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	0.4 <u>0.010</u>	1,000	10 ⁺	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic 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	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion from 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)	<u>0.004</u>	1,000	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)	<u>0.010</u>	1,000	5 <u>10</u>	0	Discharge from chemical plants and other industrial activities.	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)	<u>0.005</u>	1,000	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.
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 chloramines who drink water containing well in excess of the MRDL could experience stomach discomfort or anemia.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
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.
Chloride Chlorine dioxide (ppb)	MRDL= 8	1,000	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 chlorination.	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)	<u>0.1</u>	1,000	100	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.
Cooper (ppm)	AL=1.3		AL=1.3	1.3	Corrosion of household plumbing systems; Erosion of natural de posits; 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)	<u>0.2</u>	1,000	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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
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.
Lead (ppb)	AL= <u>0.015</u> ¹	1,000	AL=15 ¹	0	Corrosion of household plumbing systems <u>and service lines connecting buildings to water mains</u> ; Erosion of natural deposits.	<u>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. There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups, especially pregnant people, infants (both formula-fed and breastfed), and young children. Some of the health effects to infants and children include decreases in IQ and attention span. Lead exposure can also result in new or worsened learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney or nervous system problems. Contact your health care provider for more information about your risks.</u>
Mercury [inorganic] (ppb)	<u>0.002</u>	1,000	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Run off 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;	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by units	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
					sewage; Erosion of natural deposits.	untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite (ppm)	1	1000	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.
Selenium (ppb)	0.05	1,000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines ; 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.
Thallium (ppb)	0.002	1,000	2	0.5	Leaching from ore-processing sites; Discharge from electronics, Glass 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.
Synthetic organic contaminants including pesticides and herbicides:						
2,4-D (ppb)	0.07	1,000	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)	0.05	1,000	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)	0.002	1,000	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

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
						experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	<u>0.003</u>	1,000	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] (ppb <u>nanograms/l</u>) [PAH]	<u>0.0002</u>	1,000,000	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)	<u>0.04</u>	1,000	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)	<u>0.002</u>	1,000	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	1,000	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.
Di(2-ethylhexyl) adipate (ppb)	<u>0.4</u>	1,000	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 <u>general</u> toxic effects <u>such as weight loss, liver enlargement</u> or <u>possible</u> reproductive difficulties.
Di(2-ethylhexyl) phthalate (ppb)	<u>0.006</u>	1,000	6	0	Discharge from rubber and chemical factories.	Some people who drink water containing di(2-ethylhexyl) phthalate <u>well</u> 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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
Dibromochloropropane (ppt)	<u>0.0002</u>	1,000,000	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 problems and may have an increased risk of getting cancer.
Dinoseb (ppb)	<u>0.007</u>	1,000	7	7	Runoff from herbicide used on soy- beans and vegetables.	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Diquat (ppb)	<u>0.02</u>	1,000	20	20	Runoff from herbicide use.	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Dioxin [2,3,7,8-TCDD] (ppq)	<u>0.00000003</u>	1,000,000,000	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)	<u>0.1</u>	1,000	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)	<u>0.002</u>	1,000	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.
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)	<u>0.00005</u>	1,000,000	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)	<u>0.7</u>	1,000	700	700	Runoff from herbicide use.	Some people who drink water containing glyphosate in excess of the MCL over

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
						many years could experience problems with their kidneys or reproductive difficulties.
<u>Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, and PFNA) unitless</u>	<u>1 (unitless)</u>		<u>1</u>	<u>1</u>	<u>Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities.</u>	<u>Per- and polyfluoroalkyl substances (PFAS) can persist in the human body and exposure may lead to increased risk of adverse health effects. Low levels of multiple PFAS that individually would not likely result in increased risk of adverse health effects may result in adverse health effects when combined in a mixture. Some people who consume drinking water containing mixtures of PFAS in excess of the Hazard Index (HI) MCL may have increased health risks such as liver, immune, and thyroid effects following exposure over many years and developmental and thyroid effects following repeated exposure during pregnancy and/or childhood.</u>
Heptachlor (ppt)	<u>0.0004</u>	1,000,000	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 epoxide (ppt)	<u>0.0002</u>	1,000,000	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)	<u>0.001</u>	<u>1,000</u>	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)	<u>0.05</u>	<u>1,000</u>	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	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
<u>HFPO-DA (ng/L)</u>	<u>0.00001</u>	<u>1,000,000</u>	<u>10</u>	<u>10</u>	<u>Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities.</u>	<u>Some people who drink water containing HFPO-DA in excess of the MCL over many years may have increased health risks such as immune, liver, and kidney effects. There is also a potential concern for cancer associated with HFPO-DA exposure. In addition, there may be increased risks of developmental effects for people who drink water containing HFPO-DA in excess of the MCL following repeated exposure during pregnancy and/or childhood.</u>
Lindane (ppt)	0.0002	1,000,000	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)	0.04	1,000	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)	0.2	1,000	200	200	Runoff/leaching from insecticide used on apples, potatoes, alfalfa livestock.	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)	0.0005	1,000,000	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)	0.001	1,000	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.
<u>PFHxS (ng/L)</u>	<u>0.00001</u>	<u>1,000,000</u>	<u>10</u>	<u>10</u>	<u>Discharge from manufacturing and industrial chemical facilities, use of certain</u>	<u>Some people who drink water containing PFHxS in excess of the MCL over many years may have increased health risks such as immune, thyroid, and liver effects.</u>

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
					<u>consumer products, occupational exposures, and certain firefighting activities.</u>	In addition, there may be increased risks of developmental effects for people who drink water containing PFHxS in excess of the MCL following repeated exposure during pregnancy and/or childhood.
<u>PFNA (ng/L)</u>	<u>0.00001</u>	<u>1,000,000</u>	<u>10</u>	<u>10</u>	<u>Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities.</u>	Some people who drink water containing PFNA in excess of the MCL over many years may have increased health risks such as elevated cholesterol levels, immune effects, and liver effects. In addition, there may be increased risks of developmental effects for people who drink water containing PFNA in excess of the MCL following repeated exposure during pregnancy and/or childhood.
<u>PFOA (ng/L)</u>	<u>0.0000040</u>	<u>1,000,000</u>	<u>4.0</u>	<u>0</u>	<u>Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities.</u>	<u>Some people who drink water containing PFOA in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects as well as increased incidence of certain types of cancers including kidney and testicular cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOA in excess of the MCL following repeated exposure during pregnancy and/or childhood.</u>
<u>PFOS (ng/L)</u>	<u>0.0000040</u>	<u>1,000,000</u>	<u>4.0</u>	<u>0</u>	<u>Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities.</u>	<u>Some people who drink water containing PFOS in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including liver cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOS in excess of the MCL following repeated exposure during pregnancy and/or childhood.</u>
Picloram (ppb)	<u>0.5</u>	<u>1,000</u>	<u>500</u>	<u>500</u>	Herbicide runoff.	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
Simazine (ppb)	<u>0.004</u>	<u>1,000</u>	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)	<u>0.003</u>	<u>1,000</u>	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.
Volatile organic contaminants: Benzene (ppb)	<u>0.005</u>	<u>1,000</u>	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)	<u>0.005</u>	<u>1,000</u>	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.
Chlorobenzene (ppb)	<u>0.1</u>	<u>1,000</u>	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)	<u>0.6</u>	<u>1,000</u>	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)	<u>0.075</u>	<u>1,000</u>	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)	<u>0.005</u>	<u>1,000</u>	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.
1,1-Dichloroethylene (ppb)	<u>0.007</u>	<u>1,000</u>	7	7	Discharge from industrial chemical factories.	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
						over many years could experience problems with their liver.
cis-1,2-Dichloroethylene (ppb)	<u>0.07</u>	1,000	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)	<u>0.1</u>	1,000	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 livers.
Dichloromethane (ppb)	<u>0.005</u>	1,000	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.
<u>1,2 Dichloropropane (ppb)</u>	<u>0.005</u>	<u>1,000</u>	<u>5</u>	<u>0</u>	<u>Discharge from industrial chemical factories.</u>	<u>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.</u>
Ethylbenzene (ppb)	<u>0.7</u>	1,000	700	700	Discharge from petroleum refineries.	Some people who drink water containing ethylbenzene well in excess of the MCL over many could experience problems with their liver or kidneys.
Haloacetic Acids (HAA) (ppb)	<u>0.060</u>	1,000	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)	<u>0.1</u>	1,000	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.
Tetrachloroethylene (ppb)	<u>0.005</u>	1,000	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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by <u>units</u>	MCL in CCR <u>units</u>	MCLG	Major sources in drinking water	Health effects language
1,2,4-Trichlorobenzene (ppb)	<u>0.07</u>	1,000	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)	<u>0.2</u>	1,000	200	200	Discharge from metal degreasing sites and other factories.	Some people who drink water containing 1,1,1-trichloroethane well in excess of the MCL over many years could have problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloroethane (ppb)	<u>0.005</u>	1,000	5	3	Discharge from industrial and 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 system.
Trichloroethylene (ppb)	<u>0.005</u>	1,000	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)	0.10/0.080	1,000	100/80	N/A	By-product of drinking water chlorination <u>disinfection</u> .	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.
Vinyl Chloride (ppb)	<u>0.002</u>	1,000	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.

Footnote:
† Until March 31, 2016

~~Beginning April 1, 2016~~

¹ ~~These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG. This action level is effective until November 1, 2027, when the action level will drop to 10 ppb under the Lead and Copper Rule Improvements.~~

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

mrem/year = millirems per year (a measure of radiation absorbed by the body)

N/A = Not applicable

NTU = Nephelometric Turbidity Unit (a measure of water clarity)

pCi/l = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or ~~milligrams~~ milligrams per liter ~~(mg/l)~~ (mg/L)

ppb = parts per billion, or micrograms per liter ~~(µg/l)~~ (µg/L)

ppt = parts per trillion, or nanograms per liter

ppq = parts per quadrillion, or picograms per liter

TT = Treatment Technique

Authority: T.C.A. §§ 68-221-701 et seq. and 4-5-201 et seq.

* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

Board Member	Aye	No	Abstain	Absent	Signature (if required)
Dr. Gary G. Bible (Oil and Gas Industry)					
Elaine Boyd (Commissioner's Designee, Department of Environment and Conservation)					
Mayor Kevin C. Davis (Counties)					
Dodd Galbreath (Environmental Interests)					
Brent Galloway (Oil or Gas Property Owner)					
Amanda Goff (Commissioner's Designee, Department of Health)					
Sam Marshall (Commissioner's Designee, Department of Agriculture)					
Frank McGinley (Agricultural Interests)					
John Schwartz (Public-at-large)					
Neal Whitten (Manufacturing Industry)					
Terry Wimberley (Municipalities)					
Vacant (Small Generator of Water Pollution representing Automotive Interests)					

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Board of Water Quality, Oil, and Gas on _____ (mm/dd/yyyy), and is in compliance with the provisions of T.C.A. § 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 02/06/2026

Rulemaking Hearing(s) Conducted on: (add more dates). 04/09/2026

Date: _____

Signature: _____

Name of Officer: _____

Title of Officer: _____

Agency/Board/Commission: _____

Rule Chapter Number(s): _____

All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

Jonathan Skrmetti
Attorney General and Reporter

Date

Department of State Use Only

Filed with the Department of State on: _____

Effective on: _____

Tre Hargett
Secretary of State

Public Hearing Comments

One copy of a document that satisfies T.C.A. § 4-5-222 must accompany the filing.

No comments were received.

Regulatory Flexibility Addendum

Pursuant to T.C.A. §§ 4-5-401 through 4-5-404, prior to initiating the rule making process, all agencies shall conduct a review of whether a rule affects small businesses.

- (1) The type or types of small business and an identification and estimate of the number of small businesses subject to the rule being proposed that would bear the cost of or directly benefit from the rule being proposed.

This rule does not impact small businesses.

- (2) The projected reporting, recordkeeping and other administrative costs required for compliance with the rule being proposed, including the type of professional skills necessary for preparation of the report or record.

Community public water systems, which are public drinking water utilities, are currently required to issue a Consumer Confidence Report (CCR) once per year by July 1. In order to comply with new federal requirements, this rule requires community public water systems serving 10,000 or more people to issue a second CCR by December 31 each year. This rule does not impose new recordkeeping requirements. The larger community public water systems affected by this rule would incur some administrative costs to issue and publish a second CCR report annually.

- (3) A statement of the probable effect on impacted small businesses and consumers.

This rule does not impact small businesses or consumers.

- (4) A description of any less burdensome, less intrusive or less costly alternative methods of achieving the purpose and objectives of the rule being proposed that may exist, and to what extent the alternative means might be less burdensome to small business.

This rule is required by federal law. Tennessee is required to adopt this rule to maintain primacy under the Safe Drinking Water Act. There are no less burdensome, less intrusive, or less costly methods of achieving the purpose and objectives of this rule.

- (5) A comparison of the rule being proposed with any federal or state counterparts.

This rule is substantially equivalent to 40 C.F.R. part 141, subpart O Consumer Confidence Reports.

- (6) Analysis of the effect of the possible exemption of small businesses from all or any part of the requirements contained in the rule being proposed.

No small businesses would be affected by this rule so no exemptions would be needed.

Impact on Local Governments

Pursuant to T.C.A. §§ 4-5-220 and 4-5-228, “On any rule and regulation proposed to be promulgated, the proposing agency shall state in a simple declarative sentence, without additional comments on the merits or the policy of the rule or regulation, whether the rule or regulation may have a projected financial impact on local governments. The statement shall describe the financial impact in terms of increase in expenditures or decrease in revenues.”

The CCR Revision Rule will result in an increase in expenditures for public water systems above 10,000 population who are required to provide a second CCR each year and for public water systems above 100,000 population who are required to provide a plan for translation services for non-English speaking individuals.

Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to T.C.A. § 4-5-226(i)(1).

- (A)** A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

In 2024, the EPA published amendments to 40 C.F.R. part 141, the National Primary Drinking Water Regulations. This rule addresses changes to 40 C.F.R. part 141, subpart O Consumer Confidence Reports. The federal Consumer Confidence Report Revisions (CCR Revisions) rule establishes minimum requirements for the content of annual reports that community water systems must deliver to their customers. This rule is the substantial equivalent of the federal rule, and its adoption is required to retain state drinking water primacy.

- (B)** A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

40 C.F.R § 142.10 provides primary enforcement responsibility for public water systems to states that adopt federal drinking water regulations that are no less stringent than the federal regulations.

- (C)** Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

Public drinking water utilities that are designated as a community water system and that serve a population greater than 10,000 are directly affected by this rule. No comments urging adoption or rejection of this rule were received.

- (D)** Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule or the necessity to promulgate the rule;

There are no opinions of the attorney general and reporter or judicial rulings that directly relate to this rule.

- (E)** An estimate of the probable increase or decrease in state and local government revenues and expenditures, if any, resulting from the promulgation of this rule, and assumptions and reasoning upon which the estimate is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars (\$500,000), whichever is less;

The probable increase in local government expenditures would be minimal because community water systems already issue the CCR once a year. This rule would add a second issuance for such systems above 10,000 population. The rule would also increase expenditures for local governments with water systems serving over 100,000 population in development of a plan to translate the CCR for the non-English speaking population.

- (F)** Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Rebecca Rush and Erich Webber
Division of Water Resources

- (G)** Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Alli F. Williamson
Legislative Director
Commissioner's Office

- (H)** Office address, telephone number, and email address of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

Commissioner's Office

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(I) Any additional information relevant to the rule proposed for continuation that the committee requests.

(1) A description of the action proposed, the purpose of the action, the legal authority for the action and the plan for implementing the action.

In 2024, the EPA published amendments to 40 C.F.R. part 141, the National Primary Drinking Water Regulations. This rule addresses changes to 40 C.F.R. part 141, subpart O Consumer Confidence Reports. The federal CCR Revisions rule establishes the minimum requirements for the content of annual reports that community water systems must deliver to their customers. This rule is the substantial equivalent of the federal rule, and its adoption is required to retain state drinking water primacy.

(2) A determination that the action is the least-cost method for achieving the stated purpose.

The rule is the least-cost method for Tennessee to retain state drinking water primacy.

(3) A comparison of the cost-benefit relation of the action to nonaction.

Tennessee must adopt the rule to maintain primacy and continue to be eligible to receive federal funding. Non-action would result in the loss of federal funding.

(4) A determination that the action represents the most efficient allocation of public and private resources.

The rule represents the most efficient allocation of public and private resources.

(5) A determination of the effect of the action on competition.

The rule does not impact competition.

(6) A determination of the effect of the action on the cost of living in the geographical area in which the action would occur.

The rule does not impact the cost of living.

(7) A determination of the effect of the action on employment in the geographical area in which the action would occur.

The rule does not impact employment.

(8) The source of revenue to be used for the action.

No new revenue is required to implement this rule.

(9) A conclusion as to the economic impact upon all persons substantially affected by the action, including an analysis containing a description as to which persons will bear the costs of the action and which persons will benefit directly and indirectly from the action.

Community water systems that are required to issue a second CCR each year and develop a translation plan for non-English speaking persons will bear the cost of this rule. The customers served by these systems will benefit from learning about the quality of their drinking water.