UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

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CONSUMER CONFIDENCE REPORTS: REQUIRED INFORMATION

The Consumer Confidence Report (CCR) Rule (40 CFR §141.151-155; Subpart 0) requires all community Public Water Systems (PWS) to prepare an annual report on the quality of their drinking water. This handout summarizes the information that must be included in each report. A PWS may include such additional information related to drinking water as the PWS deems necessary for public education consistent with, and not detracting from, the purpose of the CCR.

If you would like assistance preparing your CCR, you have the option to utilize EPA's CCR iWriter application. Please visit: https://ofmpub.epa.gov/apex/safewater/f?p=140:LOGIN_DESKTOP. This application enables you to produce a complete CCR. It is a 15 step process that will prompt you for the information need for completion. For additional information, please see "Preparing Your Drinking Water Consumer Confidence Report – Guidance for Water Suppliers." (EPA Publication 816-R-09-011, April 2010) or visit: https://www.epa.gov/ccr

You are required to submit a letter of certification. Certifications record CCR distribution and are mandatory. Certifications are due October 1st. They can be submitted at the same time as the CCR. Please utilize our Certification form located on our EPA Region 8 website https://www.epa.gov/region8-waterops/reporting-forms-and-instructions-reporting-forms#ccr

CONTENT REQUIREMENTS FOR REPORT

1) Information about the water system (40 CFR 141.153(h)(2)&(4))

- Name and telephone number of a person that customers can call if they have questions.
- A listing of known PWS meetings or other opportunities for customers to participate in decisions that may affect the quality of water

2) Information about the source of water (40 CFR 141.153(b))

- Identify the type and common name of the PWS drinking water source(s) (i.e. wells, lakes, reservoirs, etc.) For example, PWS XYZ's water comes from both surface and ground water sources. PWS XYZ uses surface water from the 123 River and has three wells in the ABC aquifer.
- If the PWS has received a source water assessment, then the report must tell customers where to get a copy. If the source water assessment identifies areas where the PWS is susceptible to potential sources of contamination, the CCR must also include this information.

3) Definitions (40 CFR 141.153(c))

All reports must contain the following definitions:

- **Maximum Contaminant Level Goal (MCLG)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin of safety.

- **Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

  If the report contains data on contaminants that the EPA regulates using any of the following terms the CCR must include the applicable definition(s):

- **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.

- **Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

- **Maximum residual disinfectant level goal (MRDLG)**: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

- **Maximum residual disinfectant level (MRDL)**: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

4) Information on Detected Contaminants (40 CFR 141.153(d))

All detected contaminants subject to mandatory monitoring must be reported in a table, or a series of adjacent tables. Any additional monitoring results which a system chooses to include in its CCR must be displayed separately.

- The data must be derived from data collected to comply with EPA monitoring and analytical requirements during the previous calendar year. For instance, a report due on July 1, 2017 would include the data from January 1, 2016 to December 31, 2016.

- For contaminants that are monitored for less often than once a year, the most recent sample result and date must be included. Data older than 5 years need not be included. If data included in the tables is older than a year, 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 drinking water regulations.

- All MCLs must be listed in units larger than one. For example, 0.005 parts per million (ppm) would be multiplied by 1000 and presented as 5 parts per billion (ppb). Appendix A of 40 CFR §141.155 contains conversion tables.

- All detected contaminants and MCLGs listed in the tables will have to be converted to the same units of measure as the MCLs.

- Within these tables, the detection level should be included alongside the MCL and MCLG for that contaminant, along with a description of the likely source(s) of the contaminant(s) to the best of the operator's knowledge. If specific information about the contaminant's source is lacking, Appendix A of 40 CFR §141.155 provides information about possible sources of contamination and the report must list one or more of the most applicable to the system.

- The following contaminant(s), if detected, must be included in the tables:

- All regulated and unregulated contaminants: If samples are collected annually or less frequently (and, if more than one site is sampled), the report must include the HIGHEST detected level and the RANGE of detected results.

  If compliance is determined by a running annual average of all samples taken from a monitoring location, the report must include the HIGHEST AVERAGE and the RANGE of results.

  If compliance is determined on a system-wide basis by a running annual average of all samples at all monitoring locations, the report must include the AVERAGE and the RANGE of results.

- The report must indicate if any of the numbers in the "contaminants detected" table are also MCL exceedances, Treatment Technique violations, or Action Level exceedances. This can be done by using a heavier font type or placing an asterisk (*) next to the item.

- The report must include separate tables for each service area if a PWS distributes water from more than one "hydraulically independent" distribution system (i.e. pipes not connected at all) and are fed from different raw water sources. The report must also include a description of the area served by each distribution system.

- Turbidity measurements should be reported as follows: For systems reporting turbidity pursuant to §141.13: the report must include the HIGHEST AVERAGE MONTHLY turbidity value.

  For systems reporting turbidity pursuant to §141.71: the report must include the HIGHEST MONTHLY VALUE.

  For systems reporting turbidity pursuant to §141.73, §141.173 or §141.551: the HIGHEST SINGLE MEASUREMENT and the LOWEST MONTHLY PERCENTAGE meeting the turbidity limits specified for the filtration technology being used.

- Lead and Copper sampling. The report must include the 90th percentile value from the most recent round of sampling and the number of sampling sites exceeding the action level.

- The CCR Rule has been modified to include a number of new provisions to address the requirements of the Revised Total Coliform Rule (RTCR). Since Community Water Systems (CWSs) must begin complying with the RTCR requirements on April 1, 2016, the 2017 CCR (which covers calendar year 2016) will need to include information on both total coliform and *E. coli* detections and information on any TCR or RTCR violations or findings. The 2018 CCR (which covers calendar year 2017) need only address RTCR detections, violations and situations. In addition, and in accordance with the CCR Rule:

  CWSs with EC+ sample results must include:

  - The total number of positive samples in the table of detected contaminants.
  - The health effects language found in 40 CFR Appendix A to Subpart O.
  - Either the language found in 40 CFR 141.153(h)(7)(iii) if the system has an *E. coli* MCL violation; or, if the system detects *E. coli* but does not have an *E. coli* MCL violation, 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 [40 CFR 141.153(h)(7)(iv)].

A CWS that detects *E. coli* and has violated the *E. coli* MCL, must include one or more of the following statements to describe the noncompliance, as applicable:

- We had an *E. coli*-positive repeat sample following a total coliform-positive routine sample.
- We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample.
- We failed to take all required repeat samples following an *E. coli*-positive routine sample.
- We failed to test for *E. coli* when any repeat sample tests positive for total coliform.

CWSs that triggered a Level 1 or Level 2 assessment must inform their customers of:

- The number of assessments required and completed.
- The corrective actions required and completed.
- The reasons for conducting assessments and corrective actions.
- Whether the CWS has failed to complete any required assessments or corrective actions.

A CWS that must conduct a Level 1 or Level 2 assessment must include in their CCR, the specific assessment-related definitions from 40 CFR 141.153(c)(4), as shown in Table 6-3 below (from the RTCR State Implementation Guidance.)

Table 6-3. CCR Definitions for the RTCR

CCR Definition	Citation
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.	40 CFR 141.153(c)(4)(i)
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.	40 CFR 141.153(c)(4)(ii)

Any CWS required to comply with the Level 1 or Level 2 assessment requirements, not due to an *E. coli* MCL violation, must include in the CCR the appropriate text from 40 CFR 141.153(h)(7)(i) and included in Table 6-4, filling in the blanks accordingly.

Table 6-4. CCR Health Effects Language for the RTCR: Level 1 or 2 Assessment Not Due to *E. coli* MCL Violation

CCR Language	Citation
Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens 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.	40 CFR 141.153(h)(7)(i)(A)
During the past year we were required to conduct [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s). [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.	40 CFR 141.153(h)(7)(i)(B)
During the past year [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were required to be completed for our water system. [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.	FR 141.153(h)(7)(i)(C)

5) Required information on specific contaminants Cryptosporidium, Radon, Arsenic, Nitrate and TTHM (40 CRF 141.153(e) and 141.154 (b),(c) & (e))

- If a PWS has performed monitoring for Cryptosporidium which indicated that Cryptosporidium may be present in the source water or its finished water, the report must include the monitoring results and an explanation of the significance of those results. A sample explanation is provided below:

> *Cryptosporidium is a microbial parasite found in surface water throughout the United States. Although Cryptosporidium can be removed by filtration, the most commonly used filtration cannot guarantee 100% removal. Our monitoring of source/finished water indicates the presence of these organisms. Current test methods do not enable us to determine if these organisms are dead or alive. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy persons are able to overcome the disease within a few weeks. However, immuno-compromised people (such as those with AIDS, undergoing chemotherapy or recent organ transplant recipients) are at a greater risk of developing a severe, life-threatening illness. Immuno-compromised persons should contact their doctor to learn about appropriate precautions to prevent infection. Cryptosporidium must be taken in through the mouth to cause disease and it may be passed by other means than drinking water.*

- If a PWS finds radon in its finished water, the report must include the monitoring results and an explanation of the significance of these results. A possible explanation is provided below:

  Radon is a naturally-occurring gas present in some groundwater. Inhaled radon has been linked to lung cancer and may pose a health risk when inhaled after the release from water into the air. This inhalation could occur during showering, bathing, washing dishes, or washing clothes. The radon gas release from drinking water is a relatively small part of the total radon found in air. One major source of radon gas is from the soil, where the gas can seep through the foundations of homes. It is not clear whether ingested (i.e. taken through the mouth) radon contributes to cancer or other adverse health conditions. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on home testing contact (insert name of local health department).

- If a PWS detects arsenic above 0.005 mg/L and up to and including 0.010 mg/L, the report must include in its report an explanation about arsenic using language such as:

  While your drinking water meets EPA's standard 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.

- If a PWS detects nitrate at levels above 5 mg/l, but below the MCL, the report must include in its report an explanation about the impacts of nitrate on children using language such as:

  Nitrate in drinking water at levels of 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice of your health care provider.

- If a PWS detects TTHM (total trihalomethanes) above 0.080 mg/l, but below the MCL, as an annual average it must include the following health effects language:

  Some people who drink 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.

6) Required additional information (40 CFR 141.153(h))

The report must contain the following brief explanation regarding contaminants which may reasonably be expected to be found in drinking water, including bottled water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The report must also contain language similar to the paragraphs below. A CWS may use this language or their own comparable language.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally-occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*

- *Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining or farming.*

- *Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.*

- *Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.*

- *Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.*

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for human health.

If a turbidity measurement is included, the report should include an explanation of the reasons for measuring turbidity such as the following:

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.

Any ground water system that receives notice of a significant deficiency must inform its customers of any significant deficiency that is uncorrected at the time of the report. The system must continue to inform the public annually until the significant deficiency is corrected.

7) Required information on health effects (40 CFR 141.154)

All CCRs 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 person 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).

Every CCR also must include the following short informational statement about lead in drinking water and its effects on children.

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 PWS] 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.

8) Information about any violations of the National Primary Drinking Water Regulations (40 CFR 141.153(f))

The CCR must include all violations of the National Primary Drinking Water Regulations (NPDWR) that occurred over the past year. The report must contain 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.
Reportable violations include:

- All MCL exceedances, Treatment Technique violations
- All Failure to Monitor/Report (FTM) violations
- All Failures to install filtration or to disinfect, in accordance with the Surface Water Treatment Rule (SWTR), or some instances of equipment failure
- All failures of lead and copper control requirements
- All Treatment Technique violations for Acrylamide and Epichlororhydrin
- Any violation of record keeping requirements
- Any violation of a variance, exemption, or administrative or judicial order.

For systems that have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation, the CCR must contain the following language as part of the explanation of the 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.