Preparing user-friendly Consumer Confidence Reports

June 2018

Washington State Department of Health
Environmental Public Health
Office of Drinking Water

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Special thanks to the State of Massachusetts Department of Environmental Protection for granting permission to reprint portions of the publication, “Recommended Tips for Preparing User Friendly Consumer Confidence Reports, A guide to the Massachusetts Requirements for Community Public Drinking Water Systems,” Edition 4, April 2002

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For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

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Introduction

All Group A community water systems must prepare and distribute consumer confidence reports (CCRs) to their customers and the Washington State Department of Health Office of Drinking Water (ODW) before July 1 each year.

CCRs are required by the 1996 Safe Drinking Water Act Amendments and Subpart B of Part 7 of Chapter 246-290 WAC.

We implement and enforce these federal requirements in Washington State. This publication will help public water systems (PWSs) meet state and federal CCR regulations. It contains basic information you need to prepare CCRs for your customers. The appendices include a sample CCR, certification form, and contaminant tables.

What is a Consumer Confidence Report?

Customer means a billing unit or service connection to which water is delivered by a Group A community water system.

A consumer confidence report is a brief annual water quality report from a PWS to its customers. The primary purpose of the CCR is to summarize water quality data that your water system already collects. It will also include information on compliance, source water, and some required educational information. Most CCRs only need to be a few pages long.

A CCR tells people where their water comes from and what the water system does to deliver safe drinking water to their homes. It also tells them what contaminants, if any, are in their drinking water and how these contaminants could affect their health. Reporting information about your water system and the quality of the water you provide to customers will help them make informed decisions about their drinking water.

The report also is an opportunity for water systems to tell customers what it takes to deliver safe drinking water at the turn of the tap.

Who must prepare a Consumer Confidence Report?

All Group A community public water systems (PWSs) **must** prepare and distribute an annual consumer confidence report. Group A community water systems regularly serve 15 or more year-round service connections, or 25 or more year-round residents for 180 or more days per year.

A new Group A community PWS **must** deliver its first report before July 1 of the year after its first full calendar year in operation.

A Group A community PWS wholesaler that sells water to another Group A community PWS consecutive system **must** give the source information and sample results it needs to include in its CCR. The wholesaler **must** provide this information to the consecutive system by

April 1, or on a mutually agreeable date specified in a contract that will enable the consecutive system to produce its own CCR by July1.

Consecutive water systems

A consecutive PWS has the following options when preparing its CCR:

- Distribute its own report, using source and water quality information the wholesaler provides.
- Distribute the wholesaler's CCR and a cover letter or an insert detailing all information and monitoring data specific to the consecutive (purchasing) PWS.

If it selects the second option, the consecutive system **must** include the following information in its insert or cover letter:

- Required PWS information as it applies to the consecutive system. This includes PWS ID number, town, contact information, and opportunities for public participation.
- The result of any monitoring the consecutive system performs for contaminants such as bacteria, total trihalomethanes, haloacetic acids, lead and copper.
- Descriptions of any violations and corrective actions the consecutive PWS takes. In addition, an explanation of any enforcement orders the consecutive PWS is operating under.
- A description of how the PWSs are interconnected.

No matter which CCR option it chooses, **the consecutive PWS must submit its own certification form** to the Office of Drinking Water.

Remember, whether the wholesaler or the consecutive PWS produces the CCR, the consecutive PWS **must** provide its customers with a CCR, containing all required information.

When to deliver the Consumer Confidence Report

PWSs must deliver CCRs to their customers and ODW regional offices between January 1 and July 1 of each year. PWSs have until October 1 to send their certification form to ODW. However, because it identifies individual reports and helps track and record receipt of reports, we recommend that you send the certificate to us along with a copy of your CCR before the July 1 deadline.

Resources, such as a blank certification form, training opportunities, sample reports and templates, and a checklist of mandatory components are online at

http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/RegulationandCompliance/CCRReports.aspx

Refer to Appendix B for certification form template.

ODW's Consumer Confidence website contains good resources for your use.

Required information

Basic required information for all CCRs

There are seven categories of basic information required for each CCR:

I. PWS information

II. Source information

III. Required statements

IV. Definitions of terms

V. Detected contaminants in finished water

VI. Compliance with drinking water regulations

VII. Required educational information

Specific requirements for each CCR category will vary for each PWS, particularly Category V (detected contaminants). There are many different requirements for Category V, based on what each PWS monitors for and what it detects in the finished water.

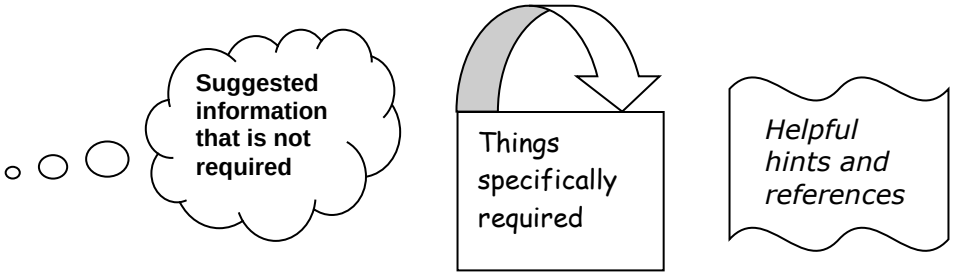
See Appendix A for a sample CCR.

This publication will help you meet your system's specific CCR reporting requirements. See Appendix A for a CCR template.

If you choose not to use the template to prepare your CCR, you will find the sections of this document numbered to follow the basic categories listed above. Each numbered section explains the requirements for each category. Use these sections to determine how the requirements apply to your PWS and what you need to report.

This document also details some suggested information separately in the "Additional Information" section (see Page 23). Because much of the information you need is in the appendices, you will find references to them throughout this document.

This guidance also includes special text boxes to help you understand your requirements. Look for these graphics in the margins:



This guidance document also includes special text formatting:

> *Your CCR **must** include some language exactly as written. Throughout this publication, required text is indented and specially formatted in italics with a shaded background.*

Whenever you need to include an explanation in your CCR, you can usually do so in your own words. We provided suggested or sample text throughout this document in italics without shading.

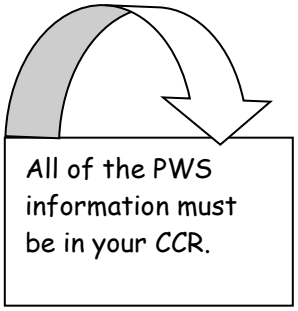
Now, you're ready to begin. If you need help producing your CCR, call our regional office (see Page 25).

Tips to tap

- Make your CCR stand out so customers will read it!
- Use graphics and colors to highlight your data.
- Proofread for spelling, grammar, punctuation, and accuracy.
- Remember, the average customer is probably not as familiar with water quality data as you are, so keep it simple.
- Ask non-technical people to read your draft report to see if they understand your message.
- Let people know what you are doing to protect their drinking water.

I. Public water system information

Most of the CCR is based on water quality data, system characteristics, and enforcement actions from the previous calendar year. Therefore, you must include the previous year in the title. For example, the title of the report you distribute by July 1, 2013, should say 2012. The title does not have to include the words "Consumer Confidence Report," but it should say that this is your PWS's annual water quality report.

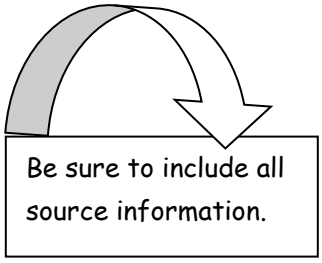


Each CCR **must** include:

- The name of the PWS, city or town, and PWS ID number.
- Name and phone number of the owner, operator, or PWS designee who can provide additional information about the drinking water and answer questions about the report. We recommend including the name of your system's certified waterworks operator.
- Information on public meetings or other opportunities for customers to discuss water quality issues.

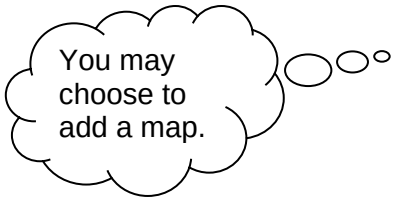
II. Your drinking water source

Drinking water source information



Each CCR **must** include the following information when describing water source(s):

- The number of sources.
- Type of water (groundwater, surface water, groundwater under the direct influence of surface water (GWI), or blend).
- Commonly used name of the source(s).
- ODW source identification numbers.
- Location(s) of source(s). Refer to "Security Concerns" on Page 23 for more source location requirements.
- Explanation of interconnections and back-up sources for any source variation during the year.
- Treatment information. You **must** explain the type of treatment used and the purpose of the treatment. If you are not sure whether you are required to include treatment information, please call our regional office (Page 25).



We recommend, but don't require, you to include a simple map of your PWS and its sources in this section.

Source protection information

We compiled Source Water Assessment Program (SWAP) data for all community PWSs in Washington. SWAP data for your PWS is online at http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/SourceWaterProtection/Assessment.aspx

If you don't have access to the Web, we encourage you to use the Internet service available through the public library system.

In your CCR, your system must let consumers know that SWAP data is available and where to get it.

Use the SWAP information in your CCR to:

- Highlight significant sources of contamination in the source water area if information is readily available.
- Include the PWS's susceptibility rating and a brief summary of the susceptibility to potential sources of contamination.
- Let consumers know the report is available and how to obtain it.

III. Mandatory language for all reports

The CCR **must** contain the following statements about drinking water **exactly as written**:

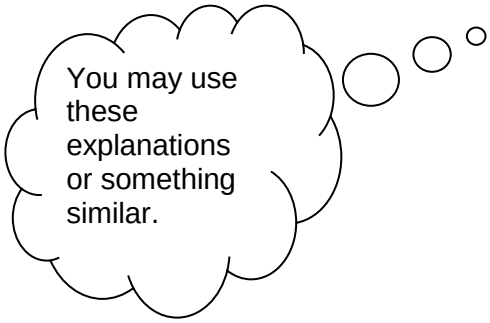
You must include the shaded language in this section in your CCR.

> *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 EPA's Safe Drinking Water Hotline (1-800-426-4791).*

> *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 (1-800-426-4791).*

PWSs **must** also include basic information about contaminants a person may reasonably expect to find in drinking water, including bottled water, and sources of contamination.

You may use the following language or something similar:



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 dissolves naturally occurring minerals and, in some cases, radioactive material, 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, parasites, and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.*

***Inorganic contaminants,** such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.*

***Pesticides and herbicides,** which may come from various sources such as agriculture, urban stormwater runoff, and residential uses.*

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

***Radioactive contaminants,** which can occur naturally or result from oil and gas production and mining activities.*

Lead

Every CCR must include a short informational statement about **lead** in drinking water and its effects on children. You may use EPA's language, ODW's language, or develop your own educational statement in consultation with ODW:

EPA Lead Statement:

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 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*

ODW Lead Statement:

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in pipes, the more dissolved metals, such as lead, it may contain. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

To help reduce potential exposure to lead: for any drinking water tap that has not been used for 6 hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes, or general cleaning. Only use water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at 1-800-426-4791 or online at ***http://www.epa.gov/safewater/lead.***

You **must** also include information on ODW and EPA regulations as they pertain to drinking water and bottled water. You may use the following language or something similar:

To ensure that tap water is safe to drink, the Department of Health and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

We translated four basic drinking water messages into 27 languages. See links to **Translated Drinking Water Warnings** *(331-246) on Page 26.*

If your community has a large proportion of non-English speaking residents, your CCR **must** contain information in the appropriate language(s). Explain the importance of the report, or provide a phone number or address where these residents can get a translated copy of the **CCR or assistance in the appropriate language.**

IV. Important definitions

Required definitions

EPA requires you to include the definitions in this section in your CCR!

The exact wording of the following definitions **must** be in your CCR to help customers understand the information in your tables:

> ***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.*
>
> ***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.*

If your CCR contains information on a contaminant regulated by an action level (such as lead and copper) or a treatment technique (such as turbidity), you must include the following definitions:

> ***Action Level:*** *The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.*
>
> ***Treatment Technique (TT):*** *A required process intended to reduce the level of a contaminant in drinking water.*

If your PWS continuously adds chemical disinfectants such as chlorine, chloramines or chlorine dioxide to the water and is reporting disinfection residuals regulated by the Stage 1 Disinfectants and Disinfection Byproducts Rule, your CCR **must** include the following definitions:

You must include these definitions exactly as written if these terms apply to your monitoring data.

> ***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.*
>
> ***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.*

If your PWS was under a variance or exemption during the previous calendar year, you **must** include the following definition in the CCR*:*

> ***Variances and Exemptions:*** *State or EPA permission not to meet an MCL, an action level, or a treatment technique under certain conditions.*

You may choose to use these optional definitions in your CCR.

Optional definitions

If you report detectable concentrations of secondary contaminants or contaminants with guidelines such as sodium and radon, we *recommend but don't require* you to include the following definitions.

> ***Secondary Maximum Contaminant Level (SMCL):*** *These standards are developed to protect the aesthetic qualities of drinking water and are not health based.*

You may also want to include a definition such as the following to clarify reportable lead and copper 90th percentile information:

> ***Lead and Copper 90th Percentile****: Out of every 10 homes sampled, 9 were at or below this level.*

Remember to define any acronyms you use in your CCR such as units of measure (ppm/ppb), N/A, ND, and so on.

Refer to Appendix C-Regulated Contaminants for definitions of units of measure.

V. Water Quality Testing Results

Water quality data is the most important part of the CCR. Your report **must** include **all** detections of contaminants in the "finished" water delivered to your customer, subject to mandatory monitoring.

This includes:

- Contaminants subject to an MCL, action level, maximum residual disinfectant level, or treatment technique (regulated contaminants).
- Disinfection by-products or microbial contaminants with monitoring requirements detected in the finished water.
- All other contaminants *required* by ODW.

The CCR **must** include all reportable detections of these contaminants even if the results are in compliance with (or below) established MCLs or action levels.

You must report any contaminants detected during required monitoring in your CCR—even if they are below the MCL.

A detected contaminant is any contaminant observed at or above the state reporting level (SRL). If the lab reports a contaminant as less than the SRL, not-detected (ND) or otherwise below the detection limit (BDL), you are not required to include that contaminant in your CCR.

If the water is treated, only monitoring results of "finished" water must be included. Any contaminant detected in the water prior to treatment should not be included in the CCR, except *Cryptosporidium.*

The CCR **must** include water quality monitoring results from the *most recent round* of sampling for EACH monitoring group that applies to your PWS.

Your system's annual Water Quality Monitoring Report references many of these contaminant groups.

Monitoring groups include, but are not limited to:

- **Microbiological contaminants**
- **Inorganic contaminants**
- **Sodium**
- **Lead and copper**
- **Synthetic organic contaminants**
- **Volatile organic contaminants**
- **Turbidity**
- **Radioactive contaminants (Radionuclides)**
- ***Cryptosporidium***
- **Disinfection byproducts and disinfectant residuals**
- **Other contaminants ODW may require to be tested.** *This includes monitoring such as uranium, tetrachloroethlyene (PCE) distribution system testing, iron, and manganese testing, and so on***.**

Include the most recent results – even if they're more than one year old.

Less than annual monitoring

If you did not conduct sampling for a specific monitoring group within the past year, your table **must** include the latest monitoring information available, but not older than five years. For example, if your PWS samples for a contaminant such as sodium once every three years, you must report the same detected sodium level in the CCR for the next three years until a new sample is collected.

If your system tests for particular contaminants less than once per year (for example, you monitor every three years), and a contaminant was detected in the last sampling round, you **must** include:

- The collection date and results in the table.
- A statement explaining that the data in the report is from the most recent testing done according to the regulations.

You may use the following sample statement or create your own:

> *The water quality information presented in the table(s) is from the most recent round of testing done according to the regulations. All data shown were collected during the last calendar year unless otherwise noted in the table(s).*

Monitoring waivers

You must include descriptions of your monitoring waivers.

If your PWS received a waiver for a specific contaminant group, such as those listed below, and is not required to monitor regularly, you **must** include a statement explaining that the data presented in the CCR are from the most recent testing done according to the regulations:

- Volatile organic chemicals (VOCs)
- Inorganic chemicals (IOCs)
- Synthetic organic chemicals (SOCs)

You may use the following sample statement or create your own:

> *The Washington State Department of Health reduced the monitoring requirements for* **[name of monitoring group(s)]** *because the source is not at risk of contamination. The last sample collected for these contaminants was taken on* **[date(s)]** *and was found to meet all applicable standards.*

Table inclusions

The sample CCR in Appendix A will help you present your data in a table format.

You **must** display all data relating to reportable contaminants in tabular form. Depending on the number of detections you have and the complexity of the information, you may choose to report the data in one table or several adjacent tables.

If your PWS distributes water to customers from multiple hydraulically independent distribution systems fed by different raw water sources:

- Make a separate column for each service area in your table.
- Identify each separate distribution system in the CCR.

As an option, you could produce separate CCRs tailored to include data for each service area.

Some PWSs will need to include several tables to report different types of contaminants. For example, you should report:

See "Contaminant Specific Table Inclusions" on Page 14 for more information on reporting lead, copper and total coliform.

- Contaminants with action levels, such as lead and copper distribution system samples, separately from contaminants with MCLs.
- Total coliform as the highest number or percentage of positive samples in a month (depending on the number of samples taken each month).
- Secondary contaminants separately if you choose to include those results.

You will need to include definitions and footnotes to clarify the information in the tables. Remember the goal is to present the data so customers will understand it.

Units of measure

See Appendix C for help converting MCLs, action levels and monitoring data for the CCR.

Be careful to match or otherwise note correct units of measure when referencing multiple contaminants under a general column label or heading. When rounding results to determine compliance with an MCL, round prior to multiplying the results by any conversion factors. If you use CCR units, you must express the MCL as a number greater than 1.

Report the MCLG and level of the detected contaminant in those same units. For example, atrazine is usually reported in mg/L or ppm. The MCL for atrazine is 0.003 mg/L. If your system detected atrazine at 0.0003 mg/L, it would be difficult for consumers to understand that your water is 10 times below the MCL. After you convert the numbers, the CCR would report the atrazine detect as 0.3 ppb and the atrazine MCL as 3 ppb.

Table format

Acronym reminder:
MCL=*maximum contaminate level*
MRDL=*maximum residual disinfectant level*
MCLG=*maximum contaminate level goal*
MRDLG=*maximum residual disinfection level goal*

Here is a summary of the requirements for water quality tables. The regulated contaminant table in your CCR **must** include the following:

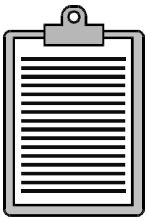
Columns for:

- MCL/MRDL and MCLG/MRDLG (This applies to most contaminants. Refer to the "Contaminant Specific Table Inclusions" section for exceptions.)
- The likely source(s) of contaminants.
- Sample collection date or range of dates if the detection reported is older than 1 year.
- Identification of violations.

Monitoring Results: The table **must** include the following numbers (in italics) if applicable for each detected contaminant (except for coliform, turbidity, and lead and copper). Report the results in the same units as the MCL and MCLG.

One sample site:

- **One sample date.** Report the *highest detected level*.
- **Multiple sampling dates.** Report the *average* of the samples taken and the *range* of detections.
- **Multiple sampling dates (running average for source samples).** Report the *highest running annual average* and the *range* of detections.



Multiple sampling sites:

- **One sample date.** Report the *highest detected level* and *range* of detections.
- **Multiple sampling dates (source samples).** Report the *highest average results for an individual source* and the *range* of detections for all sources.
- **Multiple sampling dates (running average for source samples).**Report the *highest running annual average* calculated by individual source and the *range* of detections.
- **Multiple sampling dates (running annual average for distribution samples).** Report the *highest running annual average* of all samples and the *range* of detections. (This applies only to trihalomethanes (THMs) and haloacetic acids (HAA5s).

*See examples of reporting monitoring data in Appendix D

You may use the words in italics as column headings. Or, you may have one column for "Range" and a second for "Results" or something similar. However, you should explain that the numbers in the "Results" column represent the highest concentration your system's compliance is based on, not the highest concentration detected.

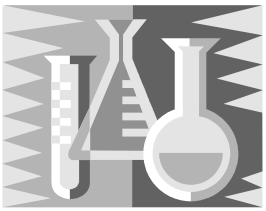
In the table, you **must** highlight any contaminant detected in violation of an MCL, MRDL, treatment technique, or that exceeds an action level.

Contaminant-specific table inclusions

Some contaminant groups have special reporting and table formatting requirements based on how they are regulated. See details of these requirements below:

Disinfection Byproducts [Total Trihalomethane (TTHM) and Haloacetic Acids (HAA5)]

- If compliance is determined based on a system-wide running annual average [Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR)], include the highest system-wide running annual average and the detected range for the system.
- If compliance is determined based on a locational running annual average (Stage 2 DBPR), include the highest locational average and the range of individual sample results for each monitoring location. If more than one location exceeds the TTHM or HAA5 MCL, include the locational averages for all locations that exceed the MCL.
- If you conducted sampling for the Initial Distribution System Evaluation (IDSE) under the Stage 2 DBPR, during the calendar years that the water system collected samples for the IDSE, you must include IDSE sample results when reporting the range of TTHM and HAA5.



Turbidity

- When reported as an MCL for surface water or groundwater under the direct influence of surface water (GWI) systems that must install filtration but have not, include the highest average monthly value.
- When reported as a treatment technique (TT) for surface water or GWI systems that meet the criteria for avoiding filtration, include the highest monthly value. Explain the reasons for measuring turbidity, for example:

  Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.
- When reported as a TT for surface water or GWI system that filters and uses turbidity as an indicator of filtration performance, include the highest single measurement **and** the lowest monthly percentage of samples meeting the turbidity limits specified for the relevant filtration technology in WAC 246-290-660. You **must** explain the reasons for measuring turbidity. For example:

  Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Lead and copper. Include the number of sites sampled, the 90th percentile value from the most recent sampling and the number of sampling sites exceeding the action level. For lead and copper only, if you monitor more than once a year, you only need to report the results of the most recent round.

Total coliform under the Revised Total Coliform Rule (RTCR)

- Include number of Level 1 and Level 2 assessment required by Treatment Technique Triggers.
- Include number of Level 1 and Level 2 assessments completed.
- Include number of positive samples for *E.coli* collected from distribution that year.

Fecal coliform or E. coli under the Total Coliform Rule

- Include the number of positive samples collected that year

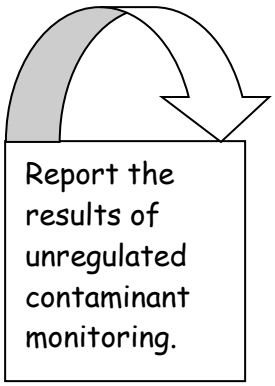
Fecal indicator-positive source samples under the Groundwater Rule (GWR)

- For *E. coli*, list the MCL and MCLG as zero.
- For enterococci or coliphage, list "TT" in the column for MCL and "N/A" in the column for MCLG.

- For all fecal indicator-positive groundwater source samples (*E. coli*, enterococci, or coliphage), include the total number of positive samples for the year and special notice language provided in the table or elsewhere in the CCR.

Radionuclides

- ***Gross Alpha.*** For gross alpha detections, the reported results should reflect the subtraction of any uranium (pCi/l) values detected.
- ***Radium 226 & 228***. For radium 226 and radium 228 detections, add the two results together and report the total COMBINED (pCi/l) value.
- ***Uranium.*** Report uranium detections in ppb units of measure. If uranium values are not on the lab report in ppb units of measure, convert available ppm or pCi/l values to the appropriate ppb value: (pCi/L uranium x 1.49 = ppb uranium) or (ppm x 1000 = ppb).



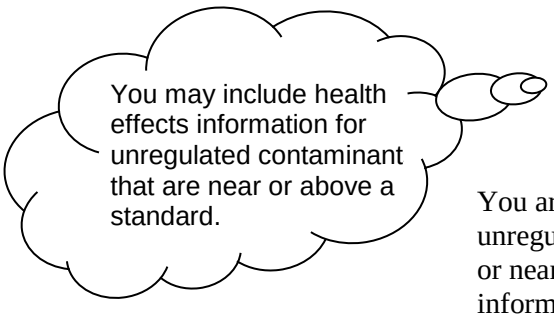
Reporting unregulated contaminants

If you detect unregulated contaminants for which state or federal rules require monitoring, you must report the following in your CCR:

- The average of the entire year's monitoring results.
- The range of detections.

We also recommend that you include an explanation for the system's monitoring of unregulated contaminants. You may use the following statement or create your own:

> *Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to help EPA determine their occurrence in drinking water and potential need for future regulation.*



You are **not** required to include statements on health effects for unregulated contaminants. However, if your system reports detections at or near a standard, we recommend that you include some health effects information.

Reporting uncorrected significant deficiencies

If you are a groundwater system that receives notice from the state of a significant deficiency, you must inform your customers of any significant deficiencies not corrected by December 31 of the reporting year covered by your CCR. The CCR must include the following information:

- The nature of the significant deficiency and the date the state identified it.

- The state-approved plan and schedule for correction, including interim measures, progress to date and any interim measures completed.

You must continue to inform your customers annually until the state determines the significant deficiency is corrected.

Reporting fecal indicator-positive source samples

If you are a groundwater system that receives notice from a laboratory of a fecal indicator-positive groundwater sample in your source, you must inform your customers of this situation in that year's CCR. The CCR must include the following:

- The source of the fecal contamination (if known) and the date(s) of the fecal indicator-positive source sample.
- If you addressed the fecal contamination as prescribed by the GWR, include the date the contamination was addressed.
- For fecal contamination that has not been addressed, the state-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.
- The health effects language for the detected fecal indicator(s).

You must continue to inform your customers annually until you address the fecal contamination in the groundwater source as prescribed by the GWR.

Reporting contaminants with proposed MCLs or health advisory levels

If a PWS took additional samples that indicate the presence of other contaminants in the finished water, the PWS **must** report any results that may indicate a health concern. A health concern is any detection above a proposed MCL or health advisory level.

This may include any of the following contaminants:

- Sodium
- Nickel
- Radon
- Sulfate
- Any other unregulated contaminant we directed you to monitor.

Report in the CCR:

- The results of the monitoring.
- An explanation of the significance of the results.

Be careful not to list guidelines or secondary maximum contaminant levels (SMCLs) as MCLs. Remember, exceeding a secondary MCL is not a violation.

You must report detections of secondary contaminants if ODW requires your PWS to monitor them.

Reporting other contaminants

If **voluntary monitoring** shows the presence of secondary contaminants or other special contaminants in the finished water, you do not have to report the results in the CCR.

If you do report the results, display them in a separate table.

We *recommend* that the table include the following information:

- The average and range of the detections.
- An explanation of the significance of the results.
- Any applicable secondary contaminant or guideline levels.
- Any applicable definitions.

You must highlight all water quality violations in the water quality table.

See Appendix C, "Regulated Contaminants" for adverse health effects language.

Reporting contaminant violations

The table **must** highlight any contaminant detected in violation of an MCL, MRDL, treatment technique, or that exceeds an action level.

The report **must** contain an easy to understand explanation of the violation or exceedance including the:

- Length of the violation.
- Potential adverse health effects.
- Actions taken to address the violation.

You **must** also include the required health effects language for the contaminant.

You may list actions taken to address the violation or exceedance in a paragraph following the table.

VI. Compliance with other drinking water regulations

You must report all violations of Drinking Water Regulations during the past year. For the 2017 CCR (covers 2016) report TCR violations through March 2016 and RTCR violations through December 2016; for 2018 CCR (covers 2017) report RTCR violations,

If your PWS violated or continues to violate drinking water regulations during the reporting period, your CCR **must** describe the violation(s). This description must include:

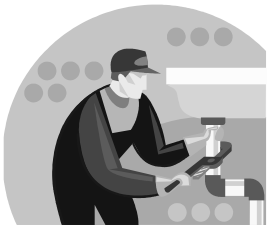
- The violation that occurred or continues to occur during the year the report covers.
- A clear explanation of the violation.
- Any potential adverse health effects.
- Steps taken to correct the violation.

You **must include violations of monitoring and reporting compliance data.** If you received a violation for failing to monitor or report, include a statement explaining when the violation occurred, what monitoring groups were involved, and steps taken since the violation (for example, a sample was taken at a later date).

Note: You may use your CCR to meet the Public Notification (PN) distribution requirement for monitoring or reporting violations, if you meet all other PN requirements. You may also use it to meet the special requirements for fluoride if your system detected it above 2.0 ppm, but below the MCL of 4.0 ppm. (See subpart A, part 7 of chapter 246-290 WAC.)

- **Filtration and disinfection processes on surface water or GWI systems.** If the violation was due to failure to install adequate filtration or disinfection equipment or processes, or there was a failure of that equipment or process, your CCR must include the following language:

  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.



- **Lead and copper requirements.** If the violation was failure to meet corrosion control treatment, source water treatment, or lead service requirements, you **must** include health effects language for lead, copper, or both.

***E. coli* detection and violation** (April 2016 and onward). If the system detects E. coli and has violated the MCL, must include one or more of the following statements: *We had an EC+ repeat sample following a TC+ routine sample.*

We had a TC+ repeat sample following an EC+ routine sample.

We failed to take all required repeat samples following an EC+ routine sample.

We failed to test for E.coli when any repeat sample tests positive for total coliform.

- **Treatment technique trigger.** If the system fails to conduct a Level 1 or Level 2 assessment or perform corrective action related to total coliform, you must include health effects language for total coliform (for violations incurred April, 2016 and later).

Treatment technique trigger. If the system fails to conduct a Level 2 assessment or corrective action related to *E. coli*. You must include health effects language for E. coli.

- **Treatment techniques for acrylamide and epichlorohydrin.** If the system violates either treatment technique, you **must** include the appropriate health effects language.
- **Record keeping requirements.**
- **Special monitoring requirements.**
- **Violation of the terms of a variance, an exemption, or administrative or judicial order.**
- **Capacity.** Report any capacity deficiencies as determined by the ODW.
- If an event during the reporting year causes your PWS to violate a surface water treatment requirement or other drinking water standard, you **must** include that violation in the CCR.
- Any additional information ODW specifically requested.

If the system is operating under a variance or exemption at any time during the reporting year, you **must** include:

- An explanation of the variance or exemption.
- The date it was issued and reason why it was granted.
- A status report on what the PWS is doing to correct the problem.
- A notice to the public for input on the review or renewal of variance or exemption.

Reporting orders

You must report if you are operating under any orders.

Your CCR **must** include information about violation of the terms of any order issued by the ODW. This may include the terms of the order, the reason for the order, and the actions taken to comply. We *also recommend* that you state the progress made and the estimated date for complying with the order.

VII. Educational Information

Special requirements for *Cryptosporidium* and radon

If *Cryptosporidium* or radon is detected in the water at any concentration, you **must** include the results in your CCR.

You must report ANY detects of cryptosporidium in raw OR finished water.

Cryptosporidium

If monitoring shows the presence of *Cryptosporidium* in either the source water or the finished water, include in the CCR:

- A summary of the monitoring results.
- A statement explaining why the results are significant. Tell customers if they need to be concerned.

You may use the following sample statement or create your own:

You may use this explanation or write your own.

> Cryptosporidium *is a microbial parasite found in surface water throughout the U.S. Although filtration removes* Cryptosporidium*, the most common filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water (and/or finished water). Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease.*
>
> *Ingestion of* Cryptosporidium *may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immunocompromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immunocompromised individuals are encouraged to consult with their doctor about appropriate precautions to prevent infection. Cryptosporidium must be ingested for it to cause disease, and may be passed through means other than drinking water.*

Radon

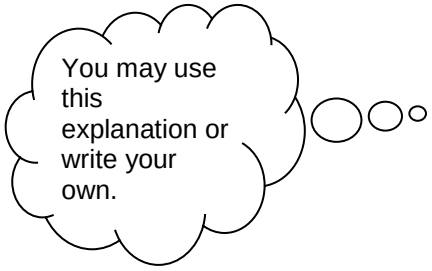
If monitoring shows the presence of radon in finished water, include:

- The results of monitoring.
- A statement explaining why the results are significant. Tell customers if they need to be concerned.

If radon is detected, you must report the results with an explanation of the results.

You may use the following sample statement or create your own:

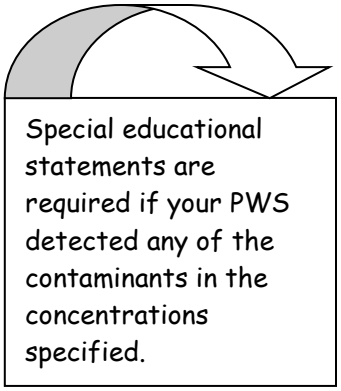
> *Radon is a radioactive gas you cannot see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from*



tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will be (in most cases) a small source of radon in indoor air.

Radon is a known human carcinogen. Breathing air that contains radon can lead to lung cancer. Drinking water containing radon may cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For information on radon, call EPA's Radon Hotline, at (800) SOS-RADON.

Special requirements for arsenic and nitrate



Special educational statements are required for arsenic and nitrate.

Arsenic: Your CCR **must** include a short statement if you detect arsenic above 5 ppb (50% of MCL), but below the MCL of 10 ppb. You can use the following statement or write your own in consultation with ODW.

Arsenic. *Your drinking water currently meets EPA's standard for arsenic. However, it does contain low levels of arsenic. There is a small chance that some people who drink water containing low levels of arsenic for many years could develop circulatory disease, cancer, or other health problems. Most types of cancer and circulatory disease are due to factors other than exposure to arsenic. EPA's standard balances the current understanding of arsenic's health effects against the cost of removing arsenic from drinking water.*

Nitrate: Your CCR **must** include a short statement if you detect Nitrate above 5 ppm (50% of MCL), but below MCL of 10 ppm. You can use the following statement or write your own in consultation with ODW.

Nitrate. *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. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.*

VIII. Additional Information

This section contains suggested additions or options you may use when writing your CCR.

Recommended information

We *recommend, but don't require*, you to include the following in your CCR:

- Treatment information. If you have treatment, such as fluoridation, we recommend that you explain the type of treatment used and the purpose of the treatment.
- A simple map of your PWS and its sources.
- An additional statement on lead for systems in compliance.
- Source protection information.

Security concerns

Some PWSs have concerns about releasing specific water-source locations to the public. We believe that an informed public is the best line of protection. However, we provided flexibility in the CCR rules about source location information.

We encourage PWSs to include as much source information as they can. Minimum source location information should include:

- **For surface water:** List the water body where the intake is located.
- **For groundwater:** List the name of the principal aquifer, although a general location is preferred. For example, "off Park Street."

PWSs that voluntarily post their CCR on the Internet may choose to remove sensitive information from the online version of the CCR.

Templates

Some PWSs may find it helpful to use a template for producing their CCR. Refer to the websites listed on Page 26 for sample CCR templates. Each requires entering your monitoring data into the formatted report, along with any additional MCL, MRDL, or health information. If you choose to use a template from a waterworks association or other source, you may have to adapt it to meet Washington CCR requirements.

Annual lead public education

Systems that exceeded the lead action level in the past must send public education materials to each customer annually as long as they exceed the lead action level. Systems that have to repeat this annual notification may include the information in their CCR.

Note: Including required CCR lead statements alone does not meet the requirement for new lead exceedances. See the chapter on "Mandatory language for all reports" (Page 6).

New billing units

We recommend that PWSs provide a copy of their CCR or notice of availability of the CCR to new billing units and hook-ups when service begins.

IX. Distribution requirements

You **must** complete distribution of your CCR to customers and ODW no later than **July 1.** We may accept CCRs from water systems by:

- U.S. Mail, FedEx, United Parcel Service, or so on.
- Hard copy delivered.
- Facsimile (FAX).
- E-mail with a word processing file or a PDF attached.
- Downloading from a website if the PWS provides us with a specific URL link

The PWS **must** mail or otherwise directly deliver one copy of the CCR to each customer. The PWS **must** make a good faith effort to reach customers who do not get water bills. We expect PWSs to make an adequate good faith effort to reach the consumers who are not bill-paying customers, such as renters or workers.

A good faith effort to reach customers includes a mix of methods appropriate to the particular PWS such as:

- Posting the reports on the Internet; mailing to postal patrons in metropolitan areas.
- Advertising the availability of the report in the news media.
- Publishing the report in a local newspaper.
- Posting in public places like cafeterias or lunchrooms in public buildings.
- Delivering multiple copies for distribution by single-bill customers such as apartment buildings or large private employers.
- Delivering to community organizations.

Before October 1 of each year, PWSs **must** submit to ODW the signed and completed certification form explaining how the CCR was distributed and certifying that the information in the CCR is correct and

consistent with the compliance monitoring data previously submitted to us. We strongly encourage you to send the certificate when you submit your annual CCR to ODW.

Your PWS must keep copies of your CCRs on file for no less than three years.

If you do not submit your CCR on time, it is a violation subject to enforcement actions by ODW or EPA.

X. Need more help?

Call our Regional Office

Northwest Region, Kent
(253) 395-6750

Southwest Region, Tumwater
(360) 236-3030

Eastern Region, Spokane Valley
(509) 329-2100

Technical assistance providers

Evergreen Rural Water of Washington
(800) 272-5981

Rural Community Assistance Corporation
(360) 493-0785 or (509) 868-2290

Related publications

You can get the following Office of Drinking Water and EPA publications online at https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm

Consumer Confidence Reports, 2-page fact sheet, DOH 331-209.

***Group A Public Water Systems, Chapter 246-290 WAC*, 237 pages**, online only, DOH 331-010.

Translated Drinking Water Warnings translates basic public notification messages into 27 languages, DOH 331-245.

Preparing Your Drinking Water Consumer Confidence Report: Guidance for Water Suppliers, 98 pages of guidance on EPA's current interpretation of the CCR Rule for water suppliers. EPA 816-R-09-011.

CCRiWriter, Fact sheet, EPA 816-F-02-027.

Consumer Confidence Report Rule: A Quick Reference Guide, 2-page overview of the rule, public health benefits, and annual requirements. EPA 816-F-09-009.

Groundwater Rule Factsheet: Public Notification, Consumer Confidence Report, and Special Notice Requirements for Community Water Systems, 6 pages describe the Groundwater Rule notification requirements for community water systems. EPA 816-F-08-026

You also can access EPA publications online at
http://yosemite.epa.gov/water/owrccatalog.nsf/

You can order publications from EPA at:
U.S. Environmental Protection Agency
Water Resource Center (RC-4100)
1200 Pennsylvania Avenue NW
Washington DC 20460
Call (800) 426-4791
E-mail center.water-resource@epa.gov

Websites with information and CCR templates

U.S. Environmental Protection Agency

National primary drinking water regulations
http://water.epa.gov/drink/contaminants/index.cfm#Primary

CCR Rule http://water.epa.gov/drink/info/ccr/regulations.cfm

CCR website http://water.epa.gov/lawsregs/rulesregs/sdwa/ccr/index.cfm

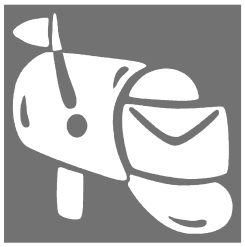
Department of Health, Office of Drinking Water

CCR website
http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/RegulationandCompliance/CCRReports.aspx

XI. Where to send your report

Send copies of your CCR to customers and our nearest Regional Office. ***Due July 1 annually.***

Send your completed CCR certification form to our nearest Regional Office. ***Due October 1 annually.***



Office of Drinking Water
Northwest Regional Office
Attn: Consumer Confidence Report
20435 72nd Avenue South, Suite 310
Kent, WA 98032

Office of Drinking Water
Southwest Regional Office
Attn: Consumer Confidence Report
PO Box 47823
Olympia, WA 98504-7823

Office of Drinking Water
Eastern Regional Office
Attn: Consumer Confidence Report
16201 E. Indiana Ave. Ste. 1500
Spokane Valley, WA 99216

Appendix A: Sampletown annual water quality report

May 2009

Spanish (Espanol)
Este informe contiene informacion importante acerca de su aqua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

French (Francais)
Ce rapport contient des informations importantes à propos de votre eau potable. Demander à quelqu'un de traduire ces informations pour vous ou discuter avec une personne qui comprend ces informations.

Is my water safe?
Last year, we conducted tests for over 80 contaminants. We only detected 10 of those contaminants, and found only 1 at a level higher than the Environmental Protection Agency (EPA) allows. As we told you at the time, our water temporarily exceeded drinking water standards. (For more information, see the section labeled **Violations and Exceedances** at the end of the report.) This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

Do I need to take special precautions?
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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?
Your water comes from three municipal wells sunk about 500 feet into an underground source of water called the Low Plain Aquifer. These wells are located west of town. The town owns the land around these wells and restricts any activity that may contaminate them. After the water comes out of the wells, we treat it to remove several contaminants and we also add disinfectant to protect you against microbial contaminants.

Source water assessment and its availability
The state performed an assessment of our source water in January of 2005. A source water assessment identifies potential sources of contamination to the water we use for your drinking water. The assessment concluded that our water source is most susceptible to contamination from abandoned irrigation wells and farm runoff. Two abandoned wells have been located and have since been properly plugged. Farm runoff continues to be a concern although many local farmers are participating in a 3 county source water protection program. Please call us at 111-2233 if you would like more information about the assessment.

Why are there contaminants in my drinking 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

EPA's Safe Drinking Water Hotline (800-426-4791). 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 dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present include: Microbial contaminants, such as viruses and bacteria, that 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 stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater 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 stormwater runoff, and septic systems; and 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 that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

Our Water Board meets on the first Tuesday of each month at 7:30 pm at Edison High School on Maple Lane. Please feel free to participate in these meetings. Your input is important to us!

Monitoring and reporting of compliance data violations

Our water system failed to conduct monitoring for Arsenic on time. We are required to sample annually. Due to an oversight, we took the sample 3 months late. Although the late sample was below the MCL we are uncertain whether or not there may be any adverse health risks associated with this violation. We have recently implemented a new monitoring scheduling system which should prevent this type of monitoring oversight in the future.

Additional information for Lead

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. Sampletown 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 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 online at http://water.epa.gov/drink/info/lead/index.cfm

Additional information for Nitrate

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. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Water Quality Data Table

The table below lists all of the drinking water contaminants we detected that are applicable for the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change.

Contaminants	MCLG or MRDLG	MCL, TT or MRDL	Your Water	Range		Sample Date	Violation	Typical Sources
				Low	High			
Disinfectant Residual								
Chloramine (as Cl2) (mg/L)	4	4	1	1	3	2008	No	Water additive to control microbes.
Inorganic Contaminants								
Fluoride (ppm)	4	4	2	1	2	2008	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen) (ppm)	10	10	6	ND	6	2008	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	4*	1	4	2006	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	0	50**	10	ND	10	2008	No	Decay of natural and man-made deposits.
Synthetic Organic Contaminants including pesticides and herbicides								
Dibromochloro propane (DBPC) (parts per trillion [ppt])	0	200	15	10	15	2008	No	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples and orchards.
Atrazine (ppb)	3	3	3.75	0.1	10	2008	Yes	Runoff from herbicide used on row crops.
Volatile Organic Contaminants								
Benzene (ppb)	0	5	1	ND	1	2007	No	Discharge from factories; leaching from gas storage tanks and landfills.
TTHMs [Total Trihalomethanes] (ppb)	NA	80	73	40	110	2008	No	Byproduct of drinking water disinfection.

* If the results of this sample had been above 5 pCi/L, our system would have been required to do additional testing for radium. Because the results were below 5 pCi/L, no testing for radium was required.

** The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

Name	Reported Level	Range	
		Low	High
Unregulated Contaminant Monitoring*			
Dimethoate (ppb)	0.07	ND	0.07

* Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Contaminants	MCLG	AL	Your Water (90th%)	Sample Date	# of Samples Exceeding the AL	Violation	Typical Sources
Inorganic Contaminant							
Lead – lead at consumers tap (ppb)	0	15	9	2008	1 of 20	No	Corrosion of household plumbing systems; erosion of natural deposits.

Data Table Key: Unit Descriptions

mg/L	mg/L: number of milligrams of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter
ppb	ppb: parts per billion, or micrograms per liter
ppt	ppt: parts per trillion, or nanograms per liter
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: not detected
NR	NR: monitoring not required, but recommended

Important Drinking Water Definitions

MCLG	Maximum Contaminant Level Goal: 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.
MCL	Maximum Contaminant Level: This highest level of a contaminant that is allowed in drinking water. MCLs are set as close as feasible using the best available treatment technology.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water systems must follow.
MRDLG	Maximum Residual Disinfectant Level Goal: 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.
MRDL	Maximum Residual Disinfectant Level: 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.

Violations and Exceedances: Atrazine

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. During March, April

and May a surge in use of atrazine-based herbicides by area farmers caused our water to exceed the MCL for atrazine. We sent a notice warning you of the problem when it occurred and offered to provide alternative water to customers at that time. We are working with the state and local farmers to ensure that this never happens again, and we are monitoring atrazine levels monthly. We regret exposing you to any potential risk. If you would like more information about atrazine or the violation call us at 111-2233 or Sample County's health department at 111-3377.

For More Information Please Contact:

Dan Jones, 111 Main Street, Sampletown, AK 55555
Phone (999) 111-2233, Fax (999) 111-2255

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Appendix B: Consumer Confidence Report Certification Form

For calendar year 2017 Consumer Confidence Reports are due before July 1, 2018

You need to complete the following:

1. Mail or deliver copies of your 2017 Consumer Confidence Report (CCR) to your water system customers **before July 1, 2018**. Keep a copy for your records.
2. Mail or email a copy of your CCR to the regional office for your county (address on back) **before July 1, 2018.**
3. Complete and send this certification form to the regional office with your CCR **by October 1, 2018.**

Note: We are better able to properly credit your water system when both documents are received together.

Certification for:

Water System Name _____

Water System County _____

Water System ID Number _____ Date delivered _____

URL (if delivered electronically _____

In compliance with the CCR requirements in WAC 246-290-72001 through -72012), I confirm that:

- The CCR has been appropriately delivered to customers who use this water system.
- All information contained in this report is correct.
- The monitoring data stated in the CCR matches information submitted to Washington State Department of Health, Office of Drinking Water.

Certified by:

Signature _____

Printed Name _____

Phone_____ Date _____

DOH Form 331-203 (Updated 6/18)

Department of Health Office of Drinking Water
Regional Office Addresses

For water systems located in the following counties: **Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima**, send to:

Attn: Consumer Confidence Report
Washington State Department of Health
Office of Drinking Water
Eastern Regional Office — Phone: 509-329-2100
16201 E Indiana Ave Ste 1500 — Fax: 509-329-2104
Spokane Valley WA 99216

For water systems located in the following counties: **Island, King, Pierce, San Juan, Skagit, Snohomish, and Whatcom**, send to:

Attn: Consumer Confidence Report
Washington State Department of Health
Office of Drinking Water
Northwest Regional Office — Phone: 253-395-6750
20425 - 72nd Ave S Ste 310 — Fax: 253-395-6760
Kent WA 98032-2388

For water systems located in the following counties: **Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Kitsap, Lewis, Mason, Pacific, Skamania, Thurston, and Wahkiakum**, send to:

Attn: Consumer Confidence Report
Washington State Department of Health
Office of Drinking Water
Southwest Regional Office — Phone: 360-236-3030
PO Box 47823 — Fax: 360-236-3029
Olympia WA 98504-7823

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD, call (800) 833-6388.

DOH Form 331-203 (Updated 1/11)

Appendix C: Regulated Contaminants in Washington State (WAC 246-290-72012)

You must report detections of any contaminants on this list in your CCR.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants						
E. coli	Zero	-	Zero	0	Human and animal fecal wastes	*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	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Fecal indicators (*E. coli*)	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. Human pathogens 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.
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

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
						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.
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.
Giardia lamblia Viruses *Cryptosporidium*	TT	-	TT	N/A	Human and animal fecal waste	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.
Heterotrophic plate count (HPC) bacteria	TT	-	TT	N/A	HPC measures a range of bacteria that are naturally present in the environment	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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Legionella	TT	-	TT	N/A	Found naturally in water; multiplies in heating systems	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.
Radioactive Contaminants						
Beta/photon emitters (mrem/yr)	4 mrem/yr	-	4	N/A 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 beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters (pCi/l)	15 pCi/l	-	15	N/A 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)	5 pCi/l	-	5	N/A 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 micro g/l	-	30	0	Erosion of natural	Some people who drink water

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
					deposits	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)	.006	1000	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 blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	0.010	1,000	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics 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	Discharge of drilling wastes; Discharge from metal refineries; Erosion of 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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Beryllium (ppb)	.004	1000	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.
Cadmium (ppb)	.005	1000	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.
Chromium (ppb)	.1	1000	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.
Copper (ppm)	AL = 1.3	-	AL = 1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits	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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
						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)	.2	1000	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.
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 = .015	1000	AL = 15	0	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
						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.
Mercury [inorganic] (ppb)	.002	1000	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff 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, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite (ppm)	1	-	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)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits;	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
					Discharge from mines	hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronics, 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)	.07	1000	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)	.05	1000	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)	.002	1000	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

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
						problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	.003	1000	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] (nanograms/l)	.0002	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)	.04	1000	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)	.002	1000	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	1000	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

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
						minor kidney changes.
Di(2-ethylhexyl) adipate (ppb)	.4	1000	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 toxic effects or reproductive difficulties.
Di(2-ethylhexyl) phthalate (ppb)	.006	1000	6	0	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate well 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.
Dibromochloropropane (ppt)	.0002	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)	.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Diquat (ppb)	.02	1000	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)	.00000003	1,000,000,000	30	0	Emissions from waste incineration	Some people who drink water containing dioxin in excess of the MCL

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
					and other combustion; Discharge from chemical factories	over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Endothall (ppb)	.1	1000	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)	.002	1000	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)	.00005	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)	.7	1000	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
						MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	.0004	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 (ppt)	.0002	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)	.001	1000	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.
Hexachlorocyclo-pentadiene (ppb)	.05	1000	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.
Lindane (ppt)	.0002	1,000,000	200	200	Runoff/leaching	Some people who drink water

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
					from insecticide used on cattle, lumber, gardens	containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.04	1000	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)	.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes	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)	.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)	.001	1000	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.
Picloram (ppb)	.5	1000	500	500	Herbicide runoff	Some people who drink water

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
						containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	.004	1000	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)	.003	1000	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)	.005	1000	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.
Bromate (ppb)	.010	1000	10	0	By-product of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Carbon tetrachloride (ppb)	.005	1000	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.
Chloramines (ppm)	MRDL = 4	-	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use drinking water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine (ppm)	MRDL = 4	-	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use drinking 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.
Chlorite (ppm)	1	-	1	0.8	By-product of drinking water disinfection	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 mothers who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Chlorine dioxide (ppb)	MRDL = .8	1000	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 mothers who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorobenzene (ppb)	.1	1000	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)	.6	1000	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)	.075	1000	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)	.005	1000	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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
1,1-Dichloroethylene (ppb)	.007	1000	7	7	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
cis-1,2-Dichloroethylene (ppb)	.07	1000	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)	.1	1000	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 liver.
Dichloromethane (ppb)	.005	1000	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.
1,2-Dichloropropane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories	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.
Ethylbenzene (ppb)	.7	1000	700	700	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Haloacetic Acids (HAA) (ppb)	.060	1000	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)	.1	1000	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)	.005	1000	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.
1,2,4-Trichlorobenzene (ppb)	.07	1000	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)	.2	1000	200	200	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
1,1,2-Trichloroethane (ppb)	.005	1000	5	3	Discharge from industrial 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 systems.
Trichloroethylene (ppb)	.005	1000	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)	.080	1000	80	N/A	By-product of drinking water disinfection	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)	.002	1000	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.

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
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.
Treatment Technique Violations						
Groundwater rule TT violations	TT	-	TT	N/A	-	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

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 Units (a measure of water clarity)

pCi/1 = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/1)

ppb = parts per billion, or micrograms per liter (µg/1)

ppt = parts per trillion, or nanograms per liter

ppq = parts per quadrillion, or picograms per liter

TT = Treatment Technique

Appendix D: Reporting Monitoring Data

This Appendix provides examples of monitoring data and instructions on how to report certain detects in the CCR.

Note: You must report all results in CCR units.

Example that demonstrates reporting for 1 sample site and monitoring less than annually:

- Barium monitoring
- Barium MCL: 2 ppm
- MCL in CCR units: 2 ppm
- March 2006 Result: 0.003 ppm
- Example CCR Table Excerpt for 2008 Report:

	MCL	MCLG	Your Water	Range	Year Sampled	Violation	Typical Source
Barium (ppm)	**2**	**2**	**0.003**	**N/A**	**2006**	**No**	**Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits**

Example that demonstrates reporting for one sampling site and multiple sampling dates:

- Atrazine monitoring
- Atrazine MCL: 0.003 ppm
- MCL in CCR units: 3 ppb
  - **2008 Results:**

Atrazine Monitoring	1st Quarter 2008	2nd Quarter 2008	3rd Quarter 2008	4th Quarter 2008
2008 Analysis Results	**0.8 ppb**	**3.8 ppb**	**2.1 ppb**	**0.9 ppb**
Running Annual Average*	**1.2 ppb**	**2.1 ppb**	**1.4 ppb**	**1.9 ppb**

*Reported RAA for quarters 1-3 are based on results from previous quarters not reported on this table.

Note: Highlighted numbers represent the range and the highest RAA.

- Example CCR Table Excerpt:

	MCL	MCLG	Your Water	Range	Year Sampled	Violation	Typical Source
Atrazine (ppb)	**3**	**3**	**2.1**	**0.8 – 3.8**	**2008**	**No**	**Runoff from herbicide used on row crops**

Example that demonstrates reporting for multiple sampling sites and multiple sampling dates:

• Total Trihalomethane monitoring under Stage 1 DBPR and Stage 2 DBPR IDSE.
• TTHM MCL: 0.080 ppm
• MCL in CCR units: 80 ppb
• 2008 Results:

Total Trihalomethane Monitoring Results* (in ppb)	1st Quarter 2008	2nd Quarter 2008	3rd Quarter 2008	4th Quarter 2008
Site 1	53	62	125	70
Site 2	55	62	119	60
Site 3	50	63	117	70
Site 4	54	64	124	71
System-wide Quarterly Average	53	64	124	71
System-wide Running Annual Average*	75	77	82	78

*Reported RAA for quarters 1-3 are based on results from previous quarters not reported on this table.

Note: Highlighted numbers represent the range and the average of the results obtained during the calendar year. The highest sample result occurred in the third quarter during IDSE sampling (see following table).

IDSE Results	1ST Quarter 2008	2nd Quarter 2008	3rd Quarter 2008	4th Quarter 2008
Site 1	**45**	**55**	**70**	**50**
Site 2	**60**	**85**	**100**	**115**
Site 3	**100**	**90**	**140**	**105**
Site 4	**45**	**60**	**65**	**50**

* The IDSE results must be included in the range in the CCR Table.

• Example CCR Table Excerpt:

	MCL	MCLG	Your Water	Range	Sample Year	Violation	Typical Source
TTHM (ppb)	**80**	**NA**	**78**	**50 – 140**	**2008**	**Yes***	**Byproduct of drinking water disinfection**

* While the average for the year did not exceed the MCL there was an MCL violation that was determined during the year that included results that were collected outside of this calendar year.

Include discussion of the TTHM MCL violation, including health effects language, below the table.

• Notes:

– Under Stage 1 DBPR for TTHM and HAA5, systems must report the average and the range of sample results.

– Since the system collected samples under IDSE during the calendar year, the results of the IDSE are included in the reported "range" of results but not the average.