United States
Environmental
Protection Agency

Preparing Your Drinking Water Consumer Confidence Report

Revised Guidance for Water Suppliers

(Original Document: EPA 816-R-01-002, January 2001)
(Revised Document: EPA 816-R-05-002, April 2005)

Notice

This document provides guidance to water suppliers on EPA's current interpretation of the Consumer Confidence Report Rule. The guidance is designed to implement national policy on these issues. The document does not, however, substitute for EPA's regulations; nor is it a regulation itself. Thus, it cannot impose legally-binding requirements on EPA, states, or water suppliers, and may not apply to a particular situation based upon its circumstances. EPA and state decision-makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. EPA may change this guidance in the future.

Contents

Introduction

This document is for water suppliers who are preparing drinking water Consumer Confidence Reports (CCRs) [40 CFR part 141 Subpart O]. This guide explains the requirements for report content, format, and distribution that the U.S. EPA established in the Consumer Confidence Report Rule, published in the FEDERAL REGISTER on August 19, 1998 and in subsequent revisions to the rule through calendar year 2004.

The rationale for CCRs is that consumers have the right to know what is in their drinking water and where that water comes from. The reports will help consumers to make informed choices that affect the health of themselves and their families. They also will encourage consumers to consider the challenges of delivering safe drinking water. Educated consumers are more likely to help protect their drinking water sources and to understand the true costs of safe drinking water.

Water suppliers, states, and EPA are all working to educate consumers about the sources and quality of their drinking water, and to increase their involvement in decisions about it. Systems and states are including citizens in decisions regarding use of the drinking water state revolving fund and in planning source water assessment programs. Consumers who are familiar with the basic drinking water information in CCRs will be able to participate more effectively in these processes.

Since this document was published in January 2001, EPA has published the Arsenic Rule (January 22, 2001); the Filter Backwash Recycling Rule (June 8, 2001); the Long-Term 1 Enhanced Surface Water Treatment Rule (January 14, 2002); miscellaneous corrections to existing rules; and miscellaneous revisions or additions to analytical methods, detection limits and compliance dates.

These rules create new requirements that may be subject to inclusion in a CCR. For example:

- **Arsenic Rule**: Beginning with the report due July 1, 2002, a system with a detect of arsenic above 5 parts per billion (ppb) or 0.005 milligrams per liter (mg/L) and up to and including 10 ppb or 0.010 mg/L must include a short informational statement in the report. In the reports due July 1, 2002, through July 1, 2007, a system with a detect of arsenic above 10 ppb or 0.010 mg/L and up to and including 50 ppb or 0.05 mg/L prior to January 23, 2006 must include special health effects language in the report. Beginning with the report due July 1, 2007, systems that exceed the revised arsenic MCL of 10 ppb or 0.010 mg/L on or after January 23, 2006 must report the violation and include the special health effects language in Appendix A.

- **Long-Term 1 Enhanced Surface Water Treatment Rule**: A surface water system serving from 500 to 9,999 people must report violations of new disinfection profiling requirements beginning with the report due July 1, 2004 and those serving fewer than 500 people must report violations of disinfection profiling requirements beginning with the report due July 1, 2005. A surface water system serving fewer than 10,000 people must also report violations of new treatment technique and filter monitoring requirements beginning with the report due July 1, 2006.

- **Filter Backwash Recycle Rule**: This new rule did not add CCR requirements.

Because more than five years have passed since monitoring was completed under the Information Collection Rule (ICR), any CCR requirements related to the ICR are no longer in effect. Therefore, references to the ICR have been removed from this document. The July 1, 2004 version of Appendix A to Title 40 of the Code of Federal Regulations (CFR), Part 141, Subpart O is included in Appendix A of this document. Appendix A lists MCLs, MCLGs, conversion factors for converting reported values to CCR units, sources of contaminants, and health effects language for the CCR. Current (as of April 2005) analytical methods and detection limits are included in Appendix B of this document. References to reporting requirements for monitoring under the Unregulated Contaminant Monitoring Rule (UCMR) have been revised to reflect changes in the rule. Finally, recommendations for improving the effectiveness of your CCR, and new examples of reporting formats and completed CCRs are included.

This document does not address the provisions of the Ground Water Rule, the Long-Term 2 Enhanced Surface Water Treatment Rule, or the Stage 2 Disinfectant/Disinfection By-Products Rule, which had not been adopted at the time of development of this document. Guidance for CCR reporting will be included in the implementation guidance for each new rule.

I. What is a consumer confidence report?

In 1996, Congress amended the Safe Drinking Water Act. This amendment added a provision requiring that all community water systems deliver to their customers a brief annual water quality report. These Consumer Confidence Reports (CCRs) summarize information that your water system already collects to comply with regulations. You will not need to engage in any new monitoring just for the CCR.

The CCR includes information on your source water, the levels of any detected contaminants, and compliance with drinking water rules, plus some educational material. Most reports will fit on a few sheets of paper. A report that contains *too much* information or is full of technical jargon can discourage consumers from learning about their drinking water.

II. Who must prepare a consumer confidence report?

Every community water system (serving at least 15 service connections and/or 25 people year round) must prepare and distribute a report. These systems typically include cities, towns, homeowners associations, and manufactured housing communities.

A water wholesaler that sells water to another water system must provide the retailer with monitoring data and other information that will enable the retailer to produce a CCR by April 1 of each year, unless the two systems make a different contractual agreement. Wholesalers are not responsible for creating the report for the retailer, nor are they responsible for providing data on contaminants that the retailer monitors (such as lead or trihalomethanes). Regardless of who produces the report, the retail system is responsible for

ensuring that its customers receive a report containing all required content.

In some cases, a retailer will contract with the wholesaler to produce the report. There are several options in this relationship. If the retailer had no new data to add, it could simply send out the wholesaler's CCR with a cover letter explaining their relationship. If the retailer did need to add data, it might choose to reprint the wholesaler's CCR with a new title/letterhead and extra data. Either of these is acceptable.

III. When must a water system distribute its report?

You must deliver your annual report to consumers by July 1 of each year. The reports are based on calendar-year data, so your report will include data collected between January and December of the previous calendar year. Additionally, the most recent monitoring results must be included for detected regulated and unregulated (if applicable) contaminants which are monitored at frequencies less than annually. Results more than five years old do not have to be reported.

Wholesalers must deliver information to their buyers by April 1st of each year (unless there is a separate agreement). A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation, and annually thereafter.

IV. What content is required in the report?

This guidance describes EPA's requirements for a CCR (using the words "must" and "shall") and suggests (using the words "encourage," "should," and "may") other sections or explanations that will help your customers understand the report. Your state's CCR rule may require more information, so be sure to check with your state drinking water program or other relevant state or local authorities.

Basic Consumer Confidence Report Requirements
(please read on for details and recommended enhancements)

Water System Information

- Name/phone number of contact person
- Information on public participation opportunities
- Information for non-English speaking populations, if applicable

Sources of Water

- Type, name, and general location of water sources
- Availability of source water assessment
- Information on significant sources of contamination, if available

Definitions (See Item 3 for specific language)

- MCL
- MCLG
- MRDL
- MRDLG
- Others as needed

Detected Contaminants

- Table summarizing data on detected regulated & unregulated contaminants
- Known or likely source of each detected contaminant
- Health effects language and explanation (for MCL violations)
- Information on voluntary monitoring for *Cryptosporidium*, radon, and other contaminants, if applicable

Compliance with Other Drinking Water Regulations

- Explanation of violations, potential health effects, and steps taken to correct the violations
- Explanation of variance/exemption, if applicable

Required Educational Information (See Item 6 for specific language)

- Explanation of contaminants and their presence in drinking water
- Warning for vulnerable populations about *Cryptosporidium*
- Informational statements on arsenic, nitrate, and lead, if necessary

EPA encourages you to tailor the content of your CCR to local conditions. If you think that an added picture or graph would help your customers to understand your report, add it. If your customers would benefit from an explanation of your need for new treatment facilities, tell them. As long as any additional educational information is consistent with, and not detracting from, the purpose of the report, you may add it. For example, the CCR rule does not require a title for your report. However, you should give your report a title to catch the customer's attention. You may call the report a "Consumer Confidence Report," a "Water Quality Report," or choose another title.

Customers are most interested in a clear statement of whether or not their drinking water meets all EPA and state standards. Although it is not required by the regulations, you will help your customers if you tell them whether their water met all drinking water standards. Be cautious in using the word "safe" since water that meets standards and is safe for most people might not be safe for infants, chemotherapy patients, or people with HIV/AIDS. Also, using the term "safe" if you have had an MCL or AL exceedance can be misleading to the customer.

*EXAMPLE–Last year, as in years past, your tap water met all EPA and state drinking water health standards. Local Water vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard. [**or, if you had a violation, begin with**: Last year, we conducted more than __ tests for over 80 contaminants. We only detected __ of those contaminants, and found only __ at a level higher than EPA allows. As we told you at the time, our water temporarily exceeded drinking water standards. For more information, see the paragraph marked **Violation** on the back.] This brochure 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 EPA and state standards. We are committed to providing you with information because informed customers are our best allies.

Examples of CCRs are included in Appendix F of this document. Research conducted by the American Water Works Association Research Foundation (AWWARF, 2004) described three important phases in facilitating customer understanding of the information in a CCR:

- **Initial Sort**: Customers are less likely to discard the CCR as "junk mail" if it looks professional, distinct, and prominently displays the utility's name. However, glossy full-color reports are not necessary.

- **Skimming**: For the reader who chooses to skim the document, important and concise messages about water quality that are prominently displayed will attract attention. However, statements about the safety of water should not be over-stated, and specific warnings regarding health risks for sensitive sub-populations must be included. The use of color will draw attention and can be used to guide the reader through the CCR. Maps, simple tables, and photographs present information quickly and effectively.

- **Reading**: If the above challenges are addressed, a customer will hopefully choose to read the entire CCR. The document should *not* be designed to *persuade* the reader, it should *inform* the reader. A brief table of contents at the very beginning will help to guide the reader. Contaminant tables should be simple and should not require special instructions. The use of large fonts in an uncrowded format is desirable. Discussions regarding detected contaminants are helpful and should promote credibility.

Item 1: Water System Information

You must provide the following information about your water system:

- The name and telephone number of a person at the water system who can answer questions about the report.

- A list of known opportunities for public participation in decisions that affect drinking water quality (e.g., time and place of regularly-scheduled water board or city/county council meetings). If you do not have regularly-scheduled meetings, you should tell customers how to get information when meetings are announced.

Systems that have a large proportion of *non-English speaking residents* must include information in the appropriate language(s) expressing the importance of the report or contain a phone number or address where residents may contact your system to obtain a translated copy of the report or assistance in the appropriate language. The state or EPA will make the determination of which systems need to include this information.

Translations of the following text are provided in Appendix C:

"This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it."

Item 2: Source(s) of Water

Describe your water (ground water, surface water, or a blend), the commonly-used name(s) (if such a name exists), and the general locations of your water source(s). EPA encourages you to provide a simple map of your system's sources without a detailed description of their locations for security reasons.

Explaining your various interconnections and back-up sources may be difficult, but it is important that consumers understand that the source of their water may vary during the year. Remember to include in your table of detected contaminants (Item 4) monitoring data for these "extra" sources if you use water from them. If your situation is complex, you may need to generalize about the types of sources and how they are used.

If a source water assessment has been completed, you should have a copy of it. Let customers know how to obtain the results of the assessment. In addition, include in the CCR a brief summary of your source water's susceptibility to contamination based on the findings of the assessment. Even if your source water assessment has not been updated, you must still include the most recent assessment information in your annual report. Examples of how to include the source water assessment information in your report are available in the "Revised State Implementation Guidance for the Consumer Confidence Report (CCR) Rule" in Appendix I, Table I-2 at http://www.epa.gov/safewater.

If a source water assessment has not yet been conducted you should include information on when the assessment report will be completed. If you do not have an assessment, EPA encourages you to include any other information about potential sources of contamination that is readily available to you; for example, information contained in a sanitary survey. This is your opportunity to educate your customers about the impacts they and others have on the quality of source water. EPA also encourages public water suppliers to use the CCR as a way to discuss appropriate source water protection actions that are in the planning stages or are already in place. This discussion is an ideal opportunity to invite public participation in locally-based source water protection efforts as well.

Item 3: Definitions

Every CCR must include definitions of key terms that consumers will need to understand the contaminant data. You must use the definitions listed below.

- **Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Maximum Contaminant Level Goal (MCLG)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Include the following definitions only if your report contains information on disinfectant residuals, or a detected contaminant that is regulated by an action level (e.g., lead) or a treatment technique (e.g., turbidity):

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

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

- **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 contamination.

Include the following definition only if your water system operated under a variance or exemption during the calendar year that the report describes:

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

Item 4: Detected Contaminants

An essential part of the report is the table that shows the highest level of each detected contaminant (this is usually the value you report to the state to determine compliance) and the range of levels of that contaminant you found during the year, if compliance is based on an average of several samples. Appendix D provides examples for interpreting and reporting detected contaminants in your CCR.

A detected contaminant is any contaminant detected at or above its minimum detection limit (MDL) (see Appendix B). If you are unsure of the MDL for a contaminant, and your lab reports a value greater than zero, include that in the report. Your state may have lower MDLs that take precedence over EPA's. Do not include in the table contaminants that are not detected or are detected below the MDL. If you sometimes distribute water from emergency or back-up sources, you generally need to include monitoring results from these sources in the ranges of detections that you report in the table, unless the source's contribution is insignificant (e.g., one day per year).

The main table of detected contaminants must contain only data about regulated contaminants (contaminants subject to a MCL, treatment technique (TT), or action level (AL)), and unregulated contaminants for which EPA or the state requires monitoring under 40 CFR 141.40. See below for special instructions about *Cryptosporidium* and radon. You may make several tables to separate regulated contaminants from those that do not have MCLs (such as lead and copper or turbidity), or those that are currently unregulated. You may want to organize your table(s) by contaminant type (e.g., microbial, inorganic) or sampling site (e.g., treatment plant, distribution system). Report any additional monitoring data in another section of the CCR, separated from the regulated contaminant data. If you want to list all the contaminants which you monitored but did not detect, you must do so outside of the table of

Item 4: Detected Contaminants (continued)

detected contaminants. If you choose to report on secondary MCLs, or if your state requires this reporting, do so outside of the main table.

To ensure that consumers can easily compare detected contaminant levels to their MCLs, your table must display the MCL for each contaminant in units that express it as a number greater than 1.0. Report the MCLG and level of the detected contaminant in the same units as the MCL. For example, atrazine is usually reported in mg/L. It is easier for customers to see that your water contains atrazine at a level 10 times lower than the MCL if you report the MCL as 3 ppb and the detected level as 0.3 ppb than if you were to report the MCL as 0.003 mg/L and the detected level as 0.0003 mg/L. In this case, you convert by multiplying the detected level and MCL by 1000. Appendix A shows the conversion factor for each contaminant. When you round results to determine compliance, round before multiplying the results by the factor listed in Appendix A.

The CCR includes data from monitoring completed during the previous calendar year. However, if you have monitoring waivers, or for another reason monitor less than once per year, use your most recent data. For example, if you monitor once every three years for lindane and detect lindane in a sample, report the same detection level each of the three years until you take a new sample. If the report contains detection data that is not from the calendar year indicated, the table must show the date of monitoring and the report must contain a brief statement explaining that the data presented is from the most recent monitoring done in compliance with regulations.

EXAMPLE–The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

You do not need to report monitoring results that are more than five years old.

The table must contain the following, for each detected contaminant:

1) The MCL, expressed as a number greater than 1.0 (see Appendix A). If the contaminant is regulated by a treatment technique (TT), put the letters "TT" in place of the MCL. If the contaminant is regulated by an action level (AL), specify the applicable action level.

2) The MCLG, expressed in the same units as the MCL (see Appendix A).

3) The level of that contaminant expressed in the same units as the MCL and MCLG:

   - If compliance is determined annually or less frequently (many inorganic and chemical contaminants), include the highest detected level at any sampling point and the range of detected levels, if applicable.

   - If compliance is determined by a running annual average of all the samples taken from a sampling point (for example, chemical contaminants), include the highest average (as reported to the state for compliance purposes) and the range of detections (see Appendix D).

   - If compliance is determined by a running annual average of all samples at all sampling points (for example, TTHMs as per the Stage 1 Disinfection Byproducts Rule), include the highest average and the range of detected levels (see Appendix D).

Item 4: Detected Contaminants (continued)

- For turbidity (when reported pursuant to 40 CFR 141.13–turbidity as a MCL for systems that must install filtration but haven't), include the highest monthly average (see Appendix D).

- For turbidity (when reported pursuant to 40 CFR 141.71–turbidity as a TT for systems that have met criteria for avoiding filtration), include the highest single measurement found in any month. You should explain the reasons for measuring turbidity (see Appendix D).

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.

- For turbidity, when reported by systems serving fewer than 10,000 people for calendar year 2004 (pursuant to 40 CFR 141.73-turbidity as a TT for systems that filter), include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 141.73 for the relevant filtration technology (see Appendix D). You should also explain the reasons for measuring turbidity.

- For turbidity, when reported by systems serving fewer than 10,000 people for calendar year 2005 and beyond (pursuant to 40 CFR 141.73 or 141.551-turbidity as a TT for systems that filter), include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 141.73 or 141.551 for the relevant filtration technology (see Appendix D). You should also explain the reasons for measuring turbidity.

- For turbidity, when reported by systems serving at least 10,000 people (pursuant to 40 CFR 141.73 or 141.173-turbidity as a TT for systems that filter), include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 141.73 or 141.173 for the relevant filtration technology (see Appendix D). You should also explain the reasons for measuring turbidity.

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.

- For lead and/or copper, include the 90th percentile value from the most recent sampling (if it is a number greater than zero) and the number of sites that exceeded the action level (do not report related water quality parameter data) (see Appendix D).

- For total coliforms (systems that collect fewer than 40 samples per month), include the highest number of positive samples collected in any one month (see Appendix D).

- For total coliforms (systems that collect 40 or more samples per month), include the highest percentage of positive samples collected in any one month (see Appendix D).

- For fecal coliforms and *E. coli*, include the number of positive samples collected that year (see Appendix D).

Item 4: Detected Contaminants (continued)

- If you detect beta particles in your water at or below 50 pCi/L, you should report the detected level in pCi/L. So that consumers may have a standard against which to compare that detected level, you should include "50 pCi/L*" in the MCL column (rather than the actual MCL of 4 mrem/year) and include a footnote to the table that says, "*EPA considers 50 pCi/L to be the level of concern for beta particles." If you detect beta particles above 50 pCi/L, you must determine the actual radioactive constituents present in the water to calculate the dose exposure level in mrem/year, and must report both the detected level and MCL as mrem/year.

4) The likely source of that contaminant, to the best of your knowledge. If the source of contamination is known, the report should identify a specific point source, such as "Al's chicken houses" or the "Super-shiny Paper Mill." If you lack reliable information on the specific source of a contaminant, include one or more of the typical sources listed in Appendix B that is most applicable to your situation.

5) Clear highlighting of any contaminant detected in violation of a MCL or a TT, or exceeding an AL. This indication could, for example, take the form of a different color type, a larger or bolder font, or a large star. Near, but not in the table, include an explanation of the length of the violation/ exceedance, the potential adverse health effects (from Appendix A), and actions you took to address the violation/exceedance.

6) The average of all of the year's monitoring results and the range of detections for any detected unregulated contaminants for which state or federal rules require monitoring (40 CFR 141.40), except *Cryptosporidium*. See Appendix A for a list of these contaminants.

You may wish to explain the reasons for unregulated contaminant monitoring with a statement such as:

EXAMPLE–Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.

Multiple Distribution Systems

If your system supplies water through two or more distribution systems that use different raw water sources and are not physically interconnected, you should include in the table a separate column of detection data for each service area. Describe the area that each distribution system serves.

Reporting on Radon and *Cryptosporidium*

If you monitored for radon and/or *Cryptosporidium* and did not detect them, you do not need to discuss the monitoring or the results in your report. If either were detected, the following requirements apply:

Radon

If your system has performed monitoring that indicates the presence of radon in its finished water, include in the report:

- the results of monitoring (the analytical values reported by the lab).

- an explanation of the significance of the results. Tell customers if they need to be

Item 4: Detected Contaminants (continued)

concerned by the information that the CCR provides.

EXAMPLE--Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. 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 in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also 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. (You should pursue radon removal for 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 additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Cryptosporidium

If your system has performed monitoring that indicates the presence of *Cryptosporidium* either in its source water or its finished water, include the following information in your report:

- a summary of the results of the monitoring. You may choose whether or not to report the actual analytical results as a part of this summary.

- an explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

EXAMPLE–Cryptosporidium *is a microbial pathogen found in surface water throughout the U.S. Although filtration removes* Cryptosporidium, *the most commonly-used 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 can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.* Cryptosporidium *must be ingested to cause disease, and it may be spread through means other than drinking water.*

Reporting on Additional Monitoring

If your system has performed voluntary monitoring that indicates the presence of contaminants that are not regulated in the finished water, EPA strongly encourages you to report any results that may indicate a health concern. Public knowledge of potential problems is in your interest as well as your customers'. EPA considers any detection above a proposed MCL or health advisory level to indicate concern. Call the Safe Drinking Water Hotline or visit EPA's Web site for this information. For these contaminants, EPA recommends that the report contain:

- the results of monitoring.

- an explanation of the significance of the results, noting the existence of the health advisory or proposed MCL.

Item 5: Compliance with Other Drinking Water Regulations

National Primary Drinking Water Regulations (NPDWR) Violations

If your water system violated one of the following requirements during the year covered by the report, your CCR must describe the violation(s). Just as you must explain the potential health effects of any MCL violation, you must provide a clear and readily understandable explanation of any other violation, potential adverse health effects (if any), and the steps the system has taken to correct the violation.

1) Treatment techniques.

   - Filtration and disinfection requirements contained in the Surface Water Treatment Rule, Interim Enhanced Surface Water Treatment Rule or Long-Term 1 Enhanced Surface Water Treatment Rule (for calendar year 2004 and later for systems serving fewer than 10,000 people). If the violation was a failure to install adequate filtration or disinfection equipment or processes, or there was a failure of that equipment or process, 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 control requirements. If the violation was a failure to meet corrosion control treatment, source water treatment, or lead service line requirements, include the health effects language for lead or copper listed in Appendix A.

   - Acrylamide and Epichlorohydrin. If you violate either treatment technique, you must include the relevant health effects language from Appendix A.

2) Monitoring and reporting of compliance data. If your system failed to take a sample on time, the report should say "health effects unknown". If your system took the samples accurately and on-time, but mailed the results late, you don't need to discuss health effects.

3) Record keeping requirements.

4) Special monitoring requirements.

5) Violation of a variance, an exemption, or an administrative or judicial order.

Variances and Exemptions

If your system operated under a variance or exemption at any time during the year covered by the report, include an explanation of the justification for the variance or exemption, the date that it was issued, when it is up for renewal, and a status report on what the system is doing to remedy the problem. Also, tell your customers how they may participate in the review or renewal of the variance or exemption.

Item 6: Educational Information

Your CCR must prominently display the following statements:

1) *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).*

2) *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).*

Your report must contain basic information about drinking water contaminants. Use the following language, or you may write your own comparable language that better fits your specific local situation:

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 and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*

- *Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.*

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

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

Special Requirements for Nitrate, Arsenic, Lead, and Trihalomethanes

You must include in your report the relevant special educational statement listed below about that contaminant if your water contains:

- **Nitrate** above 5 ppm (50 % of the MCL), but below 10 ppm (the MCL):

Item 6: Educational Information (continued)

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.

- **Arsenic** above 5 ppb, but at or below 10 ppb:

  While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

- **Arsenic** above 10 ppb, but at or below 50 ppb:

  Until January 22, 2006, a community water system that detects arsenic above 10 ppb and up to and including 50 ppb must include the arsenic health effects language prescribed by Appendix A even though the system is not in violation of the arsenic MCL.

  After January 22, 2006, a community water system that detects arsenic above 10 ppb is out of compliance with the MCL and must inform the reader of the violation and include the health effects language in Appendix A, in its CCR.

- **Lead** above 15 ppb (the action level) in more than 5%, and up to and including 10%, of sites sampled:

  Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

- **Trihalomethanes**:

  If your water contains trihalomethanes detected above 0.080 mg/L, but below the MCL of 0.10 mg/L, calculated as an annual average, you must include the health effects language for TTHMs as prescribed by Appendix A.

  If you believe that the language above is not relevant to your situation, you may adjust the language in consultation with your state or primacy agency.

Other Educational Information

You are not limited to providing only the required information in your report. You may use the report to explain (or include a diagram of) your treatment processes, source water protection efforts, or the costs of making your water safe to drink. You may include a statement from the mayor or general manager. You can also educate your customers about water conservation, taste and odor issues, affiliations with programs such as the Partnership for Safe Water, and so forth.

You may want to provide the address for EPA's drinking water Web site (www.epa.gov/safewater). The only limitation on this information is that it must not interfere with the educational purpose of the report.

V. What should the report look like?

You don't need a fancy computer or a graphic designer to produce a CCR that is easy to read and inviting to your customers. The best way to design your report is to spend some time looking at other reports. See what catches your eye, and copy it. A few things to consider:

- Write short sentences. Keep your paragraphs short, too.
- Don't make your text size too small. You might want to squeeze a few extra sentences in your report, but if you add too much, people might ignore the entire report.
- Give a draft of your CCR to relatives or friends who aren't drinking water experts and ask them if it makes sense. Ask customers for their comments when you publish the report.
- Don't distract from your main message with graphics and/or pictures that don't complement your message.
- Be as simple, truthful, and straight forward as possible. Avoid acronyms, initials, and jargon.
- Consider printing the report on recycled paper and taking other steps to make the report "environmentally friendly". If you hope to get your customers involved in protecting source water, set a good example for them.
- Use the CCR as an opportunity to tell your customers about all of the things that you are doing well.

VI. How must a water system distribute its report?

You must mail or deliver a copy of your consumer confidence report to each of your customers, and make a good faith effort to get reports to non-bill-paying consumers. Deliver your report by July 1 of each year. You may include the reports with water bills, if feasible, or you may send the reports as separate mailers. Sending the reports as separate mailers will likely be more effective, and you will reach renters who may not receive water bills directly. Keep your report on file for three years, and make it available to the public upon request.

Send a copy to the director of the state drinking water program when you mail it to customers. Within three months of the report's due date, submit to the state a certification (see Appendix E) that you distributed the report, and that its information is correct and consistent with the compliance monitoring data previously submitted to the State. Send a copy to any other state agency that the state drinking water program director identifies. EPA also encourages you to send copies to state and local health departments, as well as local TV and radio stations and newspapers. Systems that serve 100,000 or more people must post their reports at publically accessible locations on the Internet. Your system can use the EPA Web site to post your CCR by completing an on-line form.

It is in your system's interest to spread the word about the quality of its water. Since many consumers of your water may not receive bills (people such as apartment renters), you must make serious and "good faith" efforts to reach

non-bill paying consumers. A "good faith" effort means selecting the most appropriate method(s) to reach those consumers from a menu of options that your primacy agency recommends. Those options include but are not limited to:

- Posting the report on the Internet.
- Mailing the report to all postal patrons.
- Advertising the availability of the report in newspapers, TV, and radio.
- Publishing the complete report in a local newspaper.
- Posting the report in public places such as cafeterias and lobbies of public buildings, libraries, churches, and schools.
- Delivering multiple reports for distribution by single-biller customers such as apartment buildings or large private employers.
- Delivering the report to community organizations.

Your Governor (or Tribal leader or EPA Regional Administrator, if applicable) can waive the mailing requirement for water systems that serve fewer that 10,000 people. You may choose to mail the report even if the Governor has issued a waiver. If you decide to use the waiver, take the following steps:

- Publish the report in one or more local newspapers.
- Inform customers, either by notification in newspapers or by other means approved by the State, that reports will not be mailed.
- Make the reports available upon request.
- For specific subpopulations in your community, you may wish to distribute reports to organizations specific to those groups.

If your system serves 500 or fewer people and the Governor waives the mailing requirement for small systems, you do not have to publish the report in the newspaper, though you may want to do so. At least once a year, you must notify customers through a mailed, delivered, or posted notice that the report is available from your water system upon request.

Systems that serve 100,000 or more people must post their reports on the Internet. EPA encourages other systems to use this option as well. Many local governments have sites where you can post your report, even if your system itself does not have a site. EPA provides a mechanism that allows systems to link their CCR to the EPA Web site (www.epa.gov/safewater).

VII. References

1. Lazo, J. K., J. L. Pratt, C. N. Herrick, M. L. Hagenstad, R. S. Raucher, R. E. Hurd, and E. H. Rambo. 2004. Understanding and Enhancing the Impact of Consumer Confidence Reports. AWWARF, Denver, CO.

Appendix A–Regulated Contaminants and Revised UCMR Monitoring List

Appendix A of Subpart O provides information regarding regulated contaminants including conversions for MCL compliance values, likely sources of contaminants, and health effects language for contaminants detected above federal standards. This Appendix is presented on the following pages.

Summary of Changes to Appendix A of Subpart O:

The Public Notification (PN) and CCR rules have some parallel requirements, but the rules are written to provide consistency and coordination. For example, both rules use the same mandatory language to describe potential health effects of contaminants. Changes to the CCR Rule became effective June 5, 2000. A summary of the changes made by the PN Rule to the Appendices of Subpart O are given below:

- Appendices A, B, and C to Subpart O, which contain various pieces of information about the contaminants EPA regulates, were combined into a new, comprehensive Appendix A to Subpart O. As a result of this change, a number of references in the CCR Rule to the three appendices are revised to reflect the new combined Appendix A.

- As new rules are promulgated, they may change the information in Appendix A. EPA will maintain an updated version of Appendix A on its Web site at: www.epa.gov/safewater/. This will eliminate the need to republish the entire table in each final rule that changes the information it contains.

- The new Appendix A to Subpart O contains regulatory and health effects information on each of the disinfectants and disinfection byproducts regulated in the Stage 1 D/DBP Rule that EPA published in December 1998. Surface water systems serving 10,000 or more people were required to include information regarding these contaminants in their reports beginning with the report for calendar year 2002. Surface water systems serving fewer than 10,000 people and groundwater systems that use a disinfectant other than ultraviolet light must include information regarding these contaminants in their reports beginning with the report for calendar year 2004. EPA added information on the following regulated contaminants to the CCR Rule:

    - total organic carbon
    - bromate
    - chloramines
    - chlorine
    - chlorite
    - chlorine dioxide
    - haloacetic acids

- The standard health effects language for fluoride in the current CCR regulations was revised to be identical to the health effects language required for violation of the fluoride MCL in the PN Rule.

Also, the Radionuclides Rule updated the new Appendix A to Subpart O by adding MCLs, health effects, and likely source information for uranium.

Appendix A to Subpart O – Regulated Contaminants

Key

AL=Action Level
MCL=Maximum Contaminant Level
MCLG=Maximum Contaminant Level Goal
MFL=million fibers per liter
mrem/year=millirems per year (a measure of radiation absorbed by the body)
NTU=Nephelometric Turbidity Units
pCi/L=picocuries per liter (a measure of radioactivity)
ppm=parts per million, or milligrams per liter (mg/L)
ppb=parts per billion, or micrograms per liter (µg/L)
ppt=parts per trillion, or nanograms per liter
ppq=parts per quadrillion, or picograms per liter
TT=Treatment Technique

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						
Total Coliform Bacteria	MCL: (systems that collect ≥40 samples/ month) 5% of monthly samples are positive; (systems that collect < 40 samples/ month) 1 positive monthly sample			0	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and *E. coli*	0		0	0	Human and animal fecal waste	Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems.
Total Organic Carbon	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 byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Turbidity	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.

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
Radioactive Contaminants						
Beta/photon emitters (mrem/yr)	4 mrem/yr	-	4	0	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing 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	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	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 (µg/L)	30 µg/L	-	30	0	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Inorganic Contaminants						
Antimony (ppb)	.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]	1000	10[1]	0[1]	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.

[1] These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.

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.
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.
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.
Chloramines (ppm)	MRDL=4	-	MRDL=4	MRDLG =4	Water additive used to control microbes	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people 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 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.
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.
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 MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
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 women who drink water containing chlorine dioxide in excess of the MRDL. 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
Copper (ppm)	AL=1.3	-	AL=1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide (ppb)	.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. 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.

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
Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	.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 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.

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
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 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 such as weight loss, liver enlargement or possible 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 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.
Dibromochloro-propane (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 and other combustion; Discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Endothall (ppb)	.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.

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
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 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.
Hexachlorocyclopentadiene (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 from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.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.

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
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 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.
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.
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.

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
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.
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.
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.

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
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.
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 chlorination	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.
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.

Revision History

Date	Action	FEDERAL REGISTER Citation
24 August 2000	Created table	63 FR 44530 (19 August 1998) as amended by 65 FR 26024 (4 May 2000)
29 January 2001	1) Revised entries for beta/photon, alpha emitters, and combined radium, and added entry for uranium 2) Revised entry for arsenic	65 FR 76749 (7 December 2000) 66 FR 7064 (22 January 2001)
27 November 2002	3) Revised health effects language for di(2-ethylhexyl) adipate (DEHA) and di(2-ethylhexyl) phthalate (DEHP) 4) Revised the placement of regulatory and health effects information for disinfection by-products (*i.e.*, bromate, chloramines, chlorite, chlorine, and chlorine dioxide), and corrected the reference ‘‘chloride dioxide’’ to ‘‘chlorine dioxide.’’	67 FR 70855
9 December 2002	5) In the table, in the first column, in the second entry, in the second line, ‘‘andipate’’was changed to read, ‘‘adipate.’’	67 FR 73011
25 March 2003	6) Revise the arsenic rule to express the standard as 0.010 mg/L, in order to clarify the implementation of the original rule.	68 FR 14506

Revised UCMR Monitoring List

The CCR Rule requires a system to provide in their CCR the average of any monitoring results from the year and the range of detections for each detected unregulated contaminant for which monitoring is required. Systems are required to report detects of unregulated contaminants only in the year during which monitoring was conducted. Systems are encouraged to include a brief explanation of the reasons for monitoring for unregulated contaminants.

> *EXAMPLE–Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.*

In September 1999, EPA revised the Unregulated Contaminant Monitoring Rule (UCMR) (64 FR 50556) as required by the 1996 Amendments to SDWA. The data generated by the new UCMR will be used to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List, a list of contaminants that EPA is considering for possible new drinking water standards. This data will help to ensure that future decisions on drinking water standards are based on sound science and the best available information.

The revised UCMR contains a new list of contaminants for which public water systems must monitor. The UCMR Monitoring List is composed of three separate lists based on analytical methods readiness and current contaminant occurrence data. List 1 for Assessment Monitoring includes twelve chemical contaminants. List 2 for Screening Survey contains contaminants for which EPA has less occurrence data than the contaminants on List 1. List 3 for Pre-Screen Testing includes seven microorganisms known to have health effects and two radionuclides. While the UCMR Monitoring List has 37 contaminants on it, the regulation only requires monitoring for the twelve contaminants on List 1, beginning in 2001. The revised UCMR Monitoring List, along with information about likely sources of those contaminants is presented on the next page. The EPA Web site (http://www.epa.gov/safewater/) contains additional information on the revised rule.

Uses and Environmental Sources of Contaminants for the Final (2002) UCMR Monitoring List **		
Contaminant Name	**CASRN**	**Use or Environmental Source**
List 1 - Assessment Monitoring of Contaminants with Available Methods		
2,4-dinitrotoluene	121-14-2	Used in the production of isocyanate and explosives
2,6-dinitrotoluene	606-20-2	Used as a mixture with 2,4-DNT (similar uses)
DCPA mono-acid degradate	887-54-7	Degradation product of DCPA, an herbicide used on grasses and weeds with fruit and vegetable crops
DCPA di-acid degradate	2136-79-0	Degradation product of DCPA, an herbicide used on grasses and weeds with fruit and vegetable crops
4,4'-DDE	72-55-9	Degradation product of DDT, a general insecticide
EPTC	759-94-4	Herbicide used on annual grasses, weeds, in potatoes and corn
Molinate	2212-67-1	Selective herbicide used with rice, controls watergrass
MTBE	1634-04-4	Octane enhancer in unleaded gasoline
Nitrobenzene	98-95-3	Used in the production of aniline, which is used to make dyes, herbicides, and drugs
Terbacil	5902-51-2	Herbicide used with sugarcane, alfalfa, and some fruit, etc.
Acetochlor	34256-82-1	Herbicide used with cabbage, citrus, coffee, and corn crops
Perchlorate	14797-73-0	Oxygen additive in solid fuel propellent for rockets, missiles, and fireworks
List 2 -Screening Survey of Chemical Contaminants		
Diuron	330-54-1	Herbicide used on grasses in orchards and wheat crops
Linuron	330-55-2	Herbicide used with corn, soybean, cotton, and wheat crops
Prometon	1610-18-0	Herbicide used on annual and perennial weeds and grasses.
2,4,6-trichlorophenol	88-06-02	By-product of fossil fuel burning, used as bactericide and wood glue preservative
2,4-dichlorophenol	120-83-2	Chemical intermediate in herbicide production
2,4-dinitrophenol	51-28-5	Released from mines, metal, and petroleum plants
2-methyl-phenol	95-48-7	Released in automobile and diesel exhaust, coal tar and petroleum refining, and wood pulping
Alachlor ESA	---------	Degradation product of alachlor, an herbicide used with corn, bean, peanut, and soybean crops to control grasses and weeds.
1,2-diphenylhydrazine	122-66-7	Used in the production of benzidine and anti-inflammatory drugs
Diazinon	333-41-5	Insecticide used with rice, fruit, vineyards, and corn crops
Disulfoton	298-04-4	Insecticide used with cereal, cotton, tobacco, and potato crops
Fonofos	944-22-9	Soil insecticide used on worms and centipedes
Terbufos	13071-79-9	Insecticide used with corn, sugar, beet, and grain sorghum crops.

Uses and Environmental Sources of Contaminants for the Final (2002) UCMR Monitoring List **		
Contaminant Name	**CASRN**	**Use or Environmental Source**
Aeromonas Hydrophilia	N/A	Present in all freshwater and brackish water
Nitrobenzene (low level)	98-95-3	An industrial chemical used in the production of aniline, lubricating oils, dyes, drugs, pesticides and synthetic rubber.
RDX	121-82-4	Used in explosives, ammunition plants
List 3 - Pre-Screen Testing of Contaminants Needing Research on Methods		
Cyanobacteria Algae and Toxins	N/A	Bloom in surface water bodies; produce toxins
Echoviruses	N/A	Fecal sources; hand to mouth transmission
Coxsackieviruses	N/A	Fecal sources; hand to mouth transmission
Heliobacter pylori	N/A	Fecal sources; hand to mouth transmission
Microsporidia	N/A	Occur in rivers, ponds, lakes, and unfiltered water
Caliciviruses	N/A	Contaminated food and water, raw shellfish
Adenoviruses	N/A	Fecal sources; hand to mouth transmission
Lead-210 (Pb-210)	14255-04-0	Part of the uranium decay series, naturally occurring
Polonium-210 (Po-210)	13981-52-7	Part of the uranium decay series, naturally occurring

** Contaminant list taken from the July 1, 2004 version of §141.40

Appendix B–U.S. EPA's Minimum Detection Limits

Note: These detection limits are for your information. They are U.S. EPA's Minimum Detection Limits, codified at 40 CFR 141.23-141.25. Your state may have different detection limits that take precedence. If you are uncertain about the inclusion of certain data, talk to your primacy agency. Some contaminants, such as lead and copper aren't listed below. If you can't find a contaminant listed below and your lab analysis provides a detected value for that contaminants, report it in your CCR. If you're uncertain, always provide too much data rather than too little.

Contaminant	Method	Detection limit (mg/L)
Inorganic Contaminants [40 CFR 141.23(a)(4)]		
Antimony	Atomic Absorption; Furnace	0.003
	Atomic Absorption; Platform	0.0008
	ICP-Mass Spectrometry	0.0004
	Hydride-Atomic Adsorption	0.001
Arsenic	Atomic Absorption; Furnace	0.001
	Atomic Absorption; Platform	0.0005
	Atomic Absorption; Gaseous Hydride	0.001
	ICP-Mass Spectrometry	0.0014
Asbestos	Transmission Electron Microscopy	0.01 MFL
Barium	Atomic Adsorption; furnace technique	0.002
	Atomic Adsorption; direct aspiration	0.1
	Inductively Coupled Plasma	0.002 (0.001)
Beryllium	Atomic Adsorption; Furnace	0.0002
	Atomic Adsorption; Platform	0.00002
	Inductively Couple Plasma	0.0003
	ICP-Mass Spectrometry	0.0003
Cadmium	Atomic Adsorption; furnace technique	0.0001
	Inductively Coupled Plasma	0.0001
Chromium	Atomic Adsorption; furnace technique	0.001
	Inductively Coupled Plasma	0.007 (0.001)
Cyanide	Distillation, Spectrophotometric	0.02
	Distillation, Automated, Spectrophotometric	0.005
	Distillation, Selective Electrode	0.05
	Distillation, Amenable, Spectrophotometric	0.02
Mercury	Manual Cold Vapor Technique	0.0002
	Automated Cold Vapor Technique	0.0002

Contaminant	Method	Detection limit (mg/L)
Nickel	Atomic Absorption; Furnace	0.001
	Atomic Absorption; Platform	0.0006
	Inductively Coupled Plasma	0.005
	ICP-Mass Spectrometry	0.0005
Nitrate	Manual Cadmium Reduction	0.01
	Automated Hydrazine Reduction	0.01
	Automated Cadmium Reduction	0.05
	Ion Selective Electrode	1
	Ion Chromatography	0.01
Nitrite	Spectrophotometric	0.01
	Automated Cadmium Reduction	0.05
	Manual Cadmium Reduction	0.01
	Ion Chromatography	0.004
Selenium	Atomic Absorption; furnace	0.002
	Atomic Absorption; gaseous hydride	0.002
Thallium	Atomic Absorption; Furnace	0.001
	Atomic Absorption; Platform	0.0007
	ICP-Mass Spectrometry	0.0003
Volatile Organic Contaminants [40 CFR 141.24(f)(7)]		
Vinyl chloride	502.2; 524.2	0.0005
Benzene	502.2; 524.2	0.0005
Carbon tetrachloride	502.2; 524.2; 551	0.0005
1,2- Dichloroethane	502.0; 524.2	0.0005
Trichloroethylene	502.2; 524.2; 551	0.0005
para-Dichlorobenzene	502.0; 524.2	0.0005
1,1-Dichloroethylene	502.0; 524.2	0.0005
1,1,1-Trichloroethane	502.0; 524.2	0.0005
cis-1,2-Dichloroethylene	502.0; 524.2	0.0005
1,2-Dichloropropane	502.0; 524.2	0.0005
Ethylbenzene	502.0; 524.2	0.0005
Monochlorobenzene	502.0; 524.2	0.0005
o-Dichlorobenzene	502.0; 524.2	0.0005
Styrene	502.0; 524.2	0.0005
Tetrachloroethylene	502.0; 524.2; 551	0.0005
Toluene	502.0; 524.2	0.0005
trans-1,2-Dichloroethylene	502.0; 524.2	0.0005
1,2,4-Trichlorobenzene	502.0; 524.2	0.0005
1,1,2-Trichloroethane	502.0; 524.2	0.0005

Contaminant	Method	Detection limit (mg/L)
Sythentic Organize Contaminents and Herbicides [40 CFR141.24 (h)(18)]		
Alachlor	505; 507; 525.2; 508.1	0.0002
Aldicarb	531.1; 6610	0.0005
Aldicarb sulfoxide	531.1; 6610	0.0005
Aldicarb sulfone	531.1; 6610	0.0008
Atrazine	505; 507; 525.2; 508.1	0.0001
Benzo(a)pyrene	525.5; 550; 550.1	0.00002
Carbofuran	531.1; 6610	0.0009
Chlordane	505; 508; 525.2; 508.1	0.0002
Dalapon	552.1; 515.1	0.001
1,2-Dibromo-3-chloropropane (DBCP)	504.1; 551	0.00002
Di(2-thylhexyl) adipate	506; 525.2	0.0006
Di(2-ethylhexyl) phthalate	506; 525.2	0.0006
Dinoseb	515.2; 555; 515.1	0.0002
Diquat	549.1	0.0004
2,4-D	515.2; 555; 515.1	0.0001
Endothall	548.1	0.009
Endrin	505; 508; 525.2; 508.1	0.00001
Ethylene dibromide	504.1; 551	0.00001
Glyphosate	547; 6651	0.006
Heptachlor	505; 508; 525.2; 508.1	0.00004
Heptaclor epoxide	505; 508; 525.2; 508.1	0.00002
Hexachlorobenzene	505; 508; 525.2; 508.1	0.0001
Hexachlorocyclopentadiene	505; 525.2; 508; 508.1	0.0001
Lindane	505; 508; 525.2; 508.1	0.00002
Methoxyclor	505; 508; 525.2; 508.1	0.0001
Oxamyl	531.1; 6610	0.002
Picloram	515.2; 555; 515.1	0.0001
Polychlorindated biphenyls (PCBs) (as decachlorophenyl)	508A	0.0001
Pentachlorophenol	515.2; 525.2; 555; 515.1	0.00004
Simazine	505; 507; 525.2; 508.1	0.00007
Toxaphene	505; 508; 525.2	0.001
2,3,7,8-TCDD (Dioxin)	1613	0.000000005
2,4,5-TP (Silvex)	515.2; 555; 515.1	0.0002

Contaminant	Method	Detection limit
Radioactive Contaminants [40 CFR141.25]		
Gross Alpha Particle Activity	Co-precipitation	3 pCi/L
Radium 226	Radio emanation, Radiochemical	1 pCi/L
Radium 228	Radiochemical	1 pCi/L
Uranium	Radio-chemical	1 µg/L
Tritium	Liquid Scintillation	1,000 pCi/L
Strontium-89	Radiochemical	10 pCi/L
Strontium-90	Radiochemical	2 pCi/L
Iodine-131	Radiochemical	1 pCi/L
Cesium-134	Radiochemical; gamma ray spectrometry	10 pCi/L
Gross beta	Evaporation	4 pCi/L
Other radionuclides		1/10 of the applicable limit

Appendix C–Translations for English Instructions

Translations for the English Text:
"This report contains important information about your drinking water.
Have someone translate it for you, or speak with someone who understands it."

Amheric:

ይህ ዘገባ ስለሚጠጡት ውሃ ጠቃሚ መረጃዎችን ይዟል ። ሌላ ጉዳዩን የሚረዱሰውአንዲተረጉሙልዎት ወይም እንዲያስረዱዎት ያድርጉ ።

Arabic:

هذا التقرير يحتوي على معولمات مهمة عن ماء الشرب الذي تسخدمه. اطلب من شخص ما ان يترجمه لك او يستطيع فهمه.

Cambodian (Khmer):

របាយការណ៍នេះ មានសារៈសំខាន់ណាស់ គឺស្តីអំពីទឹកដែលលោក-អ្នកទទួលទាន ។ ចូររកជនណាម្នាក់ឲ្យបកប្រែជូនលោក-អ្នក ឬក៏និយាយជាមួយជនណាម្នាក់ ដែលយល់នូវន័យនេះច្បាស់លាស់ ។

Chinese (simplified):

此报告包含有关您的饮用水的重要信息。请人帮您翻译出来，或请看懂此报告的人将内容说给您听。

Chinese (traditional):

此報告包含有關您的飲用水的重要資訊。請人幫您翻譯出來，或請能看懂此報告的人將內容說給您聽。

Farsi:

این گزارش شامل اطلاعات مهمي درمورد اب اشاميدني شما ميباشد. از شخصي بخواهيد كه به شما ترجمه كنند و يا با شخصي كه اين موضوع را ميفهمند صحبت بكنيد.

French:

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.

Greek:

Αυτή η αναφορά περιλαμβάνει σημαντικές πληροφορίες σχετικά με το πόσιμο νερό σας. Ζητήστε από κάποιον να σας τη μεταφράσει, ή μιλείστε με κάποιον που την καταλαβαίνει.

Hebrew:

דוח זה כולל מידע חשוב בנוגע למי השתייה שלכם. בקשו ממישהו שיתרגם אותו עבורכם, או שוחחו עם מישהו שמבין את תוכנו.

Hindi:

यह रीपोरट में आपके पीने वाले पानी के बारे में जरुरी जानकारी है। किसी से जिसे इसका अनुवाद करना आता हो उस से बात करें।.

Hmong: Dlaim ntawv tshaabxu nuav muaj lug tseemceeb heev nyob rua huv kws has txug cov dlej mej haus. Kuas ib tug paab txhais rua koj, los nrug ib tug kws paub lug thaam.	Japanese: このレポートには飲料水に関する重要な情報が記載されています。この英文を訳してもらうか、またはどなたか英語が分かる方にたずねてください。
Korean: 이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁하시기 바랍니다.	Laotian: ໃບລາຍງານໃບນີ້ມີຣາຍລະອຽດອັນສຳຄັນກ່ຽວກັບນ້ຳດື່ມຂອງທ່ານ. ໃຫ້ຄົນໃດຄົນນຶ່ງແປພາສາໃຫ້ທ່ານຟັງ, ຣຶ ເວົ້ານຳຄົນ ໃດຄົນນຶ່ງຜູ້ທີ່ເຂົ້າໃຈມັນ.
Oromo: Gabaasii kun odeeffanno barbachisa wa'ee bisaan dhugaatii qaba. Akkaa isinii turjumaa'uu gaafadhaa yokaan nama afaan keessan dubbatuu dubbisaa.	Polish: Następujący raport zawiera ważną informację na temat wody pitnej. Proszę poprosić kogoś o przetłumaczenie lub porozmawiać z kimś kto rozumie.
Punjabi: ਇਸ ਰੀਪੋਰਟ ਵਿਚ ਤੁਹਾਡੇ ਪੀਣ ਵਾਲੇ ਪਾਣੀ ਬਾਰੇ ਜਰੂਰੀ ਜਾਣਕਾਰੀ ਹੈ। ਕਿਸੇ ਕੋਲੋਂ, ਜਿਸ ਨੂੰ ਸਮਝ ਆਉਂਦੀ ਹੋਵੇ ਇਸ ਦਾ ਅਨੁਵਾਦ ਕਰਵਾ ਲਵੋ ਜਾਂ ਉਸ ਨਾਲ ਗਲ ਕਰੋ।	Russian: В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.
Samoan: O le lipoti lenei o lo'o iai ni mea e sili ona taua e uiga i le vai o lo'o e taumafaina nei. Su'e se tagata e fa'aliliuina mo oe, po'o lou talatalanoa i seisi e iai sona malamalamaga i lenei mataupu.	Serbo-Croatian: Ovaj izvještaj sadrži važnu informaciju u vašoj vodi za piće. Neka vam neko prevede, ili popričajte sa nekim ko se u ovo razumije.

Somali: Warbixintan waxay wadataa macluumaad muhiim ah ee la xiriira biyaha aad cabtid. Cid ha kuu tarjunto ama la hadl cid fahmaysa.	Spanish: Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.
Tagalog: Naglalaman ang report na ito ng importanteng impormasyon tungkol sa iyong iniinom na tubig. Magkaroon ng isang tao na isasalin ito sa iyong wika para sa iyo, o makipag-usap sa isang tao na nakakaintindi dito.	Thai: รายงานนี้มีข้อมูลสำคัญเกี่ยวกับน้ำดื่มของท่านโปรดขอให้บุคคลใดบุคคลหนึ่งแปลข้อความให้ท่าน หรือปรึกษาผู้ที่เข้าใจข้อความนี้
Tigrigna: እዚ ጽሑፍ ብዛዕባ ትሰትይዎ ማይ ኣገዳሲ ሓበሬታ ኣለዎ። ዘተርጉመልኩም ወይ ዘረዳእኩም ሰብ ድለዩ።	Ukranian: Це повідомлення містить важливу інформацію про воду, яку ви п'єте. Попросіть кого-небудь перекласти вам це повідомлення або поговоріть з людиною, яка розуміє його зміст.
Vietnamese: Tài liệu này có tin tức quan trọng về nước uống của quý vị. Hãy nhờ người dịch cho quý vị, hoặc hỏi người nào hiểu tài liệu này.	

* Translations are provided courtesy of the State of Washington Department of Health. None of these translations have been independently verified.

Appendix D–Interpreting Monitoring Data

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

☼ 1 sampling site/1 sampling date (where system is allowed to monitor less than annually):

March 2002 Analysis Result = 0.003

Report in Table: highest detected level=.003. Report no range.

☼ Multiple sampling sites/1 sampling date:

Barium Monitoring	Feb 2003 Results
well 1	0.60
well 2	0.46
well 3	n/d

Report in Table: highest level= 0.60 AND range: n/d-0.60.

☼ 1 sampling site/multiple sampling dates:

Atrazine Monitoring	1st quarter 2004	2nd quarter 2004	3rd quarter 2004	4th quarter 2004
well 1	0.8	3.8	2.1	0.9

Report in Table: average=1.9 AND range: 0.8-3.8

☼ Multiple sampling sites/multiple sampling dates:

total trihalomethane monitoring	2nd quarter 2003	3rd quarter 2003	4th quarter 2003	1st quarter 2004	2nd quarter 2004	3rd quarter 2004	4th quarter 2004
site #1	-	-	-	45	60	125	70
site #2	-	-	-	40	55	115	60
site #3	-	-	-	45	60	105	70
site #4	-	-	-	50	65	135	80
quarterly average	55	125	65	45	60	120	70
running annual average	-	-	-	73	74	73	74

Report in Table: highest annual average: 74 AND range 40-135.

Notes: – The last 3 quarters of 2003 are shown because you need them to compute the running annual average. The range would include only detection data from 2004, unless one of the values from the previous year was so extraordinary that consumers would need it to understand the reported annual average.

– If your running annual average exceeds 80, your report must include notification of a MCL violation and the health effects language for TTHMs.

☼ Lead:

	site 1	site 2	site 3	site 4	site 5	site 6	site 7	site 8	site 9	site 10
July 2004	n/d	n/d	8	12	19	3	n/d	n/d	4	22

To calculate the 90th percentile: The results of all samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sample result shall be assigned a number starting with the number 1 for the lowest value. The number of samples taken during the monitoring period shall be multiplied by 0.9. The contaminant concentration in the numbered sample yielded by this calculation is the 90th percentile value.

	1	2	3	4	5	6	7	8	9	10
July2004	n/d	n/d	n/d	n/d	3	4	8	12	19	22

10 samples x 0.9 = 9 therefore, the 9th value is the 90th percentile value.

Report in Table: 90th percentile=19 ppb AND # of sites above action level (15 ppb)=2

Notes: – If more than 5 % (and up to and including 10%) of the samples are above the action level, you must include the educational language provided in Section IV, Item 6.

– Water quality parameter monitoring data that you collect in association with this rule should not be included in the report.

☼ Turbidity:

When reporting turbidity, systems must report the highest single measurement and the lowest monthly percentage of samples meeting the requirements specified for that technology. In this situation, direct and conventional filtration systems may want to report the data in 2 rows of your table as follows:

	MCL	MCLG	level found	range	sample date	violation	typical source
Turbidity (for systems serving <10,000 people for calendar year 2004)	TT=5 NTU	0	1 NTU	n/a		No	soil runoff
	TT= percentage of samples<0.5 NTU		96 %	n/a		No	

	MCL	MCLG	level found	range	sample date	violation	typical source
Turbidity (for systems serving ≥ 10,000 for calendar year 2004 and all surface water systems beginning with calender year 2005	TT=1 NTU	0	0.7 NTU	n/a		No	soil runoff
	TT= percentage of samples<0.3 NTU		97 %	n/a		No	

Note: Alternative filtration systems would want to report the above information using turbidity limits established by the state.

☼ Total Coliform Rule (TCR) Detects with No MCL Violation

Detects of coliform, fecal coliform or *E. coli* bacteria during routine monitoring must be reported, even if no MCL violation occurred.

For a system that collects at least 40 samples per month (i.e, a system that serves > 33,000 people), if no more than 5.0 percent of the samples collected during a month are positive, the system is in compliance with the MCL for total coliforms.

For a system that collects fewer than 40 samples/month (i.e., a system serving $\leq$ 33,000 people), if no more than one sample collected during a month is positive, the system is in compliance with the MCL for total coliforms.

In these situations, you may wish to report detects as shown below. Check with your state to make sure this meets state-specific requirements.

Systems collecting fewer than 40 total coliform samples per month:

	MCL	MCLG	level found	range	sample date	violation	typical source
Total Coliform	two or more positive samples/ month	0	1 positive sample		xx/xx/xx	No	Naturally present in the environment
Fecal coliform or *E. coli* bacteria		0	0			No	Human or animal fecal waste

Systems collecting 40 or more total coliform samples per month (assume for this example that the system serves between 33,001 and 41,000 people and collects 40 samples per month):

	MCL	MCLG	level found	range	sample date	violation	typical source
Total Coliform	two or more positive samples/ month	0	2 samples (5% of all samples taken) were positive		xx/xx/xx	No	Naturally present in the environment
Fecal coliform or *E. coli* bacteria		0	0			No	Human or animal fecal waste

☼ TOC Reporting (Surface Water Treatment Plants with conventional treatment or precipitative softening)

If any of the following apply:

- alternate compliance criteria for enhanced coagulation or enhanced softening cannot be met;
- quarterly TOC monitoring does not demonstrate the percentage removal of TOC required in the table below; or
- a system does not obtain State approval for alternate minimum TOC removal (Step 2) requirements,

you must report a treatment technique violation for enhanced coagulation or enhanced softening (as applicable).

TOC Percent Removal Requirements for Enhanced Coagulation and Enhanced Softening

Source Water TOC, mg/L	Source Water Alkalinity, mg/L as $CaCO_3$		
	0-50	>50-120	>120*
>2.0 - 4.0	35.0%	25.0%	15.0%
>4.0 – 8.0	45.0%	35.0%	25.0%
>8.0	50.0%	40.0%	30.0%

* Systems practicing softening must meet the TOC removal requirements in this column

The below example is for a conventional surface water treatment system with source water TOC between 2-4 mg/L and with a source water alkalinity between 0-50 mg/L:

	MCL	MCLG	level found	range	sample date	violation	typical source	health effects
TOC	TT	n/a	25% Removal (35% is required)	15-30% removal	Samples taken quarterly	Yes	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 …. (include remainder of TOC violation language)

The below example is for a conventional surface water treatment system with source water TOC between 4-8 mg/L and with a source water alkalinity between 50-120 mg/L:

	MCL	MCLG	level found	range	sample date	violation	typical source
TOC	TT	n/a	40% Removal (35% is required)	30-45% removal	Samples taken quarterly	No	Naturally present in the environment

☼ Substitution of Gross Alpha Particle Results for Radium Testing

A gross alpha particle activity measurement may be substituted for the required radium measurement provided that the measured gross alpha particle activity does not exceed 5 pCi/L.

In this situation, you may wish to report detects of gross alpha particle activity as shown below. Verify with the state that this approach meets their requirements.

	MCL	MCLG	level found	range	sample date	violation	typical source
Alpha emitters pCi/L	15	0	3*		xx/xx/xx	No	Erosion of natural deposits

* 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.

☼ Substitution of Gross Alpha Particle Results for Uranium Testing

A gross alpha particle activity measurement may be substituted for the required uranium measurement provided that the measured gross alpha particle activity does not exceed 15 pCi/L.

In this situation, you may wish to report detects of gross alpha particle activity as shown below. Verify with the state that this approach meets their requirements.

	MCL	MCLG	level found	range	sample date	violation	typical source
Alpha emitters pCi/L	15	0	12*		xx/xx/xx	No	Erosion of natural deposits

* If the results of this sample had been above 15 pCi/L, our system would have been required to do additional testing for uranium. Because the results were below 15pCi/L, no testing for uranium was required.

☼ Beta Particles Reporting

The MCL for beta particles is 4 mrem/year. EPA recognizes that laboratories often report these results in pCi/L, and that there is no simple conversion between the two units. Therefore, it is acceptable for systems to report the detected level for beta particles in pCi/L. So that consumers may have a standard against which to compare the detected level, systems should place 50 in the MCL column and include a footnote explaining that EPA considers 50 pCi/L to be a level of concern for beta particles.

	MCL	MCLG	level found	range	sample date	violation	typical source
Beta particles (pCi/L)	50*	0	10	nd-10	xx/xx/xx	No	Erosion of natural deposits

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

Appendix E–Certification Form (suggested format)

CWS name:_____

PWS I.D. no:_____

The community water system named above hereby confirms that its consumer confidence report has been distributed to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency.

Certified by:

Name_____

Title_____

Phone #_____ Date_____

*** You are not required by EPA rules to report the following information, but you may want to provide it to your state. Check all items that apply. ***

____CCR was distributed by mail or other direct delivery. Specify other direct delivery methods:

_____

_____

____"Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods as recommended by the primacy agency:

____posting the CCR on the Internet at www._____

____mailing the CCR to postal patrons within the service area. (attach zip codes used)

____advertising availability of the CCR in news media (attach copy of announcement)

____publication of CCR in local newspaper (attach copy)

____posting the CCR in public places (attach a list of locations)

____delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers

____delivery to community organizations (attach a list)

____(for systems serving at least 100,000 persons) Posted CCR on a publicly-accessible Internet site at the address: www._____

____Delivered CCR to other agencies as required by the primacy agency (attach a list)

Appendix F–Examples of Consumer Confidence Reports

EPA is providing the following consumer confidence reports as examples of report format. In providing these reports, EPA is not endorsing the views nor judging the accuracy of the information contained in the reports. These examples do not necessarily meet all current federal and state CCR requirements. Be sure to check with your state drinking water program since your state may have different requirements from those under which these reports were created. For assistance creating a CCR, systems may access the EPA CCR*i*Writer tool at http://www.ccriwriter.com.

The first report, *Sampletown Annual Water Quality Report*, is fictitious and was created as a general example.

The second report, *Water Quality Report - 2003*, is provided courtesy of Washington Suburban Sanitary Commission.

The third report, *Annual Water Quality Report*, is provided courtesy of East Bay Municipal Utility District.

SAMPLETOWN ANNUAL WATER QUALITY REPORT

May 2005

Spanish (Espanol)
Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduscalo o hable con alguien que lo entienda bien.

French (Francais)
Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quequ'un qui le comprend bien.

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 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 2003. 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
Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from Safe Drinking Water Hotline (800-426-4791).

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 Low	Range High	Sample Date	Violation	Typical Sources
Disinfectants & Disinfection By-products								
Chloramine (as Cl2) (mg/L)	4	4	1	1	3	2004	No	Water additive to control microbes.
Inorganic Contaminants								
Fluoride (ppm)	4	4	2	1	2	2004	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	2004	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	8.25	5	10	2002	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	0	50	10	ND	10	2004	No	Decay of natural and man-made deposits**. The EPA considers 50 pCi/L to be the level of concern for Beta particles.**
Synthetic Organic Contaminants including pesticides and herbicides								
Dibromochloro-propane (DBPC) (ppt)	0	200	15	10	15	2003	No	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples and orchards.
Atrazine (ppb)	3	3	3.75	0.1	10	2004	**Yes**	Runoff from herbicide used on row crops.
Volatile Organic Contaminants								
Benzene (ppb)	0	5	1	ND	1	2002	No	Discharge from factories; leaching from gas storage tanks and landfills.
TTHMs [Total Trihalomethanes] (ppb)	NA	80	73	40	110	2004	No	By-product of drinking water disinfection.

Name	Reported Level	Range Low	Range High
Unregulated Contaminant Monitoring*			
Chloromethane (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 (90^{th}%)	Sample Date	# of Samples Exceeding the AL	Violation	Typical Sources
Inorganic Contaminant							
Lead – lead at consumers tap (ppb)	0	15	9	2003	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 big 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

What's 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.

As water travels over the surface of the land or through the ground on its way to the Patuxent and Potomac rivers, it dissolves naturally occurring minerals, vegetation and, sometimes, even radioactive material, which can be the result of oil and gas production and mining activities. It can also pick up animal waste, pesticides, and debris from human activity. Rain also washes off waste on impervious surfaces - sidewalks, roads and other large expanses of concrete - and transports it to the rivers and reservoirs.

To ensure that our water is safe to drink, we treat and disinfect it to meet standards set by USEPA. In cases where contaminants cannot easily be measured, USEPA requires treatment techniques to reduce amounts to acceptable levels. More information about contaminants and potential health effects may be obtained by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791.

Update on Lead

WSSC has met and continues to meet all federal and state drinking water regulations, including the U.S. Environmental Protection Agency's (EPA) Lead and Copper Rule. We are not experiencing a problem with lead in our water. As required by the EPA, WSSC is responsible for residential lead testing within our service area. Our last sampling of homes, conducted in 2002 per EPA guidelines, found NO sites exceeding the 15 parts per billion federal Action Level. Historically, levels have been below the Action Level for the past 10 years and are declining.

WSSC's next required sampling would have been scheduled for late 2004 / early 2005. However, considering recent events and news reports in this region, we expanded our approach to lead sampling earlier this year beyond EPA requirements. Test results are once again well below EPA regulations and lead levels are generally lower than 2002 results.

While WSSC continues to successfully meet and surpass EPA Lead and Copper Rule requirements, we want our customers to know what they can do to reduce risks associated with lead, particularly if they have concerns due to an "at-risk" person in their household (i.e., young children, pregnant women, and nursing mothers). Although our lead sampling results continue to be very good, it is possible that lead levels in your home may be higher than at those we have tested as a result of plumbing materials. Lead can leach into water from home pipes and fixtures. If you are concerned about "at-risk" individuals in your home or your home's plumbing, there is an easy and inexpensive solution – flushing (see guidance at right). If you would like to have your home's water tested for lead, you can contact our lab to schedule a test (for a fee) at 301-206-7575.

Answers To Frequently Asked Questions About Lead:

How does lead get into the water supply?
Water leaving WSSC's filtration plants is virtually lead free. Lead can leach into water from lead pipes, brass plumbing parts, lead-based solder used in joining copper pipes, and other types of home plumbing fixtures. Since WSSC does not have any known conventional lead water lines, a potential source of lead for residents in our service area may come from lead-based solder (which WSSC banned in 1986) in homes and from household brass plumbing fixtures. For this reason, WSSC's testing locations focus on homes built between 1983 and 1986, per EPA guidelines. Home plumbing pipes installed prior to 1983 have likely developed an interior mineral coating protecting the pipes from leaching lead into the home water supply.

What is WSSC's role in school lead testing?
WSSC supports Montgomery and Prince George's County School System water sampling protocols by providing free lab services and technical expertise. Lead testing for schools and childcare centers is addressed by a different EPA regulation than lead testing for homes. Local school systems are responsible for lead testing and any remediation in schools and childcare centers. There is a 20 parts per billion federal Action Level for each fixture tested.

Should I always run the water before drinking or cooking? If so, how long? What about using hot water?
"Flushing" your cold water tap until the water turns noticeably colder (usually for 30 seconds to 2 minutes) before using water for drinking or cooking has been shown to be an effective method for reducing home lead levels. Do not use hot water for drinking or cooking as lead levels generally are higher in hot water. For more information, contact EPA's Safe Drinking Water Hotline at 1-800-426-4791 or the EPA website: www.epa.gov.

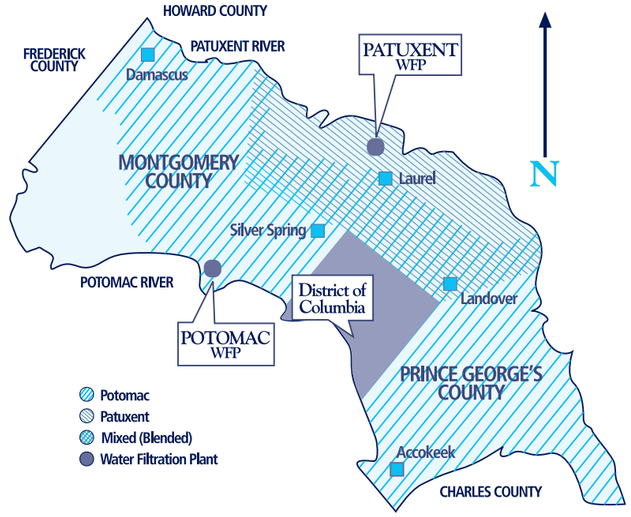
Did WSSC make any recent water chemistry changes that might impact lead levels?
Yes. Unrelated to lead regulations, in November 2003, WSSC began adding a very small amount of orthophosphate during the water filtration process to help minimize any potential future copper pipe pinhole leaks for our customers. Since this corrosion inhibitor can form a protective layer on the interior surface of metal pipes, it should further decrease lead levels.

To share your comments on this report, or for more information about your drinking water, please call WSSC at 301-206-8100.

Visit our website - www.wsscwater.com - for complete water quality data.

WASHINGTON SUBURBAN SANITARY COMMISSION

WATER QUALITY REPORT-2003



Is My Water Hard Or Soft?

Potomac water tends to be hard (120-130 milligrams per liter)
Patuxent water is soft (60-65 milligrams per liter)
(Hard water contains more dissolved calcium and magnesium and less sodium.)

Dear Valued Customer,

Thank you for the opportunity to supply you with clean, reliable water. We are extremely pleased to have once again provided you with water that met or surpassed U.S. Environmental Protection Agency standards for safety.

2003 was quite a year for challenging weather events, particularly Hurricane Isabel. Thanks to the hard work and dedication of our employees, WSSC continued to supply safe water to our customers (there was no need to boil WSSC water). Years of sound planning and engineering, including the use of elevated storage tanks, enabled us to deliver clean water, even during power outages. We also continued our commitment to stabilizing rates, resulting in the sixth fiscal year in a row without a rate increase.

We hope you find this important document about the source of your water, how it is cleaned and answers to frequently asked questions, to be helpful. You will also note that we have included information regarding a timely topic of public interest, lead in water. Please contact us with any questions or comments.

John R. Griffin
General Manager

Where Does My Water Come From?

Two rivers, the Patuxent and Potomac, are the sources of all the water we process. The raw water treated at the Patuxent Water Filtration Plant (WFP) is held in two reservoirs – Triadelphia and Rocky Gorge – and is pumped to the plant. The Potomac WFP takes its raw water directly from the Potomac River. The map shows the approximate service area of both plants. As indicated, some areas we serve receive blended water, processed at both the Patuxent and Potomac WFPs.

This report contains very important information about your drinking water. Please translate it, or speak with someone who understands it.

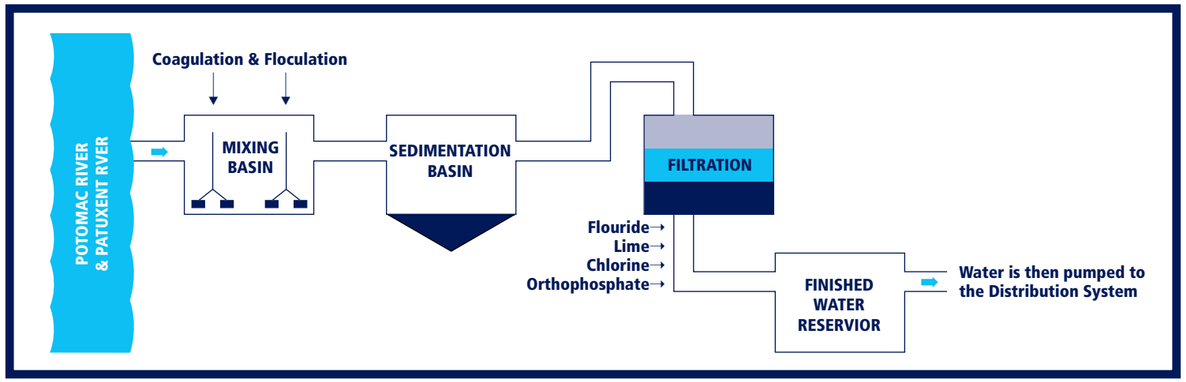
El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguién que lo entienda bien.

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

이 보고서에는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충분히 이해하시는 친구와 상의하십시오.

How Is My Water Treated?

Your water undergoes several treatment processes after it arrives at the plant and before it is sent to the distribution system, which consists of more than 5,000 miles of pipeline and 63 water storage facilities. Our water treatment includes: coagulation and flocculation (to cause small particles from the raw water to adhere to each other); sedimentation (to remove those particles); filtration (to remove the very smallest particles); chlorination (for disinfection); lime addition (to minimize the potential for dissolving lead solder used in older homes); and fluoridation (to prevent tooth decay). Orthophosohate is also added (to help minimize pinhole leaks in home plumbing).



Ensuring Drinking Water Quality

Both of our Water Filtration Plants - the Potomac and the Patuxent - are undergoing extensive improvements. Efficiency, reliability, and security will be enhanced through upgrades to treatment processes and electrical equipment, and state-of-the-art ultraviolet disinfection facilities will be added. Patuxent plant enhancements are scheduled for completion in late 2005. At the Potomac plant, which produces about 75 percent of the water used by our 1.6 million customers, work should be finished in late 2008.

Important Health Information From USEPA

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. USEPA/Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791.

How Can I Get Involved?

WSSC holds numerous project and policy-related public hearings and informational workshops throughout the year, and we welcome your participation and input. You are invited to attend public hearings on our proposed Capital Improvements Program (CIP). The six-year CIP proposes planning, design and construction expenditures for major water and sewer facilities. This year, the CIP hearings for fiscal years 2006 through 2011 will be held in Rockville on September 8 at 7:30 p.m. and in Largo on September 9 at 7:30 p.m. For more information and copies of the proposed CIP, please call our Public Communications Office at 301-206-8100 or email us at: communications@wsscwater.com. To find out about other upcoming public meetings, or to view our current CIP, please visit our website at www.wsscwater.com.

We also are a proud partner in the Patuxent Reservoirs Watershed Protection Group, which is dedicated to protecting the Patuxent Reservoirs – an important drinking water source for WSSC customers. The Group's annual Earth Month activities feature workshops and hands-on activities -- and we encourage your participation. Please contact WSSC's Environmental Office at 301-206-8077 for more information on how you can get involved and help us protect our drinking water supplies. An easy way for you to get involved and help us protect and preserve this precious natural resource is by conserving water. For more information – including water saving tips – on the regional Wise Water Use campaign, please visit: www.wateruseitwisely.com

Testing Parameters – The State and USEPA require us to test our water on a regular basis to ensure its safety. In its routine chemical analyses, WSSC tests for nearly 200 chemical substances. The table to the right shows the substances detected in your finished water between January 1 and December 31, 2003 at both the Patuxent and Potomac Water Filtration Plants.

WATER QUALITY DATA

SUBSTANCES	UNITS	PATUXENT WFP AVG	PATUXENT WFP RANGE	POTOMAC WFP AVG	POTOMAC WFP RANGE	MCL (EPA)	MCLG (EPA)	MAJOR SOURCE IN DRINKING WATER
PHYSICAL								
pH	Units	8.2	8.0-8.3	7.5	7.5-7.5			
Turbidity	NTU	0.06	0.05-0.08	0.05	0.03-0.07	TT	n/a	Soil runoff
METALS								
Barium	ppb	23	20-27	32	29-36	2000	2000	Discharge from drilling wastes; metal refineries; erosion of natural deposits
Chromium	ppb			2	<2-2	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper (POE)	ppb	16	<10-30			1300[1]	1300[1]	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
INORGANIC								
Fluoride	ppm	1.01	0.69-1.13	.93	0.60-1.06	4	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate as Nitrogen	ppm	1.41	1.04-1.75	2.17	1.49-3.39	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
BACTERIOLOGICAL								
Total Coliform	% of pos.	0.48	0-2.43	0.48	0-2.43	5	0	Human and animal fecal waste
E. coli	% of pos.	0.11	0-1.08	0.11	0-1.08			Human and animal fecal waste
No. of E. coli Positive Repeat		0		0		0	0	
DISINFECTION BYPRODUCTS								
Haloacetic Acids, Total	ppb	40.1	22.3-56.6	40.1	22.3-56.6	60[2]	n/a	By-product of drinking water chlorination
Trihalomethanes, Total	ppb	46.3	23.7-74.9	46.3	23.7-74.9	80[2]	n/a	By-product of drinking water chlorination
PESTICIDES								
Atrazine	ppb	<0.5	n/d-0.53			3	3	Runoff from herbicide used on row crops
Di(2-ethylhexyl)phthalate	ppb	1.58	n/d-5.82	1.09	n/d-3.60	6	0	Discharge from rubber and chemical factories
VOLATILE ORGANIC COMPOUNDS								
Dichloromethane	ppb			<0.5	n/d-0.5	5	0	Discharge from pharmaceutical and chemical companies
RADIONUCLIDES								
Gross Alpha	pCi/L	<2	<1-3	<1	<1-2	15	0	Erosion of natural deposits
Gross Beta	pCi/L	<4	<3-6	<4	<3-5	50[3]	0	Decay of natural and man-made deposits

Terms Defined:

NTU - Nephelometric Turbidity Unit. 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.

TT - Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water

Action Level - The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow

n/a - not applicable

n/d - not detected

< - less than

POE - Point-of-entry to distribution system

ppm - parts per million, the equivalent of one minute in 2 years or one penny in $10,000

ppb - parts per billion, the equivalent of one minute in 2,000 years or one penny in $10 million

pCi/L - picocuries per liter (a measure of radiation)

MCL - Maximum Contaminant Level: 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.

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.

[1] - Action level
[2] - Based on running yearly average in the distribution system
[3] - USEPA level of concern for beta particles

La información acerca de la calidad del agua potable que este informe contiene se puede solicitar y obtener en español llamando al Tel. (510) 287-0138.

Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug neeg uas totaub txog nws.

Ce rapport contient des informations importantes concernant votre eau potable. Veuillez traduire, ou parlez avec quelqu'un qui peut le comprendre.

Ta broszura zawiera wazne informacje dotyczace jakosci wody do picia. Przetlumacz zawartosc tej broszury lub skontaktuj sie z osoba ktora pomoze ci w zrozumieniu zawartych informacji.

U ovom izvje_taju se nalaze va_ne informacije o vodi za pi_e. Prevedite ga ili razgovarajte s nekim ko razumije izvje_taj.

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

"เอกสารฉบับนี้มีข้อมูลสำคัญเกี่ยวกับน้ำดื่มของท่าน ขอให้แปลรายงานฉบับนี้ หรือพูดคุยกับผู้ที่เข้าใจเนื้อหาในรายงานนี้"

該報告的水質資訊部份現有中文版本提供。如有需要，請聯絡 EBMUD 公眾事務辦公室，電話：(510) 287-0138

이 안내는 매우 중요합니다. 본인을 위해 번역인을 사용하십시요.

この情報は重要です。翻訳を依頼してください。

Chi tiết này thật quan trọng. Xin nhờ người dịch cho quý vị.

"รายงานฉบับนี้มีข้อมูลสำคัญเกี่ยวกับน้ำดื่มของท่าน ขอให้แปลรายงานฉบับนี้ หรือพูดคุยกับผู้ที่เข้าใจเนื้อหาในรายงานนี้"

ລາຍງານນີ້ມີຂໍ້ມູນສຳຄັນກ່ຽວກັບນ້ຳປະປາຂອງທ່ານ. ຈົ່ງໃຫ້ຄົນເວົ້າພາສາລາວ ໃຫ້ທ່ານ, ຫລືໃຫ້ປຶກສາກັບຄົນໃດຄົນໜຶ່ງທີ່ເຂົ້າໃຈເລື້ອງ.

यह सूचना महत्वपूर्ण है ।
कृपा करके किसी से :सका अनुवाद कराये ।

"هذا التقرير يحتوي على معلومات مهمّة تتعلق بمياه الشفة (أو الشرب). ترجم التقرير، أو تكلم مع شخص يستطيع أن يفهم التقرير."

Данный рапорт содержит важную информацию о вашей питьевой воде. Переведите его или проконсультируйтесь с тем, кто его понимает.

הדו"ח הזה מכיל מידע חשוב לגבי מי השתייה שלך תרגם את הדו"ח או דבר עם מישהו שמבין אותו

یہ رپورٹ آپ کے پینے کے پانی سے متعلق اہم معلومات پر مبنی ہے اس کا ترجمہ کریں یا کسی ایسے شخص سے بات کریں جو اس کو سمجھتا ہو۔

Η κατοθεν αναφορα παρουσιαζη σπουδαιες πληροφορειες για το ποσιμο νερο σας. Πρακκαλω να το μεταφρασετε η να το σξολειασετε με καποιον που το καταλαβαινη απολητως.

របាយការណ៍នេះមានតិមានសំខាន់អំពីទឹកបរិភោគ ។ សូមបកប្រែឬពិគ្រោះជាមួយអ្នកដែលមើលយល់របាយការណ៍នេះ ។

ਇਹ ਸੂਚਨਾ ਮਹਤੱਵਪੂਰਣ ਹੈ।
ਕ੍ਰਿਪਾ ਕਰਕੇ ਕਿਸੀ ਤੋ ਇਸ ਦਾ ਅਨੁਵਾਦ ਕਰਾਉ।

این گزارش حاوی اطلاعات مهمی در مورد آب آشامیدنی است. آن را ترجمه کنید و یا با کسی که محتویات آن را درک میکند صحبت کنید.

આ અહેવાલ તમારા પીવાના પાણિને માટે અગત્યની માહિતી ધરવે છે. ભાષાંતર કરે અથવા જેને સમજ પડતી હોય તેની સાથે બોલો.

About This Report

This special report meets federal and state requirements for annual customer notification regarding water quality. It was produced and mailed to residences and businesses in EBMUD's service area at a cost of 28 cents per copy. Direct mailing of this report allows EBMUD to provide virtually all of its consumers with information they should have about drinking-water quality, supply and system reliability in a cost-efficient manner.

Public Participation

For more information or specific questions about water quality, call (510) 287-1122 to talk with an EBMUD water system inspector. Regular meetings of the District Board of Directors are the second and fourth Tuesdays of each month at 1:15 p.m., 2nd floor, 375 Eleventh Street, Oakland. Board meetings are open to the public, which is welcome to attend and participate in decisions affecting drinking-water quality and other matters.

Additional Contacts

California Department of Health Services Drinking Water Branch - (510) 540-2158

U.S. Environmental Protection Agency Safe Drinking Water Hotline - (800) 426-4791

Health Departments:

Alameda County - (510) 267-8000

Contra Costa County - (925) 313-6712

EBMUD
375 Eleventh Street
Oakland, CA 94607
(510) 835-3000
www.ebmud.com

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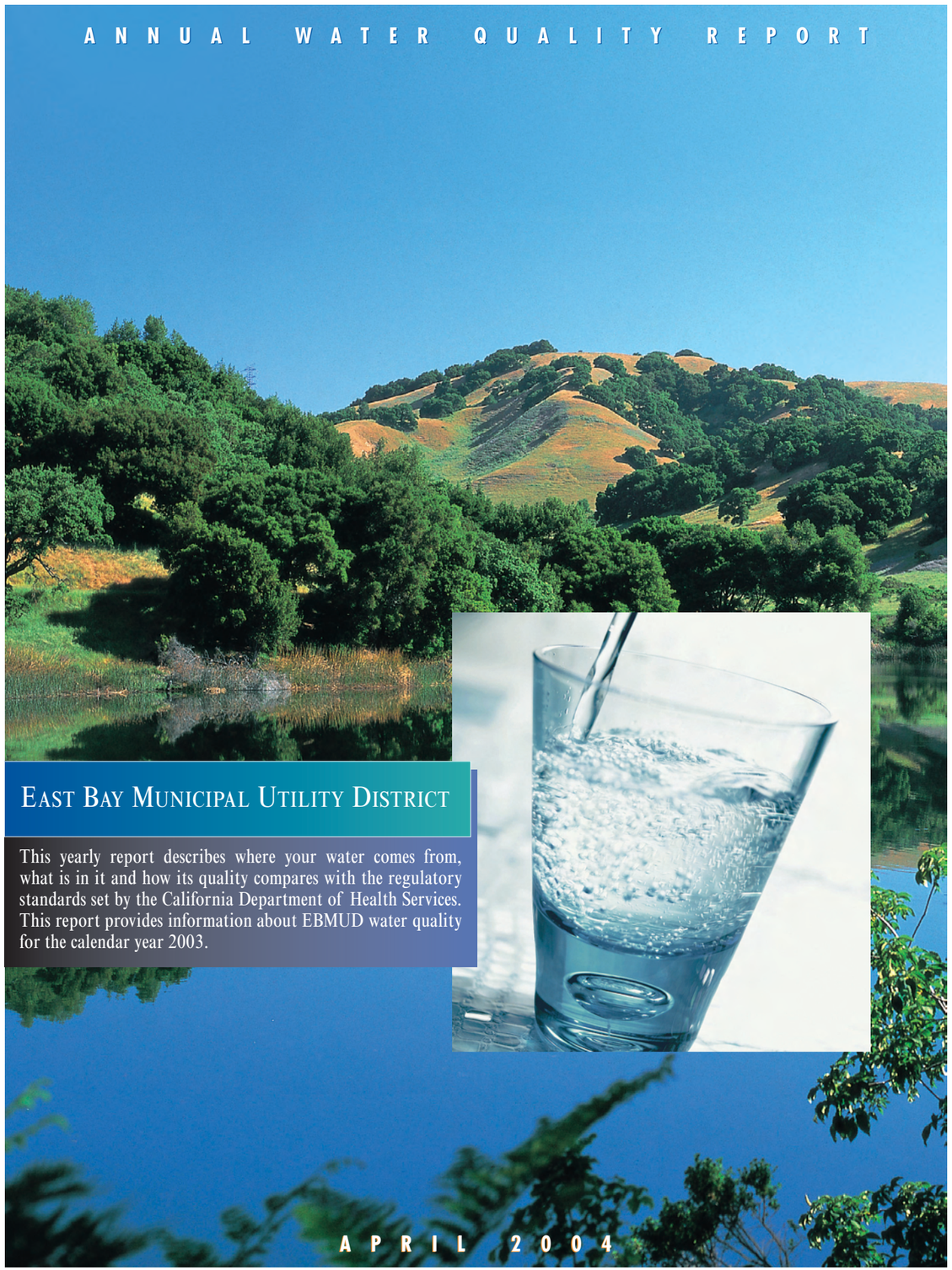


EAST BAY MUNICIPAL UTILITY DISTRICT

This yearly report describes where your water comes from, what is in it and how its quality compares with the regulatory standards set by the California Department of Health Services. This report provides information about EBMUD water quality for the calendar year 2003.

APRIL 2004

Water Quality Data for Year 2003

East Bay Municipal Utility District (EBMUD) drinking water is tested extensively and results consistently show that regulated, health-related constituents either are not detected at all or are present in amounts below state and federal drinking-water standards.

Reading the Table

EBMUD tests for more than 100 potential drinking-water constituents. The table on these pages shows constituents (and their regulatory limits) detected in EBMUD water in 2003; *constituents not detected are not listed.* The table shows the average constituent level for EBMUD's system as a whole as well as for each District water treatment plant (the map on pages 4-5 shows what geographic area each treatment plant serves), and compares this information to standards set by the California Department of Health Services (CDHS). The "Terms Used" section at the bottom of the page defines the terminology used in the table.

To view data about the water delivered to your home or business, first go to the map on pages 4-5 to determine which water treatment plant serves your neighborhood. Next, look at the table to the right and find the column with the name of the water treatment plant that serves your neighborhood. Compare this data with the maximum allowable amount of each constituent, found in the column labeled "MCL or (MRDL)."

For example, the maximum turbidity in water coming from the Walnut Creek Water Treatment Plant is 0.18 NTU. This compares to the maximum allowable level of 1.0 NTU.

Monitoring and Sampling

EBMUD takes almost 500 bacteriological samples each month from the treatment plants and distribution system. EBMUD continuously monitors turbidity (cloudiness) and chloramines (a water disinfectant). Aluminum, predominantly a water treatment by-product, is measured at the treatment plants. Samples of naturally occurring fluoride and radioactivity are taken from source waters.

EBMUD detected no asbestos when we sampled in 2003. Lead and copper levels in EBMUD water are generally low. However, lead has been detected (at levels within state regulations) at customers' drinking water taps. Home plumbing fixtures, especially older ones that contain lead, may add lead above the level in the water delivered by EBMUD. Choose plumbing fixtures that use approved materials for potable water consumption (hardware stores can help you identify these) and install them according to local building codes.

Hot water systems can contain elevated levels of lead and copper. Drinking and cooking with water from hot water taps is inadvisable.

EBMUD monitors for numerous pesticides and herbicides (generally referred to as synthetic organic chemicals) to determine

sources of industrial and agricultural contamination. No regulated synthetic organic chemicals (SOCs) were detected in EBMUD water in 2003.

In addition, EBMUD monitors for petroleum products and by-products of industrial and water treatment processes. These chemicals are generally referred to as volatile organic chemicals, and they can come from gas stations, urban storm water runoff, air pollution and septic systems. In 2003 EBMUD detected small amounts of ethylbenzene (a component of gasoline) at two of five locations. Trihalomethanes and haloacetic acids, two water treatment by-products, also were detected.

Unregulated constituents are chemical or microbial constituents that EBMUD is required to monitor, but no maximum limits have been established. Monitoring for these constituents helps regulatory agencies determine where certain constituents occur and whether they need to be regulated.

Low Resistance—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. USEPA/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 Drinking Water Hotline: (800) 426-4791 or *www.epa.gov/safewater*.

TABLE BELOW LISTS ALL DRINKING WATER CONSTITUENTS DETECTED AT THE SOURCE, THE TREATMENT PLANT OR THE DISTRIBUTION SYSTEM IN 2003, EXCEPT FOR LEAD AND COPPER, WHICH WERE SAMPLED AT CUSTOMER TAPS.

Primary Health-Related Constituents	MCL or [MRDL]	PHG (MCLG) or [MRDLG]	Average	Walnut Creek	Lafayette	Orinda	Sobrante	USL	Typical Sources
Microbiological Constituents									
Turbidity (NTU), maximum level, except for Average	TT = 1 NTU	NS	0.05	0.18	0.06	0.08	0.08	0.22	Soil runoff
	TT = 0.3 NTU 95% of the time	NS	NR	100%	100%	100%	100%	100%	Soil runoff
Inorganic Constituents									
Aluminum (mg/L)	1	0.6	<0.05	<0.05	<0.05-0.20	<0.05	<0.05-0.07	<0.05-0.08	Erosion of natural deposits; residue from some surface water treatment processes
Bromate (ug/L)	10	(zero)	<5	NR	NR	NR	<5-7.2	<5-5.1	By-product of drinking water ozonation
Fluoride (mg/L) *	2	1	<0.1	<0.1	<0.1	<0.1-0.15	0.1	0.17	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as Nitrogen (mg/L)	10	10	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40-0.41	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Chloramine Residual as Cl2 (mg/L), maximum level, except for Average	[4]	[4]	1.9	2.2	2.6	2.8	2.8	2.9	Drinking water disinfectant added for treatment
* Fluoride reported above reflect levels in the source waters. Fluoride was added in the range of 0.9 to 1.0 mg/L, to help prevent dental cavities in consumers.									
Organic Constituents									
Acrylamide in treatment chemical (one hundredth of one percent)	TT = 5 @ max. dosage allowed	(zero)	<5	0	0	<5	<5	<5	Added to water during water treatment
TOC (Control of DBP precursors)	TT	NS	NR	NR	NR	NR	Met reqmt	Met reqmt	Various natural and manmade sources
Ethylbenzene (ug/L)	300	700	<0.5	<0.5	<0.5	<0.5	<0.5-0.66	<0.5-3.5	Gasoline component; discharge from petroleum refineries; industrial chemical factories
Haloacetic acids, 5 species (ug/L)	60	NS	20	18-32	18-26	10-23	7-31	6-26	By-product of drinking water chlorination
Total Trihalomethanes or TTHMs (ug/L) **	80	NS	39	31-64	33-45	30-47	17-36	16-37	By-product of drinking water chlorination
** The annual average for calendar year 2003 was 36 ug/L.									
Constituents which have Secondary MCLs									
Aluminum (ug/L)	200	NS	<50	<50	<50-197	<50	<50-67	<50-75	Erosion of natural deposits; residue from some surface water treatment processes
Chloride (mg/L)	500	NS	8	4	4	4.4	14	15	Runoff/leaching from natural deposits; seawater influence
Color, color units	15	NS	3	3	4	2	3	3	Naturally-occurring organic materials
Odor--Threshold (T.O.N.) ***	3	NS	3	2.1	2	2.2	4.5-5.5	4-5.2	Naturally-occurring organic materials
Specific Conductance (umho/cm)	1600	NS	205	54	57	62	280	385	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	NS	17	0.8	0.8	0.8	30	41	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	1000	NS	102	38	44	55	160	230	Runoff/leaching from natural deposits
Turbidity (NTU) ****	5	NS	0.13	0.16	0.05	0.2	0.21	0.11	Soil runoff
*** MCL exceedances for T.O.N. did not coincide with increase of odor complaints or detection by customers.									
**** Turbidity results for Secondary MCL monitoring were from samples in the distribution system, not from the filter effluents as required for the Primary MCLs.									
Unregulated Constituents									
Boron (ug/L)	NS	NS	<100	<100	<100	<100	<100	106 - 125	Runoff/leaching from natural deposits

Lead and Copper: Sampled last in 2002. Required every three years.	AL	PHG	90th percentile Level Found	# of Sites found above the AL		
Copper (ug/L)	1300	170	64	No sites out of 55 Sites		Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/L)	15	2	7	No sites out of 55 Sites		Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

TERMS USED

AL = regulatory action level The concentration that, if exceeded, triggers treatment or other requirements that a water system must follow.

CL_2 = chlorine in equivalent measured form.

DBP = disinfection by-product Trihalomethanes (THMs), haloacetic acids (HAAs) and bromate are disinfection by-products, formed when chlorine and/or ozone reacts with natural constituents in water. EBMUD samples for disinfection by-products at the water treatment plants and in the distribution system.

MCL = maximum contaminant level The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

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 are set by the U.S. Environmental Protection Agency.

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

MRDL = maximum residual disinfectant level (MRDL) The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

MRDLG = maximum residual disinfectant level goal (MRDLG) The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U. S. Environmental Protection Agency.

NA = not applicable

NR = not required for meeting regulations

NS = no standard (MCL or PHG for example) established.

NTU = nephelometric turbidity units

O/S = out of service Plant not operating during sampling period.

pCi/L = picoCuries per liter, a measure of radioactivity.

PHG = public health goal The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Primary Drinking Water Standard or **PDWS**. MCLs and MRDLs for constituents that affect health along with their monitoring,water treatment and reporting requirements.

Secondary Drinking Water Standard MCLs set to protect the odor, taste, and appearance of drinking water.

TOC = total organic carbon, a measurement of natural and man-made organic material in the water. TOC reacts with disinfectants to form DBPs.

T.O.N. = threshold odor number, a measurement of odors in water.

TT = treatment technique A required process intended to reduce the level of a constituent in drinking water.

ug/L = micrograms per liter, or parts per billion (ppb).

umhos/cm = micromhos per centimeter, a measure of conductance.

USL = Upper San Leandro

WTP = water treatment plant

90th percentile = 90% of samples had lower values than indicated.

Quality Begins at the Source

The East Bay Municipal Utility District water system serves more than 1.3 million people in Alameda and Contra Costa counties. Since its founding 81 years ago, EBMUD has provided its customers with the highest quality water possible.

The water travels to the East Bay in pipelines and is protected from pesticides, agricultural and urban runoff, municipal sewage and industrial discharges. Local watersheds account for about 10 percent of the District's water supply.

Where Your Water Comes From

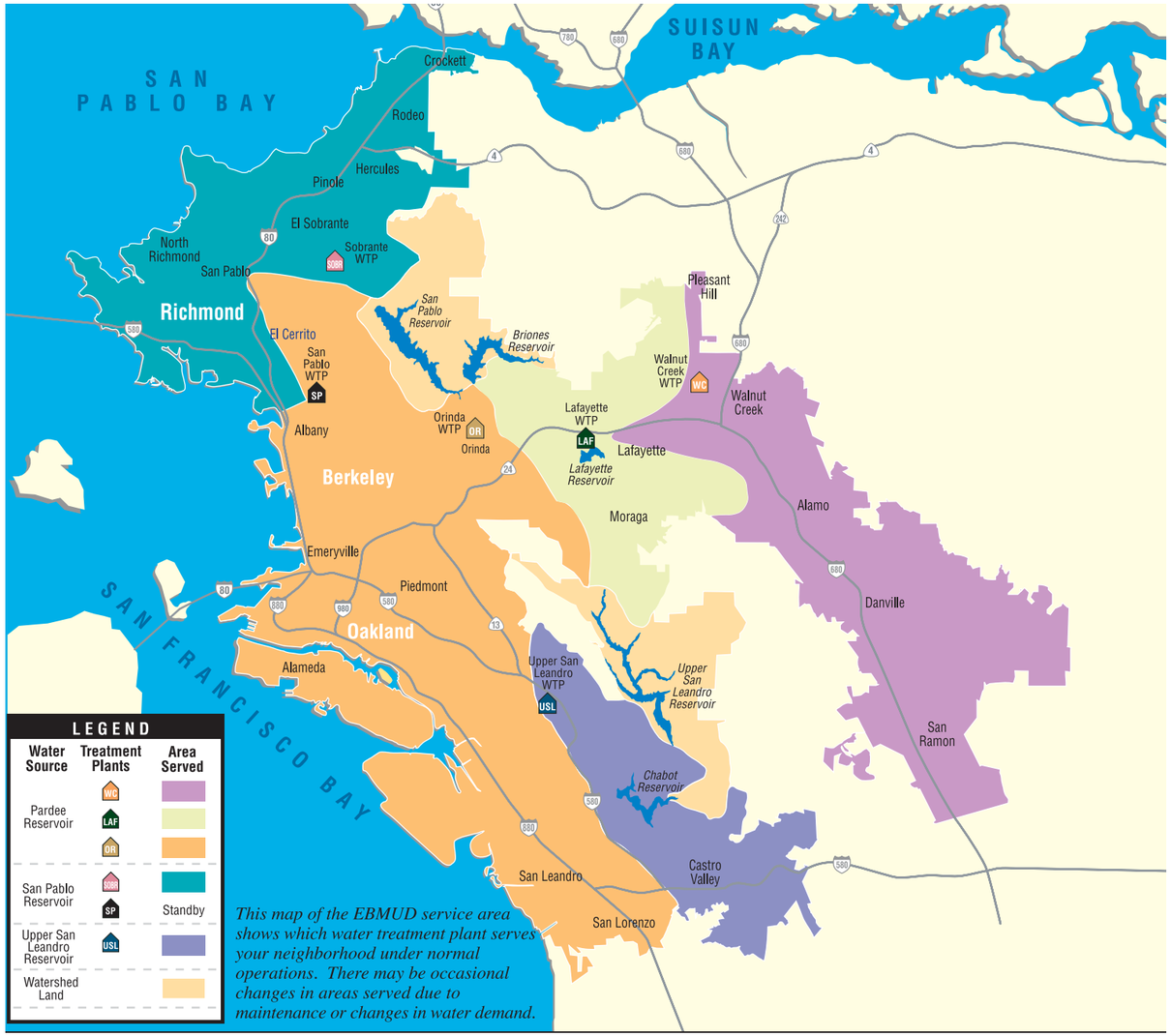
One of the most important factors in water quality is its source: the purer the source, the better the water. Ninety percent of EBMUD's water comes from the 577-square-mile protected watershed of the Mokelumne River, which collects Sierra Nevada snowmelt and flows into Pardee Reservoir in the Sierra foothills near the town of Valley Springs. The watershed on the west slope of the Sierra Nevada is mostly undeveloped land, little affected by human activity.

Protecting Water Quality

Before the water comes to your tap, EBMUD takes many steps to ensure its quality and safety. These include carefully managing and protecting watershed lands, treating the water, sampling and monitoring, analyzing results of the sampling and adjusting treatment, flushing pipes and reservoirs, and repairing pipes.

Emergency Standby Reservoir Supplies Constituents*	MCL	PHG (MCLG)	Chabot Reservoir	Lafayette Reservoir
Beta activity (pCi/L)	50	(zero)	<4	<4-4
Fluoride (mg/L)	2	1	0.24	0.22
Alkalinity, Bicarbonate (mg/L as CaCO3)	NS		148	150
Alkalinity, Carbonate (mg/L as CaCO3)	NS		1.8	0.28
Calcium (mg/L)	NS		42.5	31
Hardness (mg/L as CaCO3)	NS		180	140
Magnesium (mg/L)	NS		22.1	18.4
pH (pH units)	NS		8.1	7.3
Sodium (mg/L)	NS		31.9	21.2

*The above water sources are for emergency use only. Reporting monitoring results of detected constituents is required, even though the sources have not been used for water supply in more than 20 years.



This map of the EBMUD service area shows which water treatment plant serves your neighborhood under normal operations. There may be occasional changes in areas served due to maintenance or changes in water demand.

Ensuring Adequate Water Supplies

The Mokelumne River watershed provides EBMUD with high-quality water, but the amount of supply is not sufficient to meet our customer needs in times of severe drought. We are working on a number of programs that will decrease the severity of rationing during droughts and ensure a reliable water supply for the future. A cooperative project with the County of Sacramento will provide EBMUD with a drought-year water supply from the Sacramento River as early as 2009. We also are exploring other options for drought protection, such as underground water storage and desalting ocean and bay water.

Water conservation and water recycling also are significant parts of EBMUD's water supply program. Through wise water choices (such as installing drip irrigation systems, using drought-tolerant landscaping, replacing older toilets and washing machines with water-efficient models, and sweeping–not hosing–driveways) our customers help us save several million gallons of water a day.

Recycled water has many practical applications, and it reduces the amount of drinking water used for landscape irrigation and other non-consumptive uses. EBMUD currently recycles about six million gallons of water a day, and we are working on a number of projects to more than double that amount by the year 2020.

EBMUD recently completed a comprehensive Water Treatment and Transmission Master Plan that projects water supply needs and water quality regulations 30 to 50 years into the future, and identifies projects that will meet these needs. For example, in anticipation of future water treatment disinfection by-product regulations, EBMUD is now studying new technologies such as ultraviolet light as an alternative to chlorine for certain types of water disinfection.

Water System Security

To protect our water system against possible terrorist attack, EBMUD completed a vulnerability assessment in September 2003 and installed more secure access control at key water and wastewater system facilities. Additionally, EBMUD is in the process of installing a new centralized security system that will provide better monitoring and response capabilities. This new system, in conjunction with planned installation of additional fencing, access controls, cameras, alarms, instrusion sensors and other equipment, will significantly increase the safety and security of EBMUD facilities. In total, EBMUD will spend more than $20 million to defend our water system against potential terrorist attacks.

OTHER WATER QUALITY PARAMETERS	Walnut Creek	Lafayette	Orinda	Sobrante	USL
Alkalinity, Bicarbonate (mg/L as CaCO3)	17.3	17.7	19.5-64.5	75.4	116
Alkalinity, carbonate (mg/L as CaCO3)	<0.1	<0.1	<0.1	0.66	2.3
Calcium (mg/L)	4.0-5.9	3.9-6.1	3.9-8.0	18.4-23.9	22.3-31.5
Hardness (mg/L as CaCO3)	14-20	15-20	14-38	78-84	120-140
Magnesium (mg/L)	0.6-1.2	0.7-1.3	0.7-1.6	6.0-14.6	10.3-14.1
pH (pH units)	8.8-9.1	8.7-9.0	9.1-9.5	8.5-8.9	8.6-9.0
Potassium (mg/L)	0.4-0.7	0.4-0.7	0.5-0.8	1.2-1.3	1.5-1.8
Silica (mg/L)	8.1-13.0	8.0-13.8	7.7-13.2	10.5-12.5	5.4-10.2
Sodium (mg/L)	4.3-5.5	4.5-6.0	5.3-7.8	21.6-28.3	18.9-30.2

The table above provides information that is useful for certain industrial and home applications. Information on the hardness of water in "grains per gallon" can improve the function of dishwashers, cooling equipment and other process applications. To convert the hardness values into grains per gallon, divide the values shown in the tables in milligrams per liter by 17. For example, water hardness in areas served by the Orinda Water Treatment Plant had a range of 14 to 38 mg/L, which is equivalent to 0.8 to 2.2 grains per gallon.

The Water Treatment Process

Water Treatment

The water treatment plants in the EBMUD system are capable of filtering and processing a combined total of nearly 400 million gallons of water a day. The water treatment plants are Upper San Leandro in Oakland, San Pablo in Kensington (standby only), Sobrante in El Sobrante, and plants located in and named for Orinda, Lafayette and Walnut Creek.

Raw water contains impurities such as sediment, bacteria, algae and other microorganisms. These are effectively removed at EBMUD treatment plants. Upper San Leandro, San Pablo and Sobrante are conventional treatment plants, consisting of five basic steps (see below). Upper San Leandro and Sobrante conduct an additional step, ozonation, for taste and odor control. Orinda, Lafayette and Walnut Creek water treatment plants use only coagulation, filtration, and disinfection, because all their water comes directly from the Mokelumne Aqueducts and requires less treatment.

Information from the USEPA and CDHS

In order to ensure that tap water is safe to drink, the U. S. Environmental Protection Agency (USEPA) and the California Department of Health Services prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The CDHS regulations also establish limits for contaminants in bottled water.

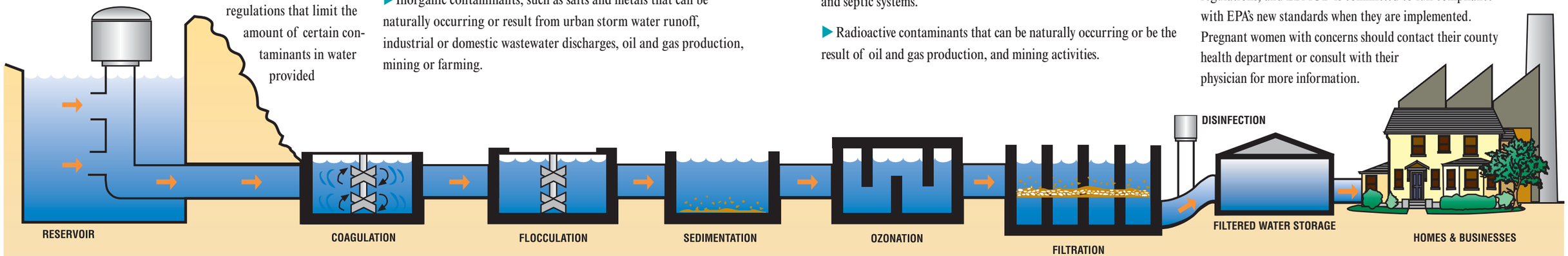
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling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

Contaminants in Drinking Water

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, bacteria and protozoa, such as Cryptosporidium, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.



The Water Treatment Process:

Coagulation Coagulants such as alum neutralize very small particles, allowing them to clump together.

Flocculation After coagulants are added, the water is gently mixed to cause sediment particles to combine and grow large enough to settle.

Sedimentation Water flows very slowly in sedimentation basins, allowing the particles to settle to the bottom.

Ozonation At the Sobrante and Upper San Leandro water treatment plants, ozone is used for disinfection and taste and odor control.

Filtration Water flows through filter beds made up of layers of coal (anthracite) and sand. The coal and sand trap any particles remaining in the water.

Disinfection The addition of chlorine and chloramine (chlorine and ammonia) kills microorganisms, providing protection against disease-causing organisms, such as bacteria or viruses.

Fluoridation Fluoride is added to prevent dental cavities.

Corrosion Control EBMUD adds calcium hydroxide (lime) or sodium hydroxide to the water to control corrosion in distribution pipes and consumers' plumbing. This also keeps substances like lead and copper from leaching out of plumbing into the drinking water.

EBMUD conducts daily tests to ensure that we deliver the highest quality water possible.

- Synthenic organic contaminants such as pesticides and herbicides that may come from a variety of sources, including agriculture, urban storm water and residential uses.
- Volatile organic contaminants from industrial processes and petroleum production, and from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants that can be naturally occurring or be the result of oil and gas production, and mining activities.

Cryptosporidium is a microbial contaminant found in surface water throughout the U.S. Although filtration is highly effective in removing Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Current test methods cannot determine if the organisms are dead or are capable of causing disease. Ingestion of Cryptosporidium may cause abdominal infection with symptoms including nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their physician regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Disinfection By-Products

Some studies have suggested a possible link between high levels of Total Trihalomethanes (TTHMs), a by-product of chlorine disinfection that is commonly present in tap water, and adverse effects on reproductive health, including low birth weight and miscarriage. These research findings have not been confirmed, but studies are continuing and the U. S. Environmental Protection Agency is considering newer, more restrictive standards for TTHMs.

EBMUD water has low TTHMs, well below current and proposed regulations, and EBMUD is committed to full compliance with EPA's new standards when they are implemented. Pregnant women with concerns should contact their county health department or consult with their physician for more information.