



WHAT'S ON TAP IN OROVILLE

OROVILLE WATER SYSTEM REPORT

Results for the year 2016

Prepared May, 2017

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

It is time again for our Annual Quality Water Report. We are required by the Environmental Protection Agency to provide this report on an annual basis. However, our goal is and always has been to provide to you a safe and dependable supply of drinking water. We consider the EPA requirement a great opportunity to let you know about the water and services we have delivered to you over the last year (2016). This report shows our water quality data for January 1, 2016 to December 31, 2016, and what the monitoring data means.

We, at the City of Oroville, make every effort to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. If you have any questions about this report or concerning your water utility, please contact City Superintendent, Rod Noel at 476-2106. If you are interested in decisions affecting water quality, the Oroville City Council meetings are held on the first and third Tuesday of each month at 7 p.m. at Oroville City Hall, 1308 Ironwood. However, we suggest you contact the City Clerk at 476-2926 ext. 10, regarding the Council meeting agenda if water is the only subject you are interested in, as water issues are not discussed at every meeting.

Thank you for allowing us to continue providing your family with clean, quality water over the past year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected in rate structure adjustments. Thank you for understanding.



WHERE DOES THE WATER COME FROM?

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 storm water 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 storm water runoff, and residential uses.
- ⚠ Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- ⚠ Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency and/or the Washington State Board of Health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration and/or the Washington State Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Our water sources are from the Oroville Aquifer, which underlies approximately 600 acres within the City and adjacent areas. It is believed that the Similkameen River recharges this aquifer annually during the spring runoff. Water is drawn from the aquifer at two sources located within the City. One source (SO5) is a well field made up of three wells (1,2&3); the other source(SO4) is a single well (#4). The water is stored in four water reservoirs located in higher elevations and delivered to you through a distribution system made up of various size pipes, which also charge hydrants for fire protection. We serve water within the City limits and to areas north on both sides of the Lake.

Σ HOW MUCH TESTING DO WE DO?

It should be noted that municipal water systems such as ours are held to very high standards, especially compared to private wells in the area. The City of Oroville routinely monitors for a wide variety of contaminants in your drinking water, in compliance with Federal and State laws. Last year the City drew 47 samples analyzed for 15 different contaminants.

We test for microbiological contaminants (coliform) monthly and nitrates annually. Most other contaminants are tested every three years; a few are allowed longer periods.

WAIVERS Periodic analysis allows the State Department of Health (DOH) to issue waivers to reduce costly testing for compounds that have been proven not to be a threat in our area. DOH waived testing for Asbestos through December 2019. For Source 4, testing for Volatile Organics (VOCs) was done in 2016, Inorganic Chemicals (IOCs) testing is scheduled for 2018, Herbicides & Pesticides scheduled for 2017 and Soil Fumigants are waived. Source 5 (wells 1, 2&3) testing for Herbicides & Pesticides is scheduled for 2019 and soil fumigants are waived, VOCs until 2017, IOCs until 2019. The City tested for Synthetic Organic Chemicals (SOCs) (general pesticides) for Source 5 in 2012 with no detects.

Lead and copper were tested for at a distribution of 10 taps across the system in 2015 and the system was found to be well within the standard.

Radionuclide testing was required under an initial monitoring rule and was conducted in 2001 and 2004; and Radium 226, 228, and Gross Alpha were tested in 2008. Testing for Radionuclides (specifically gross alpha and radium 228 for Source 5) was accomplished in 2015 and scheduled to be tested again in 2018. For Source 4, Gross Alpha was tested in 2016 and Radium 228 is scheduled for 2020.

Only the latest contaminants that have been detected at or above the state reporting level are listed in the table on the next page which includes the possible source of this low-level influence. Contaminants tested for, but not detected, are not shown.



TERMS AND ABBREVIATIONS USED IN THIS REPORT

Maximum Contaminant Level Goal (MCLG) - 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.

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. MCL's are set

at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Parts per million (ppm) - one part per million corresponds to one minute in two years or a single penny in \$10,000. ppm is the same as mg/l, or milligrams per liter.

Parts per billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000. ppb is the same as µg/L, or micrograms per liter.

n/a: not applicable

TEST RESULTS (detects above state reporting level or violations only)							
Contaminant	MCL	MCL G	Oroville Range of Detections	Oroville Average	Date of Sample	Violation Y/N	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria	1 positive monthly sample	0	1 Unsatisfactory samples out of 44	n/a	Each Month	Y * See following page.	Naturally present in the environment.
Inorganic Contaminants (IOCs)							
Fluoride(ppm)	2 *	4	.36	.36	4/11	No	Fluoride is a beneficial substance at .2 – 2 ppm. Fluoride above 2ppm could result in mottled teeth for some. We are well below that level.
Sodium (ppm)	n/a	20	29.5	29.5	4/11	No	Naturally present. Reported here only to ensure that persons with high blood pressure are aware of sodium in water.
Nitrate (ppm)	10	10	.23- .41	.32	8/16	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Unregulated Contaminants							
Hardness(ppm)	n/a	n/a	261	261	4/11	No	Unregulated. Report included to help set water softeners at installation.
Radioactive Contaminants							
Contaminant	MCL	MCL G	RESULTS	Oroville Average	Date of Sample	Violation Y/N	Erosion of natural deposits. *excluding uranium
Gross Alpha (pCi/L)	*15	0	1.21	1.21	6/16	No	
Radium 228			.85	.85	12/15	No	
Lead & Copper *							
Lead (ppb) 2015 Sampling (10 ea.)	AL=15 ppb	0	0 of 10 homes greater than AL	3.69 ppb @ 90 th Percentile	10/27/15	No	Corrosion of household plumbing systems, erosion of natural deposits.
Copper (ppm) 2015 Sampling (10 ea.)	AL=1.3 ppm	1.3	0 of 10 homes greater than AL	.36 ppm @ 90 th Percentile	10/27/15	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

* EPA's MCL for fluoride is 4 ppm. However, our state has a lower MCL to better protect human health.

WHAT DOES THE CHART MEAN?

The chart and most recent testing tells us that our water is well within federal and state drinking water standards, therefore considered SAFE by the U.S. Environmental Protection Agency (EPA) at the levels of detections in our monitoring program. Also, sodium is an IOC but not an EPA regulated substance and is shown only to inform individuals that monitor their sodium intake. Nitrate is an IOC that is required to be tested annually and is listed in the chart because it was detected above the State Reporting Level; however, it is well below the MCL. Detects above the State Reporting Level (SRL) are included in the table; however, this does not indicate violations for these substances.

*The City experienced a single report of coliform bacteria presence in a sample taken in February, 2016 which is considered a violation of water quality standards. These tests showed NO E. Coli. present. Following protocol, three follow up tests were performed where no coliform was found present; on-going sampling for the remainder of the year found no coliform bacteria present. Occasionally, water samples tested by the Okanogan County Health Dept. show bacteria presence for a number of reasons. It does not indicate that the bacteria are necessarily harmful, and sometimes the presence is simply from a tap that is not sanitized, or the edge of the bottle has been touched by the person taking the sample. Rigorous follow-up sampling is required in these circumstances to determine whether treatment and/or other measures are necessary.

We sample both our sources for radon periodically; we sampled one source in 2014 and the other in 2015 which you will find recorded in the table. There is no federal regulation for radon levels in drinking water. Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the United States. Radon can move through the ground and into homes through cracks and holes in the foundation. It 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 a home through tap water will be (in most cases) a small source of radon in indoor air. There are simple ways to fix a radon problem that that aren't too costly. For additional information on radon, call EPA's Radon Hotline, at (800) SOS-RADON.

Copper and lead are now only tested every three years, and both have been within federal and state standards.

SOME FINAL NOTES ABOUT DRINKING WATER.

It should be noted that all sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Oroville is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

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 microbiological contaminants are available from the Safe Drinking Water Hotline.

ABOUT WATER CONSERVATION

Public water systems are the second largest water user in the state. They use about 18% annually of the total amount of freshwater withdrawn from surface and groundwater sources. By comparison, agriculture uses about 60% of the state's water every year, while industry and hydropower use about 8%. A lot of hard work goes into providing the water that comes out of your tap every day. When the Department of Health adopted new water efficiency regulations in 2007, many water systems took notice and began to re-think just how efficient they can be. Now more than ever, they are taking action to find and fix leaks in their water distribution system, thereby eliminating waste.

So, we offer these water saving ideas.

- Collect rainwater to irrigate indoor/outdoor plants.
- Install WaterSense labeled low-flow showerheads and save 3 gallons per minute.
- Take shorter showers by 2-3 minutes and save up to 10 gallons per shower.
- If you don't like mowing your yard, get rid of it and replace it with native or drought resistant (xeriscape) landscaping.
- Install WaterSense labeled low-flow fixtures or aerators for every faucet in the house.
- Most landscapes will do well being watered two or three times per week.
- To reduce evaporation, water the lawn in the early morning or evening. Watering during the heat of the day, or when it's windy, wastes water and is much less effective.
- Place a 2" to 4" layer of mulch around plants and trees to avoid excess evaporation and retain moisture.
- Consider using a commercial car wash that recycles water or wash your car on your lawn.
- Sell your lawn mower and use that money as a down payment to replace your lawn with a flower or vegetable garden.
- Protect water quality by limiting or eliminating the use of fertilizers, weed killers, and pesticides.
- Install micro/drip irrigation systems or use soaker hoses to water outdoors.

Understanding what you can do to save water is where it all begins. You can get the biggest water savings in your home by installing WaterSense fixtures and fixing leaks. Since outdoor use often doubles in the summertime, use the tips in this brochure to think about what you can do to use less while still maintaining a healthy landscape. Limiting the use of fertilizers and pesticides will also help keep water clean and protect public health. Using less water leaves more of it in the ground or in our streams, rivers, and lakes. This benefits the environment and provides recreational opportunities for you and your community.

Do what you can to avoid unnecessary water use. You will contribute to the long-term health, adequate future water supply, and sustainability of your watershed!

To learn more about how you can use water efficiently, contact your local water system for more information or visit our Web site at www.doh.wa.gov/ehp/dw/programs/wue.htm

More Information

Washington State Department of Health

Office of Drinking Water

(360) 236-3100 • 1-800-521-0323 www.doh.wa.gov/ehp/dw