

ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2015

Presented By



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

PWS ID#: 1510020

Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to your homes and businesses. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

Please remember that we are always available to assist you, should you ever have any questions or concerns about your water.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the first and third Mondays of each month beginning at 6:00 p.m. at the Claude L. Wells Education Center located at 300 S. Robinson St., Tehachapi, CA.

Substances That Could Be in 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. 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.

Contaminants that may be present in source water 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, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, that 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, that are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Tip Top Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen Sink and Drain

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed-up water in which bacteria (e.g., pink and black slime) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and shower heads may be caused by hard water or water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

Water Filtration and Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time so regular filter replacement is important. (Remember to replace your refrigerator filter!)

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) 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 www.epa.gov/lead.

Where Does My Water Come From?

The City of Tehachapi uses only groundwater pumped from the Tehachapi Basin aquifer; no surface or imported water is used for direct consumption. Six active deep wells within the City continually refill 5 million gallons of storage facilities and the 40 miles of transmission lines that bring water to the homes, schools, and businesses served by our system.

The City operates five pressure zones, four of which are used and tested. Monthly bacteriological testing is done in all four zones as well as in the storage tanks and wells themselves. A free chlorine residual of 0.23 - 2.036 mg/l (parts per million) is maintained throughout the distribution system.

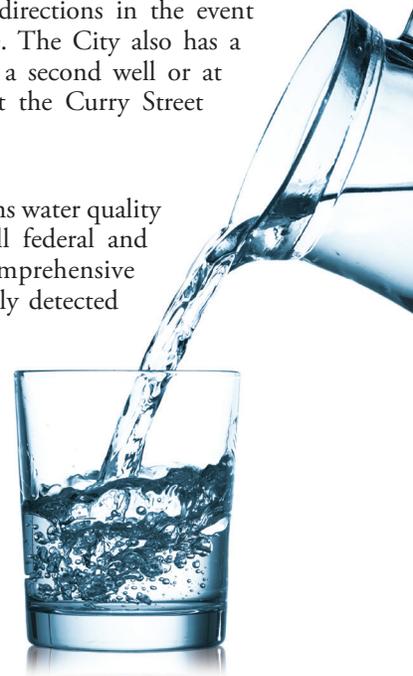
Water System Information

Of the six active wells operated by the City, one is equipped with standby power for use in case of an emergency. These wells are valved so that water can be diverted in different directions in the event of a catastrophic line rupture. The City also has a portable generator for use at a second well or at the booster station located at the Curry Street Tank Site.

Testing

The City of Tehachapi performs water quality testing in accordance with all federal and state criteria. Although comprehensive testing was done in 2015, only detected contaminants are reported in this report.

The City's water sampling (both chemical and bacteriological) is done by a state-certified water treatment plant operator and analyzed by a state-certified laboratory to ensure accuracy in testing.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Tyler Napier, Utilities Supervisor, at (661) 822-4078 ext. 507, or Thomas Brown, WTPO, at (661) 822-4078 ext. 503.



Is tap water cheaper than soda?

Yes! You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.

How long can a person go without water?

Although a person can live without food for more than a month, a person can only live without water for approximately one week.

When was drinking water first regulated?

The Safe Drinking Water Act (SDWA) of 1974 represents the first time that public drinking water supplies were protected on a federal (national) level in the U.S. Amendments were made to the SDWA in 1986 and 1996.

Seventy-one percent of Earth is covered in water: how much is drinkable?

Oceans hold about 96.5 percent of all Earth's water. Only three percent of the earth's water can be used as drinking water. Seventy-five percent of the world's fresh water is frozen in the polar ice caps.

How much water do we use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. (During medieval times a person used only 5 gallons per day.) It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.

When was chlorine first used in the U.S.?

In 1908, Jersey City, New Jersey and Chicago, Illinois were the first water supplies to be chlorinated in the U.S.

How much water is in our atmosphere?

Forty trillion gallons of water are carried in the atmosphere across the U.S. each day.

Source Water Assessment

The City of Tehachapi conducted a water source assessment and protection program. The assessment for the Mojave Well identified vulnerabilities from activities located near the drinking water source. The source is considered most vulnerable to sewer collection systems and to a historic gas station within the five- and ten-year times of travel. The source has a 100-foot sanitary seal and a depth of 182 feet to the uppermost perforation. Any microbiological activity would have to travel this vertical distance to the aquifer before it could begin horizontal travel to the well. The gas station has not had any problems associated with it, and no gas products have ever been detected in Mojave Well.

For Dennison Well, again, no contaminants above the MCL have been detected in the water supply; however, the assessment identified vulnerabilities from activities located nearby. These vulnerabilities include high-density housing and the close proximity of other supply wells, which violates specifications requiring distances far enough so that contaminants would take a minimum of two years to reach the water supply. Both of these vulnerabilities pose a relatively low-ranking risk, as does potential leaching from gas stations, both active and historic, and confirmed leaking from a tank within the ten-year time of travel. Snyder Well is considered most vulnerable to sewer collection systems. Snyder Well is a standby source and was not used for water production in 2015.

No contaminants above the MCL have been detected in the water supplied from Curry Well. The assessment noted that the water supply is still considered vulnerable to activities located near the drinking water source.

Minton Well's supply was assessed and no contaminants above the MCL were found, although it is still considered vulnerable to activities located near the drinking water source.

No contaminants above the MCL have been detected in the water supplied from Wahlstrom Well. The assessment considers the source to be vulnerable to activities located near the drinking water supply.

Pinon Well is considered most vulnerable to septic systems, both low density and sewer collection systems. No contaminants above the MCL have been detected in the water supply; however, the source is considered vulnerable to activities located near the drinking water source. This source has a very deep 300-foot sanitary seal. In addition, the depth to the uppermost perforation is 400 feet. Any microbiological activity would have to travel this vertical distance to the aquifer before it could begin horizontal travel to the well.

A copy of the complete assessment may be viewed at the City of Tehachapi, 115 South Robinson Street, Tehachapi, CA 93561.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2015	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.17	0.23–2.036	No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2015	2.0	1	0.29	0.079–0.59	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2015	15	(0)	1.89	0.767–4.34	No	Erosion of natural deposits
Nitrate [as nitrate] ¹ (ppm)	2015	45	45	36	0.44–49	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2015	80	NA	2.2	0–2.2	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	0.3	0.27	0/20	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2013	15	0.2	4.4	0/20	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Manganese (ppb)	2015	50	NS	<10	<10–<10	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2015	1,600	NS	432	423–554	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2015	500	NS	39	27–58	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2015	1,000	NS	317	270–350	No	Runoff/leaching from natural deposits

OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2015	182	160–220
Calcium (ppm)	2015	60	38–75
pH (Units)	2015	7.98	7.93–8.05
Potassium (ppm)	2015	1.2	1.0–1.6
Total Hardness (ppm)	2015	180	110–230

¹ Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Definitions

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

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

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 (SMCLs) 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. EPA.

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.

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.

NA: Not applicable

NS: No standard

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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 EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).