ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017

TUD

Presented By
Tuolumne Utilities District

www.tudwater.com
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Sonora, CA 95370
209-532-5536

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

Committed to Provide Quality Water

Once again we are pleased to present our annual water quality report covering the period from January 1, 2017, through December 31, 2017. As in years past, Tuolumne Utilities District is committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education, while continuing to serve the needs of all of our water users. Our exceptional staff continues to work hard every day, at any hour, to deliver the highest-quality drinking water without interruption. Thank you for allowing us the opportunity to serve you and your family.

Where Does My Water Come From?

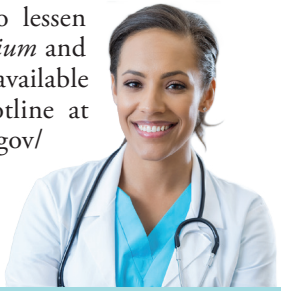
The most important factor in water quality is its source. There are two sources of supply from which Tuolumne Utilities District (District, or TUD) receives its water: surface water that originates from rainfall and runoff from snowpack in the Sierra Nevada Mountains and from ground-water wells. The District is composed of 11 water service areas, 11 surface water treatment plants, and 12 active wells.

Our surface water is delivered to TUD starting at the South Fork of the Stanislaus River at Lyons Reservoir via the Tuolumne Main Canal by agreement with Pacific Gas and Electric Company (PG&E). PG&E owns and operates Pinecrest Lake, Lyons Reservoir, and the Tuolumne Main Canal. Approximately 96% of TUD's annual water needs are met with surface water from Lyons Reservoir and Pinecrest Lake; the other 4% is met with ground water, either as a primary source or a backup source.

To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed at www.epa.gov/surf.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 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.



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. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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 storm-water 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 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 which can also come from gas stations, urban storm-water 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.

Community Participation

You are invited to attend our regularly scheduled Board meetings, which occur at 2 p.m. on the second and fourth Tuesdays of the month. The TUD Board Room is located at 18885 Nugget Blvd. in Sonora. If you are unable to attend the Board meetings, they can be viewed live on our website and in our meeting archives from our website at www.tudwater.com.

To the Last Drop

The National Oceanic and Atmospheric Administration (NOAA) defines drought as a deficiency in precipitation over an extended period of time, usually a season or more, resulting in a water shortage, causing adverse impacts on vegetation, animals, and/or people. Drought strikes in virtually all climate zones, from very wet to very dry.

There are primarily three types of drought: Meteorological Drought, which refers to the lack of precipitation, or the degree of dryness and the duration of the dry period; Agricultural Drought, which refers to the agricultural impact of drought, focusing on precipitation shortages, soil water deficits, and reduced ground water or reservoir levels needed for irrigation; and Hydrological Drought, which pertains to drought that usually occurs following periods of extended precipitation shortfalls that can impact water supply (i.e., stream flow, reservoir and lake levels, ground water).

Drought is a temporary aberration from normal climatic conditions; thus, it can vary significantly from one region to another. Although normally occurring, human factors, such as water demand, can exacerbate the duration and impact that drought has on a region. By following simple water conservation measures, you can help significantly reduce the lasting effects of extended drought.

Testing For Cryptosporidium

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% removal.

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, immunocompromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immunocompromised 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.

> **Water treatment is a complex, time-consuming process.**

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

QUESTIONS?

For more information about this report, or any questions relating to your drinking water, please call Michelle Perkins, Regulatory Compliance, at (209) 532-5536, extension 537.

Source Water Assessment

An assessment of the drinking water sources for all TUD water systems was completed in 2013. The vulnerability summary for each system is included. A copy of the complete assessment of each system may be viewed at the Department of Health Services Water Field Operations Branch, Merced District Office, 265 W. Bullard Ave., Suite 101, Fresno, California 93704.

Vulnerability Summary

VULNERABILITY	APPLE VALLEY	PEACEFUL PINES	PHOENIX LAKE	SONORA	PONDEROSA	TUOLUMNE	UPPER BASIN	COLUMBIA	CEDAR RIDGE	SCENIC VIEW
Sewer Collection	X			X		X	X	X		
Septic System Low Density				X		X		X		
Septic System High Density		X	X	X	X		X		X	X
Grazing	X						X			
Other Animal Operations	X						X			
Lumber Processing/ Manufacturing	X			X						
Wood/Pulp/Mills								X		
Recreational/Surface water source				X	X	X	X	X	X	X
Historic waste dumps/ landfills				X			X			
Auto/Machine Shop				X						
Car Washing				X						
Dry Cleaners				X						
Highways/Transportation Corridor				X						

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments such as iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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 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.

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 (i.e., pink- and black-colored slime growth) 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 showerheads 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/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!)

Information on the Internet

The U.S. EPA (https://goo.gl/TFAMKc) and the Centers for Disease Control and Prevention (www.cdc.gov) websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Division of Drinking Water and Environmental Management has a website (https://goo.gl/kGepu4) that provides complete and current information on water issues in California, including valuable information about our watershed.

Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

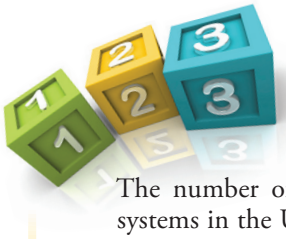
- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So, get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you can save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Fixtures With Green Stains

A green or blue-green stain on kitchen or bathroom fixtures is caused by tiny amounts of copper that dissolve in your home's copper plumbing system when the water sits unused overnight. Copper staining may be the result of a leaky faucet or a faulty toilet flush valve, so be sure your plumbing is in good working order.

Copper stains may also be caused by overly hot tap water. Generally speaking, you should maintain your water temperature at a maximum of 120 degrees Fahrenheit. You should consult the owner's manual for your heater or check with your plumber to determine your current heat setting. Lowering your water temperature will reduce the staining problem and save you money on your energy bill.

Also keep in mind that a tap that is used often throughout the day usually will not produce copper stains, so if you flush the tap for a minute or so before using the water for cooking or drinking, copper levels will be reduced.



BY THE NUMBERS

34 BILLION The number of gallons of water produced daily by public water systems in the United States.

1 MILLION The number of miles of drinking water distribution mains in the United States.

135 BILLION The amount of money spent annually on maintaining the public water infrastructure in the United States.

300 MILLION The number of Americans who receive water from a public water system.

2 BILLION The age in years of the world's oldest water, found in a mine at a depth of nearly two miles.

151 THOUSAND The number of active public water systems in the U.S.

199 THOUSAND The number of highly trained and licensed water professionals serving in the United States.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES

				Apple Valley		Cedar Ridge		Columbia/Big Hill		Peaceful Pines		Phoenix Lake			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2017	[4.0 (as Cl2)]	[4 (as Cl2)]	0.63	0.56–1.22	1.4	1.3–1.5	1.60	1.30–2.0	1.06	0.71–1.57	0.85	0.36–1.71	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2017	TT	NA	NA	NA	1.0	0.6–1.9	NA	NA	NA	NA	NA	NA	No	Various natural and man-made sources
Fluoride (ppm)	2015	2.0	1	0.1	ND–0.14	ND[1]	ND–0.16[1]	ND[1]	NA[1]	0.18	NA	ND	NA	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)	ND	NA	0.7[2]	ND–1.4[2]	ND[2]	NA[2]	ND	NA	3.6	NA	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2017	60	NA	2.0	2.0–2.0	25.5	16–35	44.65	21–80	2.0	2.0–2.0	11	11–11	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2017	45	45	0.43	ND–0.43	ND	NA	ND	NA	ND	NA	ND	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	4.2	4.2–4.2	24.3	14–28	40.15	24–60	5.2	5.2–5.2	29	29–29	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2017	TT	NA	NA	NA	0.29[5]	0.04–0.29	0.15	0.02–0.15	NA	NA	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	100	NA	NA	NA	NA	NA	No	Soil runoff

REGULATED SUBSTANCES

				Ponderosa		Scenic View		Sonora			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2017	[4.0 (as Cl2)]	[4 (as Cl2)]	1.69	1.50–1.90	1.60	1.30–1.70	1.60	1.55–1.75	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2017	TT	NA	1.1	0.7–1.7	1.0	1.0–1.5	1.0	1.0–1.9	No	Various natural and man-made sources
Fluoride (ppm)	2015	2.0	1	ND[1]	NA[1]	ND[1]	NA[1]	ND[1]	NA[1]	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)	ND[2]	NA[2]	8.1[3]	ND–16.1[3]	ND[2]	NA[2]	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2017	60	NA	49.3	38–71	20.5	16–25	43.98	34–61	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2017	45	45	ND	NA	5.0	ND–5.0	2.1	ND–2.1	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	44.8	35–61	37.8	27–47	46.6	34–57	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2017	TT	NA	0.23	0.03–0.23	0.15	0.04–0.15	0.30	0.05–0.30	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	100	NA	100	NA	100	NA	No	Soil runoff

REGULATED SUBSTANCES

				Tuolumne		Upper Basin		Wards Ferry			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2017	[4.0 (as Cl2)]	[4 (as Cl2)]	1.45	1.40–1.60	1.63	1.60–1.80	0.36	0.06–0.81	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2017	TT	NA	1.0	0.8–1.7	1.0	0.7–1.8	NA	NA	No	Various natural and man-made sources
Fluoride (ppm)	2015	2.0	1	ND[1]	NA[1]	0.07[1]	ND–0.16[1]	ND	NA	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)	ND[2]	NA[2]	0.3	ND–1.5	ND[4]	NA[4]	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2017	60	NA	30.5	18–36	37.9	22–66	ND[2]	NA[2]	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2017	45	45	ND	NA	ND	NA	3.1	0.92–3.1	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	35.5	25–47	33.65	25–49	5.4[2]	NA[2]	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2017	TT	NA	0.29	0.03–0.29	0.29	0.03–0.29	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	100	NA	100	NA	NA	NA	No	Soil runoff

Tap water samples collected for copper and lead analyses from sample sites throughout the different communities

				Apple Valley		Cedar Ridge		Columbia/Big Hill		Peaceful Pines			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.190	0/5	0.096	0/10	0.081	0/20	ND	0/5	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	2.9	0/5	ND	1/10	ND	2/20	ND	0/5	No	Internal corrosion of household water plumbing systems; discharge from industrial manufacturers; erosion of natural deposits

Tap water samples collected for copper and lead analyses from sample sites throughout the different communities

				Phoenix Lake		Ponderosa		Scenic View		Sonora			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.340	0/5	0.16[6]	0/10[6]	0.068[6]	0/10[6]	0.14[3]	0/31[3]	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	ND	0/5	10[6]	1/10[6]	ND[6]	0/10[6]	ND[3,7]	0/31[3]	No	Internal corrosion of household water plumbing systems; discharge from industrial manufacturers; erosion of natural deposits

Tap water samples collected for copper and lead analyses from sample sites throughout the different communities

				Tuolumne		Upper Basin		Wards Ferry			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.086[6]	0/10[6]	0.120	0/20	1.07[6]	1/5[6]	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	ND[6]	1/10[6]	ND	0/20	ND[6]	0/5[6]	No	Internal corrosion of household water plumbing systems; discharge from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

				Apple Valley		Cedar Ridge		Columbia/Big Hill		Peaceful Pines			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2015	300	NS	307	ND–920	600[1]	ND–1200[1]	ND[1]	NA[1]	ND[1]	NA[1]	Yes	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2015	50	NS	37	ND–58	70[1]	ND–150[1]	ND[1]	NA[1]	62[1]	26–62[1]	Yes	Leaching from natural deposits
Sulfate (ppm)	2015	500	NS	9	4–14	2.1[1]	<1–5.8[1]	<1.0[1]	<1.0–<1.0[1]	3.4	NA	No	Runoff/leaching from natural deposits; industrial wastes
Zinc (ppm)	2015	5.0	NS	ND	NA	0.034[1]	ND–0.068[1]	ND[1]	NA[1]	ND	NA	No	Runoff/leaching from natural deposits; industrial wastes

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Phoenix Lake AMOUNT DETECTED	Phoenix Lake RANGE LOW-HIGH	Ponderosa AMOUNT DETECTED	Ponderosa RANGE LOW-HIGH	Scenic View AMOUNT DETECTED	Scenic View RANGE LOW-HIGH	Sonora AMOUNT DETECTED	Sonora RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2015	300	NS	ND[1]	NA[1]	ND[1]	NA[1]	ND[1]	NA[1]	ND[1]	NA[1]	Yes	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2015	50	NS	ND[1]	NA[1]	ND[1]	NA[1]	ND[1]	NA[1]	ND[1]	NA[1]	Yes	Leaching from natural deposits
Sulfate (ppm)	2015	500	NS	2.8	NA	<1.0[1]	<1.0–<1.0[1]	<1.0[1]	<1.0–<1.0[1]	<1.0[1]	<1.0–<1.0[1]	No	Runoff/leaching from natural deposits; industrial wastes
Zinc (ppm)	2015	5.0	NS	ND	NA	ND[1]	NA[1]	ND[1]	NA[1]	ND[1]	NA[1]	No	Runoff/leaching from natural deposits; industrial wastes

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Tuolumne AMOUNT DETECTED	Tuolumne RANGE LOW-HIGH	Upper Basin AMOUNT DETECTED	Upper Basin RANGE LOW-HIGH	Wards Ferry AMOUNT DETECTED	Wards Ferry RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2015	300	NS	ND[1]	NA[1]	56[1]	ND–280[1]	ND	NA	Yes	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2015	50	NS	ND[1]	NA[1]	31[1]	ND–72[1]	ND	NA	Yes	Leaching from natural deposits
Sulfate (ppm)	2015	500	NS	1.5[1]	NA[1]	<1.0[1]	<1.0–10[1]	3.4	NA	No	Runoff/leaching from natural deposits; industrial wastes
Zinc (ppm)	2015	5.0	NS	ND[1]	NA[1]	0.090[1]	ND–0.340[1]	ND	NA	No	Runoff/leaching from natural deposits; industrial wastes

UNREGULATED AND OTHER SUBSTANCES[9]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Apple Valley AMOUNT DETECTED	Apple Valley RANGE LOW-HIGH	Cedar Ridge AMOUNT DETECTED	Cedar Ridge RANGE LOW-HIGH	Columbia/Big Hill AMOUNT DETECTED	Columbia/Big Hill RANGE LOW-HIGH	Peaceful Pines AMOUNT DETECTED	Peaceful Pines RANGE LOW-HIGH	Phoenix Lake AMOUNT DETECTED	Phoenix Lake RANGE LOW-HIGH	Ponderosa AMOUNT DETECTED	Ponderosa RANGE LOW-HIGH
Chlorate (ppb)	2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI [Hexavalent Chromium] (ppb)	2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness (ppm)	2015	177	130–220	68.5	7.1–130	7.8	7.7–7.9	81	NA	300	NA	8.0	NA
Molybdenum (ppb)	2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (ppm)	2015	12	12–12	4.5[1]	3.4–5.6[1]	5.5[1]	5.4–5.5[1]	15	NA	16	NA	5.2[1]	NA[1]
Strontium (ppb)	2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (ppb)	2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

UNREGULATED AND OTHER SUBSTANCES[9]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Scenic View AMOUNT DETECTED	Scenic View RANGE LOW-HIGH	Sonora AMOUNT DETECTED	Sonora RANGE LOW-HIGH	Tuolumne AMOUNT DETECTED	Tuolumne RANGE LOW-HIGH	Upper Basin AMOUNT DETECTED	Upper Basin RANGE LOW-HIGH	Wards Ferry AMOUNT DETECTED	Wards Ferry RANGE LOW-HIGH
Chlorate (ppb)	2014	NA	NA	425[9]	ND–670	NA	NA	NA	NA	NA	NA
Chromium VI [Hexavalent Chromium] (ppb)	2014	NA	NA	0.04895[10]	0.038–0.09	NA	NA	NA	NA	NA	NA
Hardness (ppm)	2015	14	NA	17	NA	10	NA	36	6.9–77	150	NA
Molybdenum (ppb)	2014	NA	NA	0.04[11]	ND–3.9	NA	NA	NA	NA	NA	NA
Sodium (ppm)	2015	9.2[1]	NA[1]	5.3[1]	NA[1]	6.8[1]	NA[1]	8[1]	3.8–11[1]	9.5	NA
Strontium (ppb)	2014	NA	NA	53[12]	30–99	NA	NA	NA	NA	NA	NA
Vanadium (ppb)	2014	NA	NA	0.2651[13]	ND–1.3	NA	NA	NA	NA	NA	NA

[1] Sampled in 2017.
[2] Sampled in 2014.
[3] Sampled in 2016.
[4] Sampled in 2010.
[5] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration systems.
[6] Sampled in 2015.
[7] Mono Village ND 0/10; East Sonora 2014 ND 0/5, Cuesta/ Lambert 2014 .0115 1/5
[8] Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.
[9] Mono Village Sonora (199)
[10] Mono Village Sonora (.0404)
[11] Mono Village
[12] Mono Village (Sonora 44)
[13] Mono Village Sonora .545

Definitions

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

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