ANNUAL WATER QUALITY REPORT

Water Testing Performed in 2016

Presented By

Tuolumne Utilities District

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

We've Come a Long Way

Once again we are proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Where Does My Water Come From?

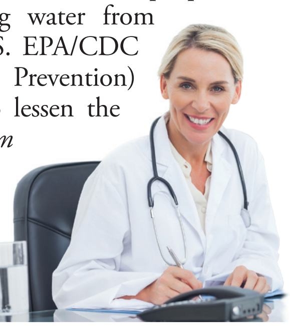
The most important factor in water quality is its source. There are two sources of supply from which Tuolumne Utilities District (District, or TUD) receives its water: surface water that originates from rainfall and runoff from snowpack in the Sierra Nevada Mountains, and groundwater wells. The District comprises 11 water service areas, 11 surface water treatment plants, and 19 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 PG&E. PG&E owns and operates Pinecrest Lake, Lyons Reservoir, and the Tuolumne Main Canal. Approximately 96 percent of TUD's annual water needs are met with surface water from Lyons Reservoir and Pinecrest Lake; the other 4 percent is met with groundwater 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 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.



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 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.

Community Participation

You are invited to attend our regularly scheduled Board meetings held on the second Tuesday of each month, beginning at 2:00 p.m., and the fourth Tuesday of each month, beginning at 5:30 p.m., in the Tuolumne Utilities District boardroom, at 18885 Nugget Boulevard, Sonora, California. Current information is available on our Web site: www.tudwater.com. The Board meetings can be viewed live on our Web site and in our meeting archives.

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						

FOG (Fats, Oils, and Grease)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.

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.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of fresh water that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet, twice the global per-capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to http://goo.gl/QMoIXT.

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 like iron and manganese. Although iron and manganese do not themselves 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 such times. 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.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

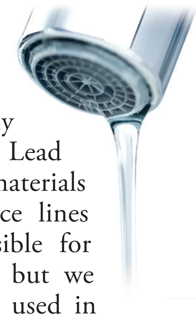
For a detailed discussion on the NRDC study results, check out their Web site at https://goo.gl/Jxb6xG.

Water Conservation

You can play a role in conserving water and save 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 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.

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.

What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing “7 PC” (code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

How much emergency water should I keep?

Typically, 1 gallon per person per day is recommended. For a family of four, that would be 12 gallons for 3 days. Humans can survive without food for 1 month, but can survive only 1 week without water.

How long can I store drinking water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria before it was filled with tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

How long does it take a water supplier to produce one glass of drinking water?

It could take up to 45 minutes to produce a single glass of drinking water.

How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40 percent of total water use). Toilets use about 4 to 6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less often 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 U.S. 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 the 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			
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	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2016	[4.0 (as Cl2)]	[4 (as Cl2)]	0.67	0.33–1.25	1.4	1.3–1.5	1.8	1.7–2.1	1.01	0.42–1.5	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2016	TT	NA	NA	NA	1.2	1.0–1.7	NA	NA	NA	NA	No	Various natural and man-made sources
Fluoride (ppm)	2015	2.0	1	0.1	ND–0.14	0.08[1]	ND–0.16[1]	ND[1]	NA[1]	0.18	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	No	Erosion of natural deposits
Haloacetic Acids[4] (ppb)	2014	60	NA	ND	NA	39[1]	32–48[1]	57[1]	34–79[1]	2.1	NA	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2016	45	45	0.45	ND–0.45	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)	2014	80	NA	ND	NA	38[1]	33–41[1]	50[1]	39–59[1]	1.8	NA	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2016	TT	NA	NA	NA	0.30	0.04–0.30	0.14	0.012–0.14	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	100	NA	NA	NA	No	Soil runoff

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	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	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2016	[4.0 (as Cl2)]	[4 (as Cl2)]	0.82	0.56–1.5	1.5	1.3–1.8	1.6	1.4–1.6	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2016	TT	NA	NA	NA	1.3	1.0–1.7	1.3	0.8–2.0	No	Various natural and man-made sources
Fluoride (ppm)	2015	2.0	1	ND	NA	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)	3.6	NA	ND[2]	NA[2]	8.1[1]	ND–16.1[1]	No	Erosion of natural deposits
Haloacetic Acids[4] (ppb)	2014	60	NA	13[1]	NA[1]	45[1]	29–69[1]	21[1]	17–25[1]	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2016	45	45	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)	2014	80	NA	58[1]	NA[1]	50[1]	45–67[1]	35[1]	31–39[1]	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2016	TT	NA	NA	NA	0.14	0.05–0.14	0.15	0.04–0.15	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	100	NA	No	Soil runoff

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Sonora AMOUNT DETECTED	Sonora RANGE LOW-HIGH	Tuolumne AMOUNT DETECTED	Tuolumne RANGE LOW-HIGH	Upper Basin AMOUNT DETECTED	Upper Basin RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2016	[4.0 (as Cl2)]	[4 (as Cl2)]	1.6	1.4–1.7	1.4	1.3–1.5	1.7	1.6–1.8	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2016	TT	NA	1.4	1–1.9	1.4	1.1–1.7	1.3	0.7–1.7	No	Various natural and man-made sources
Fluoride (ppm)	2015	2.0	1	ND[1]	NA[1]	ND[1]	NA[1]	0.07[1]	ND–0.16[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]	ND[2]	NA[2]	0.3	ND–1.5	No	Erosion of natural deposits
Haloacetic Acids[4] (ppb)	2014	60	NA	52[1]	27–69[1]	38[1]	28–52[1]	47[1]	27–62[1]	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2016	45	45	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)	2014	80	NA	61[1]	48–72[1]	50[1]	36–65[1]	46[1]	31–56[1]	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2016	TT	NA	0.22	0.04–0.22	0.28	0.03–0.28	0.34	0.04–0.34	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	100	NA	100	NA	100	NA	No	Soil runoff

REGULATED SUBSTANCES

				Wards Ferry			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2016	[4.0 (as Cl2)]	[4 (as Cl2)]	0.35	0.07–0.69	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2016	TT	NA	NA	NA	No	Various natural and man-made sources
Fluoride (ppm)	2015	2.0	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[3]	NA[3]	No	Erosion of natural deposits
Haloacetic Acids[4] (ppb)	2014	60	NA	ND	NA	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2016	45	45	3.1	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2014	80	NA	5.4	NA	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2016	TT	NA	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	NA	NA	No	Soil runoff

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

				Apple Valley		Cedar Ridge		Columbia/ Big Hill			
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)	2014	1.3	0.3	0.18	0/5	0.15	0/11	0.08	0/31	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2014	15	0.2	ND	0/5	ND	1/11	6.8	1/31	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

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

				Peaceful Pines		Phoenix Lake		Ponderosa			
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)	2014	1.3	0.3	ND	0/5	0.2	0/5	0.16[5]	0/10[5]	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2014	15	0.2	ND	0/5	ND	0/5	10[5]	1/10[5]	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

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

				Scenic View		Sonora		Tuolumne			
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)	2014	1.3	0.3	0.068[5]	0/10[5]	0.14[1]	0/31[1]	0.086[5]	0/10[5]	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2014	15	0.2	ND[5]	0/10[5]	ND[1]	0/31[1]	ND[5]	1/10[5]	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

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)	Upper Basin: Amount Detected (90th%tile)	Upper Basin: Sites Above AL/Total Sites	Wards Ferry: Amount Detected (90th%tile)	Wards Ferry: Sites Above AL/Total Sites	Violation	Typical Source
Copper (ppm)	2014	1.3	0.3	0.15[5]	0/40[5]	1.07[5]	1/5[5]	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2014	15	0.2	3[5]	2/40[5]	ND[5]	0/5[5]	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)	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	Exceedance	Typical Source
Iron (ppb)	2015	300	NS	307	ND–920	550[1]	ND–1,100[1]	ND[1]	NA[1]	ND	NA	Yes	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2015	50	NS	37	ND–58	75.5[1]	11–140[1]	ND[1]	NA[1]	64	NA	Yes	Leaching from natural deposits
Sulfate (ppm)	2015	500	NS	9	4–14	3[1]	ND–5.8[1]	ND[1]	NA[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]	9[1]	ND–17[1]	16[1]	NA[1]	Yes	Leaching from natural deposits
Sulfate (ppm)	2015	500	NS	2.8	NA	ND[1]	NA[1]	<1	NA	ND[1]	NA[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	4.1[1]	NA[1]	2[1]	ND–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

ADDITIONAL SUBSTANCES

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	Scenic View: Amount Detected	Scenic View: Range Low-High
Sodium (ppm)	2015	12	12–12	5[1]	4–5.6[1]	5.6[1]	5.5–5.7[1]	15	NA	16	NA	5.1[1]	NA[1]	7.6[1]	NA[1]
Hardness (ppm)	2015	177	130–220	70[1]	9–130[1]	9.8[1]	9.6–10[1]	81	NA	300	NA	9.7[1]	NA	13[1]	NA

ADDITIONAL SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	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
Sodium (ppm)	2015	4.9[1]	NA[1]	5[1]	NA[1]	8[1]	4–11[1]	9.5	NA
Hardness (ppm)	2015	14[1]	NA	14[1]	NA	36[1]	11–77[1]	150	NA

UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3) - SONORA[5]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Chlorate (ppb)	2014	425	ND–670
Chromium VI [Hexavalent Chromium] (ppb)	2014	0.04895	0.038–0.09
Molybdenum (ppb)	2014	0.04	ND–3.9
Strontium (ppb)	2014	53	30–99
Vanadium (ppb)	2014	0.2651	ND–1.3

[1] Sampled in 2016.
[2] Sampled in 2014.
[3] Sampled in 2010.
[4] Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
[5] 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.
[5] Sampled in 2015.
[5] Sampled in 2013.
[6] 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.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant that, 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.