Annual

WATER QUALITY REPORT

Reporting Year 2013

Presented By
Tuolumne Utilities District

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

There When You Need Us

Tuolumne Utilities District (TUD) is proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. We will be facing many challenges this summer as the drought continues. The District remains dedicated to continue to deliver to you quality drinking water that meets all state and federal standards. The District still requests that you aim to reduce your water use by 50% until the water supply conditions improve. 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 our water users. Thank you for being a customer of Tuolumne Utilities District and for allowing us to continue providing you with quality drinking water.

To better assist you with the information provided in this report, please visit the TUD Web site at www.tudwater.com to view which water treatment plant serves your area. If you have any questions related to your drinking water, please call Don Perkins, Water Superintendent, at (209) 532-5536, extension 554.

Community Participation

You are invited to attend our regularly scheduled Board meetings held on the second Tuesday of each month beginning at 2:00 pm and the fourth Tuesday of each month, beginning at 5:30 pm in the Tuolumne Utilities District boardroom, at 18885 Nugget Boulevard, Sonora. 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.

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 groundwater wells. The District comprises 17 water service areas, 14 surface water treatment plants, and 22 active wells.

Approximately 96% of TUD's annual water needs are met with surface water; the other 4% is met with groundwater either as a primary source or a backup source. In 2012 the Sonora-Jamestown System supplied water to the Cuesta Center-Lambert Lakes System and supplemental water to the East Sonora and Mono Village Systems.

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 California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department 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, which are by-products of industrial processes and petroleum production, and which 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.

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 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/safewater/lead.

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. Further, 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 www.nrdc.org/water/drinking/bw/exesum.asp.

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.

Source Water Assessment

An assessment of the drinking water sources for all TUD water systems was completed in 2002-2003. 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, CA 93704.

TipTopTap

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's screen as they could be pieces of plastic from the hot water heater's dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet's 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/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 filters!)

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 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.

Iron and manganese were found at levels that exceed the secondary MCLs (SMCLs) of 300 ppb and 50 ppb, respectively. These SMCLs were set to protect you against unpleasant aesthetic effects such as color, taste, odor, and the staining of plumbing fixtures and clothing while washing. Since violating these SMCLs does not pose a risk to public health, the state allows the affected community to decide whether or not to treat or remove it. The high iron and manganese levels come from our wells that are mainly used as back-up sources normally used during the annual ditch outage which is approximately seven days a year.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Apple Valley AMOUNT DETECTED (RANGE)	Big Hill AMOUNT DETECTED (RANGE)	Cedar Ridge AMOUNT DETECTED (RANGE)	Columbia/Gibbs AMOUNT DETECTED (RANGE)	Crystal Falls/Willow Springs AMOUNT DETECTED (RANGE)	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2013	[4.0 (as Cl2)]	[4 (as Cl2)]	0.98 (0.05–1.54)	1.4 (1.3–1.5)	1.3 (1.1–1.5)	1.7 (1.6–1.8)	1.6 (1.4–1.7)	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2013	TT	NA	NA	NA	1.7 (1.3–2.3)	NA	1.8 (1.2–2.4)	No	Various natural and man-made sources
Fluoride (ppm)	2012	2.0	1	0.2 (0.13–0.2)	ND[1]	0.12[1] (ND–0.23)	ND[1]	0.09[1] (ND–0.2)	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2006	15	(0)	0.2 (ND–2.5)	ND[2]	0.7 (ND–1.38)	0.75[2] (ND–1.5)	0.44 (ND–2.3)	No	Erosion of natural deposits
Haloacetic Acids–Stage 1 (ppb)	2012	60	NA	ND	41[1] (39–46)	29.5[1] (28–34)	46.6[1] (44–60)	44.5[1] (45–49)	No	By-product of drinking water disinfection
Haloacetic Acids–Stage 2 (ppb)	2013	60	NA	NA	37	24	34 (32–36)	32.5 (28–37)	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2013	45	45	2 (ND–3)	ND	ND	ND	ND	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2012	80	NA	3.5	53.3[1] (45–59)	30.3[1] (29–33)	57[1] (60–70)	50.5[1] (45–59)	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	NA	56	24	37 (36–38)	41.5 (36–47)	No	By-product of drinking water disinfection
Turbidity[6] (NTU)	2013	TT	NA	NA	0.13 (0.07–0.13)	0.2 (0.05–0.2)	0.14 (0.07–0.14)	0.22 (0.05–0.22)	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT	NA	NA	100	100	100	100	No	Soil runoff

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Cuesta Center/Lambert Lakes AMOUNT DETECTED (RANGE)	East Sonora AMOUNT DETECTED (RANGE)	Mono Village AMOUNT DETECTED (RANGE)	Monte Grande/Curtis Creek AMOUNT DETECTED (RANGE)	Peaceful Pines AMOUNT DETECTED (RANGE)	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2013	[4.0 (as Cl2)]	[4 (as Cl2)]	0.97 (0.78–1.25)	0.97 (0.7–1.34)	1.7 (1.6–1.9)	1.6 (1.4–1.9)	0.73 (0.33–1.12)	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2013	TT	NA	2 (1.6–2.5)	NA	2 (1.6–2.5)	NA	NA	No	Various natural and man-made sources
Fluoride (ppm)	2012	2.0	1	ND	ND	ND[1]	ND[1]	0.23	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2006	15	(0)	ND	2.7[2] (ND–3.7)	0.84[2] (ND–2)	ND[2]	1.08[2]	No	Erosion of natural deposits
Haloacetic Acids–Stage 1 (ppb)	2012	60	NA	12.3[1] (12–21)	41[1] (25–49)	37.5[1] (25–51)	47.8[1] (44–66)	3	No	By-product of drinking water disinfection
Haloacetic Acids–Stage 2 (ppb)	2013	60	NA	9.6	21	23	35	NA	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2013	45	45	ND	4.6 (ND–9.1)	ND	ND	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2012	80	NA	47.8[1] (42–60)	52.3[1] (53–57)	50.3[1] (52–57)	58[1] (52–71)	2.7	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	41	21	41	44	NA	No	By-product of drinking water disinfection
Turbidity[6] (NTU)	2013	TT	NA	0.2 (0.06–0.2)	0.2 (0.06–0.2)	0.2 (0.06–0.2)	0.17 (0.07–0.17)	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT	NA	100	100	100	99.3	NA	No	Soil runoff

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Phoenix Lake AMOUNT DETECTED (RANGE)	Ponderosa AMOUNT DETECTED (RANGE)	Scenic View AMOUNT DETECTED (RANGE)	Sonora/Jamestown AMOUNT DETECTED (RANGE)	Tuolumne AMOUNT DETECTED (RANGE)	Upper Basin AMOUNT DETECTED (RANGE)	Wards Ferry AMOUNT DETECTED (RANGE)	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2013	[4.0 (as Cl2)]	[4 (as Cl2)]	0.77 (0.47–1.15)	1.5 (1.3–2.1)	1.6 (1.5–1.8)	1.7 (1.6–1.9)	1.5 (1.3–1.9)	1.8 (1.6–1.9)	0.51 (0.27–0.89)	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2013	TT	NA	NA	1.9 (1.3–6.0)	2.1 (1.4–2.8)	2 (1.6–2.5)	2 (1.5–2.4)	1.8 (1.3–2.4)	NA	No	Various natural and man-made sources
Fluoride (ppm)	2012	2.0	1	0.16	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2006	15	(0)	2 (1.4–3.04)	ND[2]	9[3] (ND–24)	ND[2]	ND[2]	0.88[2] (ND–4.25)	ND[4]	No	Erosion of natural deposits
Haloacetic Acids–Stage 1 (ppb)	2012	60	NA	12	34.3[1] (34–43)	23[1] (17–32)	29.3[1] (21–53)	33[1] (33–40)	40.8[1] (39–45)	ND	No	By-product of drinking water disinfection
Haloacetic Acids–Stage 2 (ppb)	2013	60	NA	NA[5]	32	20	30.5 (28–34)	21	29.5 (24–35)	NA	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2013	45	45	ND	ND	ND	ND	ND	ND	13	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2012	80	NA	36	42.3[1] (41–56)	35.5[1] (38–39)	46.4[1] (39–68)	45.8[1] (36–57)	33[1] (29–40)	4	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	NA	43	27	40 (38–41)	43	27 (26–28)	NA	No	By-product of drinking water disinfection
Turbidity[6] (NTU)	2013	TT	NA	NA	0.14 (0.06–0.14)	0.14 (0.07–0.14)	0.2 (0.06–0.2)	0.3 (0.05–0.3)	0.28 (0.05–0.28)	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT	NA	NA	100	99.1	100	100	100	NA	No	Soil runoff

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)	Apple Valley 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Big Hill 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Cedar Ridge 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Columbia/Gibbs 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Crystal Falls/ Willow Springs 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Cuesta Center/ Lambert Lakes 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	East Sonora 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Mono Village 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Monte Grande/ Curtis Creek 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0.3	0.535 (0/5)	0.0014 (0/10)	0.084 (0/10)	0.11 (0/20)	0.18[1] (0/20)	0.19 (0/5)	0.18 (0/5)	0.092[1] (0/10)	0.17 (0/10)	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2011	15	0.2	1.3 (0/5)	ND (1/10)	4.9 (1/10)	4 (1/20)	ND[1] (1/20)	7.9 (0/5)	1.2 (0/5)	ND[1] (0/10)	ND (1/10)	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)	Peaceful Pines 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Phoenix Lake 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Ponderosa 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Scenic View 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Sonora/ Jamestown 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Tuolumne 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Upper Basin 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	Wards Ferry 90TH PERCENTILE (SITES ABOVE AL/ TOTAL)	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0.3	0.034 (0/5)	0.34 (0/5)	0.11[5] (0/10)	0.09[5] (0/10)	0.21[1] (0/31)	0.082[5] (0/10)	0.09 (0/10)	0.42[5] (0/5)	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2011	15	0.2	1.1 (0/5)	2.5 (0/5)	ND[5] (1/10)	ND[5] (0/10)	ND[1] (1/31)	6.8[5] (0/10)	9 (1/10)	ND[5] (0/5)	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	Apple Valley AMOUNT DETECTED (RANGE)	Big Hill AMOUNT DETECTED (RANGE)	Cedar Ridge AMOUNT DETECTED (RANGE)	Columbia/Gibbs AMOUNT DETECTED (RANGE)	Crystal Falls/Willow Springs AMOUNT DETECTED (RANGE)	Cuesta Center/ Lambert Lakes AMOUNT DETECTED (RANGE)	East Sonora AMOUNT DETECTED (RANGE)	Mono Village AMOUNT DETECTED (RANGE)	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2012	300	50 (0–150)	ND[1]	650[1] (ND–1300)	ND[1]	480[1] (ND–1700)	ND[1]	ND[1]	ND[1]	Yes	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2012	50	16 (0–48)	ND[1]	81[1] (12–150)	ND[1]	80[1] (ND–240)	10[1] (ND–23)	11.5[1] (ND–23)	ND[1]	Yes	Leaching from natural deposits
Sulfate (ppm)	2012	500	0.0084 (0.005–0.013)	ND[1]	3.6[1] (ND–7.1)	ND[1]	2.6[1] (ND–6)	3.5[1]	5.5[1] (ND–11)	9.6[1]	No	Runoff/leaching from natural deposits; industrial wastes
Zinc (ppm)	2013	5.0	ND	ND	0.0285 (ND–0.057)	ND	0.158 (ND–0.51)	ND	ND	ND	No	Runoff/leaching from natural deposits; industrial wastes

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	Monte Grande/ Curtis Creek AMOUNT DETECTED (RANGE)	Peaceful Pines AMOUNT DETECTED (RANGE)	Phoenix Lake AMOUNT DETECTED (RANGE)	Ponderosa AMOUNT DETECTED (RANGE)	Scenic View AMOUNT DETECTED (RANGE)	Sonora/ Jamestown AMOUNT DETECTED (RANGE)	Tuolumne AMOUNT DETECTED (RANGE)	Upper Basin AMOUNT DETECTED (RANGE)	Wards Ferry AMOUNT DETECTED (RANGE)	EXCEEDANCE	TYPICAL SOURCE
Iron (ppb)	2012	300	ND[1]	ND	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND	Yes	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2012	50	ND[1]	23[1]	ND[1]	ND[1]	29[1]	10[1]	11[1]	ND[1]	ND	Yes	Leaching from natural deposits
Sulfate (ppm)	2012	500	ND[1]	4.2	4.1	ND[1]	ND[1]	3.5[1]	ND[1]	ND[1]	3.5	No	Runoff/leaching from natural deposits; industrial wastes
Zinc (ppm)	2013	5.0	ND	ND[5]	ND[5]	ND	ND	ND	ND	ND	ND[5]	No	Runoff/leaching from natural deposits; industrial wastes

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Apple Valley AMOUNT DETECTED (RANGE)	Big Hill AMOUNT DETECTED (RANGE)	Cedar Ridge AMOUNT DETECTED (RANGE)	Columbia/Gibbs AMOUNT DETECTED (RANGE)	Crystal Falls/Willow Springs AMOUNT DETECTED (RANGE)	Cuesta Center/Lambert Lakes AMOUNT DETECTED (RANGE)	East Sonora AMOUNT DETECTED (RANGE)	Mono Village AMOUNT DETECTED (RANGE)	Monte Grande/Curtis Creek AMOUNT DETECTED (RANGE)
Chlorate (ppb)	2013	NA	NA	NA	NA	NA	256 (ND–530)	256 (ND–530)	256 (ND–530)	NA
Hardness (ppm)	2012	163 (130–190)	11[1]	65[1] (10–120)	11[1]	41[1] (10–71)	20[1]	70[1] (20–120)	90[1]	11[1]
Hexavalent Chromium (ppb)	2013	NA	NA	NA	NA	NA	0.06 (ND–0.077)	0.06 (ND–0.077)	0.06 (ND–0.077)	NA
Sodium (ppm)	2012	13.3 (13–14)	7.2[1]	4.7[1] (3.8–5.5)	6.9[1]	7.5[1] (4.7–10)	5.4[1]	8.2[1] (5.4–11)	13[1]	5.6[1]
Strotium (ppb)	2013	NA	NA	NA	NA	NA	33 (30–35)	33 (30–35)	33 (30–35)	NA
Vanadium (ppb)	2013	NA	NA	NA	NA	NA	1 (ND–1.3)	1 (ND–1.3)	1 (ND–1.3)	NA

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Peaceful Pines AMOUNT DETECTED (RANGE)	Phoenix Lake AMOUNT DETECTED (RANGE)	Ponderosa AMOUNT DETECTED (RANGE)	Scenic View AMOUNT DETECTED (RANGE)	Sonora/Jamestown AMOUNT DETECTED (RANGE)	Tuolumne AMOUNT DETECTED (RANGE)	Upper Basin AMOUNT DETECTED (RANGE)	Wards Ferry AMOUNT DETECTED (RANGE)
Chlorate (ppb)	2013	NA	NA	NA	NA	256 (ND–530)	NA	NA	NA
Hardness (ppm)	2012	73	270	11[1]	12[1]	20[1]	12[1]	9.9[1]	150
Hexavalent Chromium (ppb)	2013	NA	NA	NA	NA	0.06 (ND–0.077)	NA	NA	NA
Sodium (ppm)	2012	14	16	5.6[1]	8[1]	5.4[1]	7[1]	5.4[1]	9.9
Strotium (ppb)	2013	NA	NA	NA	NA	33 (30–35)	NA	NA	NA
Vanadium (ppb)	2013	NA	NA	NA	NA	1.0 (ND–1.3)	NA	NA	NA

[1] Sampled in 2013.
[2] Sampled in 2005.
[3] Sampled in 2009.
[4] Sampled in 2010.
[5] Sampled in 2012.
[6] 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 system.

Definitions

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

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.