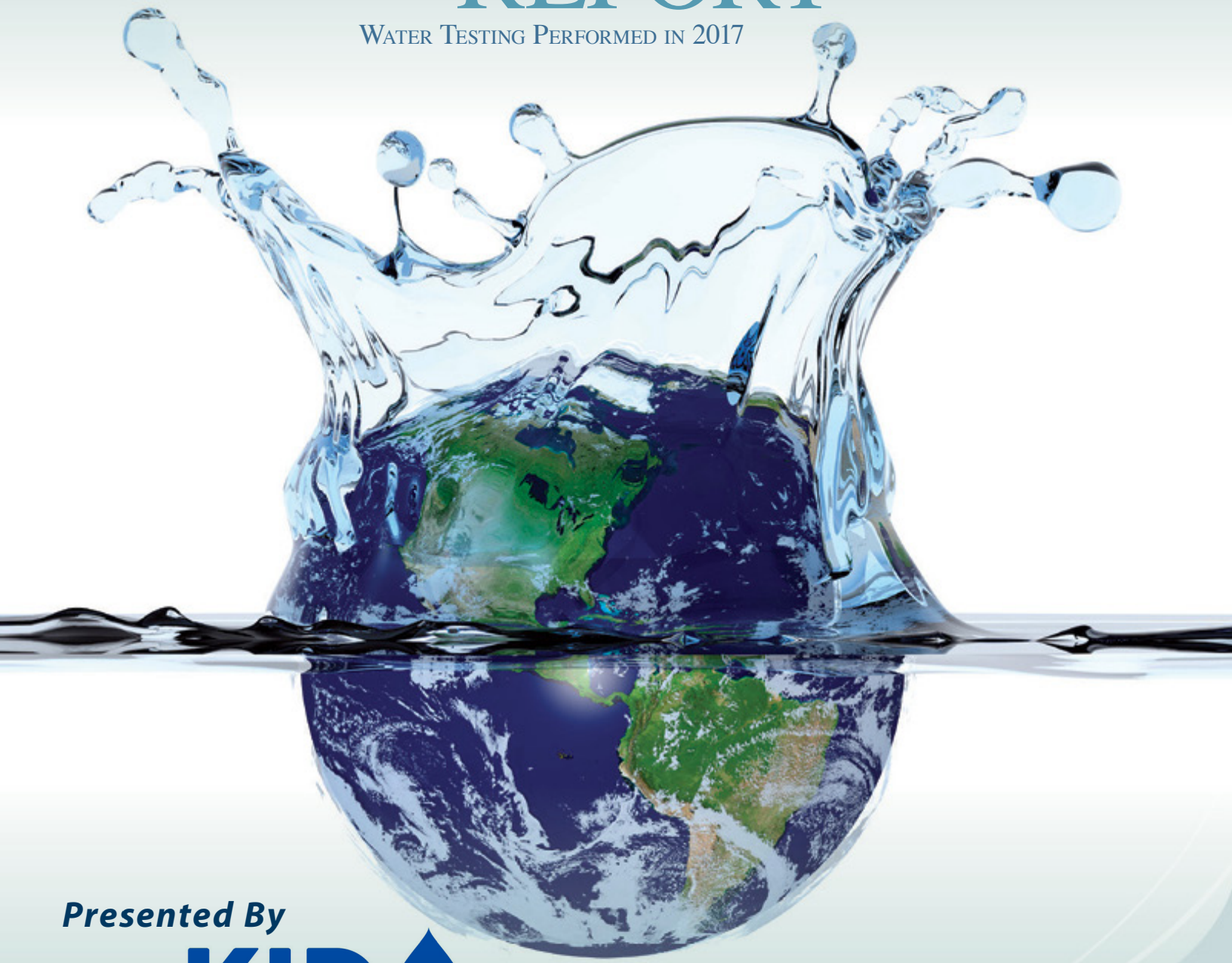
ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017



Presented By

KID

Kearns Improvement District

Este es un informe valioso sobre su agua potable, si usted desea esta información en español nuestra oficina dispone del personal para atenderle.

PWS ID#: 18011

Quality First

Once again we are pleased to present our annual water quality report. As in years past, we are 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. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

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:

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

- 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.

What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. For more information on backflow prevention contact the Safe Drinking Water Hotline at (800) 426-4791.

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.

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.

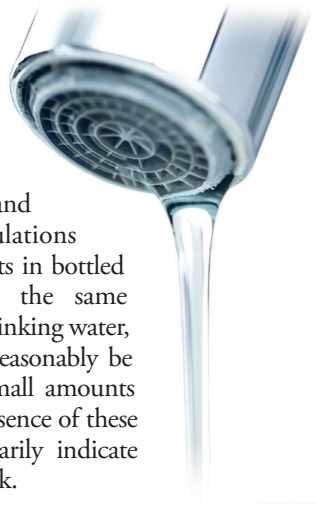
For a detailed discussion on the NRDC study results, check out their Web site at https://goo.gl/Jxb6xG.

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 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.

Substances That Could Be in Water



To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban storm-water runoff, and septic systems;

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

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call John Lawson, Operations Specialist, at (801) 968 1011.

Community Participation

You are invited to attend our monthly Board of Trustee meetings. We generally meet the second Tuesday of each month, beginning at 5:30 p.m. at the Kearns Improvement District office, 5350 West 5400 South, Kearns, UT.

Source Water Assessment

A Source Water Protection Plan (SWPP) is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. Kearns Improvement District has a susceptibility rating of low.

JVWCD also has a Drinking Water Source Protection Plan available for review. Please call (801) 565-4300 if you have any questions or would like to review the plan.

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/lead.

Where Does My Water Come From?

The Kearns Improvement District buys 90 percent of the water delivered to our customers from the Jordan Valley Water Conservancy District (JVWCD), our wholesale water provider. Water sources include Deer Creek Reservoir and local mountain springs and wells. The water is treated at the Jordan Valley Water Treatment Plant and the Southeast Regional Water Treatment Plant. The remaining 10 percent of the water is delivered through 12 wells located in the Kearns area. Kearns Improvement District staff operate and maintain these wells.

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. Remember that detecting a substance does not necessarily mean the water is unsafe to drink; 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

				Kearns Improvement District		Jordan Valley Water Conservative District			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2016	15	0	5.5	-0.1–5.5	14[1]	-1.2–14[1]	No	Erosion of natural deposits
Arsenic (ppb)	2017	10	0	4.8	0.7–4.8	3	ND–3	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2016	2	2	0.115	0.047–0.115	0.111[1]	0.015–0.111[1]	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters[2] (pCi/L)	2016	50	0	8.5	0.5–8.5	32[1]	1.1–32[1]	No	Decay of natural and man-made deposits
Chlorine Dioxide (ppb)	2017	[800]	[800]	NA	NA	35	ND–35	No	Water additive used to control microbes
Chlorine (ppm)	2017	[4]	[4]	0.94	0.02–0.94	1.34	0.02–1.34	No	Water additive used to control microbes
Chlorite (ppm)	2017	1	0.8	NA	NA	0.61	0.18–0.61	No	By-product of drinking water disinfection
Chromium (ppb)	2017	100	100	NA	NA	4.84	ND–4.84	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Radium (pCi/L)	2016	5	0	1.4	0.12–1.4	3.11[1]	0.03–3.11[1]	No	Decay of natural and man-made deposits
Cyanide (ppb)	2016	200	200	0.002	NA	0.002[1]	ND–0.002[1]	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2017	4	4	0.758	0.366–0.758	1.37	0.104–1.37	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2017	60	NA	49.3	ND–49.3	61.16	ND–61.16	No	By-product of drinking water disinfection
Nitrate (ppm)	2017	10	10	3.74	0.2–3.74	3.12	0.144–3.12	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2016	50	50	0.9	0.0013–0.9	3.1[1]	ND–3.1[1]	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes][3] (ppb)	2017	80	NA	81.7	20.8–81.7	87.5	ND–87.5	No	By-product of drinking water disinfection
Tetrachloroethylene (ppb)	2016	5	0	1.0	NA	NA	NA	No	Discharge from factories and dry cleaners
Total Organic Carbon (ppm)	2013	TT	NA	2.3	ND–2.3	2.59[1]	ND–2.59[1]	No	Naturally present in the environment
Turbidity[4] (NTU)	2016	TT	NA	0.55	0.08–0.55	0.43[1]	0.07–0.43[1]	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2017	TT	NA	NA	NA	100%	NA	No	Soil runoff
Uranium (ppb)	2017	30	0	NA	NA	9.5	ND–9.5	No	Erosion of natural deposits

Tap Water Samples Collected for Lead and Copper Analyses from Sample Sites throughout the Community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	Kearns Improvement District: AMOUNT DETECTED (90TH%TILE)	Kearns Improvement District: SITES ABOVE AL/ TOTAL SITES	Jordan Valley Water Conservative District: AMOUNT DETECTED (90TH%TILE)	Jordan Valley Water Conservative District: SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2016	1.3	1.3	0.2130	0/30	0.235[1]	0/30[1]	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2016	15	0	1.9	0/30	2.1[1]	1/30[1]	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	Kearns Improvement District: AMOUNT DETECTED	Kearns Improvement District: RANGE LOW-HIGH	Jordan Valley Water Conservative District: AMOUNT DETECTED	Jordan Valley Water Conservative District: RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2017	200	NA	NA	NA	10.91	ND–10.91	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2014	250	NA	270	NA	170[1]	10–170[1]	No	Runoff/leaching from natural deposits
Color (Units)	2017	15	NA	NA	NA	0.98	0.49–0.98	No	Naturally occurring organic materials
Iron (ppb)	2014	300	NA	110	NA	157[1]	ND–157[1]	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2017	50	NA	NA	NA	5	ND–5	No	Leaching from natural deposits
pH (Units)	2014	6.5–8.5	NA	7.5	NA	8.4[1]	6.86–8.4[1]	No	Naturally occurring
Sulfate (ppm)	2016	250	NA	56	42–56	100[1]	6–100[1]	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2016	500	NA	864	220–864	688	40–688	No	Runoff/leaching from natural deposits
Zinc (ppm)	2017	5	NA	NA	NA	0.002	ND–0.002	No	Runoff/leaching from natural deposits; Industrial wastes

OTHER SUBSTANCES (JORDAN VALLEY WATER CONSERVATIVE DISTRICT)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Bis (2-ethylhexyl) phthalate (ppb)	2017	6	0	0.81	ND–0.81	No	Discharge from rubber and chemical factories
Dissolved Organic Carbon (ppb)	2017	TT	NE	2.56	ND–2.56	No	Naturally occurring
HAA6 (ppb)	2017	UR	NE	65.32	6.71–65.32	No	By-product of drinking water disinfection
HPC	2017	500	0	112	0–112	No	Used to measure the overall bacteriological quality of drinking water
Radon (pCi/L)	2017	NE	NE	-1	-9–-1	No	Naturally occurring in soil

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Kearns Improvement District AMOUNT DETECTED	Kearns Improvement District RANGE LOW-HIGH	Jordan Valley Water Conservative District AMOUNT DETECTED	Jordan Valley Water Conservative District RANGE LOW-HIGH	TYPICAL SOURCE
Alkalinity–Bicarbonate [HCO3] (ppm)	2014	242	NA	NA	NA	Naturally occurring
Alkalinity–CO2 (ppm)	2014	180	NA	NA	NA	NA
Alkalinity–Total [as CaCO3] (ppm)	2014	198	NA	NA	NA	NA
Boron (ppm)	2014	0.09	NA	NA	NA	NA
Bromodichloromethane (ppb)	2016	17.20	2.62–17.20	6.37[1]	ND–6.37[1]	Disinfection by-products
Bromoform (ppb)	2017	1.70	ND–1.70	NA	NA	Disinfection by-products
Calcium, Total (ppm)	2014	127	NA	NA	NA	NA
Chlorate (ppb)	2014	138.225	<20–138.225	225.2	ND–225.2	NA
Chloroform (ppb)	2017	67.40	5.45–67.40	28	ND–28	Disinfection by-products
Chromium (Total) (ppb)	2014	8.4	0.223–8.4	NA	NA	NA
Chromium-6 (ppb)	2014	2.912	0.222–2.912	4.212	ND–4.212	NA
Dibromochloromethane (ppb)	2017	6.71	1.47–6.71	2	ND–2	Disinfection by-products
Conductivity (µmho/cm)	2014	1330	NA	NA	NA	NA
Hardness, Total, as CaCO3 (ppm)	2014	478	NA	NA	NA	NA
Magnesium, Total (ppm)	2014	39.0	NA	NA	NA	NA
Molybdenum (ppb)	2014	2.713	< 1–2.713	2.07[1]	ND–2.07[1]	By-product of copper and tungsten mining
Nickel (ppb)	2017	NA	NA	2.23	ND–2.23	Erosion of natural deposits
Phosphate, ortho as P (ppm)	2014	0.03	NA	NA	NA	NA
Potassium, Total (ppm)	2014	6.1	NA	NA	NA	NA
Sodium (ppm)	2016	73.4	17.0–73.4	79.9[1]	10–79.9[1]	Erosion of natural deposits
Silica, (as SiO2) Total (ppm)	2014	39.8	NA	NA	NA	NA
Strontium (ppb)	2014	643.658	277.538–643.658	972.6	80.7–972.6	NA
Vanadium (ppb)	2014	12.357	0.69–12.357	1.48[1]	ND–1.48[1]	Naturally occurring

[1] Sampled in 2017.
[2] The MCL for beta particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.
[3] High result is not a violation, violation is determined on annual location average.
[4] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of disinfectants.

Definitions

(micromhos per centimeter): A unit expressing the amount of electrical conductivity of a solution.

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which 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. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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 allow for a margin of safety.

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.

NE: Not estabilished.

(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.

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).

SMCL (Secondary Maximum Contaminant Level): SMCLs are established to regulate the aesthetics of drinking water like appearance, taste and odor.

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