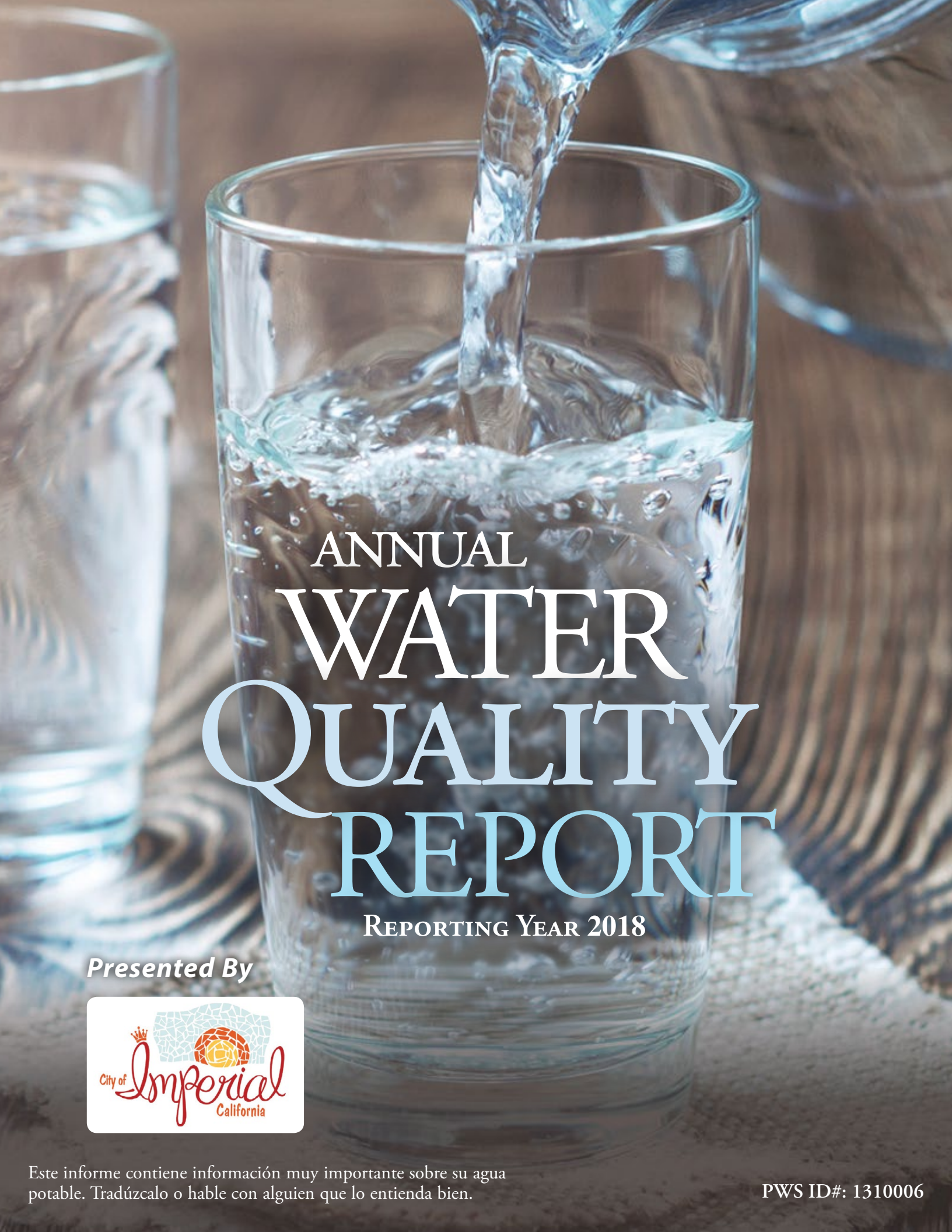

ANNUAL WATER QUALITY REPORT

Reporting Year 2018

Presented By

City of Imperial California

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

PWS ID#: 1310006

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. 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.

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

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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

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.

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 wastebasket.

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.

Where Does My Water Come From?

The City of Imperial receives its water supply from the Colorado River via the All-American Canal and the facilities of the Imperial Irrigation District. The city currently provides an average of 2.6 million gallons per day and an average of 961 million gallons of water annually to its citizens. At the present time, the City of Imperial meets all applicable State Water Resources Control Board Division of Drinking Water and U.S. Environmental Protection Agency (U.S. EPA) domestic water quality standards. The raw water we receive from the All-American Canal exceeded standards for aluminum and iron. Water quality data for the reporting period ending December 31, 2018, are presented in this report. Other recent water quality information is available for review at our office upon request.

About Our Violations

On May 30, 2018, from 5:46 to 6:31 p.m., we were in violation of the treatment technique (TT) for turbidity. The filtered water had a turbidity spike of greater than 2.0 NTU due to the installation of piping for the new granular activated carbon columns. The spike occurred when the plant was put back into operation. The Division of Drinking Water was notified of the exceedance. To mitigate further turbidity problems during a plant shutdown, valves should be isolated so water is not being pumped to the finished water reservoir. When putting the plant back into operation after the turbidity has reached normal operating parameters, the isolation valves are opened, and the water is pumped to the reservoir. Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

During the first and second quarters of 2018, a total trihalomethanes (TTHMs) exceedance occurred at the 14th and O Streets sample port. Upon being notified by the laboratory, we reported the results to the Division of Drinking Water and alerted the public. TTHMs form when chlorine disinfectant reacts with organic matter in the water. Granular activated carbon columns were installed to help remove organic matter from the water to reduce the formation of TTHMs. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems and may have an increased risk of getting cancer.

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 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.

City Council Meeting

You are invited to participate in our City Council meetings the first and third Wednesday of each month at 7 p.m. in the Imperial Council Chambers, 200 West Ninth Street, Imperial, California.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to several ponds, which allows for a greater holding capacity for the water treatment plant. The water is then pumped to a settling basin that has flocculator mixers, where a polymer and a coagulant are added. The addition of these substances causes small particles (called floc) to adhere to one another, making them heavy enough to settle into a basin, from which sediment is removed. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller suspended particles are removed, turbidity disappears and clear water emerges.

Chlorine is added after filtration to disinfect the water to prevent the development of bacteria. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste. Next, a portion of the water is pumped into four granular activated carbon columns to reduce total organic carbon (TOC), which is one of the precursors of total trihalomethane (TTHM) formation in the water. Finally, the combined water is sent to the 2-million-gallon finished water tank. From there the water is pumped into the distribution system for your home or business.

QUESTIONS?

For more information about this report or any questions relating to your drinking water, or to voice your concerns about your drinking water, please call Robert Emmett, Chief Water Plant Operator, at (760) 355-2155.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not 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 fourth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2018	1	2	0.13	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2018	2.0	1	0.29	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
HAA5 (ppb)	2018	60	NA	16	5.7–34.9	No	By-product of drinking water disinfection
Nitrate [as nitrogen] (ppm)	2018	10	10	0.41	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2018	80	NA	64	32–111	Yes	By-product of drinking water disinfection
Turbidity (NTU)	2018	0.3	NA	0.08	0.04–5.1	Yes	Soil runoff

SUBSTANCE (UNIT OF MEASURE)	MCL	PHG	LEVEL FOUND	RANGE	SAMPLE DATE	VIOLATION	TYPICAL SOURCE
Turbidity	TT=1 NTU TT=95% of samples <0.3 NTU	NA	5.1 98.3%	NA NA	2018	Yes	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)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	NO. OF SCHOOLS REQUESTING LEAD TESTING	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2016	1.3	0.3	0.43	0/30	0	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2016	15	0.2	<0.002	0/30	0	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2018	200	NS	670	NA	Yes[1]	Erosion of natural deposits; residual from some surface water treatment processes
Color (Units)	2018	15	NS	7.5	NA	No	Naturally occurring organic materials
Iron (ppb)	2018	300	NS	710	NA	Yes[2]	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2018	50	NS	NA	NA	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2018	1,600	NS	1,000	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2018	500	NS	240	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2018	1,000	NS	620	NA	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2018	5	NS	2.5	NA	No	Soil runoff

OTHER UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Alkalinity, Total (ppm)	2018	140	NA	Leaching from natural deposits
Bicarbonate (ppm)	2018	170	NA	Leaching from natural deposits
Boron (ppb)	2018	160	NA	Leaching from natural deposits
Calcium (ppm)	2018	88	NA	Leaching from natural deposits
Hardness, Total [as CaCO3] (ppm)	2018	340	NA	Leaching from natural deposits
Magnesium (ppm)	2018	28	NA	Leaching from natural deposits
pH (Units)	2018	8.2	NA	Leaching from natural deposits
Potassium (ppm)	2018	5.2	NA	Leaching from natural deposits
Sodium (ppm)	2018	100	NA	Leaching from natural deposits
Total Anions (ppm)	2018	10.5	NA	Naturally occurring
Total Cations (ppm)	2018	11.2	NA	Naturally occurring
Vanadium (ppb)	2018	3.4	NA	Leaching from natural deposits

[1] Aluminum can come from erosion of natural deposit residuals and from some surface water treatment processes such as aluminum sulfate which is used as a coagulant in the settling operation for the plant.

[2] Iron leaches from natural deposits and possibly from industrial waste. Certain layers of rocks may contains small amount of natural occurring iron that may leach into a river or stream flow.

VIOLATION OF TTHMs MCL

TTHMs: Site 3 - MCL violation 1st, 2nd, 3rd quarter. Site 8 - MCL violation on the 3rd and 4th quarter

VIOLATION	EXPLANATION	DURATION	ACTIONS TAKEN TO CORRECT THE VIOLATION	HEALTH EFFECTS LANGUAGE
Total Trihalomethanes (TTHMs) Maximum Contaminant Level (MCL) Violation	The 3-quarter average at the TTHM monitoring site exceeded the MCL of 80 ppb.	The violation is for the 3rd quarter of 2017.	We are investigating changes in the operation of the distribution system to reduce TTHM levels to below the MCL.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems and may have an increased risk of getting cancer.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

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

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.

NS: No standard.

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.