ANNUAL WATER QUALITY REPORT

Reporting Year 2021

Presented By

City of Imperial California

PWS ID#: 1310006

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

City of Imperial
420 South Imperial Avenue
Imperial, CA 92251

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, 2021. 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 all hours—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 City of Imperial receives its water supply from the Colorado River via the All-American Canal and the facilities of the Imperial Irrigation District. Our treatment process includes sedimentation, coagulation, flocculation, filtration, and disinfection. The city currently provides an average of 2.6 million gallons per day and 961 million gallons of water annually to its citizens. At the present time, the City of Imperial meets all applicable State Board, Division of Drinking Water and U.S. EPA 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, 2021, is enclosed. Additional 2021 water quality information is available for review upon request.

Testing for *Cryptosporidium*

Monitoring of our source water indicates zero presence of *Cryptosporidium*, a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100-percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

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.

Important Health Information

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. You may also flush your tap for 30 seconds to two minutes before using water for drinking or cooking. Additional information is available from the U.S. EPA Safe Drinking Water Hotline at (800) 426-4791 or epa.gov/safewater/lead.

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.

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 holding ponds before being 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, which prevents 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, which is one of the precursors of total trihalomethane formation in water. Finally, the combined water is sent to a two-million-gallon finished water tank. From there, the water is pumped into the distribution system and to your home or business.

City Council Meeting

You are invited to participate in our city council meetings. We meet the first and third Wednesday of each month beginning at 7:00 p.m. at the Imperial Council Chambers, 200 West Ninth Street, Imperial.

Source Water Assessment

A source water assessment plan (SWAP) is now available at our office. If you would like to review the SWAP, please feel free to contact our office during regular office hours.

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.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2021	1	2	0.11	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2021	2.0	1	0.41	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as N (ppm)	2021	10	10	ND	NA	No	Runoff and leaching from fertilizer use, leaching from septic tanks and sewage; erosion of natural deposts.
TTHMs [total trihalomethanes]–Stage 1[1]	2021	80	NA	ND	29-79	No	By-product of drinking water disinfection

SECONDARY SUBSTANCES

				Unregulated And Other Substances Central Main Canal		Primary Standards Central Main Canal			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Aluminum (ppb)	2021	200	NS	100	NA	NA	NA	No	Erosion of natural deposits; residual from some surface water treatment processes
Color (units)	2021	15	NS	20	NA	NA	NA	No	Naturally occurring organic materials
Iron (ppb)	2021	300	NS	110	NA	NA	NA	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2021	50	NS	ND	NA	NA[2]	NA[2]	No	Leaching from natural deposits
Specific Conductance (µmho/cm)	2021	1,600	NS	1,200	NA	1,100	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2021	500	NS	280	NA	280[2]	NA[2]	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2021	1,000	NS	760	NA	NA	NA	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2021	5	NS	12	NA	NA	NA	Yes	Soil runoff

UNREGULATED SUBSTANCES[3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Boron (ppb)	2021	160	NA	Leaching from natural deposits
Hardness, Total [as CaCO3] (ppm)	2021	320	NA	Leaching from natural deposits
Sodium (ppm)	2021	120	NA	Leaching from natural deposits
Vanadium (ppb)	2021	3	NA	Leaching from natural deposits

OTHER UNREGULATED SUBSTANCES[3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Alkalinity, Total (ppm)	2021	160	NA	Leaching from natural deposits
Bicarbonate (ppm)	2021	200	NA	Leaching from natural deposits
Calcium (ppm)	2021	82	NA	Leaching from natural deposits
Magnesium (ppm)	2021	29	NA	Leaching from natural deposits
pH (units)	2021	8.44	NA	Leaching from natural deposits
Potassium (ppm)	2021	4.9	NA	Leaching from natural deposits
Total Anions (ppm)	2021	12.5	NA	Naturally occurring
Total Cations (ppm)	2021	11.8	NA	Naturally occurring

[1] Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.
[2] Sampled in 2018.
[3] Unregulated contaminant monitoring helps U.S. EPA and the State Board determine where certain contaminants occur and whether the contaminants need to be regulated.

CONTAMINANT (CCR UNITS)	MCL	PHG (OR MCLG)	AVERAGE	RANGE	SAMPLE DATE	VIOLATION	TYPICAL SOURCE
TTHM (µg/L)	80	N/A	57	28–79	2021	No	Byproduct of drinking water disinfection

LEAD MONITORING

Lead Action Level (90th percentile)	0.015 mg/L
Lead DLR	5 µg/L
AL in CCR units	15 µg/L

AUG 2019 LEAD RESULTS (µg/L)	SITE 1	SITE 2	SITE 3	SITE 4	SITE 5	SITE 6	SITE 7	SITE 8	SITE 9	SITE 10
Lab Reported Results	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.6
Results Converted per section 64678 (c)	0	0	0	0	0	0	0	0	0	8.6

CONTAMINANT (CCR UNITS)	MCL	PHG	AVERAGE	RANGE SAMPLE DATE	SAMPLE DATE	VIOLATION	NUMBER OF SCHOOLS REQUESTING LEAD SAMPLING	TYPICAL SOURCE
Lead (µg/L)	AL=15	0.2	0.29	30 sites sampled; 0 sites over AL	2019	No	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

TTHM MCL	0.080 mg/L
MCL in CCR units	80µg/L

2021 TTHM RESULTS (µg/L)

LOCATION	1ST QTR	2ND QTR	3RD QTR	4TH QTR
Site 1	63	79	79	59
Site 1 LRAA[1]	72	67	71	70
Site 2	38	54	65	28
Site 2 LRAA[1]	44	42	47	46
Site 3	51	75	75	56
Site 3 LRAA[1]	69	64	64	64
Site 4	34	56	64	30
Site 4 LRAA[1]	45	44	48	46

[1] LRAA for Quarters 1 to 3 are based on results from previous quarters not reported on this table.

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.

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.

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).

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