

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020

***Presented By***





## Quality First

Once again, we are pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2020. 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 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.

## 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 for the surface water consist of “complete” treatment including sedimentation, coagulation, flocculation, filtration, and disinfection. 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 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, 2020, is enclosed. Recent 2020 water quality information is available for review upon request.

## Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.

## 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](http://www.epa.gov/safewater/lead).

## Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to a several ponds, which allows for holding capacity for the water treatment plant. The water is then pumped to a settling basin with 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 (GAC) 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 two-million-gallon finished water tank. From there, the water is pumped into the distribution system for your home or business.

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## City Council Meetings

You are invited to participate in our City Council Meetings. We meet the 1st and 3rd Wednesdays of each month beginning at 7 p.m. at the Imperial Council Chambers, 200 West 9th Street, Imperial, CA 92251.

### 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, 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.

### Testing for *Cryptosporidium*

Monitoring of our source water indicates the presence of *Cryptosporidium* at levels of 0/None.

*Cryptosporidium* is 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 doctors 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.

### 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>.



**QUESTIONS?** For more information about this report, or for 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. Also, the water we deliver must meet specific health standards. Here, we show only 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 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 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. If you would like more information on the U.S. EPA's Unregulated Contaminant 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
<b>Barium</b> (ppm)	2020	1	2	0.11	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
<b>Fluoride</b> (ppm)	2020	2.0	1	0.41	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Nitrate [as nitrogen]</b> (ppm)	2020	10	10	NA	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> <sup>1</sup>	2020	80	NA	ND	NA	No	By-product of drinking water disinfection

  

SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
<b>Aluminum</b> (ppb)	2020	200	NS	160	NA	No	Erosion of natural deposits; residual from some surface water treatment processes
<b>Color</b> (Units)	2020	15	NS	7.5	NA	No	Naturally occurring organic materials
<b>Iron</b> (ppb)	2020	300	NS	160	NA	No	Leaching from natural deposits; industrial wastes
<b>Manganese</b> (ppb)	2020	50	NS	ND	NA	No	Leaching from natural deposits
<b>Specific Conductance</b> (µmho/cm)	2020	1,600	NS	1100	NA	No	Substances that form ions when in water; seawater influence
<b>Sulfate</b> (ppm)	2020	500	NS	280	NA	No	Runoff/leaching from natural deposits; industrial wastes
<b>Total Dissolved Solids</b> (ppm)	2020	1,000	NS	690	NA	No	Runoff/leaching from natural deposits
<b>Turbidity</b> (NTU)	2020	5	NS	5.7	NA	Yes	Soil runoff

## UNREGULATED AND OTHER SUBSTANCES <sup>2</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Alkalinity, Total (ppm)	2020	150	NA	Leaching from natural deposits
Bicarbonate (ppm)	2020	180	NA	Leaching from natural deposits
Boron (ppb)	2020	160	NA	Leaching from natural deposits
Calcium (ppm)	2020	88	NA	Leaching from natural deposits
Hardness, Total [as CaCO <sub>3</sub> ] (ppm)	2020	350	NA	Leaching from natural deposits
Magnesium (ppm)	2020	31	NA	Leaching from natural deposits
pH (Units)	2020	8.4	NA	Leaching from natural deposits
Potassium (ppm)	2020	5.4	NA	Leaching from natural deposits
Sodium (ppm)	2020	120	NA	Leaching from natural deposits
Total Anions (ppm)	2020	12.2	NA	Naturally occurring
Total Cations (ppm)	2020	12.3	NA	Naturally occurring
Vanadium (ppb)	2020	3.4	NA	Leaching from natural deposits

<sup>1</sup>Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

<sup>2</sup>Unregulated contaminant monitoring helps the U.S. EPA and the State Water Resources Control Board to 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	31–100	2020	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
Lab Reported Results	AL=15	0.2	0.29	30 sites sampled; 0 sites over AL	2019	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

2020 TTHM RESULTS (µg/L)				
LOCATION	1ST QTR	2ND QTR	3RD QTR	4TH QTR
Site 1	41	100	62	64
Site 1 LRAA <sup>1</sup>	63	69	61	67
Site 2	36	61	45	31
Site 2 LRAA <sup>1</sup>	41	44	42	43
Site 3	61	94	76	54
Site 3 LRAA <sup>1</sup>	61	70	66	71
Site 4	38	63	48	36
Site 4 LRAA <sup>1</sup>	46	48	45	46

<sup>1</sup>LRAA for Quarters 1 to 3 are based on results from previous quarters not reported on this table.

## Treatment Technique Violation

VIOLATION TYPE	EXPLANATION	DATE AND LENGTH OF VIOLATION	STEPS TAKEN TO CORRECT VIOLATION	HEALTH EFFECTS
TTHMs violation in the second quarter of 2020 for exceeding the 80 ppb limit.	Two of the four sample sites exceeded the 80 ppb limit.	Samples were collected on 05/13/2020 and are taken every quarter.	Cycling more water through the booster station reservoirs to reduce TTHMs levels.	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

## Definitions

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