



Presented By



Reporting Year 2022

ANNUAL WATER QUALITY REPORT

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

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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.

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



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;

Pesticides and Herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, discharges, oil and gas production, mining, or farming;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater systems, agricultural livestock operations, and wildlife;

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

include:

Contaminants that may be present in source water that water poses a health risk.

presence of contaminants does not necessarily indicate at least small amounts of some contaminants. The bottled water, may reasonably be expected to contain contaminants in bottled water that provide the same protection for public health. Drinking water, including certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration 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 and California law also establish limits for regulations and California law also establish limits for bottled water (both tap water and from human activity).

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.

Substances That Could Be in Water

Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water and the use of chlorine are probably the most significant public health advancements in human history.

Benefits of Chlorination

- Potent Germicide Reduction of many disease-causing microorganisms in drinking water to almost immeasurable levels.
- Taste and Odor Reduction of many disagreeable tastes and odors from foul-smelling algae secretions, sulfides, and decaying vegetation.
- Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.
- Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

City Council Meeting

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

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.

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, 2022. 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.



Testing for Cryptosporidium

Monitoring of our source water indicates no *Cryptosporidium* above equipment detection limits. *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 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.

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>.

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 Board, Division of Drinking Water, and 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, 2019, is included in this report. Water quality information for previous years is available for review upon request.

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 two 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 www.epa.gov/safewater/lead.

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] (MCLG)	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Unregulated and Other Substances, Central Main Canal				110	NA	NA	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Unregulated and Other Substances, Central Main Canal				0.37	NA	NA	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer
Unregulated and Other Substances, Central Main Canal				ND	NA	NA	NA	No	By-product of drinking water disinfection and aluminum factories
Unregulated and Other Substances, Central Main Canal				2022					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.
Unregulated and Other Substances, Central Main Canal				2022					The highest level of a contaminant that is allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Unregulated and Other Substances, Central Main Canal				2022					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.

SECONDARY SUBSTANCES									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL (MCLG)	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Unregulated and Other Substances, Central Main Canal				200	NS	67	NA	No	Erosion of natural deposits; residual from some
Unregulated and Other Substances, Central Main Canal				300	NS	ND	NA	No	Leaching from natural deposits; industrial wastes
Unregulated and Other Substances, Central Main Canal				50	NS	ND	NA	No	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				1,600	NS	1,100	NA	No	Substances that form ions when in water; seawater influence
Unregulated and Other Substances, Central Main Canal				500	NS	240	NA	No	Runoff/leaching from natural deposits; industrial wastes
Unregulated and Other Substances, Central Main Canal				1,000	NS	600	NA	No	Runoff/leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				2022					Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Unregulated and Other Substances, Central Main Canal				2022					Soil runoff

UNREGULATED SUBSTANCES ¹									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	Board to determine where certain contaminants occur and whether the contaminants need to be regulated.
Unregulated and Other Substances, Central Main Canal				150	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				180	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				180	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				71	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				280	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				24.9	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				8.1	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				4.3	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				94	NA	NA	NA	NA	Leaching from natural deposits
Unregulated and Other Substances, Central Main Canal				2022					Naturally occurring
Unregulated and Other Substances, Central Main Canal				9.8	NA	NA	NA	NA	Naturally occurring
Unregulated and Other Substances, Central Main Canal				2022					Total Cations (ppm)
Unregulated and Other Substances, Central Main Canal				2022					Total Anions (ppm)
Unregulated and Other Substances, Central Main Canal				2022					Total Cations (ppm)
Unregulated and Other Substances, Central Main Canal				2022					Vanadium (ppb)



Water Treatment Process

Our treatment process for surface water consists of sedimentation, coagulation, flocculation, filtration, and disinfection. First, raw water is drawn from our water source and sent to several ponds, which provide holding capacity for the water treatment plant. The water is then pumped to a settling basin that has flocculator mixers, where a polymer and 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 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 trihalomethane formation in the 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 to your home or business.

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 hours at (760) 355-2155.

TTHM MCL		2022 TTHM RESULTS (µg/L)			
MCL in CGR units	80µg/L	1ST QTR	2ND QTR	3RD QTR	4TH QTR
Site 1 LRAA ¹	64	72	75	64	72
Site 2 LRAA ¹	40	41	46	41	41
Site 3 LRAA ¹	65	68	63	65	61
Site 4 LRAA ¹	46	40	43	46	45
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 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.

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.

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

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