ANNUAL WATER QUALITY REPORT

Water Testing Performed in 2018

Presented By

THE CITY OF SAN FERNANDO

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

PWS ID#: 1910143

Our Commitment Continues

The City of San Fernando Water Department is proud to present the 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.

In news about 2018, we activated one additional water well, which will enable us to keep up with the City's water demands.

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

Thank you for allowing us the opportunity to serve you.

Important Health Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

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.

Where Does My Water Come From?

The City of San Fernando, incorporated in 1911, provides water service to an area of approximately 2.42 square miles with an approximate population of 24,714 residents. Annually, the city serves approximately 1 billion gallons of water to our customers. San Fernando residents are fortunate to have three sources of water: (1) Local groundwater wells that draw water from the Sylmar basin; (2) Imported water from the Metropolitan Water District (MWD) emergency connection, which delivers surface water from the Joseph Jensen Plant; and (3) A connection from the City of Los Angeles distribution system that is used only in extreme emergencies. In 2018, the City of San Fernando received 100% of its water supply from local groundwater.

Community Participation

You are invited to participate at our City Council meetings and voice your concerns about your drinking water. The City Council meets every first and third Monday of each month beginning at 6 p.m. at City Hall, 117 Macneil Street, San Fernando, CA.

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.

QUESTIONS?

If you should have any questions relating to your drinking water, or for additional information regarding this report, you may contact Public Works Superintendent Tony Salazar at (818) 898-1294.

Source Water Assessment

In August 2002, the California Department of Public Health, Drinking Water Field Operations Branch, Central District, conducted a Drinking Water Source Assessment for the City of San Fernando Water Division. The purpose of the assessment was to determine the vulnerability of our water sources to possible contaminating activities. Here are the results for wells 2A, 3, 4A, and 7A.

SOURCE	VULNERABILITY ASSOCIATED WITH DETECTED CONTAMINANTS	VULNERABILITY NOT ASSOCIATED WITH ANY DETECTED CONTAMINANTS
Well 2A	Housing-high density; Parks; Septic systems-high density; Apartments and condominiums	Sewer collection systems
Well 3	Housing-high density; Parks; Septic systems-high density; apartments and condominiums	Sewer collection systems, Automobile gas stations, Dry cleaners
Well 4A	Sewer collection systems; Dry cleaners	None
Well 7A	Housing-high density; Septic systems-high density; Apartments and condominiums	Automobile gas stations

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 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.

How Is My Water Treated and Purified?

We use two treatment processes. The first one consists of some basic steps. First, groundwater is drawn from the Sylmar basin; then chlorine is injected in a sodium hypochlorite solution of 0.8% for disinfection (as a precaution against any bacteria that may be present). The city's wells utilize an on-site chlorine generation (OSG) system, in which the 0.8% of sodium hypochlorite solution is used as a disinfectant agent. Through an electrolytic process, the OSG operates automatically, requiring only salt, water (softened), and electricity to produce the sodium hypochlorite solution. We carefully monitor on a daily basis the amount of chlorine injected at each well site. Water is then pumped to reservoirs and the distribution system, where it flows by gravity through the distribution system into your home or business. Likewise, chlorine residuals are monitored from the distribution system daily in order to ensure a reliable supply of drinking water.

The second treatment uses a proprietary ion-exchange process for removal of nitrate anions from the water. A self-contained unit is installed in-line between a well discharge and the distribution system. Nitrate removal is accomplished using ion-exchange resin, regenerated with sodium chloride (brine) solution. Sodium chloride is the only treatment chemical used for this system function.

Nitrate monitoring is also conducted on a daily basis.

Test Results

Our water is monitored for many different substances on a very strict sampling schedule. Also, the water we deliver must meet specific state and federal health standards. The information in the data tables shows substances that were detected between January 1 and December 31, 2018. Additional information for past substances that were detected have been included, ranging from 2014 to 2017. Remember that detecting a substance does not necessarily indicate that 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.

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	0.147	0.130–0.170	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium [Total] (ppb)	2018	50	(100)	3.3	3.1–3.6	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2018	2.0	1	0.31	0.22–0.36	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Free Chlorine Residual (ppm)	2018	[4.0 (as Cl2)]	[4 (as Cl2)]	1.62	0.5–2.70	No	Drinking water disinfectant added for treatment
Haloacetic Acids (ppb)	2018	60	NA	0.2	ND–2.8	No	By-product of drinking water disinfection
Nitrate [as nitrogen] (ppm)	2018	10	10	7.8	7.1–8.3	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2018	80	NA	7.4	3.3–20	No	By-product of drinking water disinfection
Tetrachloroethylene [PCE] (ppb)	2018	5	0.06	0.71	0.59–0.82	No	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Total Coliform Bacteria [federal Revised Total Coliform Rule] (# Positive Samples)	2018	TT	NA	1	NA	No	Naturally present in the environment
Total Coliform Bacteria [state Total Coliform Rule] (# of Positive Samples)	2018	1 positive monthly sample	(0)	1	NA	No	Naturally present in the environment
Turbidity (NTU)	2018	TT	NA	0.13	ND–0.20	No	Soil runoff
Uranium (pCi/L)	2018	20	0.43	1.0	1.0–1.0	No	Erosion of natural deposits

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 %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.3	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	ND	0/30	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
Odor–Threshold (Units)	2018	3	NS	1.8	ND–2.0	No	Naturally occurring organic materials
Total Dissolved Solids (ppm)	2018	1,000	NS	383	360–400	No	Runoff/leaching from natural deposits
Turbidity (Units)	2018	5	NS	0.13	ND–0.20	No	Soil runoff

UNREGULATED SUBSTANCES [1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Boron (ppb)	2014	160	160–160	Runoff/leaching from natural deposits; industrial wastes
Bromodichloromethane (ppb)	2018	1.7	ND–5.9	By-product of drinking water chlorination
Bromoform (ppb)	2018	1.2	ND–3.7	By-product of drinking water chlorination
Chloroform (ppb)	2018	1.1	ND–3.8	By-product of drinking water disinfection
Chromium VI [Hexavalent Chromium] (ppb)	2018	3.54	3.29–3.88	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Dibromochloromethane (ppm)	2018	2.5	1.0–6.8	By-product of drinking water chlorination
Hardness, Total [as CaCO3] (ppm)	2018	247	210–270	Erosion; leaching of natural deposits
Sodium (ppm)	2018	29	27–32	Erosion; leaching of natural deposits; sea water influence

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 that, if exceeded, triggers treatment or other requirements that a water system must follow.

µmho/cm (micromhos 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

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.

pCi/L (picocuries per liter): A measure of radioactivity.

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.

OTHER UNREGULATED SUBSTANCES [1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Aggressiveness Index (Units)	2018	12.5	12–13	Elemental balance in water; affected by temperature, other factors
Alkalinity (Total) (as CaCO3) (ppm)	2018	180	170–200	Naturally occurring
Bicarbonate (as HCO3) (ppm)	2018	220	210–240	Naturally occurring
Calcium (Ca) (ppm)	2018	69	64–72	Erosion; leaching of natural deposits
Carbon Dioxide (ppb)	2015	5,800	5,400–6,200	Naturally occurring
Carbonate (as CO3) (ppm)	2018	0.8	ND–2.5	Naturally occurring
Chlorate (ppb)	2015	133	130–140	By-product of drinking water chlorination; industrial processes
Chloride (ppm)	2018	28	24–31	Runoff/leaching from natural deposits; seawater influence
Chlorodifluoromethane (HCFC-22) (ppb)	2015	380	360–400	NA
Dibromoacetic Acid (ppb)	2018	0.2	ND–2.4	By-product of drinking water chlorination
Dichloroacetic Acid (ppb)	2018	0.1	ND–1.4	By-product of drinking water chlorination
Hardness (Total) as CaCO3 (ppm)	2018	247	210–270	Erosion; leaching of natural deposits
Iron (Fe) (ppb)	2018	43	ND–130	Leaching from natural deposits; industrial wastes
Langelier Index @ 60 degrees C. (Units)	2018	1.18	0.85–1.5	NA
Magnesium (Mg) (ppm)	2018	18	12–21	Erosion; leaching of natural deposits
Molybdenum (ppb)	2015	4	4–4	NA
Nitrate + Nitrite as Nitrogen (N) (ppm)	2018	7.9	7.3–8.4	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH (Units)	2018	7.9	7.7–8.2	Naturally occurring
Potassium (K) (ppm)	2018	4.0	3.4–4.5	Erosion; leaching of natural deposits
Specific Conductance (E.C.) (µmho/cm)	2018	613	570–640	Substances that form ions when in water; seawater influence
Strontium (ppb)	2015	517	500–530	NA
Sulfate (SO4) (ppm)	2018	53	46–62	Runoff/leaching from natural deposits; industrial wastes
Vanadium (ppb)	2015	7	7–8	Naturally occurring; industrial waste discharge

[1] 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.