

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 Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must 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.

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) 898-1293.

City of San Fernando
117 Macneil Street
San Fernando, CA 91340

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

Para obtener una copia en español por favor llame al (818) 898-1293 o visite nuestro sitio de internet www.sfcity.org

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Annual WATER QUALITY REPORT

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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 concerned about lead in your water. Information on lead in drinking water for drinking or cooking. If you are using water for drinking or cooking, 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 www.epa.gov/safewater/lead.

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 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 www.epa.gov/safewater/lead.

Important Health Information
Nitrate in drinking water at levels above 45 mg/L 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 45 mg/L 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.

Source	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

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." The following are the results for wells 2A, 3, 4A, and 7A.

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 23,728 residents. Annually, the city serves 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), 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 2011, the City of San Fernando received 99.5% of its water supply from local groundwater and .5% imported water was purchased from MWD in 2011.

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.

Meeting the Challenge
We are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. 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, our customers. 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 share with us your thoughts or concerns about the information in this report. Should you ever have any questions or concerns, we are always available to assist you.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, general physical, general minerals, or synthetic organic contaminants, or disinfection by-product. The tables below show only those contaminants that were detected in the water.

REGULATED SUBSTANCES									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL (MRDL)	PHG (MCLG) (MRDLG)	San Fernando		MWD		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Aluminum ¹ (ppb)	2011	1,000	600	ND	NA	86	61–99	No	Erosion of natural deposits; residue from some surface water treatment processes
Bromate (ppb)	2011	10	0.1	NA	NA	5.9	ND–8.8	No	By-product of drinking water disinfection
Fluoride ² (ppm)	2011	2.0	1	0.29	0.20–0.36	0.8	0.7–0.9	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Beta Particle Activity (pCi/L)	2011	50	(0)	NA	NA	ND	ND–4	No	Decay of natural and man-made deposits
Haloacetic Acids (Five) (HAA5) (ppb)	2011	60	NA	NA	NA	2.4	1.8–3.4	No	By-product of drinking water chlorination.
Nitrate [as nitrate] ³ (ppm)	2011	45	45	28	18–38	0.4	0.4–0.5	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	5.0	0.6–18.0	28	20–47	No	By-product of drinking water disinfection
Tetrachloroethylene [PCE] (ppb)	2011	5	0.06	0.30	ND–0.59	ND	NA	No	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Total Chromium (ppb)	2011	50	(100)	36	ND–40	NA	NA	No	Discharge from steel and pulp mills; erosion of natural deposits
Total Coliform Bacteria [Total Coliform Rule] (# positive samples)	2011	No more than 1 positive monthly sample	(0)	1	NA	NA	NA	No	Naturally present in the environment
Total Coliform Bacteria [Total Coliform Rule] ⁴ (% positive samples)	2011	More than 5.0% of monthly samples are positive	(0)	NA	NA	0.1	NA	No	Naturally present in the environment
Turbidity ⁵ (NTU)	2011	TT	NA	0.20	ND–0.20	0.09	0.03–0.09	No	Soil runoff
Uranium (pCi/L)	2011	20	0.43	NA	NA	1	ND–2	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community⁶

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper ¹ (ppm)	2011	1.3	0.3	0.32	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2011	15	0.2	0	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)	San Fernando		MWD		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Aluminum ¹ (ppb)	2011	200	NS	ND	NA	86	61–99	No	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	2011	500	NS	22	15–29	64	59–69	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2011	15	NS	ND	NA	1	1–1	No	Naturally occurring organic materials
Copper ¹ (ppm)	2011	1.0	NS	0.17	0.036–0.340	ND	NA	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Odor–Threshold (TON)	2011	3	NS	0.11	ND–1.00	2	2–2	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2011	1,600	NS	545	460–630	500	420–530	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2011	500	NS	55	49–61	56	54–58	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2011	1,000	NS	330	280–380	280	280–290	No	Runoff/leaching from natural deposits
Turbidity ⁵ (NTU)	2011	5	NS	0.10	ND–0.20	0.03	0.03–0.09	No	Soil runoff

UNREGULATED AND OTHER SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	San Fernando		MWD		TYPICAL SOURCE	
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Aggressiveness Index [AI] ⁷ (Units)	2011	12.5	12–13	12.0	12.0–12.0	Elemental balance in water; affected by temperature, other factors	
Alkalinity, Total [as CaCO ₃] (ppm)	2011	165	140–190	85	76–93	Naturally occurring	
Barium (ppb)	2011	170	170–170	ND	NA	Oil and metal refineries discharge; erosion of natural deposits	
Bicarbonate [as HCO ₃] (ppm)	2011	200	170–230	NA	NA	Naturally occurring	
Boron (ppb)	2011	NA	NA	190	190–190	Runoff/leaching from natural deposits; industrial wastes	
Calcium [Ca] (ppm)	2011	62	52–72	27	26–28	Erosion; leaching of natural deposits	
Carbon Dioxide (ppb)	2011	4,200	3,200–5,200	NA	NA	Naturally occurring	
Chlorate (ppb)	2011	NA	NA	50	ND–58	By-product of drinking water chlorination; industrial processes	
Chloride (ppm)	2011	22	15–29	64	59–69	Runoff/leaching from natural deposits; seawater influence	
Chromium VI [Hexavalent Chromium] (ppb)	2011	3.54	2.96–3.73	0.20	0.20–0.20	Industrial waste discharge; can also be naturally present	
Corrosivity [as Saturation Index] ⁸ (Units)	2011	NA	NA	0.20	0.18–0.23	Elemental balance in water; affected by temperature and other factors	
Hardness, Total [as CaCO ₃] (ppm)	2011	220	170–270	110	100–120	Erosion; leaching of natural deposits	
Magnesium [Mg] (ppm)	2011	10.99	0.97–21	12	12–12	Erosion; leaching of natural deposits	
N-Nitrosodimethylamine [NDMA] (ppt)	2011	NA	NA	7	ND–8	By-product of drinking water chloramination; industrial processes	
Nitrate + Nitrite as Nitrogen [N] (ppb)	2011	6,100	4,100–8,100	NA	NA	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
pH (Units)	2011	8.0	7.9–8.0	8.2	8.1–8.4	Naturally occurring	
Potassium (K) (ppm)	2011	4.0	3.6–4.4	2.7	2.7–2.7	Erosion; leaching of natural deposits	
Sodium (Na) (ppm)	2011	28.5	27–30	54	52–57	Erosion; leaching of natural deposits; sea water influence	
Sulfate (SO ₄) (ppm)	2011	55	49–61	56	54–58	Runoff/leaching from natural deposits; industrial wastes	
TOC (ppm)	2011	NA	NA	1.9	1.6–2.1	Various natural and man-made sources	
Vanadium (ppb)	2011	NA	NA	3.4	3.4–3.4	Naturally occurring; industrial waste discharge	

¹ Aluminum and copper have both primary and secondary standards.

² Metropolitan was in compliance with all provisions of the State's Fluoridation System Requirements.

³ State MCL is 45 ppm as nitrate, which is the equivalent of 10 ppm as Nitrogen.

⁴ Compliance is based on the combined distribution system sampling from all the treatment plants. In 2011, 8,014 samples were analyzed and two samples were positive for total coliforms. The MCL was not violated.

⁵ The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. Turbidity, a measure of the cloudiness of the water, is an indicator of treatment performance. The averages and ranges of turbidity shown in the Secondary Standards were based on the treatment plant effluent.

⁶ Lead and copper are regulated as a Treatment Technique under the Lead and Copper Rule, which requires water samples to be collected at the consumers' tap. If action levels are exceeded in more than 10% of the consumer tap samples, water systems must take steps to reduce these contaminants.

⁷ AI = (Aggressiveness Index): AI < 10.0 = Highly aggressive and very corrosive water; AI > 12.0 = Non-aggressive water; AI (10.0 - 11.9) = Moderately aggressive water.

⁸ Positive SI index = Non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI index = Corrosive; tendency to dissolve calcium carbonate.

Definitions

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.

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).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

TON (Threshold Odor Number): A measure of odor in water.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.