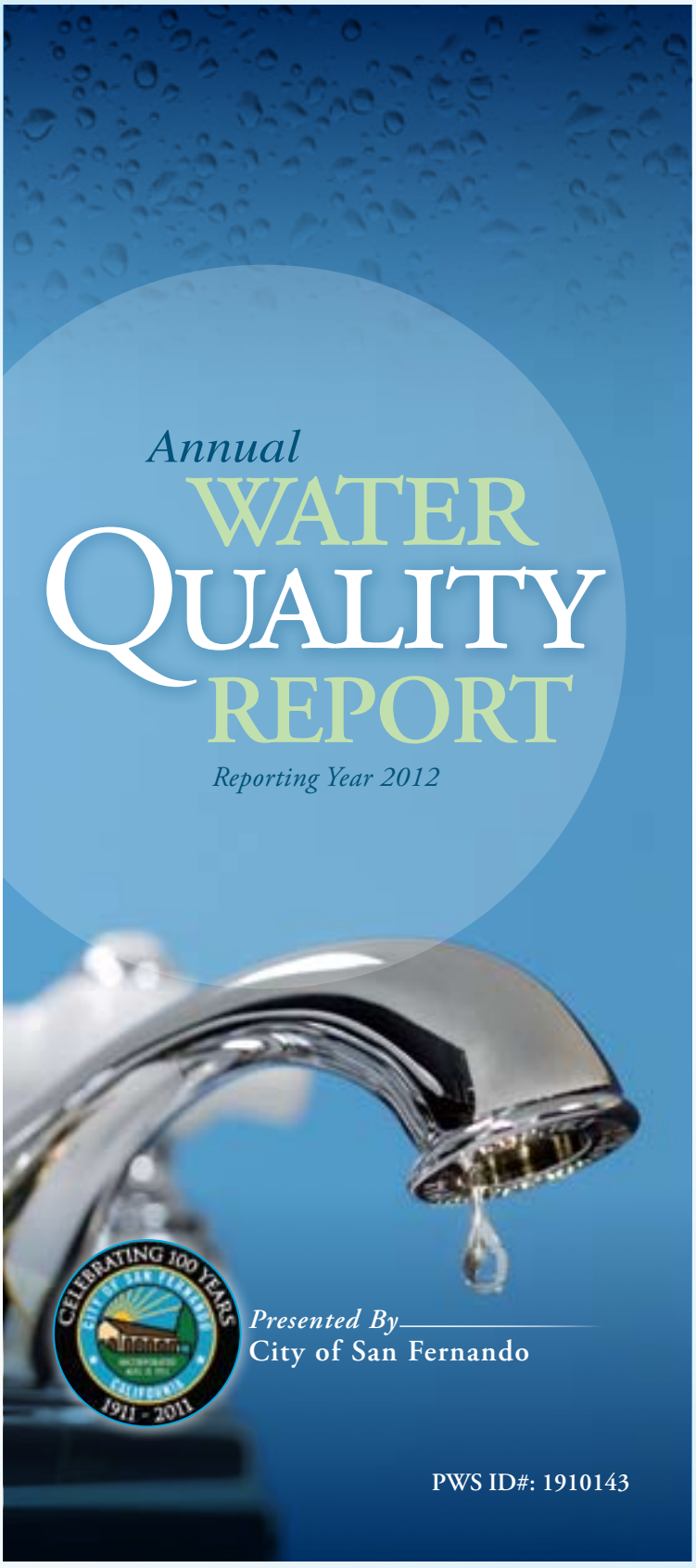
Annual
WATER
QUALITY
REPORT
Reporting Year 2012
CELEBRATING 100 YEARS
1911 - 2011
Presented By
City of San Fernando
PWS ID#: 1910143

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2012. 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 to assist you should you ever have any questions or concerns about your water.

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.

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 2012, the City of San Fernando received 97% of its water supply from local groundwater and 3% imported water was purchased from MWD.

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 California 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) 898-1294.

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. The following 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

How Is My Water Treated and Purified?

The treatment process 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). All of 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, 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.

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 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 or at www.epa.gov/safewater/lead.

Important Health Information

Nitrate in drinking water at levels above 45 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 45 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 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.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Metropolitan Water District tests their own water and those results are also listed below.

REGULATED SUBSTANCES

				San Fernando		MWD			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum[1] (ppb)	2012	1,000	600	NA	NA	83	60–110	No	Erosion of natural deposits; residue from some surface water treatment processes
Barium (ppb)	2012	1,000	2,000	135	100–170	ND	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Bromate[2] (ppb)	2012	10	0.1	NA	NA	5.2	3.7–6.9	No	By-product of drinking water disinfection
Chromium (ppb)	2012	50	(100)	3.56	3.4–4.0	ND	NA	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Gross Beta Particle Activity[3] (pCi/L)	2012	50	(0)	NA	NA	ND	ND–4	No	Decay of natural and man-made deposits
Fluoride (F) Natural-source (ppm)	2012	2.0	1	0.31	0.25–0.36	NA	NA	No	Erosion; leaching of natural deposits
Fluoride (F) Treatment-related[4] (ppm)	2012	2.0	1	NA	NA	0.8	0.7–0.8	No	Erosion of natural deposits; water additive that promotes strong teeth
Haloacetic Acids [HAA]–Stage 2[5] (ppb)	2012	60	NA	ND	NA	2.2	1.1–3.2	No	By-product of drinking water disinfection
Nitrate [as nitrate][6] (ppm)	2012	45	45	30	24–36	ND	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite as Nitrogen (N) (ppb)	2012	10,000	None	6,650	5,100–8,200	NA	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 2[7] (ppb)	2012	80	NA	ND	NA	11	8.0–19	No	By-product of drinking water disinfection
Tetrachloroethylene [PCE] (ppb)	2012	5	0.06	0.78	0.68–0.88	ND	NA	No	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Total Coliform Bacteria [Total Coliform Rule] (# positive samples)	2012	No more than 1 positive monthly sample	(0)	1	NA	NA	NA	No	Naturally present in the environment
Total Coliform Bacteria [Total Coliform Rule][8] (% positive samples)	2012	No more than 5.0% of monthly samples are positive	(0)	NA	NA	0.1	NA	No	Naturally present in the environment
Turbidity[9] (NTU)	2012	TT	NA	0.17	0.12–0.21	0.3	0.06–0.3	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2012	TT	NA	NA	NA	100	NA	No	Soil runoff
Uranium (pCi/L)	2012	20	0.43	NA	NA	1	ND–2	No	Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	San Fernando AMOUNT DETECTED	San Fernando RANGE LOW-HIGH	MWD AMOUNT DETECTED	MWD RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum[1] (ppb)	2012	200	NS	ND	NA	83	60–110	No	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	2012	500	NS	26	21–30	56	50–63	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2012	15	NS	ND	NA	2	1–2	No	Naturally occurring organic materials
Odor–Threshold (Units)	2012	3	NS	ND	NA	2	2–2	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2012	1,600	NS	560	500–620	440	400–500	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2012	500	NS	56	50–61	48	46–50	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2012	1,000	NS	280	180–380	260	240–280	No	Runoff/leaching from natural deposits
Turbidity (Units)	2012	5	NS	0.17	0.12–0.21	NA	NA	No	Soil runoff

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	San Fernando AMOUNT DETECTED	San Fernando RANGE LOW-HIGH	MWD AMOUNT DETECTED	MWD RANGE LOW-HIGH	TYPICAL SOURCE
Aggressiveness Index [AI] (Units)	2012	12	12–12	NA	NA	Elemental balance in water; affected by temperature, other factors
Alkalinity Total [as CaCO3] (ppm)	2012	165	150–180	79	72–93	Naturally occurring
Aluminum[1] (ppb)	2012	ND	NA	83	60–110	NA
Bicarbonate [as HCO3] (ppm)	2012	200	180–220	NA	NA	Naturally occurring
Boron (ppb)	2012	NA	NA	170	170–170	Runoff/leaching from natural deposits; industrial wastes
Calcium [Ca] (ppm)	2012	62	54–69	24	23–24	Erosion; leaching of natural deposits
Chromium VI [Hexavalent Chromium] (ppb)	2012	3.48	3.35–3.87	ND	NA	Industrial waste discharge; can also be naturally present
Corrosivity [as Aggressiveness Index][10] (Units)	2012	NA	NA	12.0	11.9–12.0	Elemental balance in water; affected by temperature, other factors
Corrosivity [as Saturation Index][11] (Units)	2012	NA	NA	0.20	0.19–0.22	Elemental balance in water; affected by temperature, other factors
Hardness (ppm)	2012	NA	NA	100	98–110	Erosion/leaching of natural deposits
Hardness Total [as CaCO3] (ppm)	2012	220	180–260	NA	NA	Erosion/leaching of natural deposits
Magnesium [Mg] (ppm)	2012	15	10–20	11	11–11	Erosion; leaching of natural deposits
N-Nitrosodimethylamine [NDMA][12] (ppt)	2012	NA	NA	ND–6.7	ND–2.0	By-product of drinking water chloramination; industrial processes
pH (Units)	2012	7.8	7.7–7.8	8.3	7.9–8.4	Naturally occurring
Potassium (K) (ppm)	2012	3.9	3.5–4.3	2.4	2.3–2.5	Erosion; leaching of natural deposits
Sodium (ppm)	2012	30	27–33	48	43–53	Erosion; leaching of natural deposits; sea water influence
TOC (ppm)	2012	NA	NA	1.9	1.7–2.1	Various natural and man-made sources

[1] Aluminum, copper, MTBE, and thiobencarb have both primary and secondary standards.
[2] Metropolitan used EPA method 326.0, which has a state DLR of 1.0 ppb. Compliance was based on the RAA.
[3] CDPH considers 50 pCi/L to be the level of concern for beta particles; the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ.
[4] Metropolitan was in compliance with all provisions of the state's Fluoridation System Requirements.
[5] State DLR is 1.0 ppb for each of the following: dichloroacetic acid, trichloroacetic acid, monobromoacetic acid; it's 2.0 ppb for monochloroacetic acid.
[6] State MCL is 45 ppm as nitrate, which is equivalent of 10 ppm as nitrogen.
[7] Metropolitan's reporting level is 0.5 ppb for each of the trihalomethanes (bromodichloromethane, bromoform, chloroform, and dibromochloromethane), which is lower than the state DLR of 1.0 ppb.
[8] Compliance is based on the combined distribution system sampling from all the treatment plants. In 2012, 8,037 samples were analyzed and six samples were positive for total coliforms. The MCL was not violated.
[9] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.
[10] AI of less than 10.0 = highly aggressive and very corrosive water; AI of greater than 12.0 = non-aggressive water; AI of 10.0–11.9 = moderately aggressive water.
[11] Positive SI index = non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI index = corrosive; tendency to dissolve calcium carbonate.
[12] Amount detected is from distribution system-wide. The range is from Jensen Plant.

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).

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