



FERN VALLEY WATER DISTRICT

Newsletter

NUMBER 52

JUNE 2013

CONSUMER CONFIDENCE REPORT *Monitoring Data & Test Results from Calendar Year 2012*

A message from the United States Environmental Protection Agency (USEPA) and California Department of Public Health (CDPH): In order to ensure that tap water is safe to drink, the USEPA and the CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The CDPH regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

While Fern Valley Water District (FVWD) works hard to be certain that our water is safe and pleasing for our customers, all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791.

This yearly report describes where your water comes from, what is in it, and how its quality compares with the regulatory standards set by the (CDPH).

OUR PRECIOUS WATER SUPPLY is a function of the amount of precipitation that falls locally in the watershed. The District produced a total of 50.21 million gallons of water from our surface water and groundwater supplies: Under licenses issued by the California State Water Resources Control Board, 44.44 million gallons or 84.8% of the water delivered to you last year was obtained from Strawberry and Tahquitz Creeks. These diversion sites are located at an elevation high above Fern Valley. We filter this water through our surface water treatment plant. The filtered water then enters a granular activated carbon adsorption facility, further removing a wide variety of potential contaminants. Chlorine disinfectant is added to protect you against microbial contaminants. A Source Water Assessment of FVWD's surface water supply was completed in 2012. A copy is available at the District office.

Groundwater supplies (Wells): When there is insufficient surface water supply, the District supplements your water supply from a combination of 11 vertical groundwater wells. Last year 6.77 million gallons or 15.2% of the water delivered to you was from wells. This deep well water is obtained from fractured rock, not from a large underground aquifer. An assessment of the drinking water sources for FVWD was completed in December 2002. The sources are most vulnerable to the following activities not associated with any detected contaminants: low density septic systems, campgrounds/recreational areas, and surface water streams. A copy of the complete assessment is available at the District office. You may also request a summary of the assessment be sent to you by contacting Office Manager, Jessica Priefer at (951) 659-2200.

The well water is aerated to remove carbon dioxide (CO₂), a corrosive gas naturally present in groundwater. The aeration process removes the CO₂, which in turn elevates the pH producing water that is less corrosive to the District's water system and your household plumbing. This reduces the risk of lead and copper from leaching into the water from your 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. Fern Valley Water District is 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 <http://www.epa.gov/safewater/lead>.

Contaminants that may be present in source water include:

- ❖ **Microbial contaminants**, such as viruses and bacteria, which 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 result from urban storm water 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 storm water 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 storm water runoff, agricultural application and septic systems.
- ❖ **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

Informational Statement

The sources of drinking water in 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. Water industry professionals are dedicated to removing any materials that might prove harmful to customers. FVWD uses effective, multi-barrier treatment processes to ensure our water continues to meet state and federal standards.

Some people who use water containing chlorine in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine in excess of the MRDL could experience stomach discomfort.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

The following are definitions and notations used in this report:

Maximum Contaminant Level (MCL): 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 are set to protect the odor, taste, and appearance of drinking water.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health, along with their monitoring and reporting requirements, and water treatment requirements.

Public Health Goal (PHG): 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 Environmental Protection Agency (CEPA).

Maximum Contaminant Level Goal (MCLG): 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. Environmental Protection Agency (USEPA).

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Maximum Residual Disinfection Level (MRDL): 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.

Maximum Residual Disinfection Level Goal (MRDLG): The level of 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.

None: The USEPA and CAL EPA, have not set a Public Health Goal or Maximum Contaminant Level for this substance.

Not detectable (ND): At testing limit.

Nephelometric Turbidity Units (NTU): A measurement of the cloudiness of water.

Parts per million (ppm): Or milligrams per liter (mg/L).

Parts per billion (ppb): Or micrograms per liter (ug/L).

Picocuries per liter (pCi/L): A measure of radiation.

Contact Time (CT): Chlorine (disinfectant) residual in mg/L times the contact time in minutes.

FERN VALLEY WATER DISTRICT

Monitoring Data & Test Results From Calendar Year 2012

All water produced and delivered by the District meets or exceeds standards for public drinking water established by the CDPH and the USEPA.

In the following tables, you will find detailed information about the water that comes from your tap. Your water is regularly tested for more than 120 chemicals and other substances, as well as radioactivity. Only substances that were detected are listed in the tables. Unless otherwise noted, the data presented in the table is from testing done January 1 through December 31, 2012. The state allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, may be from more than one year of sample results.

If you have additional questions or concerns regarding the quality of your water, please contact Steve Erler, General Manager at (951) 659-2200.

PRIMARY DRINKING WATER STANDARDS

Parameter	Range of Detection	Average	Unit Measurement	MCL	PHG MCLG	Typical Sources in Drinking Water
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Disinfection Byproducts

Trihalomethanes (THMs)	1.0-40	39.4	ppb	80	none	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	0.0-28.0	29.6	ppb	60	none	By-product of drinking water chlorination
Total Chlorine Residual	0.37-0.58	0.44	Mg/L	4	4	Disinfectant added for treatment

Radionuclides

Gross Alpha Activity Groundwater	0.295-7.9	2.296	pCi/L	15	0	Erosion of natural deposits
Uranium Groundwater	0-8.2	2.05	pCi/L	20	0.43	Erosion of natural deposits
Gross Alpha Activity Surface water	0.277-0.293	0.285	pCi/L	15	0	Erosion of natural deposits

Household Lead and Copper Test Results (year sampled 2010)

Parameter	No. of Samples Collected	90 th Percentile level detected	Number of sites exceed action level	AL	MCLG	Typical Source in Drinking Water
Lead (ppb)	10	8.9	None	15	0.2	Internal corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	10	0.12	2	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits

Sampling Results for Microbiological

Microbiological Contaminants	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	1 (in one month)	0	More than 1 positive sample per month	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	0 (in the year)	0	0	0	Human and animal fecal waste

SECONDARY DRINKING WATER STANDARDS

Groundwater (year sampled date 2012)

Parameter	Level Detected	Average	Unit Measurement	MCL	PHG MCLG	Typical Sources in Drinking Water
Chloride	1.6-2.5	2.0	ppm	500	none	Runoff/leaching from natural deposits
Sodium	9.9-12	10.9	ppm	none	none	Generally found in ground and surface water
Total Hardness	35-40	38.0	ppm	none	none	Erosion of natural deposits
Total Dissolved Solids	95-130	112	ppm	1000	none	Runoff/leaching from natural deposits
Turbidity	0-3.40	1.74	NTU	5	None	Soil runoff
Sulfate	0 -0.60	0.37	ppm	500	NA	Runoff/leaching from natural deposits
Iron	0-560	290	ppm	300	NA	Runoff/leaching from natural deposits

Surface water

Chloride	1.1-1.4	1.25	ppm	500	none	Naturally occurring organic materials
Color	5.0	5.0	units	15	none	Naturally occurring organic materials
Total Hardness	13-19	16	ppm	none	none	Erosion of natural deposits
Sodium	3.8-7.1	5.45	ppm	none	none	Generally found in ground and surface water
Sulfate	0-0.5	0.25	ppm	500	none	Runoff/leaching from natural deposits
Total Dissolved Solids	34-86	60	ppm	1000	none	Runoff/leaching from natural deposits

Sampling Results Showing Treatment of Surface Water Sources

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our surface water filtration system.	
Treatment Technique ^(a) Alternative Technology Filtration	EPD (Environmental Products Division) two stage pressure filter
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to <u>0.2</u> NTU in 95% of measurements in a month. 2 – Not exceed <u>1.0</u> NTU for more than eight consecutive hours. 3 – Not exceed <u>5.0</u> NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	0.19
Number of violations of any surface water treatment requirements	1

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

TT Violation	Explanation	Length	Steps Taken to Correct the Violation	Health Effects Language
Failure of disinfection treatment contact time (CT)	On January 18, 2013, at the outlet of chlorine Contact Time Tank No. 7 the CT requirement was not achieved. This was due to freezing temperatures which caused the District mechanical failures, followed by a large increase in water demand due to customer's bursting pipes, subsequently, prior to ensuring that the CT requirement would be met Staff substantially increased the flow rate at the treatment plant. Fortunately, the extra detention time provided by the adjacent tank in series was sufficient to increase the CT above the CT required. The Department of Public Health was satisfied that inadequately treated water did not leave the surface water treatment facility.	< 24 hours	As directed by the Department of Public Health, we took immediate action to resolve this problem by installing freeze protection and implementing steps and procedures to prevent another occurrence.	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

BRIEF SYSTEM DESCRIPTION

Fern Valley Water District was established in 1958 as a California Water District under Section 34000, Division 13 of the California Water Code. The District employs a staff of four, two office personnel and two field operators. Our system consists of approximately 22 miles of pipeline ranging in size from 4 to 10 inches in diameter. We currently have 1,178 service connections, eleven groundwater wells with a total pumping capacity of 320-gpm (gallons per minute), four aeration plants to treat the well water, one 250-gpm surface water treatment plant, and a 250-gpm surface water granular activated carbon adsorption system. Water storage includes five storage reservoirs with a capacity of 4,499,431 gallons for finished water, three reservoirs with a capacity of 2,340,000 gallons for raw or untreated water; the total water storage capacity is 6,839,431 gallons. Because our system is "gravity-feed" we can provide continued service even during short-term power outages and disruptions in supply.

BELOW ARE PHOTOS OF FERN VALLEY WATER DISTRICT FACILITIES



Surface Water Treatment Plant



Granular Activated Carbon Adsorption System



Treatment Facility



Fern Valley Water District Office

Public Participation

The general public is welcome to attend the regularly scheduled FVWD's Board of Directors meeting, scheduled for the third Friday of each month at 9:00 a.m. The meetings are held in the boardroom at the District Office located at 55790 South Circle in Fern Valley. For meeting agendas, or if you have a topic that you would like to put on the Agenda, please contact Office Manager, Jessica Priefer at (951) 659-2200 at least 10 days prior to the meeting.

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FERN VALLEY WATER DISTRICT

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It is our policy to be responsive to our customers' needs, and we are available for emergency assistance 24 hours a day. Our emergency phone number is (951) 659-2200. Our office hours are 8:30 a.m. - 4:00 p.m. Monday through Friday. Closed from 12:00p.m. - 12:30 p.m. for lunch