WATER QUALITY REPORT 2018

Fallbrook Public Utility District

We test our drinking water quality for many constituents, as required by State and Federal Regulations. This report shows the results of our monitoring from calendar year 2017.

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

The sources of our drinking water may 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.

Type of water sources in use: While FPUD is a water retailer, virtually all of our water is purchased from the San Diego County Water Authority, which purchases much of its water from the Metropolitan Water District of Southern California. Virtually all tap water delivered by FPUD is treated at Metropolitan's Lake Skinner Filtration Plant in Riverside County.

Name & location of source(s): FPUD receives virtually all its water from two sources: a 242-mile-long aqueduct that brings Colorado River water from Lake Havasu to Southern California, and another 444-mile-long aqueduct that carries water from the Feather River in northern California through the Delta to State Water Project contractors throughout the state. One percent of FPUD water comes from our Capra Well, when available.


Santa Margarita River

Drinking water source assessment information: About one percent of FPUD water comes from our Capra Well. A source-water assessment was conducted on the water system in May 2004. The well is considered most vulnerable to low-density septic systems, agricultural/irrigation wells, and historic mining operations. Discussion of vulnerability: The Capra Well is in a rural area close to Red Mountain with few activities that could potentially contaminate the water supply. The only significant possible contaminating activities observed are pesticide and fertilizer use in the groves in the general area surrounding the well. In 2011, any water from Capra Well was diverted to Red Mountain Reservoir where it is treated through UV disinfection.

Safety is our #1 priority! Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

Time and place of regularly scheduled board meetings: Every fourth Monday of the month at 4 p.m. in the district boardroom, located at 990 E. Mission Road. They are open to the public.

For more information contact: Jason Cavender, System Operations Manager, (760) 728-1125.

We Take Extra Measures to Disinfect Our Water at Red Mountain Reservoir

- The District's Red Mountain Reservoir is an open reservoir with a capacity of 440 million gallons and is used to store treated water purchased from the San Diego County Water Authority. The open reservoir met the health standards of the day when it was constructed in 1949 and was reconstructed and lined in 1985, and it has continued to meet or exceed water quality standards. Drainage collection and diversion ditches prevent local runoff water from entering the reservoir. The reservoir is physically inspected at least twice daily. Bacteriological tests are taken once a week. FPUD upgraded its chlorination facilities in early 2010 by installing Ultraviolet Technology (UV Technology) for additional disinfection.

- The water the District purchases from the Water Authority is a blend of fully-treated Colorado River and State Water Project water that receives complete conventional treatment, along with ozone treatment – a cutting-edge, high-quality disinfection process. The water is treated at Metropolitan Water District's Skinner Filtration Plant. The water delivered to Red Mountain has a chloramine (mixture of chlorine and ammonia) disinfectant residual.

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, which can be naturally occurring or a result of urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides** 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems.
- **Radioactive contaminants,** which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency and the State Water Resources Control Board prescribe regulations that limit the amount of certain contaminants in tap water. These regulations also establish limits for contaminants in bottled water for the same public health protection.

For more information about contaminants and potential health effects, or for USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants, call the USEPA Safe Drinking Water Hotline (1-800-426-4791). 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.

Terms used in this report

- **Maximum Contaminant Level (MCL)**: The highest level of a contaminant 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.
- **Maximum Contaminant Level Goal (MCLG)**: The level of a contaminant in drinking water below which there is no known or expected risk to one's health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).
- **Public Health Goal (PHG)**: The level of a contaminant in drinking water below which there is no known or expected risk to one's health. PHGs are set by the California Environmental Protection Agency.
- **Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. These are set by the U.S. Environmental Protection Agency.

1 part per million or 1 mg/L is:	1 part per billion or 1 µg/L is:
• 1 cent in $10, 000	• 1 cent in $10,000,000
• 1 minute in 2 years	• 1 minute in 2,000 years
• 1 inch in 16 miles	• 1 inch in 16,000 miles
• 1 drop in 10 gallons	• 1 drop in 10,000 gallons

- **Primary Drinking Water Standards (PDWS)**: MCLs or MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- **Secondary Drinking Water Standards (SDWS):** MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.
- **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.
- **Regulatory Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements, that a water system must follow.
- **NA:** Not applicable, indicate when there is no establish level
- **ND**: Not detectable at testing limit
- **SI:** Saturation Index
- **µS/cm:** Measure of electrical conductance
- **pCi/L**: Picocuries per liter (a measure of radiation)
- **ppm or mg/L**: Parts per million or milligrams per liter
- **ppb or µg/L**: Parts per billion or micrograms per liter
- **ppt or ng/L:** Parts per trillion or micrograms per liter
- **LRAA**: Locational Running Annual Average; The LRAA is the highest Individual of all Running Annual Averages. It is calculated as an average of all the samples collected within a 12-month period.

The tables that follow list the drinking water contaminants that were detected during the most recent sampling. The presence of these contaminants does not necessarily indicate that the water poses a health risk. The State Water Resource Control Board (SWRCB) allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though it is representative of the water quality, is more than one year old.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants, can be particularly at risk for infection. These people should seek advice from their health-care providers.

What about Lead? 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. FPUD is responsible for providing high-quality drinking water, but cannot control the variety of materials used in personal 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.

TABLE 1 - Sampling results showing the detection of coliform bacteria

Microbiological Contaminants (to be completed only if there was a detection of bacteria)	**Highest No. of detections**	**Months in violation**	**State or Federal MCL** (Maximum Contaminant Level)	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria	4.0%	0	More than 5.0% of monthly samples are positive;	0	Naturally present in the environment
Fecal Coliform or *E. coli*	0	0	A routine sample and a repeat sample detect total coliform, and either sample also detects fecal coliform or E.coli	0	Human and animal fecal waste

TABLE 2 - Sampling results showing the detection of lead and copper for residential

Lead and Copper (Tested every 3 years. Data is from 2016.) Test again August 2019	**No. of samples collected**	**90th percentile level detected**	**No. of sites exceeding Action Level**	**Action Level**	**PHG**	**Typical Source of Contaminant**
Lead (µg/L)	34	ND	0	15	0.2	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (mg/L)	34	0.21	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

In addition, on January 2017, the State of California issued new guidelines on lead testing in schools. We are committed to supporting our school districts' efforts to protect students and ensure that the drinking water at their school sites meet lead limits. We have already completed our work with school districts serving kindergarten through 12th grade to develop sampling plans unique to each school site. We have also already sampled seven schools in our district and all the results were below the Action Level. There was no follow-up monitoring required, nor was there a need to take corrective action on any plumbing fixtures at any school sampled.

Sampling results showing the detection of lead for our K-12th grade schools

Contaminant (CCR units)	**Action Level**	**PHG**	**No. of sites exceeding Action Level**	**Sample Date**	**Number of Schools Requesting Lead Sampling**	**Typical Source of Contaminant**
Lead (µg/L)	15	0.2	0	2017	7	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

TABLE 3 - Detection of contaminants with a primary (health-related) drinking water standard

Chemical or Constituent (and reporting units)	Level Detected (average)	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Clarity					
Lake Skinner Combined Filter Effluent Turbidity (NTU)	Highest	0.10	TT	N/A	Soil Runoff
	% ≤ 0.3	100			
Inorganic Chemicals					
Barium (mg/l)	.125	.120 - .130	1	2	Erosion of Natural deposits
Fluoride – (mg/L)	0.7	0.5 – 0.9	2	1	Erosion of natural deposits; Metropolitan Water District treats our water by adding fluoride to the naturally occurring fluoride level to help prevent dental caries in consumers. Fluoride levels in the treated water are maintained within a range of 0.7 to 1.3 mg/L, as required by the State Board regulations.
Radiological					
Gross Alpha (pCi/L)	ND	ND – 4.0	15	(0)	Erosion of natural deposits
Gross Beta (pCi/L)	ND	ND – 5.0	50	(0)	Decay of natural and man-made deposits
Uranium (pCi/L)	ND	ND – 3.0	20	0.43	Erosion of natural deposits
Disinfection by-products, Disinfectant Residuals and Disinfection by-product precursors (Federal Rule)					
Bromate (ppb)	4.1	ND – 12.0	10	0.1	By-product of drinking water ozonation
Total Chlorine Residual (mg/L) *Highest RAA*	2.10	0.2 – 3.2	[4]	[4]	Drinking water disinfectant added for treatment
Haloacetic Acids (five) (µg/L) *Highest LRAA*	18.8	8.6 – 38.0	60	NA	By-product of drinking water disinfection
Total Trihalomethanes (µg/L) *Highest LRAA*	35.0	16.0 – 48.0	80	NA	By-product of drinking water disinfection

TABLE 4 – Detection of contaminants with a secondary (aesthetic) drinking water standard

Chemical or Constituent (and reporting units)	Level Detected (average)	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (mg/L)	78	56 – 100	500	NA	Runoff/leaching from natural deposits; seawater influence
Color (units)	1.0	1.0	15	NA	Naturally occurring organic materials
Odor Threshold (TON) *Threshold Odor Number*	3.0	1.0 – 3.0	3	NA	Naturally occurring organic materials
Specific Conductance (µS/cm)	728	455- 1,000	1600	NA	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	153	66 - 240	500	NA	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	600	259 - 660	1000	NA	Runoff/leaching from natural deposits
Turbidity (NTU) *Nephelometric Turbidity Unit*	.49	.07 –2.9	5	NA	Soil runoff

TABLE 5 – Additional parameters

Chemical or Constituent (and reporting units)	Level Detected (average)	Range of detections	Notification Level	Major sources in drinking water
Alkalinity (mg/L)	96	62 – 130	NA	Naturally present in the environment
Bicarbonate (HCO_3) (mg/L)	150	150	NA	Naturally present in the environment
Boron (µg/L)	155	150 - 160	1,000	Runoff leaching from natural deposits; industrial waste
Calcium (mg/L)	51	27 - 75	NA	Naturally present in the environment
Chlorate (µg/L)	23	23	800	By-product of drinking water chlorination; industrial processes
Corrosivity (SI)	.14	.04 - .25	NA	Elemental balance in water; affected by temperature, other factors
Hardness (mg/L) *Conversion to grains below	205	109 – 300	NA	Consists of Magnesium and Calcium and is usually naturally occurring
Magnesium (mg/L)	19	11 – 27	NA	Naturally present in the environment
pH (pH units)	8.0	7.9 – 8.2	NA	Naturally present in the environment
Potassium (mg/L)	3.9	2.8 – 5.0	NA	Naturally present in the environment
Sodium (mg/L)	74	48 – 100	NA	Generally naturally occurring
TOC (mg/L) *Total Organic Compounds*	2.5	1.9 – 3.1	TT	Various natural and manmade sources
N-Nitrosodimethylamine (ppt)	ND	ND – 3.1	10	Byproduct of drinking water chloramination; industrial process

*To convert Hardness (mg/L) to Hardness (grains) divide by 17.1. For example, 230mg/L divide by 17.1 = 13.4 grains.

Fallbrook Public Utility District

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Water Emergency:

Do you know where your shut-off valve is?

Every home, apartment and business should have a water shut-off valve, commonly referred to as a master valve or house valve, that turns water on or off in the building. Do you know where your shut-off valve is? Does everyone else in the family know where it is? If there's an emergency, you may need to know in a hurry. You can't afford to waste precious minutes searching for the shut-off valve when you have a leak or a line break, with gushing water.

The shut-off valve is part of your private plumbing and should not be confused with your water meter. The most likely location for your house valve is either:

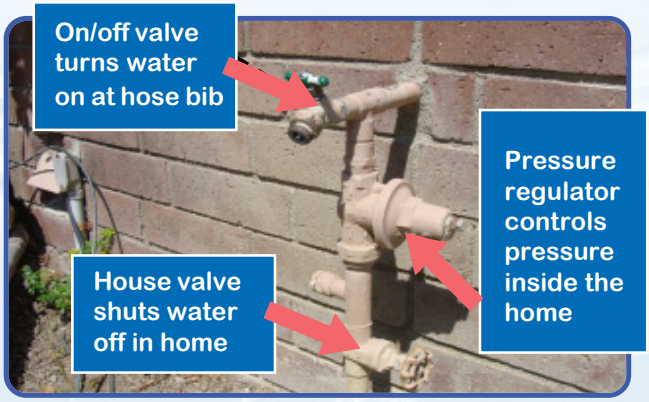
- **At the hose bib in front or side of your house where the main water hose hooks up or,**
- **In the garage**

When you think you've located the valve, try a simple test to be sure you've got the right one. Try turning it off briefly. Check the faucets inside to see if the water has been shut off. If it isn't off, try again. If you live in a condominium, please take special care. You may have to access to a row of valves and you might shut off your neighbor's water!

Once you've found the right valve, mark it with a tag, a bright ribbon or colorful paint. Make it easy to see so you'll be able to find it quickly in case of an emergency.

If you cannot turn your house valve off in an emergency and need to have water turned off at FPUD's district meter, please call us. We will be happy to send someone out as quickly as possible to shut it off.

The master valve to a condonimium or apartment may be more difficult to locate because several may be grouped together.



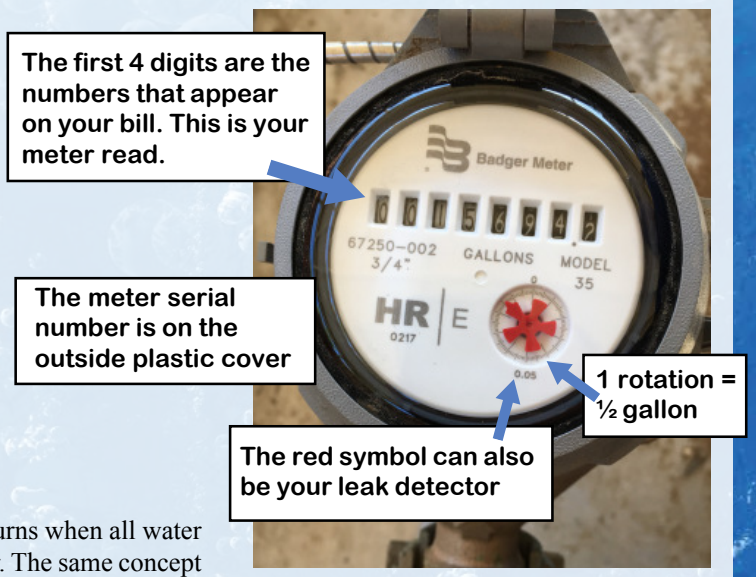
This type of hose bib is common for single family homes. The most likely location for your hose bib is at the front or side of your home where the main hose hooks up, or in the garage.

How to Read Your Water Meter

The water meter can: a) identify if you have a leak; b) tell you how much water you are using; and c) help you monitor the amount of water you use on a daily basis.

Finding and accessing the water meter:

The first step in reading your water meter is to locate it. It is usually near the front of your lot, as it faces the street and it is enclosed in a meter box. Once you've located the meter box, lift the lid very carefully as it is a favorite hiding place for spiders, snakes and insects.



Red Symbol

Each full rotation of the red symbol indicates ½ gallon of water has passed through the meter.

Leak Detector - Red Symbol

The red symbol can also serve as a leak detector. If the red symbol turns when all water is off in the house, you have a leak that should be investigated further. The same concept applies for a leak on your property - if you think the water is off but the red symbol is spinning or moving, you may have a leak.

The Numbers

Just like the mileage odometer on your car, these numbers keep a running total of all water that has passed through the meter since it was new. You only need to pay attention to the first four numbers from left to right – these numbers are the numbers that appear on your bill. These are the numbers that record by the thousands of gallons.