



JOSHUA BASIN WATER DISTRICT

Annual Water Report Quality



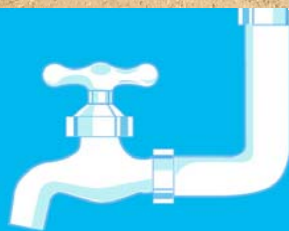
Water Testing Performed in 2016 (PWS# 03610025)

1

Fix Leaky Toilets
Saves
30-50 Gallons
per day/toilet

2

Wash Only Full Loads of Clothes
Saves
15-45 Gallons
per load



3

Run Dishwasher When Full
Saves
5-15 Gallons
per load

4

Take 5 Minute Showers instead
of 10 Minute Showers
Saves
12.5 Gallons
with a water efficient shower head



From the desk of the GM

Dear Joshua Basin Water District Customer:

We are pleased to present to you this year's Annual Water Quality Report.

This report, required by State law, is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to be aware of the efforts we make to continually improve and protect our water resources. We are committed to ensuring the quality of your water.

The sources of drinking water in general (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells, though not all of these sources apply to Joshua Tree. Our water source comes from District-owned wells located throughout the community that draw from underground aquifers.

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. A source water assessment plan is available from our office that provides more information such as potential sources of contamination. We have learned through our monitoring and testing that some constituents have been detected, as in nearly all water systems.

Contaminants that may be present in source water in general, not necessarily in Joshua Tree, 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 naturally occur or 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 that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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.



**"Don't Waste It,
Just Taste It"**

Tank the Tortoise



In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resource Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. SWRCB regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Joshua Basin Water District routinely monitors for constituents in your drinking water according to Federal and State laws. The table included shows the results of our monitoring for the period of January 1st to December 31st, 2016. All drinking water, including bottled drinking

water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. More information about contaminants and potential health effects can be accessed on the USEPA's website at (<http://www.epa.gov/dwstandardsregulations/drinking-water-standards-and-health-advisory-tables> or by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

While Joshua Basin Water District is responsible for providing high quality drinking water, we cannot control the variety of materials, such as lead, used in plumbing components in homes and businesses. 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. When your water has been sitting for several hours, you can minimize the potential for lead exposure from your own water pipes 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 due to your own private water lines, 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>.

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. The United States Environmental Protection Agency, and the Centers for Disease Control provide guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants. They are available from the Safe Drinking Water Hotline (1-800-426-4791).



On July 1, 2014 the State Water Resource Control Board (SWRCB) adopted new standards for Chromium VI. Chromium VI, a metallic element, has been a topic of regular discussion in our Board Meetings. After rounds of quarterly testing, it was determined that all five of the district's wells do not meet the state standard. Some people who drink water containing Chromium VI in excess of the MCL over many years may have an increased risk of getting cancer. In order to address this compliance issue, the District worked along with the SWRCB to develop a compliance plan. This plan was submitted on June 15, 2016. Senate Bill 385 provides for water utilities who do not meet the Chromium VI standard to come into compliance as of January 1, 2020.



This plan includes conducting two very important studies that are presently underway. The first study deals with Hydro Profiling our highest producing well; this information will assist the District in understanding water quality concentrations at various depths along the well. The second study, Ion Exchange Treatment and Reduction Coagulation Filtration, in partnership with the Bureau of Reclamation, is a pilot program which deals with the removal of Chromium VI. The findings from both studies are key to identifying and proposing a systematic treatment approach for the District's five well sites. Customers will be notified of updates on this plan biannually. On May 5, 2017, the Superior Court of California entered an order regarding the 2014 Chromium VI MCL. The SWRCB is presently reviewing the order and its range of impacts. Until the District receives further clarification from the State regarding the order, the District will continue to follow the compliance plan.

Nitrate in drinking water at levels above 10 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 10 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.

The State Water Resource Control Board completed two drinking water source assessments for Joshua Basin Water District on August 24, 2001. These assessments examined the District's Well 10 and Well 14 and determined these sources are most vulnerable to high-density residential septic systems.

The District completed a drinking water source assessment for Well 15 in August 2007. This assessment determined that Well 15 is most vulnerable to low-density septic systems.

A drinking water source assessment for Well 17 completed in August 2007 determined that Well 17 is most vulnerable to National Pollutant Discharge Elimination System/Water Discharge Regulation permitted discharges.

A drinking water source assessment for Well 16 completed in September 2010 determined that Well 16 is most vulnerable to both high and low density septic systems and airports-maintenance/fueling areas.

Additional copies of this report are available by contacting the District. Please contact Randy Little, Water Production Supervisor, at 760-366-8438 for more information. A summary of the assessment may be requested by contacting the District's sanitary engineer from the State Water Resource Control Board at (909) 383-4308 or (909) 383-4745 (fax). A copy of each source's complete assessment may be viewed at the Joshua Basin Water District office or at: SWRCB San Bernardino District Office, Government Center 4th Floor, 464 West Fourth Street, Suite 437 San Bernardino, CA 92401.

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative are more than one year old. This report along with other important information can be found on the District's website at www.JBWD.com

If you have questions about this water quality report, please call Randy Mayes, Interim Director of Water Resources & Operations, at 760-366-8438. We at Joshua Basin Water District work around the clock to provide top quality water to every tap. We ask that all of our customers help us along the way. You can help

preserve water quality by taking toxic cleaners, paint, oil and other chemicals to an authorized disposal site rather than putting them into the septic tank. Help preserve water quantity by conserving whenever you can, and by notifying the District if you suspect a water leak. Thank you for allowing us to continue providing your family with clean, quality water this year.

Sincerely,

Curt Sauer,
General Manager

If you want to learn more about Joshua Basin Water District, please attend any of our regularly scheduled meetings of the Board of Directors or our Citizens Advisory Committee. Meeting Location: Joshua Basin Water District, 61750 Chollita Rd. Joshua Tree CA 92252. Call for meeting times: 760-366-8438.



TERMS 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.

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).

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.

Maximum Residual Disinfectant 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 Disinfectant Level Goal (MRDLG): 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.

Primary Drinking Water Standards (PDWS): MCLs and 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.

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

NA: Not Applicable

ND: not detectable at testing limit

NTU: Nephelometric Turbidity Units

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

µS/cm micro-siemens per centimeter (a measure of conductivity)

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria	Microbiological Contaminants
Total Coliform Bacteria (State TCR)	0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment	Total Coliform Bacteria

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Copper (ppm) (09-01-16)	21	0.077	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) (09-01-16)	21	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2016	42.5	41.0-44.0	NA	NA	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2016	38.5	34.0-43.0	NA	NA	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chlorine (ppm)	2016	0.70	0.30-0.98	4	4	Drinking water disinfectant added for treatment

TABLE 4 (CONTINUED) – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Arsenic (ppb)	2016	2.75	ND-5.50	10	0.004	Erosion of Natural deposits; runoff from orchards; glass and electronics production wastes
Chromium, Hexavalent (ppb)	2016	23.85	12.0-41.0	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; <i>erosion of natural deposits</i>
Fluoride (ppm)	2016	0.79	0.63-0.96	2.0	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids (ppb)	2016	ND	ND	60	N/A	By-product of drinking water disinfection
Nitrate (as N) (ppm)	2016	4.55	2.40-5.60	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Total Trihalomethanes (TTHMs) (ppb)	2016	7.05	ND-14.10	80	NA	By-product of drinking water disinfection

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (ppm)	2016	8.95	8.00-9.9	500	NA	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2016	100	0-200	300	NA	Leaching from natural deposits; industrial wastes

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD (CONTINUED)

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Odor Threshold (Units)	2016	0.99	ND-1.00	3	NA	Naturally-occurring organic materials
Specific Conductance (µS/cm)	2016	260	240-280	1600	NA	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2016	11.65	8.30-15.00	500	NA	Runoff/leaching from natural deposits; industrial wastes
Turbidity (NTU)	2016	0.17	ND-0.80	5	NA	Soil runoff

Items listed below have been tested and found to be **Non-Detected** in the Water Supply:

1. Aluminum	13. Dibromochloropropane (DBCP)	25. Nickel
2. Antimony	14. Dichloroacetic Acid	26. Perchlorate
3. Barium	15. Dichloromethane	27. Selenium
4. Benzene	16. Ethylbenzene	28. Silver
5. Beryllium	17. Ethylene Dibromide (EDB)	29. Styrene
6. Boron	18. Hydroxide Alkalinity	30. Tetrachloroethylene
7. Cadmium	19. MBAS (Foaming Agents)	31. Thallium
8. Carbon Tetrachloride	20. Mercury (inorganic)	32. Toluene
9. Carbon Alkalinity	21. Methyl-t-butyl ether (MTBE)	33. Total 1,3-Dichloropropene
10. Cis-1,2-Dichloroethylene	22. Monobromoacetic acid	34. trans-1,2-Dichloroethylene
11. Cyanide (as free cyanide)	23. Monochloroacetic Acid	35. Trichloroacetic Acid
12. Dibromoacetic Acid	24. Monochlorobenzene	36. Trichloroethene (TCE)

Este es un informe anual que contiene información muy importante sobre su agua potable. La calidad de esta agua conforma con todos los requerimientos legales del gobierno y del estado federal. Si desea mayor información, o tiene preguntas, por favor contác, tenos a 760-366-8438.