

JOSHUA BASIN WATER DISTRICT

Annual Water Report Quality

Start
**NOW
SAVE
WATER**

Water Testing Performed in 2014 (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.

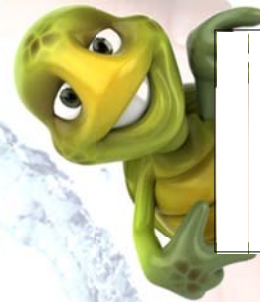
This report, required by State law, is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to be aware of the efforts we make to continually improve and protect our 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, 2014. 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://water.epa.gov/drink/standards/hascience.cfm> or by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Maximum Contamination Levels, (MCL) are very stringent limits set by State and Federal law which may not be exceeded. They are set such that out of every 10,000 or 1,000,000 people (depends upon how the MCL was developed) drinking two liters of water every day for a lifetime, only one of those people may experience the described health effect.

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 (800-426-4791).





On August 13, 2014, two water samples tested positive for total coliforms. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. As per state regulation, the District immediately resampled. The laboratory results showed an absence of coliform bacteria, all subsequent tests for the year showed absence as well. **The SWRCB has determined that public health and welfare WAS NOT adversely affected by this occurrence.**

On July 1, 2014 the State Water Resource Control Board (SWRCB) adopted new standards for Chromium VI. Chromium VI has been a topic of regular discussion in our Board Meetings for the past year. Districts similar to ours who have naturally occurring Chromium VI, a metallic element, must complete four rounds of quarterly testing. During the first two quarterly tests, two wells did not meet the standards. It is probable that by July, four of our five wells will not meet state standards. In consultation with the State, we have decided to proactively inform our customers that our water does not, nor will it meet the new standards for Chromium VI.

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 is working with the SWRCB to develop a compliance plan. 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, 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.

The State Water Resource Control Board completed a drinking water source assessment for Joshua Basin Water District on August 24, 2001. This assessment examined the District's Well 10 and Well 14 and determined these sources are most vulnerable to high-density residential septic systems. Septic systems can leach nitrates and other contaminants, and these impurities are compounded in highly populated developments.

The District completed a drinking water source assessment for Well 15 in February 2005. This assessment determined that Well 15 is most vulnerable to low-density septic systems. In this environment, septic systems are not always properly sited or properly maintained, contributing to contaminant leaching. Additionally, agricultural uses and pesticides contribute to the water source's vulnerability.

A drinking water source assessment for Well 17 completed in December 2008 determined that Well 17 is most vulnerable to transportation corridors and National Pollutant Discharge Elimination System/Water Discharge Regulation permitted discharges.

A drinking water source assessment for Well 16 completed in July 2010 determined that Well 16 is most vulnerable to 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.

Joshua Basin Water District has completed several scientific studies in association with the United States Geological Survey (USGS). The purpose of these studies has been threefold: (1) improve the understanding of the geohydrologic framework of the water in the Joshua Tree and Copper Mountain groundwater sub-basins; (2) determine the distribution and quantity of recharge using field and numerical techniques; and (3) develop a groundwater flow model that can be used to help manage the water resources of the region. Our partnership with USGS in understanding our aquifer through these scientific studies assures that we can continue delivering a high quality and dependable source of water in the future.

If you have questions about this water quality report, please call me or Randy Little 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 mainline 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

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	2	1	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) (08-08-2013)	22	0.064	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) (08-08-2013)	22	ND	0	15	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)	2014	43.6	33-55	NA	NA	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2014	72.6	56-95	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
Gross Alpha Particle Activity (pCi/L)	2014	0.975	0-3.9	15	0	Erosion of Natural Deposits
Chlorine (ppm)	2014	0.69	0.2-1.05	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
Haloacetic Acids (ppb)	2014	0.80	0-1.6	60	N/A	By-product of drinking water disinfection
Hexavalent Chromium (ppb)	2014	24.0	12-44	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate (measured as NO ₃) (ppm)	2014	14.128	9-23	45	45	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Trihalomethanes (TTHMs) (ppb)	2014	8.35	3-13.7	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 (mg/L)	2014	14.66	14-15	500	NA	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2014	ND	ND	15	NA	Naturally-occurring organic materials
Odor Threshold (Units)	2014	1.0	NA	3	NA	Naturally-occurring organic materials
Sulfate (mg/L)	2014	71.5	23-120	500	NA	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance (E.C.) (µS/cm)	2014	360	300-470	1600	NA	Substances that form ions when in water; seawater influence

TABLE 5 (CONTINUED) – 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
Turbidity (Units)	2014	0.115	0-0.9	5	NA	Soil runoff
Total Dissolved Solids (mg/L)	2014	186.6	130-260	1000	NA	Runoff/leaching from natural deposits

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Magnesium (ppm)	2014	4.23	3.7-5.1	N/A	N/A
Calcium (ppm)	2014	22	16-32	N/A	N/A

Tested which were found to be **Non-Detected** in the Water Supply include:

1. 1,2-Dibromo-3-chloropropane (DBCP)
2. Chloroform (Trichloromethane)
3. Color
4. Copper (Source)
5. Dichloroacetic Acid
6. Escherichia coli (0157)
7. Ethylene Dibromide (EDB)
8. Fecal coliform and E.coli
9. Iron
10. Manganese
11. Monobromoacetic Acid
12. Monochloroacetic Acid
13. Silver
14. Trichloroacetic Acid
15. Zinc

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 contáctenos a 760-366-8438.