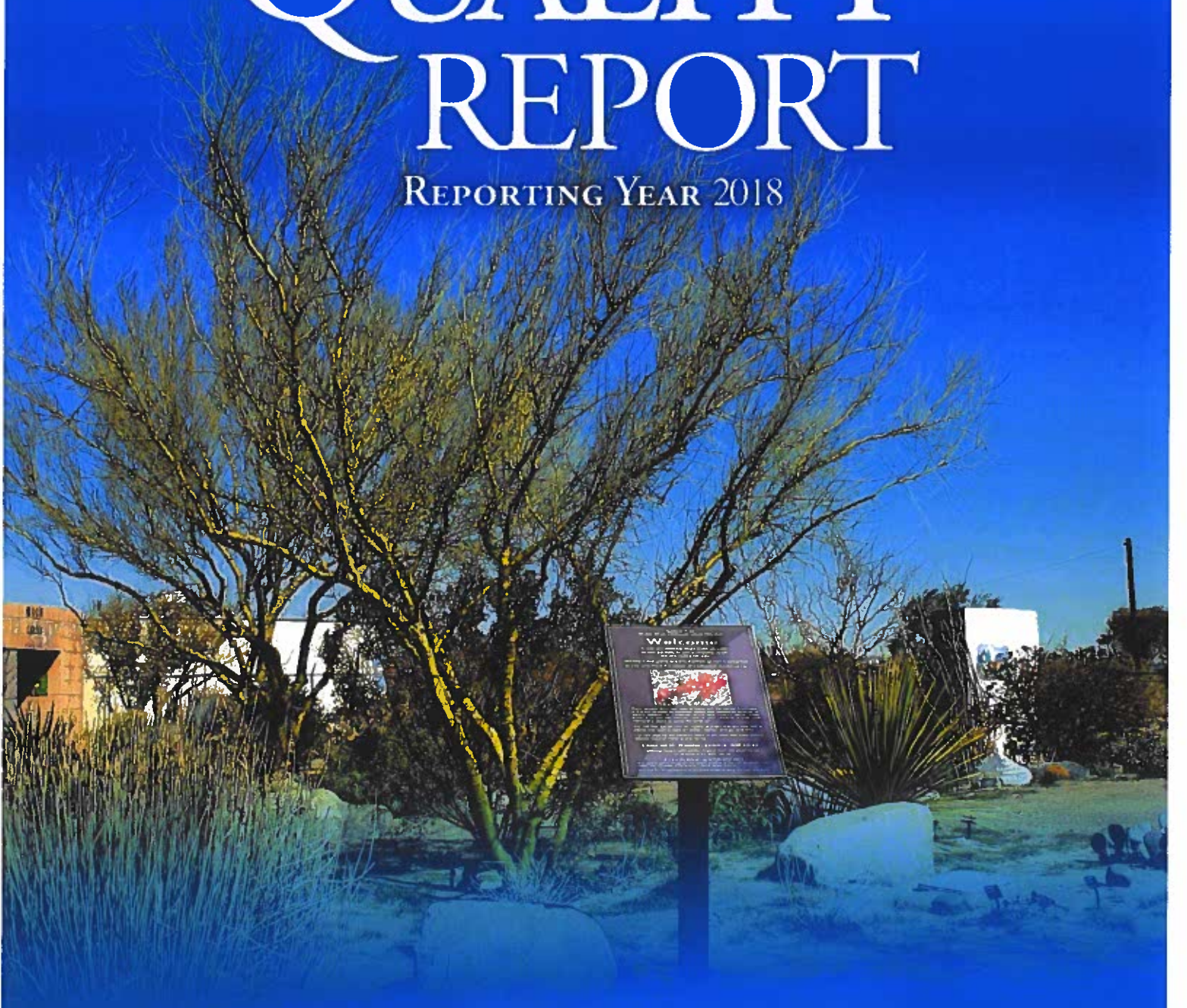


ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018



Presented By



**JOSHUA BASIN
WATER DISTRICT**

*Proudly providing water from an ancient
source ... well into the future.*

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. 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 should you ever have any questions or concerns about your water.



Community Participation

To learn more about the Joshua Basin Water District, please log onto our website at www.jbwd.com or attend any of the regularly scheduled meetings of the Board of Directors or our Citizens Advisory Committee, Finance Committee, and our Water Resources and Operations Committee. The Board of Directors meets the first and third Wednesday of each month at 61750 Chollita Road, Joshua Tree, CA 92252. To inquire about meeting times, please call (760) 974-0072 or email bwszak@jbwd.com.

Important Health Information

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>.



Where Does My Water Come From?

Our water source comes from district-owned wells located throughout the community that draw groundwater from underground aquifers. The two aquifers that supply our water are the Joshua Tree and Copper Mountain groundwater basins.

Level 1 Assessment Update

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that were found during these assessments.

In the month of June 2018, four water samples tested positive for total coliforms. As per state regulation, the District immediately resampled. The laboratory results showed an absence of coliform bacteria; all subsequent tests for this year showed absence as well.

During the last year, we were required to conduct one Level 1 assessment, which was completed. In addition, we were required to take two corrective actions, and we completed both of these actions, as well.



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 State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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.

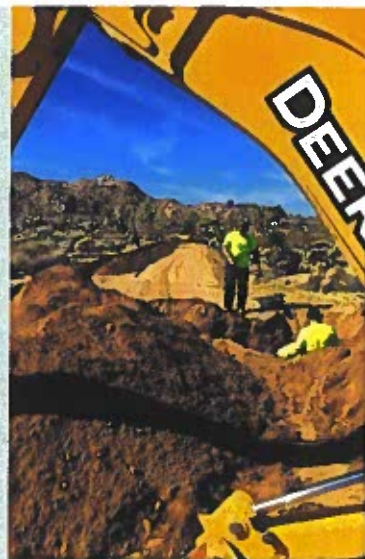
Contaminants that may be present in source water include: Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; Inorganic Contaminants, such as salts and metals, that can be naturally occurring 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.

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 we 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.



We remain vigilant in delivering the best-quality drinking water

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Mark Ban, Assistant General Manager of Operations, at (760) 366-8438.





Source Water Assessment

A source water assessment has been completed for our system. The purpose of the assessment is to determine the susceptibility of each drinking water source to potential contaminant sources. The report includes background information and a relative susceptibility rating of Higher, Moderate, or Lower. It is important to understand that a susceptibility rating of Higher does not imply poor water quality, only the system's potential to become contaminated within the assessment area.

Drinking Water Source Assessments

The State Water Resources Control Board (SWRCB) completed two drinking water source assessments for Joshua Basin Water District on August 24, 2001. These assessments examined district Wells 10 and 14 and determined that 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 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 completed in September 2010 determined that Well 16 is most vulnerable to both high- and low-density septic systems and airport maintenance/fueling areas.

Copies of this report are available by contacting Randy Little, Water Production Supervisor, at (760) 366-8438. A summary of the assessment may be requested by contacting the district's sanitary engineer from the SWRCB 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 the SWRCB San Bernardino District Office, Government Center, 4th Floor, 464 West Fourth Street, Suite 437, San Bernardino, California.

If you would like a copy of our assessment, please feel free to contact our office during regular business hours at the number provided in this report.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Please note that lead was not detected during the most recent round of testing. Further, in 2017, the District received requests from two elementary schools for performing lead sampling. The test results were non-detected for lead at both schools.

| REGULATED SUBSTANCES | | | | | | | |
|---|--------------|-----------------------------|---------------------------|-----------------------------|-----------------------------|-----------|--|
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL [MRDL] | PHG (MCLG) [MRDLG] | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
| Arsenic (ppb) | 2018 | 10 | 0.004 | 2 | NA | No | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Chlorine (ppm) | 2018 | [4.0 (as Cl ₂)] | [4 (as Cl ₂)] | 0.76 | 0.20–1.16 | No | Drinking water disinfectant added for treatment |
| Chromium [Total] (ppb) | 2018 | 50 | (100) | 15 | 11–19 | No | Discharge from steel and pulp mills and chrome plating; erosion of natural deposits |
| Fluoride (ppm) | 2018 | 2.0 | 1 | 0.78 | 0.56–1 | No | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross Alpha Particle Activity (pCi/L) | 2018 | 15 | (0) | 5.8 | NA | No | Erosion of natural deposits |
| HAA5 (ppb) | 2018 | 60 | NA | 1 | NA | No | By-product of water disinfection |
| Nitrate [as nitrogen] (ppm) | 2018 | 10 | 10 | 4.39 | 2.4–6.2 | No | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Total Coliform Bacteria (# positive samples) | 2018 | 1 positive monthly sample | NA | 4 | NA | Yes | Naturally present in the environment |
| TTHMs [Total Trihalomethanes] (ppb) | 2018 | 80 | NA | 6.95 | 2.8–11.1 | No | By-product of drinking water disinfection |
| Tap water samples were collected for lead and copper analyses from sample sites throughout the community. | | | | | | | |
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL | MCLG | AMOUNT DETECTED (90TH %ILE) | SITES ABOVE AL/ TOTAL SITES | VIOLATION | TYPICAL SOURCE |
| Copper (ppm) | 2016 | 1.3 | 0.3 | 0.077 | 0/21 | No | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

SECONDARY SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | SMCL | PHG (MCLG) | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|--------------------------------|-----------------|-------|---------------|--------------------|-------------------|-----------|---|
| Chloride (ppm) | 2017 | 500 | NS | 12.5 | 11–14 | No | Runoff/leaching from natural deposits; seawater influence |
| Odor–Threshold (TON) | 2018 | 3 | NS | 1 | 1–1 | No | Naturally occurring organic materials |
| Specific Conductance (µS/cm) | 2017 | 1,600 | NS | 380 | 280–480 | No | Substances that form ions when in water; seawater influence |
| Sulfate (ppm) | 2017 | 500 | NS | 61.5 | 13–110 | No | Runoff/leaching from natural deposits; industrial wastes |
| Total Dissolved Solids (ppm) | 2017 | 1,000 | NS | 250 | 190–310 | No | Runoff/leaching from natural deposits |
| Turbidity (NTU) | 2018 | 5 | NS | 0.21 | 0.1–0.4 | No | Soil runoff |

UNREGULATED AND OTHER SUBSTANCES¹

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH |
|--------------------------------|-----------------|--------------------|-------------------|
| Bromodichloromethane (ppb) | 2018 | 2 | NA |
| Bromoform (ppb) | 2018 | 2.6 | 1.2–4 |
| Chloroform (ppb) | 2018 | 1 | NA |
| Dibromochloromethane (ppb) | 2018 | 2.85 | 1.6–4.1 |
| Hardness (ppm) | 2017 | 76.5 | 60–93 |
| Vanadium (ppb) | 2018 | 11.3 | 9.6–13 |

¹ Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

CFU: Colony forming units.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

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.

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).

TON (Threshold Odor Number): A measure of odor in water.

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