Annual Water Quality Report

JOSHUA BASIN WATER DISTRICT

Water Testing Performed in 2008

District Water Supply Meets All Federal and State Standards

Dear Community Member and Customer,

I am pleased to present our community and customers with the 2008 Annual Water Quality Report which shows that our drinking water supply once again meets and exceeds the strict standards for purity set by the U.S. Environmental Protection Agency (EPA) and California Department of Public Health. Providing a safe water supply to our community is our highest priority. The employees of the Joshua Basin Water District are highly trained, certified, and dedicated to meeting this goal.

To assure this continued excellent water long into the future, our Board has taken steps to replace the water we use with high quality water from northern California. We are replacing old iron pipes to avoid leaks and improve the taste. We are also assuring that new homes will have adequate waste water treatment to protect the quality of our ground water.

While we have made this report as understandable as possible, much of the specific language is required by law; so my apologies for the very technical tone. If you have any questions or would like more information about our water quality, please call us at 760-366-8438. You can obtain more information about contaminants and potential health effects by calling the EPA's Safe Drinking Water Hot line at 1-800-426-4791.

Sincerely,
Joe Guzzetta, General Manager

The tables on the following pages show the results of the District's monitoring from January 1 to December 31, 2008. Our highly qualified staff routinely monitors the water supply to ensure that impurities remain at low levels to provide high quality, safe drinking water. While it is common to find impurities in most water sources – *including bottled water* – the federal and state governments set strict standards on the allowable level of impurities. The presence of contaminants does not necessarily indicate that the water poses a health risk.

Our water supply comes from District-owned wells located throughout the community that draw from underground aquifers. Small amounts of contaminants may seep into the groundwater from a variety of sources including erosion of natural mineral deposits, soil runoff, leaching from septic tanks and agricultural processes, and household plumbing system corrosion. Seepage accounts for an extremely low amount of contaminants in the District's water supply.

The District routinely monitors the water supply to ensure that small amounts of contaminants remain at low levels to provide high quality, safe drinking water. The federal and state governments set strict standards on the allowable level of impurities.

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.

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 can also be obtained through EPA's Safe Drinking Water Hotline.

PWS ID#: 036-10-025

In this report you will find many terms and abbreviations you may or may not be familiar with. To help you better understand these terms we've provided the following definitions:

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).

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. MRDLGs are set by the U.S. Environmental Protection Agency.

Primary Drinking Water Standard (PDWS): MCLs or 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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect health at the MCL levels.

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

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).

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

The tables in this report list drinking water contaminants that were detected during the period January 1, 2008 through December 31, 2008.

SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER (Month/2007)

Substance (Unit of Measurement)	Year Sampled	AL	PHG	Amount Detected (90th% Tile)	Sites Above AL/ Total Sites	Violation	Typical Source of Contaminant
Lead(ppb)	2007	1.5	2	ND	22	None	from industrial manufacturers; erosion of natural deposits.
Copper(ppm)	2007	1.3	0.17	.067	22	None	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent	Year Sampled	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2008	46.0	33-61	None	None	Generally found in ground & surface water.
Hardness (ppm)	2008	71.3	54-100	None	None	Generally found in ground & surface water.

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*, which 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production and mining activities.

Certain minerals are radioactive and may emit forms of radiation known as alpha, photons and beta radiation. Some people who drink water containing alpha, beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

SAMPLING RESULTS FOR DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent	Year Sampled	Average Level Detected	Range of Detections	MCL or [MRDL]	PHG, (MCLG) [MRDLG]	Typical Source of Contaminant
Radioactive						
Gross Alpha Particle Activity (pCi/L)	2008	ND	ND	15	(0)	Erosion of Natural Deposits
Inorganic						
Aluminum (ppm)	2008	0.02	ND-0.06	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes
Chromium (ppb)	2008	14.2	11-18	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Flouride (ppm)	2008	0.6	ND-0.77	2.0	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as nitrate, NO3) (ppm)	2008	12.03	11-15	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (as nitrogen, N) (ppm)	2007	0.05	ND-0.26	1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Volatile Organic						
Methyl-tert-butyl ether (MTBE) (ppb)	2007	ND	ND	13	13	Leakage from underground gasoline storage tanks and pipelines
Disinfection Byproducts, Residuals and Precursors						
TTHMs (Total Trihalomethanes) (ppb)	2008	7.5	4-11	80	N/A	By-product of drinking water chlorination
Chlorine (ppm)		0.49	0.34-0.61	[4]	[4]	Drinking water disinfectant added for treatment

SAMPLING RESULTS FOR DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent	Year Sampled	Average Level Detected	Range of Detections	MCL	Typical Source of Contaminant
Aluminum (ppb)	2008	43.2	ND-77	200	Erosion of natural deposits; residual from some surface water treatment processes
Color (units)	2008	ND	ND	15	Naturally-Occurring organic materials
Copper (ppm)	2008	ND	ND	1.0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Corrosivity	2008	11.7	11.58-11.83	Non-Corrosive	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
Foaming Agents (MBAS) (ppb)	2007	ND	ND	500	Municipal and industrial waste discharges
Iron (ppb)	2008	ND	ND	300	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2007	ND	ND	50	Leaching from natural deposits
Methyl-tert-butyl ether (MTBE) (ppb)	2007	ND	ND	5	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor-Threshold (units)	2008	.79	ND-1.0	3	Naturally-Occurring organic materials
Turbidity (units)	2008	0.08	ND-3.3	5	Soil runoff
Total Dissolved Solids (TDS) (ppm)	2008	230	170-320	1000	Runoff/leaching from natural deposits
Specific Conductance (micromhos)	2008	346.7	260-480	1600	Substances that form ions when in water; seawater influence
Chloride (ppm)	2008	14	12-16	500	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	2008	55.7	14-130	500	Runoff/leaching from natural deposits; industrial wastes

There are no PHGs or MCLGs for constituents with secondary drinking water standards because secondary drinking water standards are set to protect the aesthetics of the water and PHG/MCLGs are based on health concern.

DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent	Year Sampled	Average Level Detected	Range of Detection	Notification Level	Health Effects Language
Vanadium (ppb)	2008	12.6	11-17	50	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals

JOSHUA BASIN WATER DISTRICT

Promote *cooperation and respect with customers, employees, neighboring communities and public-private agencies.*

Provide *a high standard of water quality and customer service at responsible cost.*

Protect *the water resources of the Joshua Basin Water District.*

P.O. BOX 675 ▪ 61750 CHOLLITA ROAD ▪ JOSHUA TREE ▪ CALIFORNIA 92252
TELEPHONE (760) 366-8438 FAX (760) 366-9528

Regular Meetings of the Joshua Basin Water District Board of Directors

Are held on the first and third Wednesday of each month at 7:00 pm at the District Office

61750 Chollita Rd, Joshua Tree California 92252

In September of 2007, the district conducted a lead and copper sample survey based off of specific criteria set forth by the DPH, the district polled property locations within the district boundaries. The results of such testing, found on page 2, indicates that the district is compliant with the Department of Public Health regulations. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Joshua Basin Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in home plumbing components. When your water has been sitting in the pipes 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."

Drinking Water Source Assessment Results

The California Department of Health Services completed a drinking water source assessment for Joshua Basin Water District on August 24, 2001. This assessment examined the District's Well 10 and 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 low-density septic systems, transportation corridors and NPDES/WDR permitted discharges.

The District has also completed several studies in association with the United States Geological Survey (USGS). The purpose of these studies was threefold: (1) improve the understanding of the geohydrologic framework of the Joshua Tree and Copper Mountain groundwater subbasins; (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.

Additional copies of this report are available by contacting the District.
Please contact Joe Bocanegra, Interim Chief of Operations, at (760) 366-8438 for more information. A summary of the assessment may be requested by contacting the sanitary engineer 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: DHS San Bernardino District Office, Government Center 4th Floor, 464 West Fourth Street, Suite 437, San

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