

2016 Consumer Confidence Report

Water System Name: Furnace Creek Water System Report Date: 07/01/2017

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2016 and may include earlier monitoring data.

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

Type of water source(s) in use: The Furnace Creek Community water supply is collected solely from three wells

Name & general location of source(s): Furnace Creek water supply is located one mile east of the two million gallon tank on the alluvial fan. The system capacity is approximately one million gallons per day.

Drinking Water Source Assessment information: A source water assessment was conducted for all Furnace Creek wells in January 2009. Sources were considered vulnerable to water supply and monitoring wells. Arsenic, fluoride, and general minerals were detected but are not attributed to activities and are considered naturally occurring. Reverse osmosis treatment is provided for these. A copy of the complete assessment may be viewed at the Death Valley National Park office or requested from the State Water Resources Control Board, Division of Drinking Water at (909) 383-4328 or 464 West 4th Street, Suite 437, San Bernardino, CA 92401

The water is considered moderately mineralized consisting of sodium, calcium and magnesium, salts and bicarbonate, fluoride, arsenic and chloride. The water is considered high silica water in which amorphous silica and magnesium silicate deposits could create serious problems by fouling surfaces of water handling equipment. This type of silica scale is very tenacious and difficult to remove. Specific water quality data relating to system water supplies can be found below.

Time and place of regularly scheduled board meetings for public participation: Please call Tom Buck for an appointment at (760) 786-3264 or email: tom_buck@nps.gov

For more information, contact: Tom Buck Phone: (760) 786-3264

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

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.

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

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.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found

(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.

in our water system on multiple occasions.

ND: not detectable at testing limit

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

ppb: parts per billion or micrograms per liter (µg/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)

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.

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 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.

In order to ensure that tap water is safe to drink, the USEPA 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. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board 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 representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	(In a mo.) 2	1	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	(In the year) 0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive	0	Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	(from 4/1/16-12/31/16) 0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

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

Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	7/6/16	10	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	7/6/16	10	.065	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

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)	4/8/2014	150		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	4/8/2014	170		none	none	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 [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Turbidity (NTU)	4/8/14	0.22	0.09-0.22	1	N/A	Soil runoff
Gross Alpha Particle Activity (PCI/L)	9/16/15	5.3	N/A	15	(0)	Erosion of natural deposits
Radium 228 (PCI/L)	9/16/15	0.166	N/A	5	N/A	Erosion of natural deposits
TTHMs (Total Trihalomethanes) (ppb)	7/13/16	5.1	N/A	80	N/A	By-product of drinking water disinfection
Haloacetic Acids (ppb)	7/13/16	1.2	N/A	60	N/A	By-product of drinking water disinfection
Arsenic (ppb)	12/5/16	5.99	2.7-8.0	10	N/A	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes

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
Odor—Threshold (TON)	4/8/14	1	N/A	3	N/A	Naturally-occurring organic materials
Turbidity (NTU)	4/8/14	0.22	0.17-0.22	5	N/A	Soil runoff
Total Dissolved Solids (TDS) (ppm)	4/8/14	590	N/A	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (µS/cm)	4/8/14	960	N/A	1600	N/A	Substances that form ions when in water; seawater influence
Chloride (ppm)	4/8/14	32	N/A	500	N/A	Runoff/leaching from natural deposits; seawater influence

Sulfate (ppm)	4/8/14	160	N/A	500	N/A	Runoff/leaching from natural deposits; seawater influence
TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language	
Boron (ppm)	4/8/2014	.92	.88-.92	1	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	

Additional General Information on Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

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 are available from the Safe Drinking Water Hotline (1-800-426-4791).

Lead-Specific Language for Community Water Systems: 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. Furnace Creek Water System is responsible for providing high quality drinking water, but 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. [Optional: 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 (1-800-426-4701) or at <http://www.epa.gov/lead>.

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
Total Coliform Bacteria Maximum contaminant level exceeded November 2016 (state Total Coliform Rule)	2 samples tested positive for total coliform bacteria but E. coli was not detected. The maximum allowed is 1 sample.	1 month	Reviewed sampling techniques and sample points & corrected deficiencies	Coliforms are a group of bacteria found in plant material, water, and soil. Coliforms are also present in the digestive tracts and feces of humans and animals. Most of the time, these

				bacteria are not harmful.
Total Coliform Bacteria Repeat samples not collected November 2016	Did not collect repeat distribution total coliform samples within 24 hours	1 month	Reviewed sampling techniques and sample points & corrected deficiencies	Coliforms are also present in the digestive tracts and feces of humans and animals. Most of the time, these bacteria are not harmful.
Groundwater Rule well samples not collected November 2016	Did not collect E. coli well samples within 24 hours of notification of positive total coliform positive from distribution	1 month	Reviewed sampling techniques and sample points & corrected deficiencies	Coliforms are also present in the digestive tracts and feces of humans and animals. Most of the time, these bacteria are not harmful.

For Water Systems Providing Ground Water as a Source of Drinking Water

**TABLE 7 – SAMPLING RESULTS SHOWING
FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES**

Microbiological Contaminants (complete if fecal-indicator detected)	Total No. of Detections	Sample Dates	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
<i>E. coli</i>	0 (In the year)		0	(0)	Human and animal fecal waste
Enterococci	0 (In the year)		TT	n/a	Human and animal fecal waste
Coliphage	0 (In the year)		TT	n/a	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Ground Water Source Samples, Uncorrected Significant Deficiencies, or Ground Water TT

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE				
None detected				
SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES				
None detected				
VIOLATION OF GROUND WATER TT				
TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
N/A				