



TPWD

2017 Consumer Confidence Report

JUNE 2018



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

The Twentynine Palms Water District is pleased to provide you with our 2017 Consumer Confidence Report.

Included in this report are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

Your water comes from 6 different well sites that

are pumped from four different underground aquifers. Well 14 and Well 17 pump water from the Fortynine

Palms Groundwater Basin. Well 12, and Well 15 pump water from the Indian Cove Groundwater Basin. Well 16 pumps water from the Eastern Groundwater Basin. Well TP-1 pumps water from the Mesquite Springs Groundwater Basin.



SOURCE ASSESSMENTS. In April of 2002, the District completed source water assessments for all active drinking water wells. Wells 14 and 16 are considered most vulnerable to the following activities associated with the contaminants detected in the water supply: septic systems, high density housing, office buildings/complexes, schools and parks. In addition, all wells are vulnerable to one or more of the following activities: automobile repair shops, private wells, historic gas stations, roads, highways, fleet terminals, and maintenance areas. However, no contaminants have been detected. A copy of the completed assessment is available at the Twentynine Palms Water District main office or at the State Water Resources Control Board, Division of Drinking Water, San Bernardino District Office, 464 West 4th Street, Suite 437, San Bernardino, CA, 92401.

ARSENIC REMOVAL PROGRAM

A NATIONAL MODEL

The District, in cooperation with the US Environmental Protection Agency (USEPA), has successfully implemented the nation's first program of its kind to remove arsenic, a known carcinogen, from drinking water. The onsite arsenic removal project has been cited as a national model that is viewed as an economic solution to address the expensive costs of replacing media and waste removal.

The program was created in response to the USEPA's standard, adopted in 2001, of arsenic in drinking water from 10 parts per billion (ppb), down from 50 ppb. One part per billion is a thimble of water in your average size swimming pool.

Arsenic is an odorless, tasteless semi-metal that is naturally present in the earth. Long-term exposure to arsenic in its highly toxic inorganic form can cause skin damage, circulatory problems and an increased risk of cancer.

The District's program involves onsite regeneration of iron-based adsorptive media to remove arsenic from drinking water. The USEPA chose the Twentynine Palms Water District for its arsenic demonstration program because of its experienced staff, and familiarity and training with adsorptive media regeneration for fluoride removal.



WATER PROTECTION

Household chemicals and waste can pollute our water supply if we do not use them correctly and dispose of them properly. If they are flushed down the drain, they may end up in our groundwater. You can protect our water quality by using and disposing of household chemicals and waste with care. Do not throw them in the trash, take them to a hazardous waste collection facility instead. You can also reduce/eliminate herbicide and pesticide applications as well as recycle used oil and other automotive products. For more information regarding disposal please call San Bernardino County Fire Department Household Hazardous Waste Program at 1-800-645-9228.



GET INVOLVED

Our regular Board of Directors Meetings are held on the fourth Wednesday of each month at 6 p.m., in the District's administration building located at 72401 Hatch Road in Twentynine Palms. The public is invited to attend. Board meetings can be viewed on the District's website at: www.29palmswater.com. To confirm meeting dates, times, and locations, please contact the District Secretary (760-367-1792 x 308) or visit our website at www.29palmswater.com.

If you have questions about this report or the fluoride variance, please contact Mike Minatrea, Operations Superintendent at (760-367-7546).

WATER QUALITY TEST RESULTS FOR TWENTYNINE PALMS WATER DISTRICT

DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD (PDWS)						
	Sample Date	Avg. Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors						
Chlorine (ppm)	2017	.19	.01-.45	[MRDL=4.0 (as Cl ₂)]	[MRDLG=4 (as Cl ₂)]	Drinking water disinfectant added for treatment.
Total Trihalomethanes (TTHM) (ppb)	2017	3.85	ND-7.6	80	N/A	By-product of drinking water disinfection.
Inorganic Contaminants						
Arsenic (ppb)	2017	2.22	ND-7.2	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.
Hexavalent Chromium (ppb) ¹	2017	5.89	ND-11	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Chromium Total (ppb)	2017	ND	ND	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits.
Fluoride (ppm)	2017	1.04	.30-1.9	2.0*	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as N) (ppm)	2017	2.1	1.3-3.0	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Radioactive Contaminants						
Gross Alpha Particle Activity (pCi/L)	2016	1.50	ND-6	15*	(0)	Erosion of natural deposits.
Uranium (pCi/L)	2016	12	4-20	20	.43	Erosion of natural deposits.
1,2,3-Trichloropropane (ug/L) ²	2016	ND		0.005	.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as a cleaning and maintenance solvent, paint and varnish remover and cleaning agent; byproduct during the production of other compounds and pesticides.

¹ There is currently no MCL for hexavalent chromium. The previous MCL of 0.010 mg/L (10 ppb) was withdrawn on September 1, 2017. However, any hexavalent chromium results above the detection limit of 1 ppb should be reported.

² 1,2,3-Trichloropropane (1,2,3-TCP) had a notification level (NL) of 5 ppt until December 14, 2017, when the MCL of 5 ppt became effective.

1,2,3-Trichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

* Gross Alpha MCL exclude Uranium

DETECTION OF LEAD AND COPPER - Collected at customer tap							
	Sample Date	No. of Samples Collected	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Typical Source of Contaminant
Lead and Copper							
Copper (ppm)	2017	30	.098	0	1.3	.3	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (ppb)	2017	30	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

The District received requests from seven schools to perform lead sampling. All 35 samples came back absent for lead.

DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD (SDWS)						
There are no PHGs or MCLGs for contaminants with secondary drinking water standards because these are not health based levels, but set on the basis of aesthetics.						
	Sample Date	Avg. Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Contaminant						
Chloride (ppm)	2017	12.45	7.3-29	500	N/A	Runoff/leaching from natural deposits; seawater influence.
Odor--Threshold (units)	2017	1	1	3	N/A	Naturally-occurring organic materials.
Specific Conductance (micromhos)	2017	320	210-640	1600	N/A	Substances that form ions when in water; seawater influence.
Sulfate (ppm)	2017	26.9	8.9-90	500	N/A	Runoff/leaching from natural deposits; industrial wastes.
Total Dissolved Solids (TDS) (ppm)	2017	201	120-380	1000	N/A	Runoff/leaching from natural deposits.
Turbidity (units)	2017	ND	ND	5	N/A	Soil runoff.

COLIFORM BACTERIA						
38-48 samples taken monthly	Highest no. of detection	No. of months in violation	MCL	MCLG	Typical source of bacteria	Microbiological Contaminants
Total Coliform Bacteria (State TCR)	1	0	More than 1 sample in a month with a detection	0	Naturally present in the environment	Total Coliform Bacteria

DETECTION OF UNREGULATED CONTAMINANTS						
Unregulated contaminant monitoring helps the USEPA and the California Department of Health Services to determine where certain contaminants occur and whether the contaminants need to be regulated.						
	Sample Date	Avg. Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Chemical or Contaminant						
Hardness (ppm)	2017	71	54-83	N/A	N/A	Generally found in ground and surface water.
Sodium (ppm)	2017	43	15-120	N/A	N/A	Generally found in ground and surface water.
Vanadium (ppb)	2017	8.81	4.5-19	N/A	N/A	Naturally-occurring element.

TABLE DEFINITIONS

In this report, you might find terms and abbreviations that you may not be familiar with. To help you better understand these terms, the District has 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).

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.

Microhoms: A measurement of conductivity.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment techniques.

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

ND: Not detectable at testing limit. **N/A:** Non applicable

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

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

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

Turbidity: Turbidity is the cloudiness or haziness of a fluid caused by large numbers of individual particles that are generally invisible to the naked eye.

Vanadium: 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.

WATER QUALITY DATA

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.

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 agricultural, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts 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 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 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 must provide the same protection for public health. Unless otherwise noted, the following data presented in this table lists all of the drinking water contaminants that were detected during the 2017 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State 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.

Units: Unit of Measure.

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).

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. Twentynine Palms Water District 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. 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>.



Arsenic. 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 United States 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.

* The current State limit for fluoride in drinking water permits an MCL (Maximum Contaminant Level) of 2.0 milligrams per liter (mg/L). On January 21, 1993, the Twentynine Palms Water District was granted a variance from the California Primary Drinking Water Standard for fluoride, which states "The District shall not serve water containing fluoride levels in excess of 3.0 milligrams per liter (mg/L) or 75% of the U.S. Environmental Protection Agency Primary Drinking Water Standard (currently at 4.0 mg/L), whichever is higher." This variance was granted due to the elevated levels of naturally occurring fluoride in our source water. The beneficial effects of fluoride in drinking water approach a maximum at concentrations of 1.0 to 1.5 mg/L. Higher fluoride levels may cause dental fluorosis and in severe cases can be identified as mottled areas of the teeth. Based on dental research, fluorosis can only occur during the tooth-forming period, which is approximately before the age of 12. There are no other known ill effects, at the levels typically served by the District, of any kind found associated with fluoride in drinking water. As such, it is recommended that children under the age of 12 use an alternative drinking water supply. The variance from the Primary Drinking Water Standard for fluoride shall be in effect for a period of up to 30 years from the date of issuance subject to the following provisions:

1. Every five years, beginning in January 1998, the District shall submit a report to the State Board evaluating community acceptance of the fluoride levels being served.
2. The State Board advises the District in writing of its findings that there is no significant public opposition from the community served by the District and that the variance does not pose an unreasonable risk to the consumer's health.

Other provisions to the variance include:

1. That the variance may be withdrawn upon reasonable notice by the State Board, if it determines that the community no longer accepts the fluoride level authorized by the variance.
2. The District shall provide quarterly consumer notification of the variance in accordance with Section 64464.6 of the California Domestic Water Quality and Monitoring Regulations.
3. A fluoride monitoring plan, approved by the State Board, that monitors and reports all fluoride levels in the distribution system and water produced by all sources.

The District maintains acceptable levels of fluoride through the use of wells with lower levels of fluoride being pumped as much as possible when water demand on the system dictates. In April 2004, the State Board issued a permit to the District allowing full operation of the Fluoride Removal Plant, which currently is producing approximately 1.2 million gallons a day (1.2 MGD) of potable drinking water. The plant extracts water from the Mesquite Springs aquifer to remove high levels of naturally occurring fluoride. This aquifer is a significant source of water for the District and on-going studies will determine future production rates from the plant to better manage our groundwater resources.