

## 2004 CONSUMER CONFIDENCE REPORT JUNE 2005

\*\*\*\*\*Este informe contiene informacion muy importante sobre su agua beber.  
Traduzcalo o hable con alguien que lo entienda bien.\*\*\*\*\*

The **Twentynine Palms Water District** is pleased to provide you with our 2004 Consumer Confidence Report. This report contains details on where your water comes from, what it contains and how it compares to standards set by regulatory agencies.

**Your water comes from 12 different well sites** that are pumped from four different underground aquifers. Well #3B, Well #4, Well #13 and Well #14 pump water from the Fortynine Palms Groundwater Basin. Well #6, Well #7, Well #9, Well #10, Well #11 and Well #12 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.

**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. EPA/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 (800-426-4791).

**The sources of drinking water (both tap 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**, USEPA and the State Department of Health Services (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

**All drinking water, including bottled water**, may reasonably be expected to contain at least small amounts of 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).

**TWENTYNINE PALMS WATER DISTRICT  
72401 HATCH ROAD  
TWENTYNINE PALMS, CA 92277-2935**

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**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 storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining or farming.

*Pesticides and herbicides* that may come from a variety of sources such as agricultural, urban storm water runoff and residential uses.

*Organic chemical contaminants* including synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water 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.

**Water Quality Data**

The following table lists all the drinking water contaminants that were detected during the 2004 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1-December 31, 2004. The State Department of Health requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

You may not be familiar with terms and abbreviations in this table. To help you better understand these terms the District has provided the following definitions:

- **Regulatory Action Level:** The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.
- **Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's (or MCLG's) as is economically and technologically feasible. Secondary MCL's are set to protect the odor, taste and appearance of drinking water.
- **Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's are set by the U.S. Environmental Protection Agency (USEPA).
- **Public Health Goal or PHG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHG's are set by the California Environmental Protection Agency.
- **Primary Drinking Water Standard or PDWS:** MCL's for contaminants that affect health along with their monitoring and reporting requirements and water treatment techniques.
- **Variations and exemptions:** State or USEPA permission not to meet an MCL or a treatment technique under certain conditions.
- **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).

DETECTED CHEMICALS & CONSTITUENTS WITH PRIMARY DRINKING WATER STANDARDS						
Inorganics (units of measurement)	Avg. Level Detected	Range of Detection	MCL	PHG	MCLG	Typical Source of Contaminant
Arsenic (ppb) (sampled 2003)	8.64	2.0-29	50	N/A	N/A	Erosion of natural deposits; runoff from orchards, glass and electronics' production wastes.
Fluoride (ppm)	1.52	0.5-3.1*	2	1	N/A	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (ppm) (as Nitrate; NO <sub>3</sub> )	8.03	2.1-25	45	45	N/A	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total Chromium (ppb) (sampled 2003)	7.83	0-24	50	N/A	100	Erosion of natural deposits; discharge from steel and pulp mills and chrome plating.
<b>Volatile Organic Chemicals</b>						
Total Trihalomethanes-Max. Potential (ppb) (sampled 2003)	13.6	13.6	100	N/A	N/A	By-product of drinking water Chlorination.
<b>Radiological</b>						
Gross Alpha (pCi/L) (sampled 2003)	9.34	0-19.5	15	N/A	0	Erosion of natural deposits.
Uranium (pCi/L) (sampled 2003)	15.8	15.8	20	0.5	0	Erosion of natural deposits.

**DETECTED CHEMICALS & CONSTITUENTS WITH SECONDARY DRINKING WATER STANDARDS**

There are no PHG's or MCLG's for constituents with secondary drinking water standards because these are not health based levels, but set on the basis of aesthetics.

	<b>Avg. Level Detected</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>PHG</b>	<b>MCLG</b>	<b>Typical Source of Contaminant</b>
All results sampled in 2003						
Odor-Threshold (units)	1 unit	1 unit	3 units	none	none	Naturally-occurring organic materials.
Turbidity (units)	0.31	0.1-1.2	5 units	none	none	Soil runoff.
Total Dissolved Solids (ppm)	157.5	100-330	1000	none	none	Runoff/leaching from natural deposits.
Specific Conductance (micromhos)	276	190-560	1600	none	none	Substances that form ions when in water; seawater influence.
Chloride (ppm)	11.4	3.5-21	500	none	none	Runoff/leaching from natural deposits; seawater influence.
Sulfate (ppm)	16.9	3.5-68	500	none	none	Runoff/leaching from natural deposits; industrial wastes.
Corrosivity	(-)0.45	(-)0.03-(-)0.81	non-corrosive	none	none	Naturally or industrial-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.

**ADDITIONAL CONSTITUENTS ANALYZED**

Unregulated contaminant monitoring helps EPA and the California Department of Health Services to determine where certain contaminants occur and whether the contaminants need to be regulated.

Sodium (ppm) (sampled 2002)	34.6	12-100	none	none	none	Generally found in ground and surface water.
Hardness (ppm) (sampled 2002)	65.4	31-100	none	none	none	Generally found in ground and surface water.
Radon (pCi/L) (sampled in 2000)	1268	608-1800	none	none	none	Erosion of natural deposits.
Chromium VI (sampled 2002)	10.7	1.1-28	none	none	none	Industrial applications; manufacturing of stainless steel and other alloys.
Boron (sampled 2002)	365	350-380	none	none	none	Naturally-occurring element.
Vanadium (sampled 2002)	11.4	4.7-33	none	none	none	Naturally-occurring element.

**DISINFECTION BYPRODUCTS, DISINFECTION RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS**

Total Trihalomethanes (TTHM) ppb	4.5	0-8.0	80	N/A	N/A	Byproduct of drinking water chlorination.
Haloacetic Acids (ppb)	1.2	0-15	60	N/A	N/A	Byproduct of drinking water chlorination.
Chlorine (ppm)	0.18	0.16-0.24	4	N/A	N/A	Drinking water disinfectant added for treatment.

**Radon** is a radioactive gas that you can't see, taste or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or call EPA's Radon Hotline (800-SOS-RADON).

**Nitrate** in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should seek advice from your health care provider.

**Arsenic.** Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.

**Total Gross Alpha Monitoring.** On February 23, 2004, the District received lab results for Well #16 indicating a level of 19.5pCi/L of gross alpha. The Gross Alpha MCL is meant as a trigger for more testing. This prompted the District to test at this well source for Radium 226 and Uranium. No follow-up testing results have exceeded MCL levels for Radium 226 or Uranium. Based on the review of the follow-up testing, the Department of Health approved a reduction in monitoring for radiological constituents to four quarterly samples every four years starting in January 2007. Adverse health effects: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

**\*MCL Violation.** On February 13, 2004 the District received analytical results that Well #3B had a fluoride level of 3.1 ppm. This level exceeds the MCL of 3.0 ppm set forth by the District's fluoride variance and constitutes a violation (Please see below for more information regarding the fluoride variance). The well was taken off-line and a repeat sample was collected on February 18, 2004. The result of the repeat sample was lower than the MCL for fluoride and the Well was placed back on-line. Some people who drink water in excess of the federal MCL of 4.0 ppm over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2.0 ppm may get mottled teeth. Mottling (dental fluorosis) may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

**Source Assessments.** In April of 2002, the District completed source water assessments for all active drinking water wells. Wells 3B, 4, 13, 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 Department of Health, San Bernardino District Office, 464 West 4<sup>th</sup> Street, Suite 437, San Bernardino, CA. 92401.

**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 Department of Health Services evaluating community acceptance of the fluoride levels being served.
2. The Department of Health Services 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 consumer health.

Other provisions to the variance include:

1. That the variance may be withdrawn upon reasonable notice by the Department of Health Services, if the Department 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 Department of Health Services, 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 Department of Health Services issued a permit to the District allowing full operation of the Fluoride Removal Plant, which currently is producing approximately one million gallons a day (1 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.

**If you have questions** about the fluoride variance or any part of this report please contact Mike Wright at 760-367-7546.

**Our regular Board of Directors' Meetings** are held on the fourth Wednesday of each month at 6 p.m., in the District office located at 72401 Hatch Rd. and are shown on cable channel 6 at 7 p.m. on the fourth Friday.