

# 2007 Consumer Confidence Report

Water System Name: SERE Camp, Warner Springs Report Date: 19 May 2008

*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, 2007.*

**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: Groundwater

Name & location of source(s): Main well, SERE Camp, Warner Springs, California

Drinking Water Source Assessment information: Completed in March 2002. The sources are considered most vulnerable to military activities (leaking fuel tanks, spills). A copy of the completed assessment is available at the NAVFAC Southwest Environmental office. You may also request a summary of the assessment by contacting Mr. Len Sinfield at (619) 532-2280.

Time and place of regularly scheduled board meetings for public participation: The Navy does not hold regularly scheduled meetings on water issues. Telephone calls or written inquiries may be directed to Mr. Len Sinfield at (619) 532-2280

For more information, contact: Len Sinfield Phone: (619) 532-2280

## **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 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 Standards (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**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.

**Variations and Exemptions:** Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**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 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 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 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 Department of Public Health (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 must provide the same protection for public health.

**Tables 1, 2, 3, 4, and 5 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 Department 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.

**TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA**

Microbiological Contaminants (to be completed only if there was a detection of bacteria )	Highest No. of detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	2*	1	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

**TABLE 2 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER**

Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	No. of samples collected	90 <sup>th</sup> percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	Not required.	N/A	N/A	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	Not required.	N/A	N/A	1.3	0.17	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)	3/6/07	89	87-93	none	none	Generally found in ground & surface water
Hardness (ppm)	3/6/07	378	378-533	none	none	Generally found in ground & surface water

\*Any violation of an MCL or AL is marked with an asterisk. Additional information regarding the violation is provided later in this report.

**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
Gross Alpha Particle Activity (Picocuries per liter – pCi/L)	1/10/2007 4/4/2007 7/3/2007 10/6/2007	5.5 <sup>1</sup>	0 – 18.5	15	(0)	Erosion of natural deposits.
Combined Radium 226 & 228 (pCi/L)	1/10/2007 4/4/2007 7/3/2007 10/6/2007	0.78 <sup>2</sup>	0 – 0.487	5	(0)	Erosion of natural deposits.
Uranium (pCi/L)	1/10/2007 4/4/2007 7/3/2007 10/6/2007	15.1 <sup>2</sup>	0.5 – 24.8	20	(0)	Erosion of natural deposits.
Perchlorate (micrograms per liter or parts per billion - ppb)	3/12/2007	0.135	0.135 - 0.176	6	6	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
TTHMs (Total Trihalomethanes) (ppb)	7/03/2007	2.3	1.8 – 33.0	80	N/A	By-product of drinking water chlorination.
Haloacetic Acids (ppb)	7/03/2007	ND <sup>3</sup>	0.0 – 9.1	60	N/A	By-product of drinking water chlorination.
Chlorine (parts per million – ppm)	Weekly	0.75 <sup>4</sup>	0.0 – 5.0 <sup>5</sup>	4.0	4.0	Drinking water disinfectant added for treatment

**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
Color (CU)	3/6/2007	ND	3 - 300	15	N/A	Naturally occurring organic materials
Iron (ppb)	3/6/2007	ND	ND – 6330	300	N/A	Leaching from natural deposits.
Manganese (ppb)	3/6/2007	ND	ND – 206	50	N/A	Leaching from natural deposits.

<sup>1</sup> 2007 average over 4 quarters and adjusted for counting error and Uranium.<sup>2</sup> 2007 average over 4 quarters.<sup>3</sup> ND – Not detected above the analytical method detection limit.<sup>4</sup> 2007 annual average.<sup>5</sup> Range with lowest and highest individual measurements, not averages.

Total Dissolved Solids (TDS)	3/6/2007	720	654 - 1120	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (µS/cm)	3/6/2007	993	993	1600	N/A	Substances that form ions when in water; seawater influence
Chloride (Milligrams per liter – mg/L)	3/6/2007	109	70 - 106	500	N/A	Runoff/leaching from natural deposits; seawater influence
Sulfate (mg/L)	3/6/2007	157	166 - 690	500	N/A	Runoff/leaching from natural deposits; industrial wastes

**TABLE 6 - DETECTION OF UNREGULATED CONTAMINANTS**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Notification Level	Health Effects Language
none				

### 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).

SERE Camp is located in a remote area near the community of Warner Springs in the northeastern San Diego County at an elevation of about 3200 feet. The Camp consisted of a headquarters area with an administrative building, several staff barracks buildings, a wastewater treatment plant, and a training compound. SERE Camp is dependent upon two wells for its water supply: Main Well (Well No. 1) and Standby Well (Well No. 2). The camp has no water supply connections with any other water systems. Storage at the camp is provided by three water storage tanks: 5,000 gallons raw water storage tank, 1,000 gallon hydro-pneumatic tank, and a 42,000 gallon bolted steel treated water storage tank. The camp voluntarily provides continuous chlorination for all water delivered to the distribution system. A hypochlorite solution is added at the discharge side of the booster pumps by a flow of hypochlorite tablets with 65 percent available free chlorine.

### Summary Information for Contaminants Exceeding an MCL, MRDL, or AL, or a Violation of Any Treatment Technique or Monitoring and Reporting Requirement

Last year, the main well was tested for Total Coliform, Nitrates as NO<sub>3</sub>, General Mineral, Physical, and Inorganic Chemicals. The water system was tested for TTHM/HAA5.

#### Total Coliform MCL Violation

During routine monthly monitoring, a sample of drinking water from Building 1648 collected on February 8, 2007 had a positive coliform detection. On February 10, 2007, drinking water from building 1648 was resampled along with the first upstream location, fire hydrant no.8. Building 1648 resample result was negative for coliform, but fire hydrant no.8 had a positive coliform detection. Due to these coliform detections, on February 13, 2007, the California Department of Public Health (DPH) issued a "Boil Water Order" (BWO) for SERE Camp. On February 13 and 16, 2007, both building 1648 and fire hydrant no.8, as well as the next upstream location, fire hydrant no. 5, and the Main Well were sampled. No coliform was detected in any of the samples from February 13 or 16, 2007. On February 21, 2007, the

California DPH lifted the BWO for SERE Camp. The coliform detections probably resulted from not maintaining an adequate residual chlorine disinfection level in the drinking water. The Navy has instituted several measures to maintain the residual chlorine levels in the drinking water.

Because of these coliform detections, SERE Camp failed to comply with the Primary Drinking Water Standard for total coliform bacteria in February 2007. The Navy was issued a citation for noncompliance by the California DPH. For small water systems such as SERE Camp, having more than one sample collected during any month having a total coliform positive is a violation of the total coliform bacteria Primary Drinking Water Standard. All other drinking water system testing met required compliance limits in 2007.

Health Effects Language: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.