

2003

**CONSUMER CONFIDENCE REPORT
CAMP PENDLETON DRINKING WATER SYSTEMS**

Camp Pendleton 2003 Consumer Confidence Report

Water System: Camp Pendleton North Water System, Permit No. 3710700
Camp Pendleton South Water System, Permit No. 3710702

Reporting Period: January 1 to December 31, 2003

Date of Report: May 18, 2004

What Is This Report About?

This report provides important information about the quality of the water provided to customers on Marine Corps Base, Camp Pendleton (Camp Pendleton) in 2003. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards.

General Information on Drinking Water

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and the State of California's Department of Health Services (California DHS) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. 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 human activity. California DHS regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. 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 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).

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, which 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, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Additional Information on Drinking Water

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 from their health care providers about drinking water. 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).

Terms and Abbreviations 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 public health goals or maximum contaminant level goals 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 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.

Primary Drinking Water Standards (PDWS): MCLs for contaminants that have potential health effects along with their monitoring, reporting and water treatment requirements.

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

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

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

Detection Limits for the purpose of Reporting (DLRs): Some contaminants are not required to be reported to the California DHS; however, DHS encourages reporting these contaminants, if found, particularly if there are proposed regulations for the detected chemical, or there is health guidance available.

N/A: Not applicable

ND: Not detectable at the testing limits.

NTU: Nephelometric turbidity units (measures the cloudiness of the water).

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

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

ppb: Parts per billion or equivalent to micrograms per liter (µg/L).

ppt: Parts per trillion or equivalent to nanograms per liter (ng/L).

µmhos/cm: Micromhos per centimeter (a measurement of conductivity).

Camp Pendleton's Drinking Water Sources

Except for San Mateo Point housing, Camp Pendleton obtains all of its drinking water from local underground aquifers or basins. (San Mateo Point housing receives its water from the South Coast Water District; these residents should receive a Consumer Confidence Report from the South Coast Water District.) There are two independent water systems that supply all but San Mateo Point housing with drinking water. The North Water System (53 Area and most areas north) is supplied by three wells in the San Onofre basin and four wells in the San Mateo basin. The South Water System (43 Area and all areas south) is supplied by three wells in the Las Flores basin and twelve wells in the Santa Margarita basin. Presently, water extracted from five of the twelve drinking water wells in the Santa Margarita basin is filtered at an iron and manganese water treatment plant to reduce naturally-occurring concentrations of iron and manganese in the water.

Drinking Water Source Assessment Summary

The California DHS conducted a source water assessment for Camp Pendleton's drinking water systems during July 2002. This assessment determined that some wells that supply the southern drinking water system are most vulnerable to contaminants detected nearby the groundwater source and associated with the following evaluated activities: chemical/petroleum processing/storage and historic waste dumps/landfills. The assessment also determined that these wells are vulnerable to the following evaluated activities *not* associated with any detected contaminants: airports – maintenance, fueling areas, landfills/dumps, and military installations. The assessment further determined that all other Camp Pendleton wells for both the northern and southern drinking water systems are vulnerable to activities normally associated with military installations, however, no related contaminants have been detected in the water supply.

You may request a summary of this assessment by contacting Linda Teason, AC/S, Environmental Security, Drinking Water Branch, at 725-9741. A copy of the complete assessment is also available at:

AC/S, Environmental Security
Building 22165
Marine Corps Base
Camp Pendleton, CA 92055

Capital Improvements

Camp Pendleton frequently initiates projects to upgrade the distribution system. Current projects include upgrading the existing iron and manganese water treatment plant, which is scheduled to be completed in September 2004; construction of a second iron and manganese treatment plant to treat water extracted from the remaining seven drinking water wells in the Santa Margarita basin, which is scheduled to be completed by April 2005; replacement of four reservoirs; and upgrading chlorination stations by replacing gaseous chlorine with another disinfectant. Camp Pendleton will update you on the status of these projects in the next report.

Camp Pendleton's Drinking Water Quality

Camp Pendleton's water department treats water according to California DHS regulations. Besides monitoring for regulated contaminants, Camp Pendleton also monitors for unregulated contaminants, which helps USEPA and the California DHS to determine where certain contaminants occur and whether the contaminants need to be regulated.

Last year, Camp Pendleton conducted 16,622 tests for over 164 drinking water constituents. Of the 33 detected constituents presented in this report, only 6 had detections higher than an established MCL or AL. The presence of these substances in the water does not necessarily indicate that the water poses a health risk.

The following information summarizes contaminants that exceeded an MCL or AL, or resulted in a violation of any treatment or monitoring and reporting requirements:

North System

- There were 15 exceedances of the action level for copper out of 61 total samples collected. These are attributed to corrosion of copper pipes in buildings and residences.

South System

- There were exceedances of the secondary drinking water standard for color, iron, and manganese. These are all attributed to naturally-occurring materials that come in contact with the water before it is pumped to the surface. They are not associated with any known health risks, although they may impart an unpleasing aesthetic quality to the water. Most of the water produced in the south system that supplies the Wire Mountain, Stuart Mesa, and Del Mar Areas is treated at an iron and manganese plant, where contaminants attributed to naturally-occurring iron and manganese in the water are removed before it is distributed to consumers. Some exceedances can also be attributed to routine flushing operations that disturb accumulated precipitates in the water mains.
- There were seven exceedances of the action level for 1,2,3-trichloropropane. The Base is evaluating a course of action for continued safety and quality.
- There was one exceedance of the MCL for gross alpha particles out of 59 sampling events collected. These are attributed to erosion of natural deposits.

The following tables list all the drinking water constituents that were detected in samples taken in 2003. Health effects of individual contaminants have been provided by the California DHS.

Sampling Results Showing the Detection of Coliform Bacteria for 2003

North System

Microbiological

Chemical or Constituent	Highest # of Detects	MCL	PHG (MCLG)	Typical Sources of Bacteria	Health Effects Language
Total Coliform Bacteria	1*	No more than 1 positive sample / month	0 detects	Naturally present in the environment.	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. If Coliforms were found in more samples than allowed, this would be a warning of potential problems.
Fecal Coliform or <i>E. coli</i>	None	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> .	0 detects	Human and animal fecal waste.	Fecal Coliform and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems.

South System

Microbiological

Chemical or Constituent	Highest # of Detects	MCL	PHG (MCLG)	Typical Sources of Bacteria	Health Effects Language
Total Coliform Bacteria	1*	No more than 1 positive sample / month	0 detects	Naturally present in the environment.	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. If Coliforms were found in more samples than allowed, this would be a warning of potential problems.
Fecal Coliform or <i>E. coli</i>	None	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> .	0 detects	Human and animal fecal waste.	Fecal coliform and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems.

* Wells 23073 and Well 52028 each had one positive sample result for Total Coliform during 2003. These wells were immediately taken out of service, super chlorinated, flushed and resampled. The wells were returned to service after the resample results came back negative for Total and Fecal Coliforms. There were no detections for total coliform, fecal coliform, or *E. coli* bacteria in either the northern or southern distribution systems.

Sampling Results Showing the Detection of Lead and Copper at the Tap (Secondary MCLs) for 2003

North System

Inorganic Contaminants

Chemical or Constituent	Average Level of Detection	90th Percentile Level Detection	No. of sites Exceeding AL	AL	PHG (MCLG)	Typical Sources	Health Effects Language
Lead (µg/L)	ND(<5)	ND(<5)	0	15	2	Internal corrosion of household water plumbing system; discharges from industrial manufactures; erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults that drink this water over many years may develop kidney problems or high blood pressure.
Copper (mg/L)	0.766	1.740*	15	1.3	0.17	Internal corrosion of household water plumbing system; erosion of natural deposits; leaching from wood preservatives.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

*Federal and State standards for lead and copper are treatment techniques which may require the purveyors to optimize corrosion control treatment if, at the 90th percentile, action levels of 15 ppb for lead and 1.3 ppm for copper are exceeded in tap water testing. When copper or lead concentrations at a sampling location exceed the Action Limit, that distribution line is flushed and resampled. A study has been initiated to see what type of corrosion control treatment will resolve the situation.

Sampling Results Showing the Detection of Lead and Copper at the Tap (Secondary MCLs) for 2002

South System*

Inorganic Contaminants

Chemical or Constituent	Average Level of Detection	90th Percentile Level Detection	No. of sites Exceeding AL	AL	PHG (MCLG)	Typical Sources	Health Effects Language
Lead (µg/L)	ND(<5)	ND(<5)	0	15	2	Internal corrosion of household water plumbing system; discharges from industrial manufactures; erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults that drink this water over many years may develop kidney problems or high blood pressure.
Copper (mg/L)	0.493	1.060	1	1.3	0.17	Internal corrosion of household water plumbing system; erosion of natural deposits; leaching from wood preservatives.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

*The Southern System was last sampled in September 2002. The Southern System is not required to be sampled again until 2005, however, results from 2002 are being presented in compliance with regulations.

Detected Results for Sodium and Hardness for 2003

North System

Sodium and Hardness

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources
Sodium	mg/L	77	63.4 - 93.6	None	None	Sodium refers to the salt present in the water and is generally naturally occurring.
Hardness	mg/L	289	213 - 395	None	None	Hardness is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.

South System

Sodium and Hardness

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources
Sodium	mg/L	132	102 - 180	None	None	Sodium refers to the salt present in the water and is generally naturally occurring.
Hardness	mg/L	360	236 - 449	None	None	Hardness is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.

Detected Contaminants with Primary MCLs or MCLGs for 2003

North System

Inorganic Contaminants

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources	Health Effects Language
Arsenic	µg/L	ND(<2)	ND(<2) to 3	50	N/A	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Fluoride	mg/L	0.35	0.25 to 0.45	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.	Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L 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 mg/L may get mottled teeth.
Nitrate (as NO ₃)	mg/L	7.2	ND(<2) to 16.3	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. Pregnant women who drink water containing nitrate in excess of the MCL may experience anemia.

Detected Contaminants with Primary MCLs or MCLGs for 2003

South System

Inorganic Contaminants

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources	Health Effects Language
Arsenic	µg/L	ND(<2)	ND(<2) to 4	50	N/A	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Barium	mg/L	ND(<0.100)	ND(<0.100) to 0.162	1	2	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits.	Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.
Fluoride	mg/L	0.43	0.20 to 0.95	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.	Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L 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 mg/L may get mottled teeth.
Nitrate (as NO ₃)	mg/L	2.2	ND(<2) to 9.9	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. Pregnant women who drink water containing nitrate in excess of the MCL may experience anemia.

Detected Regulated Contaminants with Primary MCLs or MCLGs for 2003

North System

Radioactive Contaminants

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources	Health Effects Language
Gross Alpha particle activity	pCi/L	5.1	ND(<3) to 11.7	15	N/A	Erosion of natural deposits.	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.
Gross Beta particle activity	pCi/L	2.6	ND(<4) to 14.4	50	N/A	Decay of natural and man-made deposits.	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium	pCi/L	5.2	ND(<2) to 8.4	20	0.5	Erosion of natural deposits.	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Detected Regulated Contaminants with Primary MCLs or MCLGs for 2003

South System

Radioactive Contaminants

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources	Health Effects Language
Gross Alpha particle activity	pCi/L	4.9	ND(<3) to 16.39*	15	N/A	Erosion of natural deposits.	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.
Gross Beta particle activity	pCi/L	3.4	ND(<4) to 48.1	50	N/A	Decay of natural and man-made deposits.	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Tritium	pCi/L	121	ND(<1000) to 2737	20,000	N/A	Decay of natural and man-made deposits.	Some people who drink water containing tritium in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium	pCi/L	5.8	ND(<2) to 14.2	20	0.5	Erosion of natural deposits.	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

* Well 41611 exceeded the MCL once out of 59 sampling events. Four consecutive quarters are used to determine compliance. Based on consecutive quarterly averaging, this well was in compliance.

Disinfection Byproducts, Disinfectant Residuals and Disinfection Byproducts Precursors for 2003

North System

Disinfection Byproducts

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL/DLR	PHG (MCLG)	Typical Sources	Health Effects Language
Total Trihalomethanes (TTHM)	µg/L	17.4*	ND(<0.5) to 70.3	100	N/A	Byproduct of drinking water chlorination.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems and may have an increased risk of getting cancer.

South System

Disinfection Byproducts

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL/DLR	PHG (MCLG)	Typical Sources	Health Effects Language
Total Trihalomethanes (TTHM)	µg/L	33.8*	ND(<0.5) to 91.1	100	N/A	Byproduct of drinking water chlorination.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.

* Highest running annual average

Detection of Constituents with Secondary Water Standards for 2003

North System

Secondary Water Standard

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources
Color	Color Units	ND(<1)	ND(<1) to 3	15	N/A	Naturally-occurring organic materials.
Corrosivity	Aggressive Index	11.5	11.4 to 11.7	Non-corrosive	N/A	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.
Turbidity*	NTU	ND(<5)	ND(<0.5) to 0.7	5	N/A	Soil runoff
Conductivity	µmhos/cm	920	719 to 1160	1600	N/A	Substances that form ions when in water; seawater influence.
Total Dissolved Solids (TDS)	mg/L	545	428 to 714	1000	N/A	Runoff / leaching from natural deposits.
Chloride	mg/L	96	72 to 131	500	N/A	Runoff / leaching from natural deposits; seawater influence.
Sulfate	mg/L	141	91 to 205	500	N/A	Runoff / leaching from natural deposits; industrial wastes.

* Turbidity is a measurement of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Detection of Constituents with Secondary Water Standards for 2003

South System

Secondary Water Standard

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	MCL	PHG (MCLG)	Typical Sources
Color	Color Units	6.4	ND(<1) to 118*	15	N/A	Naturally-occurring organic materials.
Corrosivity	Aggressive Index	12	11.7 to 12.3	Non-corrosive	N/A	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.
Manganese	µg/L	ND(<20)	ND(<20) to 154**	50	N/A	Substances that form ions when in water; seawater influence.
Iron	µg/L	ND(<100)	ND(<100) to 2460***	300	N/A	Leaching from natural deposits; industrial wastes.
Turbidity****	NTU	ND(<0.5)	N/D(<0.5) to 4.6	5	N/A	Soil runoff.
Conductivity	µmhos/cm	1280	887 to 1450	1600	N/A	Substances that form ions when in water; seawater influence.
Total Dissolved Solids (TDS)	mg/L	739	499 to 826	1000	N/A	Runoff / leaching from natural deposits.
Chloride	mg/L	171	135 to 208	500	N/A	Runoff / leaching from natural deposits; seawater influence.
Sulfate	mg/L	171	56 to 268	500	N/A	Runoff / leaching from natural deposits; industrial wastes.

* Twenty seven of 348 samples exceeded the MCL for color in the distribution system.

** Twenty eight of 348 samples exceeded the MCL for manganese in the distribution system.

*** Eleven of 348 samples exceeded the MCL for iron in the distribution system.

**** Turbidity is a measurement of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Detection of Unregulated Contaminants with no MCLs for 2003

North System

Unregulated Contaminants

Chemical or Constituent	Units	Action Level	Range of Detection	MCL	PHG (MCLG)	Health Effects Language
Boron	µg/L	1000	ND(<100) to 268	N/A	N/A	Some men who drink water containing boron in excess of the action level over many years may experience reproductive effects, based on studies in dogs.
Vanadium	µg/L	50	ND(<3) to 11	N/A	N/A	The babies of some pregnant women who drink water containing vanadium in excess of the action level may have an increased risk of developmental effects, based on studies in laboratory animals.

South System

Unregulated Contaminants

Chemical or Constituent	Units	Action Level	Range of Detection	MCL	PHG (MCLG)	Health Effects Language
Boron	µg/L	1000	ND(<100) to 280	N/A	N/A	Some men who drink water containing boron in excess of the action level over many years may experience reproductive effects, based on studies in dogs.
Vanadium	µg/L	50	ND(<3) to 12	N/A	N/A	The babies of some pregnant women who drink water containing vanadium in excess of the action level may have an increased risk of developmental effects, based on studies in laboratory animals.
1,2,3-Trichloropropane	ng/L	5	ND(<5) to 49.6*	N/A	N/A	Some people who use water containing 1,2,3,-trichloropropane in excess of the action level over many years may have an increased risk of getting cancer, based on studies in laboratory animals.

* High result from Well 2202. Water from this well is blended with other wells prior to distribution.

Detected General Minerals and Organic Chemicals for 2003

North System

General Minerals and Organics

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	DLR
Bicarbonate Alkalinity	mg/L	166	137 to 230	N/A
Calcium	mg/L	72	57 to 107	N/A
Magnesium	mg/L	24	17 to 40	N/A
pH	pH Units	6.8	6.7 to 6.9	N/A
Total Organic Carbon	mg/L	0.5	ND(<0.7) to 1.5	N/A
Potassium	mg/L	1.0	ND(<1) to 2	N/A

South System

General Minerals and Organics

Chemical or Constituent	Units	Average Level of Detection	Range of Detection	DLR
Bicarbonate Alkalinity	mg/L	224	144 to 315	N/A
Calcium	mg/L	87	61 to 105	N/A
Magnesium	mg/L	35	20 to 45	N/A
pH	pH Units	7.1	6.8 to 7.5	N/A
Total Organic Carbon	mg/L	1.5	ND(<0.7) to 2.8	N/A
Potassium	mg/L	3.2	ND(<1) to 6.1	N/A

How Can I Get More Information About My Water?

Quarterly Community Council Meetings are held on Base. Drinking water issues can be discussed at these meetings. The public is welcome to attend and give input. For information about meeting locations, dates and times, contact the Housing Department at (760) 725-3068. The AC/S Facilities Water Department may also be contacted for additional information by calling (760) 725-0598.

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

Addendum

Correction to 2001 CCR:

- Results of Hexavalent Chromium testing in 2002 should not have been reported in the 2001 report, as no testing of this constituent was conducted in 2001.

Corrections and clarifications to 2002 CCR:

- Due to lab error, last year's report contained a detection for Thallium which should have read non-detect ND vice ND(<1) to 10 µg/L. The Base took 58 samples in the southern wells during 2002 and all were ND.
- The *average level of detection* for hexavalent chromium in both the northern and southern water systems should have read ND (<1) instead of ND (<10) µg/L. The *range of detection* for hexavalent chromium in the northern water system should have read ND (<1) instead of ND (<10) µg/L, and the *range of detection* for hexavalent chromium in the southern water system should have read ND (<1) to 1.8 µg/L instead of ND (<10). Hexavalent chromium was detected above the detection limit of 1.0 µg/L at one southern system well on three occasions during 2002. Camp Pendleton is required to test for hexavalent chromium in the drinking water wells, and will continue to monitor and report results above the detection limit to the California DHS.
- The results for Manganese in the southern system should have read ND(<20)-631 µg/L with an average of 232 µg/L versus 27-45 µg/L with an average of 36 µg/L.

Summary of Water Quality Complaint/Response

There were a total of 24 water quality complaints reported in 2003. A total of 9 complaints were received from the Del Mar Housing Area during November and 2 complaints were received in October. One complaint was received in August from the Wire Mountain Housing Area during the 3rd quarter and 11 complaints were received from the Stuart Mesa Housing Area during March when Reservoir 32939 was restored to service and the entire area was flushed. There were no complaints during the 2nd quarter.

Water Section personnel respond to each complaint that is forwarded to the Facilities Maintenance Department (FMD) with the following protocol:

- Each documented complaint is addressed with either a phone call or visit to the resident. Samples are collected if the Water Supply Unit determines they are required or if the resident requests it. This is documented on the Report of Water Quality Complaint form and includes the number and types of samples collected, and the results. Samples are evaluated for the following: Free Chlorine Residual, Bacteriological, Heterotrophic Plate Count, Color, Turbidity, Iron and Manganese. Normally, results of water quality complaint samples are forwarded to the resident.
- In the event that several complaints are received from the same general location, Water Supply Unit personnel investigate the affected areas (reservoirs, pumping stations and distribution system pipe lines) and conduct flushing operations to include all necessary sampling both before and after flushing operations.