

YOUR DRINKING WATER 2018 Annual Water Quality Report Marine Corps Base, Camp Pendleton

INSIDE THIS REPORT

This report describes the quality of water provided to residents and personnel living and working aboard Marine Corps Base, Camp Pendleton (MCB CamPen) during 2018. Included are details about where the water comes from, what it contains, and how it compares to established drinking water standards.

Drinking Water Sources	Τ
Water Šervice Areas	1
Water Quality Monitoring	1
General Information about Drinking Water	2
Drinking Water Considerations	2
Terms Üsed in this Report	3
2018 Water Quality Monitoring Results	4
Consumer Notifications	7
Regulatory Information: Lead & Coliform	8
From the Ground to Your Tap	9
Source Water Assessment & Protection	10
Water Conservation & How to Help	11
Contact Info. & Additional Resources	12

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

DRINKING WATER SOURCES

Unlike most of Southern California which relies on imported water supplies, nearly all of MCB CamPen's drinking water comes from local groundwater sources. Wells located on Base supply water to all of MCB CamPen except for San Mateo Point Housing, which receives water from the South Coast Water District. Residents of San Mateo Point Housing should receive a consumer confidence report from this off-base water supplier.

WATER SERVICE AREAS

MCB CamPen provides water to the base through two drinking water systems:

Northern Water System: Services all areas north of Las Pulgas Road except for the 43 Area and San Mateo Point housing. Wells located in the San Onofre and San Mateo River basins supply water to this water system.

Southern Water System: Services the 43 Area and all areas south and southeast of Las Pulgas Road. Wells located in the Las Pulgas and Santa Margarita River basins supply water to this water system.



Camp Pendleton water service areas

WATER QUALITY MONITORING

MCB CamPen routinely tests the water to ensure that it meets safe drinking water standards. In addition to monitoring for contaminants with established drinking water standards, the base also monitors for unregulated contaminants, which helps the U.S. Environmental Protection Agency (USEPA) and the California State Water Resources Control Board (SWRCB) determine where certain contaminants occur and whether such contaminants require regulation.

Last year, MCB CamPen completed over 20,000 water quality tests to evaluate compliance for over 200 different drinking water contaminants. While most contaminants registered below detectable levels, some occasionally did not achieve a drinking water standard. The tables on pages 4 - 6 depict these contaminants along with others that require reporting. The tables contain separate columns to distinguish between the water quality measured in the Northern and Southern Water Systems.

GENERAL INFORMATION ABOUT DRINKING WATER

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, which 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, which 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 SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. These regulations also establish limits for contaminants in bottled water that provide the same protection for public health.



DRINKING WATER CONSIDERATIONS

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). Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 These people should seek advice infections. 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).

TERMS USED IN THIS REPORT

ACTION LEVEL (AL) - The concentration of a contaminant in drinking water which, if exceeded, triggers treatment or other requirements that a water system must follow.

HEALTH ADVISORY (HA) - The concentration of an unregulated contaminant in drinking water which, if exceeded over a lifetime, may have associated health risks.

MAXIMUM CONTAMINANT LEVEL (MCL) - The highest level of a contaminant allowed in drinking water. Primary MCLs are set as close to the Public Health Goal (PHG) or Maximum Contaminant Level Goal (MCLG) as is economically and technologically feasible.

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.

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 to control 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.

<u>**MICROSIEMENS PER CENTIMETER (\muS/CM)</u>** - A unit of measurement to express electrical conductivity of drinking water. One μ S/cm equals one ppm of conductive particles in drinking water (see definition for ppm).</u>

NEPHELOMETRIC TURBIDITY UNIT (NTU) - A unit of measurement to express the amount of suspended particles in drinking water.

NON DETECT (ND) - Either a contaminant is not present in the drinking water or the contaminant is below the laboratory detection limit or state-required reporting level.

NOTIFICATION LEVEL (NL) - A health-based advisory level established by the SWRCB for chemicals in drinking water that lack MCLs. When chemicals are found at concentrations greater than their notification levels, certain regulatory requirements and recommendations apply.

PART PER MILLION (PPM) - A unit of concentration often used to represent how much of a pollutant exists in drinking water. One ppm is like one second in 11.5 days.

PART PER BILLION (PPB) - A unit of concentration often used to represent how much of a pollutant exists in drinking water. One ppb is like one second in nearly 32 years.

PART PER TRILLION (PPT) - A unit of concentration often used to represent how much of a pollutant exists in drinking water. One ppt is like one second in nearly 32,000 years.

<u>PICOCURIES PER LITER (PCI/L)</u> - A unit of measurement to express activity of radionuclide contaminants in drinking water. **<u>PRESENT/ABSENT (P/A)</u>** - A unit of measurement to express bacteriological sample results in drinking water.

PRIMARY DRINKING WATER STANDARD (PDWS) - MCLs and MRDLs for contaminants in drinking water that affect health along with their monitoring, reporting, and water treatment requirements.

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.

SECONDARY MAXIMUM CONTAMINANT LEVEL (SMCL) - The highest level of a contaminant allowed to protect the odor, taste, and appearance of drinking water; these contaminants do not present a health risk at the SMCL.

STATE WATER RESOURCES CONTROL BOARD (SWRCB) - The SWRCB preserves the quality of California's water resources and drinking water for protection of the environment and public health.

THRESHOLD ODOR NUMBER (TON) - A unit of measurement to express the amount of odor compounds in drinking water.

2018 WATER QUALITY MONITORING RESULTS

Inorganics with Primary Drinking Water Standards							
Parameter			Water System		PHG	Units	Typical Sources
			Southern				.,)
Arsenic	Range	ND -1.36	ND - 1.67	10	0.004	ppb	Erosion of natural deposits
	Average	0.17	0.87				
Barium	Range		0.029-0.056		2	ppm	Leaching from natural deposits and industrial waste
	Average	0.050	0.043				industrial waste
Chromium	Range	ND	ND - 2.23	5	0.04	ppb	Erosion of natural deposits and
(total)	Average	ND	0.99				Industrial waste
Fluoride	Range	0.26-0.80	0.12-0.80	2		ppm	Erosion of natural deposits
(Natural-Source)	Average	0.34	0.47				
Nitrate as N	Range	1.77-2.29	ND - 1.82	10	10	ррт	Runoff and leaching from fertilizer use; erosion of natural deposits
	Average	2.01	0.96	10	10	ррш	
Radionuclides with Primary Drinking Water Standards							
Radionucides with Pril	mary Dri	iikiiig vvat	er Stanuai	rus			
	mary Dri		System		PHG	l Inits	
Parameter	mary Dri			MCL	PHG (MCLG)	Units	Typical Sources
Parameter	Range	Water	System	MCL	(MCLG)		
	Range Average	Water Northern ND - 3.85 0.48	System Southern ND - 17.2 5.6		PHG (MCLG) (0)	Units pCi/L	Typical Sources Erosion of natural deposits
Parameter	Range Average Range	Water Northern ND - 3.85 0.48 NA	System Southern ND - 17.2 5.6 10.2-14	MCL	(MCLG)		
Parameter Gross Alpha ¹ Uranium ²	Range Average Range Average	Water Northern ND - 3.85 0.48 NA NA	System Southern ND - 17.2 5.6 10.2-14 11.4	MCL 15 20	(MCLG) (0) 0.43	pCi/L	Erosion of natural deposits Erosion of natural deposits
Parameter Gross Alpha ¹ Uranium ² ¹ Compliance with the gross uranium, the Southern Wat	Range Average Range Average alpha MC ser System hed from a	Water Northern ND - 3.85 0.48 NA NA L is determin was in comp trigger level of	System Southern ND - 17.2 5.6 10.2-14 11.4 hed by subtroliance with	MCL 15 20 acting urani the gross a	(MCLG) (0) 0.43 um values f Ipha MCL (pCi/L pCi/L from the (the adjust	Erosion of natural deposits
Parameter Gross Alpha ¹ Uranium ² ¹ Compliance with the gross uranium, the Southern Wat ² Uranium testing is determin	Range Average Range Average alpha MC er System ned from a st for Uran	Water Northern ND - 3.85 0.48 NA NA L is determin was in comp trigger level o ium.	System Southern ND - 17.2 5.6 10.2-14 11.4 ned by subtr bliance with of 5 pCl/L of	MCL 15 20 acting urani the gross a Gross Alph	(MCLG) (0) 0.43 um values f Ipha MCL (a. In the No	pCi/L pCi/L from the (the adjust) orth for 2	Erosion of natural deposits Erosion of natural deposits gross alpha values. After subtracting sted gross alpha result was 3 (pCi/L). 018 no Gross Alpha value was over the
Parameter Gross Alpha ¹ Uranium ² ¹ Compliance with the gross uranium, the Southern Wat ² Uranium testing is determin trigger amount to need to te Disinfectants and Disin	Range Average Range Average alpha MC er System ned from a st for Uran	Water Northern ND - 3.85 0.48 NA NA L is determin was in comp trigger level o ium.	System Southern ND - 17.2 5.6 10.2-14 11.4 ned by subtr bliance with of 5 pCl/L of	MCL 15 20 acting urani the gross a Gross Alph a ry Drink MCL	(MCLG) (0) 0.43 um values f Ipha MCL (a. In the Nc ting Wate PHG	pCi/L pCi/L from the (the adjust orth for 2	Erosion of natural deposits Erosion of natural deposits gross alpha values. After subtracting sted gross alpha result was 3 (pCi/L). 018 no Gross Alpha value was over the lards
Parameter Gross Alpha ¹ Uranium ² ¹ Compliance with the gross uranium, the Southern Wat ² Uranium testing is determin trigger amount to need to te	Range Average Range Average alpha MC er System ned from a st for Uran	Water Northern ND - 3.85 0.48 NA NA L is determin was in comp trigger level o ium.	System Southern ND - 17.2 5.6 10.2-14 11.4 ned by subtr bliance with of 5 pCl/L of with Prim	MCL 15 20 acting urani the gross a Gross Alph a ary Drink	(MCLG) (0) 0.43 um values f Ipha MCL (a. In the Nc ting Wate	pCi/L pCi/L from the (the adjust) orth for 2	Erosion of natural deposits Erosion of natural deposits gross alpha values. After subtracting sted gross alpha result was 3 (pCi/L). 018 no Gross Alpha value was over the
Parameter Gross Alpha ¹ Uranium ² ¹ Compliance with the gross uranium, the Southern Wat ² Uranium testing is determin trigger amount to need to te Disinfectants and Disin	Range Average Range Average alpha MC er System ned from a st for Uran	Water Northern ND - 3.85 0.48 NA NA L is determin was in comp trigger level of ium. Syproducts Water	System Southern ND - 17.2 5.6 10.2-14 11.4 ned by subtr blance with of 5 pCl/L of with Prim System	MCL 15 20 acting urani the gross a Gross Alph a ry Drink MCL	(MCLG) (0) 0.43 um values f Ipha MCL (a. In the Nc ting Wate PHG	pCi/L pCi/L from the (the adjust orth for 2	Erosion of natural deposits Erosion of natural deposits gross alpha values. After subtracting sted gross alpha result was 3 (pCi/L). 018 no Gross Alpha value was over the lards

Byproduct of drinking water 60 Haloacetic Acids None ppb disinfection Average 6 6 Range 12 - 50 15 - **140** Byproduct of drinking water Total Trihalomethanes³ 80 None ppb disinfection 27 38 Average

2 - 19

3 - 10

Range

³ Compliance with the Total Trihalomethanes MCL is determined by a locational running annual average of four quarters of results. Based on these averages, the Southern Water System was in compliance with the MCL during 2018.

Total Trihalomethanes

During January 2018, the average of samples analyzed for total trihalomethanes in the Southern Water System was 81 parts billion (ppb), which was slightly over the total trihalomethanes MCL of 80 ppb. Notification to the affected areas occurred on February 20, 2018. The notice advised that 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. Upon learning of the exceedance, staff immediately flushed water lines in the affected areas, and returned the Advanced Water Treatment Plant back in operation limiting the potential for trihalomethanes to form. Subsequent monitoring has complied with the total trihalomethanes MCL.

2018 WATER QUALITY MONITORING RESULTS

Parameter		Water Northern	System Southern	MCL	PHG (MCLG)	Units	Typical Sources
Total Coliform Bacteria	Coliform Bacteria Coliform Positive		6 .1%	Varies ⁴	(0)	P/A	Naturally present in the environment
month. The Northern	Water System with the MCL	complies wit	h the MCL w	hen no mo	re than one	e monthly	r of total coliform positive samples p sample tests positive. The Southe e. See page 8 for information on t
Contaminants with	Secondary D	rinking W	ater Stand	ards	1000		
Downworker		Water	System	MCL	PHG	Linite	Turited Courses
Parameter		Northern	Southern	(SMCL)	(MCLG)	Units	Typical Sources
Chloride	Range	91-96	83 - 217	(500)			Runoff/leaching from natural depos
Chioride	Average	94	148	(500)	None	ppm	
Foaming Agents (MBAS)	Range	ND	ND - 102	(500)	None	pph	Municipal and industrial waste
(IMBAS)	Average	ND	13	(500)		ррb	discharges
Sulfate	Range	91 - 107	58 - 77	(500)	None	ppm R	Runoff/leaching from natural depos
	Average	99	67	(000)			
Specific Conductance	Range	766 - 814	561-1400	(1600)	None	e µS/cm	Substances that form ions when i
	Average	797	980	· · · ·			water
Total Dissolved Solids	Range	444 - 506	300 - 824	(1000)	None	lone ppm	Runoff/leaching from natural depos
	Average Range	487	369				
Turbidity	Average	ND - 0.163 0.091	0.055	(5)	None	None NTU	Soil runoff
ap Water Monitor							
Water System							
Parameter		Northern	Southern	AL	PHG	Units	Typical Sources
C	Samples > AL	0 of 30	0 of 30				Internal corrosion of household
Copper⁵	90th percentile	0.57	0.13	1.3	0.3	ррт	plumbing systems
Lead ⁵	Samples > AL	0 of 30	0 of 30	15	0.2		Internal corrosion of household plumbing systems
	90th percentile	ND	ND	15		ppb	

Both the Northern and Southern Water Systems were in compliance with the lead and copper Action Levels during 2018. Compliance is based on the 90th percentile of all samples collected, which must be less than the AL. The system is out of compliance when more than 10% of samples exceed the AL.

2018 WATER QUALITY MONITORING RESULTS

Sodium and Hardness							
Parameter		Water System		NL	PHG	Units	Typical Sources
Faiameter		Northern	Southern				
Sodium	Range	70.2-72.9	67.8-168	None	None	ppm	Leaching from natural deposits
	Average	72.0	116				
Total Hardness	Range	210 - 240	65 - 390	None	None	ppm	Naturally occurring minerals
rotal rial difess	Average	228	137	Ttone			
Unregulated Contami	nant Moni	itoring Rul	e 3 (UCMF	R3) ⁶			
Parameter		Water	System	NL (HA)	PHG	Units	Typical Sources
r ar anneter		Northern	Southern		PHG		
Chlorate	Range	120 - 220	97 - 560	800	None	ppb	Agricultural defoliant; disinfection byproduct
Cinorate	Average	187	320	000	None	ρμο	
Hexavalent Chromium	Range	0.10 - 0.43	0 - 0.37	None	None	ppb	Erosion of natural deposits
	Average	0.21	0.14	1 tone	1 tone	ppo	
Molybdenum	Range	3.0 - 3.8	1.7 - 7.6	None	None	ppb	Naturally present in the environme
riolybdenum	Average	3.3	4.4	None	None		Naturally present in the environment
Perfluorooctane Sulfonic	Range	ND- 18	ND - 22	3	Nana		Industrial use chemical
Acid (PFOS)	Average	14	7	13	None ppt	ррс	industrial use chemical
Perfluorooctanoic Acid	Range	ND - 9	ND - 17	14	N	Det	Industrial use chemical
(PFOA)	Average	4	5	14	None	one ppt	
Strontium	Range	270 - 450	130 - 590	None	None	pph	Naturally present in the onvironmen
Suonuum	Average	320	365	None	None	ррb	Naturally present in the environment
Vanadium	Range	2.2 - 3.0	0.24 - 7.4	50	None	pph	Naturally present in the onvironmen
Yanaulum	Average	2.7	3	50	INONE	ррb	Naturally present in the environment

⁶Testing for these contaminants was performed in accordance with the USEPA's Third Unregulated Contaminant Monitoring Rule (UCMR3). Unregulated contaminant monitoring helps the USEPA and SWRCB to determine where certain contaminants occur and whether the contaminants need to be regulated. The Southern Water System was sampled during 2013 and 2014. The Northern Water System was sampled during 2014 and 2015. PFOS and PFOA reflect values sampled in 2018 with new notification levels.

Monitoring for Other Unregulated Contaminants

Parameter	Paramotor		Water System		PHG Units Typical Sources		Typical Sources
Farameter		Northern	Southern	(HA)	mg	Onits	i ypical sources
Chloroform	Range	ND - 0.71	ND - 1.5	None	None	None ppb Byproduct of drinking water disinfection	Byproduct of drinking water
Chiorolorni	Average	0.29	0.7				disinfection
PFOS + PFOA ⁷	Range	ND - 25	ND - 38	(70)	(70) None ppt Industrial us	ppt	Industrial use chemical
HOSTHOA	Average	18	12				

⁷During 2018, for the Southern System, well water was blended and monitored to ensure no water entering treatment exceeded USEPA's HA for combined perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). The Northern System was monitored and no wells exceeded the HA. Lifetime consumption of drinking water with PFOA and PFOS above the HA may result in adverse health effects, including fetal developmental during pregnancy, effects to breast-fed infants, cancer, liver effects, immune effects, and other effects (e.g., cholesterol changes)

CONSUMER NOTIFICATIONS

WATER SYSTEM MONITORING AND REPORTING VIOLATIONS

Total Coliform Rule

During April 2018, 6.1% of Southern Water System samples tested positive for total coliform bacteria. The standard is that no more than 5% of Southern Water System samples may test positive. Notification to the affected areas occurred on May 24, 2018. Upon learning of the coliform detections, staff immediately isolated and flushed water lines in the affected areas, increased disinfectant levels, and resampled until the issue was corrected and laboratory retests for total coliform were negative. For more information about the revised total coliform rule and corrective actions please see the RTCR section on page 8.

Total Trihalomethanes

During January, 2018 the average of samples analyzed for total trihalomethanes in the Southern Water System was 81 parts per billion (ppb), which was slightly over the total trihalomethanes MCL of 80 ppb. Notification to the affected areas occurred on February 20, 2018. The notice advised that 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. Upon learning of the exceedance, staff immediately flushed water lines in the affected areas and modified the flushing regime to limit the potential for trihalomethanes to form. Subsequent monitoring has complied with the total trihalomethanes thanes MCL.

Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS)

In July 2018 the State of California established notification levels of 14 ppt. for PFOA and 13 ppt. for PFOS. Lifetime Health Advisory Levels, also known as response levels, had previously been established at 70 ppt as the combine PFOA and PFOS concentration. During 2018 all samples were well below the Lifetime Health Advisory Response Levels however some samples exceeded the Notification Levels. Lifetime consumption of drinking water with PFOA and PFOS above the NL may result in adverse health effects, to include developmental effects to fetuses during pregnancy or to breast-fed infants, cancer, liver effects, immune effects, and other effects (e.g., cholesterol changes).

A NOTE ON FLUORIDE

MCB CamPen currently does not add fluoride to the drinking water. However, the presence of naturallyoccurring fluoride in our source water may help to prevent tooth decay. General information on the oral health benefits of fluoride in drinking water is available at the following web links:

SWRCB, Division of Drinking Water http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/ Fluoridation.shtml

Department of Health and Human Services Center for Disease Control and Prevention (CDC) http://www.cdc.gov/fluoridation/index.htm



REGULATORY INFORMATION: LEAD AND TOTAL COLIFORM

LEAD IN DRINKING WATER

Although sampling of residential taps during 2018 achieved standards for lead in drinking water, federal regulations require us to communicate the following health advisory regarding lead in drinking water: 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. Marine Corps Installations West—Marine Corps Base, Camp Pendleton 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/lead.

REVISED TOTAL COLIFORM RULE (RTCR)

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

All state water systems are required to comply with the state Total Coliform Rule. As of April I, 2016, all state water systems are also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and *E. coli* bacteria). Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defect exists. If found, these must be corrected by the water system. During the past year, we were required to conduct one level I assessment for our Southern Water System. A Level I 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. One level I assessment was completed. In addition, we were required to take one corrective action, and completed the specified corrective action.

FROM THE GROUND TO YOUR TAP

WELLS

Water is pumped from groundwater wells on Base.

WATER TREATMENT

Treatment processes remove naturally occurring iron, manganese, and dissolved solids (Southern System only).

A small, safe amount of chlorine disinfects the water; then the water is treated to limit corrosion.

RESERVOIRS

Water is sent to storage tanks until needed.

YOUR TAP

Water comes out of your tap safe to drink.

VS

BOTTLED VS. TAP WATER

Though many people prefer bottled water to tap water for perceived health considerations and taste, both bottled water and tap water must meet strict regulatory standards before they reach the consumer. Bottled water is regulated by the U.S. Food and Drug Administration, while tap water is regulated by the USEPA and the California EPA. Varying factors, such as residence time in the water distribution system, natural mineral content, and residual chlorine from the water disinfection process can impart an unpleasant taste to tap water. Below are some ways that you can improve the taste of tap water.

Prior to consumption:

- Flush the water from the tap for a couple of seconds.
- Allow the water to air for a period of time.
- Chill the water.
- Use a sink filter attachment or filter pitcher.
- Utilize refrigerators with water filters already installed.

Tap water is a bargain relative to the cost of bottled water. Using tap water also alleviates the cost and environmental burden associated with the manufacture, transport, and recycling or disposal of plastic water bottles. Go ahead and give our drinking water a try!

DID YOU KNOW?

Americans use the most bottled water of any nation—about 29 billion plastic bottles per year. The amount of oil required to produce a single plastic water bottle is enough to fill a quarter of that bottle. Filling up a reusable bottle with tap water helps save energy and prevents these plastic bottles from ending up in our landfills and our oceans. It also saves you money; your tap water is free!

SOURCE WATER ASSESSMENT

The SWRCB's Division of Drinking Water conducted an assessment of the Base's drinking water sources during July 2002. The assessment evaluated whether MCB CamPen's groundwater supplies are vulnerable to contamination from activities that occur, or have occurred, on Base. The assessment determined that wells in both water systems are most vulnerable to contamination commonly associated with military installations; chemical or petroleum processing or storage; historic and operational waste dumps and landfills; and airport maintenance and fueling areas. You may request a summary of this assessment by contacting Water Resources Division at 760-725-0602. The complete assessment may be viewed at Water Resources Division, Drinking Water Dept. at Building 2291, Room 7.

HOUSEHOLD HAZARDOUS WASTE

Another way to help protect our source water is to properly dispose of household hazardous waste. These are products that are typically corrosive, toxic, ignitable, or reactive, such as paints, cleaners, oils, batteries, and pesticides. The Housing District Offices provide a free program for the disposal of household hazardous waste. Never throw unwanted hazardous waste into the trash; this may injure sanitation workers and contaminate the environment. Similarly, never dispose of household hazardous waste liquids down your drains, as this also provides an easy pathway for hazardous waste to enter the environment. For questions or for more information on household hazardous waste drop-off points, call the following Housing District Offices at:

٠	Del Mar	760-430-0040
٠	Wire Mountain	760-430-8476
٠	San Onofre	949-940-9178
٠	Stuart Mesa	760-430-0694
•	Dalur	760 205 4025

DeLuz 760-385-4835
Mesa 760-385-5318

SOURCE WATER PROTECTION

Because MCB CamPen's groundwater resources are located near areas where we live and work, our have the activities potential to introduce contaminants into our drinking water supplies. Water runoff from storm and non-stormwater related events can pick up and deposit contaminants into the rivers and streams that recharge our aquifers. Surface water contamination can also harm aquatic life and pollute our beaches. Below are some simple ways you can help us to reduce water pollution, safeguard our drinking water resources and protect the environment:

- Check your car for leaks.
- Take your car to a carwash instead of washing it in the driveway.
- Pick up after your pet.
- Use fertilizers and herbicides sparingly.
- Sweep driveways and sidewalks instead of using a hose.
- Dispose of chemicals properly; never dispose of waste, trash or any materials down storm drains.

For more information on stormwater, or to report illegal discharges into the storm drain system, call the Environmental Security Stormwater Section at 760-763-7880.



WATER CONSERVATION

MCB CamPen's limited groundwater resources are vulnerable to wasteful water-use activities. In order to help conserve our groundwater supplies, please consider your water consumption, and use only the water you need. For more information, please visit the following USEPA site: www.epa.gov/watersense.

HOW YOU CAN HELP

Report leaking faucets, toilets, and irrigation systems to your housing office or the Facilities Customer Service Line.

DID YOU KNOW?

- California State Governor, Jerry Brown, declared a drought state of emergency on January 17, 2014. Although the drought emergency was called off in 2018 by Governor Brown, it is still important to conserve water. We cannot predict how much precipitation California will receive in the upcoming years.
- 2015 was the warmest year on record in California.
- 2018 had the warmest summer on record in California.
- California's recent drought is the driest period on record.
- Over 10 million California residents live in a drought-susceptible area.

QUESTIONS?

Marine Corps Installations West—Marine Corps Base, Camp Pendleton is committed to providing safe drinking water for the Marines, their families, and all who live and work aboard MCB CamPen. We are happy to answer any questions you may have or provide you with additional information. You may also request that a hard copy of this report be mailed to you. See page 12 for contact information. Use a spray nozzle that allows you to adjust or stop flow. Wash only full loads of laundry and dishes. Do not leave water running unattended.

Sweep driveways and sidewalks instead of hosing. Take short, five-minute showers.

Run water only when using it, **not** while brushing teeth, shaving or washing counters.

CONTACT INFORMATION AND ADDITIONAL RESOURCES

FOR QUESTIONS, COMMENTS, OR TO REQUEST A HARD COPY OF THIS REPORT:

Water Resources Division 760-725-0602

FOR MORE INFORMATION ON FLUORIDE:

SWRCB, Division of Drinking Water http://www.waterboards.ca.gov/ drinking_water/ certlic/drinkingwater/ Fluoridation.shtml

Department of Health & Human Services CDC http://www.cdc.gov/fluoridation/index.htm

HOUSEHOLD HAZARDOUS WASTE DROP-OFF POINTS OR TO REPORT LEAKS:

Base Housing Offices

Del Mar
Wire Mountain
San Onofre
Stuart Mesa
DeLuz
Mesa

760-430-0040 760-430-8476 949-940-9178 760-430-0694 760-385-4835 760-385-5318

0

Facilities Maintenance Division (FMD) Customer Service Line 760-725-4683

ADDITIONAL DRINKING WATER RESOURCES:

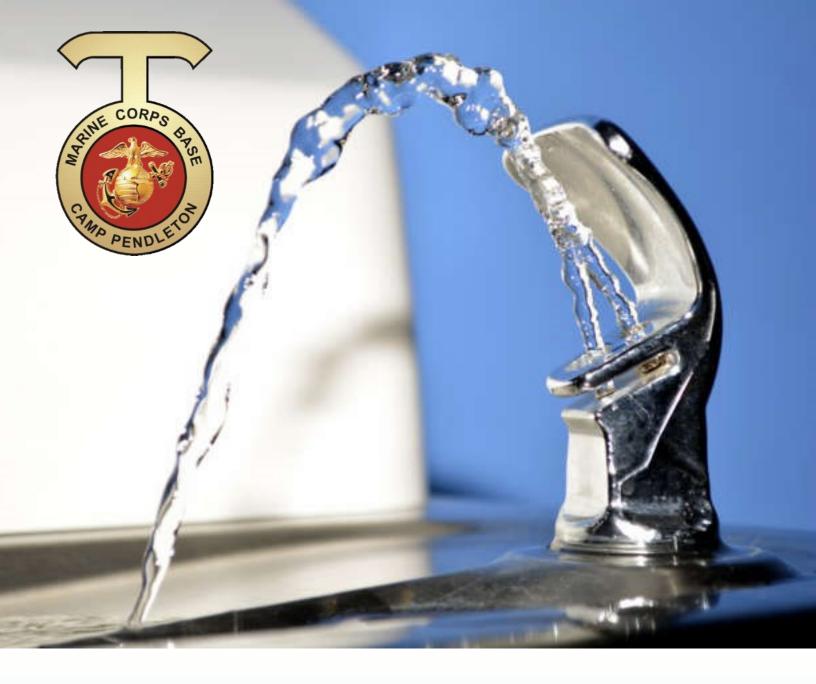
SWRCB, Division of Drinking Water http://www.waterboards.ca.gov/drinking_water/ programs/index.shtml

California Office of Environmental Health Hazard Assessment www.oehha.ca.gov/water.html

USEPA http://water.epa.gov/drink USEPA Safe Drinking Water Hotline I-800-426-4791

0

PAGE 12



YOUR DRINKING WATER 2018 ANNUAL WATER QUALITY REPORT MARINE CORPS BASE, CAMP PENDLETON

FOR QUESTIONS, COMMENTS, OR TO REQUEST A HARD COPY OF THIS REPORT:

Water Resources Division 760-725-0602