

NAVAL AIR STATION NORTH ISLAND/ NAVAL AMPHIBIOUS BASE CORONADO AND NAVY PT. LOMA COMPLEX

Consumer Confidence Report - 2002

Navy Public Works center San Diego (PWC) provides potable drinking water to all naval commands in the greater San Diego metropolitan area two areas are designated by the California Department of Health Services (DHS) as permitted public water system. The North Island Naval Air Station (NASNI) and Naval Amphibious base Coronado (NAB) together comprise of the first system. The Navy PT. Loma Complex facilities comprise of the second system PWC is required to provide this consumer confidence Report to our customers in both of these systems.

During calendar year 2002 the City of San Diego and Navy Regional Environmental Laboratory Water Quality Laboratory conducted in excess of 188,000 tests for 437 drinking water contaminants. We only detected 26 contaminants and **none** at a level higher than the State of California Department of Health Services or the United States Environmental Protection Agency allows.

This report is a snapshot of the quality of the water that we provided to you last year. Included are details about where your water comes from, what it contains, and how it compares to State Standards. We are committed to providing you with information because informed customers are our best allies. For more information about your water, please call (619) 556-7964 and ask for Bob Cesarz or Jackie Oravitz at (619) 545-9146. Written inquiries may be sent to PWCSD, Code 660, 2730 McKean Street Suite 1, San Diego CA 92136-5294.

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. More information about the Environmental Protection Agency's (EPA) guidelines on appropriate means to lessen the risk of infection by **Cryptosporidium** and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (800-426-4791). During calendar year 2002, the City of San Diego analyzed all of our source waters and **Cryptosporidium** was not detected.

The water for the Naval Base Coronado and for Naval Facilities Point Loma comes from the City of San Diego's Alvarado Filtration Plant. Source water for the plant comes is purchased from San Diego County Water Authority or from the City's local reservoirs.

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 EPA's Safe Drinking Water Hotline (800-426-4791) or find it on the EPA's web site at www.epa.gov/safewater/hfacts.html. California action levels are available on the Department's web site www.dhs.ca.gov/ps/dwem/index.htm.

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 waters 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 storm water 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 runoff, and residential uses.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- **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, and septic systems.

In order to ensure that tap water is safe to drink, the California Department of Health Services (Department) prescribes regulations, which limit the amount of certain contaminants in the water provided by public water systems. The City of San Diego's Water Department treats all water according to the Department's regulations. The Navy, then, maintains the quality of the purchased treated water according to all the Department's regulations. The Department's Food and Drug Branch regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

2002 WATER QUALITY DATA

Tables 1A, 1B, and 1C below list all the regulated CCR contaminants with Primary MCLs that were detected in the drinking water at a level at or above the California Department of Health Services (DHS) Detection Limits for Purposes of Reporting (DLRs) during the 2002 calendar year. The presence of these contaminants in the drinking water does not necessarily indicate that the water poses a health risk.

Table 2A and 2B list regulated contaminants with Secondary MCLs that were detected at or above the CA DHS DLR for each analyte.

Table 3 is a listing of detected unregulated CCR contaminants that were detected at or above the CA DHS DLR for each analyte. Unregulated contaminant monitoring helps the EPA and the CA DHS to determine where certain contaminants occur and whether the contaminants need to be regulated.

Table 4 is provides data on data on sodium and hardness that is of interest to the general public.

Terms & abbreviations used in tables:

- **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 or 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 United States Environmental Protection Agency.
- **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. MRDLs are set by the U.S. Environmental Protection Agency.
- **Regulatory Action Level (AL)**: The concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow.
- **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.
- **CCR**: Consumer Confidence Report.
- **Corrosivity**: The Corrosivity of a sample is measured by the Langlier Stability Index. A positive index, indicating non-Corrosivity, was maintained at all plant effluents.
- **CSD WQL MDL**: City of San Diego Water Quality Laboratory Method Detection Limit. Lowest quantifiable concentration of a measured analyte detectable by the Laboratory.
- **n/a**: not applicable
- **nd**: not detectable at testing limit
- **ppt**: parts per trillion or nanograms per liter (ng/L)
- **ppb**: parts per billion or micrograms per liter (µg/L) -- [1 ppb = 1,000 ppt]
- **ppm**: parts per million or milligrams per liter (mg/L) -- [1 ppm = 1,000 ppb]
- **PC/L**: picocuries per liter (a measure of radiation)
- **Sample Date**: This column is to record the last time a contaminant was analyzed.

Detected CCR contaminants health effects language:

Even though there were **no** violations of the MCLs for either the EPA or the CA DHS, the following information is provided on the contaminants that are listed in Tables 1 through 6 that were detected at or above the CA DHS Detection Limit for Reporting (DLR). This information describes the potential health effects of drinking water that contains the contaminant at levels above the federal MCL.

- **BORON**: Some men who drink water containing boron in excess of the action level over many years may experience reproductive effects. This is based on studies in dogs.
- **CHLORAMINES**: Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort.
- **COPPER**: 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 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 with their personal doctor.
- **FLUORIDE**: 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. All of the fluoride in our drinking water is naturally occurring. The City of San Diego does not add fluoride to its drinking water.
- **GROSS ALPHA PARTICLE ACTIVITY**: Certain materials 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. The City of San Diego is required to analyze for radioactive contaminants every four (4) years.
- **GROSS BETA PARTICLE ACTIVITY**: Certain materials 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. The City of San Diego is required to analyze for radioactive contaminants every four (4) years.
- **HALOACETIC ACIDS**: Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
- **LEAD**: 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 who drink this water over many years may develop kidney problems or high blood pressure.
- **PERCHLORATE**: Some people who drink water containing perchlorate in excess of the action level may experience effects associated with hypothyroidism. Perchlorate interferes with the production of thyroid hormones, which are required for normal pre- and postnatal development in humans, as well as normal body metabolism.
- **RADIUM 228**: Some people who drink water containing radium 228 in excess of the MCL over many years may have an increased risk of getting cancer.
- **TOTAL COLIFORM**: No more than 5.0% of the monthly samples may be total coliform positive. Fecal coliform / E. coli MCLs: The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform constitutes an acute MCL violation.
- **TOTAL TRIHALOMETHANES (TTHMs)**: Compliance with the MCL regulation for TTHMs are based on the running average of samples collected over the entire year. An individual sample greater than 80 µg/L does not constitute a violation of the MCL. Some people who use 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.
- **TURBIDITY**: Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
- **URANIUM**: 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. The City of San Diego is required to analyze for radioactive contaminants every four (4) years.
- **VANADIUM**: 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. This is based on studies in laboratory animals.

NAVY PUBLIC WORKS CENTER SAN DIEGO

CIVIL UTILITIES

POTABLE WATER CONSUMER CONFIDENCE REPORT -- 2002

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CSD MDL	NAVAL BASE CORONADO		PT LOMA FACILITIES		YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					AVERAGE	RANGE	AVERAGE	RANGE		
Fluoride	ppm	2	1	0.04	0.282	0.260 - 0.298	0.262	0.260 - 0.298	2002	Erosion of natural deposits; water additive that promotes; strong teeth, discharge from fertilizer and aluminum factories.
Gross Beta Particle Activity	pCi/L	50	n/a	4	ND	ND -- 6.25	ND	ND -- 6.25	2002	Decay of natural and manmade deposits.
Gross Alpha Particle Activity	pCi/L	15	n/a	1	3.32	2.86 -- 3.82	3.32	2.86 -- 3.82	2002	Erosion of natural deposits.
Radium 228	pCi/L	2	n/a	0.5	0.73	ND -- 1.44	0.73	ND -- 1.44	2002	Erosion of natural deposits.
Uranium	pCi/L	20	0.5	2	3.40	2.55 -- 4.51	3.40	2.55 -- 4.51	2002	Erosion of natural deposits.
Turbidity (Alvarado WTP Effluent)	NTU	TT	TT	0.07	0.10	ND -- 0.16	0.10	ND -- 0.16	2002	Soil runoff

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CA DHS DLR	NAVAL BASE CORONADO		POINT LOMA FACILITIES		YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					90th Percentile	No. > AL / Total No. Sites	90th Percentile	No. > AL / Total No. Sites		
Copper	ppm	AL = 1.3	0.17	0.05	0.230	0 / 20	0.249	0 / 10	2002	Internal Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	ppb	AL = 15	2	5	ND	0 / 20	5	0 / 10	2002	Internal Corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.

CONTAMINANT	UNITS	MRDL	MCLG (MCLG)	CSD MDL	NAVAL BASE CORONADO		PT LOMA FACILITIES		YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					AVERAGE	RANGE	AVERAGE	RANGE		
Total Trihalomethanes (TTHMs)	ppb	80	n/a	0.2	59.18	36.2 -- 69.9	44.6	31.8 -- 61.9	2002	By-product of drinking water chlorination.
Haloacetic acids (HAA5)	ppb	60	n/a	0.5	21	7.0 -- 38.0	22.1	14.2 -- 44.4	2002	By-product of drinking water disinfection.
Disinfectant Residual (Chloramines)	ppm	4	4	0.1	1.37	0 -- 2.08	1.03	0 -- 2.1	2002	Drinking water disinfectant added for treatment.
Total Coliform Bacteria	< 5% P	(0)	A	A	0 / 532	# positive / # sampled	0 / 297	# positive / # sampled	2002	Naturally present in the environment.

CONTAMINANT	UNITS	CA SMCL	PHG (MCLG)	CSD MDL	NAVAL BASE CORONADO		PT LOMA FACILITIES		YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					AVERAGE	RANGE	AVERAGE	RANGE		
Corrosivity	non-corrosiv	n/a	n/a	0.69	0.11	0 -- 0.97	0.69	0.11 -- 0.97	2002	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in water. A positive index indicates that the water is non-corrosive.
Total Dissolved Solids	ppm	1000	n/a	10	517	483 -- 571	517	483 -- 571	2002	Runoff/leaching from natural deposits.
Specific Conductance	umhos/cm	1600	n/a	n/a	871	843 -- 921	871	843 -- 921	2002	Substances that form ions when in water; seawater influence.
Chloride	ppm	500	n/a	0.5	87.4	71.0 -- 118	87.4	71.0 -- 118	2002	Runoff/leaching from natural deposits; seawater influence.
Sulfate	ppm	500	n/a	0.5	175.00	137 -- 210	175.00	137 -- 210	2002	Runoff/leaching from natural deposits; seawater influence.

CONTAMINANT	UNITS	CA SMCL	PHG (MCLG)	PWCSD MDL	NAVAL BASE CORONADO		PT LOMA FACILITIES		YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					AVERAGE	RANGE	AVERAGE	RANGE		
Color	CU	15	n/a	1	3.48	0 -- 33.0	2.79	0 -- 15	2002	Naturally-occurring organic materials.
Odor - Threshold	OU	3	n/a	1	N/D	N/D	N/D	N/D	2002	Naturally-occurring organic materials.
Turbidity	NTU	5	n/a	0.5	0.07	1.5 -- 4.5	0.08	0.5 -- 1.5	2002	Soil runoff

CONTAMINANT	UNITS	ACTION LEVEL	CSD MDL	NAVAL BASE CORONADO		PT LOMA FACILITIES		YEAR SAMPLED
				AVERAGE	RANGE	AVERAGE	RANGE	
Boron	ppb	1000	5	91.3	42.7 -- 141	91.3	42.7 -- 141	2002
Perchlorate	ppb	18	4	ND	ND	ND	ND	2002
Vanadium	ppb	50	0.2	ND	ND -- 0.323	ND	ND -- 0.323	2002

CONTAMINANT	UNITS	MCL	PHG (MCLG)	CSD MDL	NAVAL BASE CORONADO		PT LOMA FACILITIES		YEAR SAMPLED	TYPICAL SOURCE OF CONTAMINANTS
					AVERAGE	RANGE	AVERAGE	RANGE		
Sodium	ppm	na	na	5	82.2	78.5 -- 87.7	82.2	78.5 -- 87.7	2002	Naturally present in the environment.
Total Hardness	ppm	na	na	2	235	216 -- 251	235	216 -- 251	2002	Naturally present in the environment.
Total Hardness	gr/Gal	na	na	0.117	13.80	12.6 -- 14.7	13.80	12.6 -- 14.7	2002	Naturally present in the environment.