



NAVAL BASE VENTURA COUNTY 2011 CONSUMER CONFIDENCE REPORT

IS MY TAP WATER SAFE TO DRINK?

Yes. Your drinking water meets all U.S. Environmental Protection Agency (EPA) and California Department of Public Health (CDPH) water quality standards.

Naval Base Ventura County (NBVC) is committed to providing you complete and accurate information regarding the safety of the water you drink. Required annually by the CDPH, this Consumer Confidence Report (CCR) includes information showing the quality of the drinking water delivered to personnel and residents at NBVC Point Mugu, Port Hueneme, and San Nicolas Island (SNI) during the previous calendar year. The report also includes details about where your water comes from, what it contains, and how it compares to State standards.

Note: This report contains important information about your drinking water. Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail. Translate it, or speak with someone who understands it.

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

WHERE DOES MY WATER COME FROM?

Point Mugu and Port Hueneme

NBVC Point Mugu and Port Hueneme receive the same drinking water as the City of Port Hueneme and the Channel Islands Beach Community District, which is purchased from the Port Hueneme Water Agency (PHWA). The PHWA provides treatment to groundwater that comes primarily from the United

Water Conservation District (United). United's water, in turn, comes from local groundwater resources in the El Rio area of Ventura County. This water is pumped from shallow wells drilled into the Oxnard and Fox Canyon aquifers, which are fed by the Santa Clara River drainage basin. The drainage basin receives water from various sources such as: percolative contributions from regional rainfall, rivers, and streams; and to a far lesser degree contribution from the percolation of wastewater treatment plants, and agricultural runoff.

PHWA's water treatment plant uses two different types of state-of-the-art membrane filtration technologies to treat United's water. These desalination techniques are known as reverse osmosis (RO) and nano-filtration (NF). Three treatment trains operate side-by-side and each one produces between 1 and 1.5 million gallons of drinking water every day. The treatment process softens the water received from United by lowering the mineral content and minimizes the corrosiveness of the water through the addition of sodium hydroxide. The water is disinfected using chloramines instead of chlorine. Chloramines have better taste, fewer odors, and reduce the formation of Disinfection By-Products (DBP's) in the water, which is a known carcinogen. ***Fish owners should chemically remove the chloramines from the PHWA water when preparing fish tank water. Failure to remove the chloramines could result in risk to the aquatic life in the tank.***

State water imported by the Metropolitan Water District of Southern California (MWD) is an additional water source for the PHWA. MWD imports water from northern California via the State Water Project through a network of reservoirs, aqueducts, and pump stations. The State water is filtered and disinfected by MWD surface water treatment plants and brought into Ventura County by Calleguas Municipal Water District (Calleguas). Calleguas brings the State water to the PHWA treatment plant, where it is blended with the treated United water and then delivered to you. The blended water contains about 2.5 parts per million chloramines. The concentration of chloramines is within the water quality standards intended to safeguard public health.

In October 2001, United completed a Source Water Assessment for its drinking water wells. This assessment provides a survey of potential contamination sources of the groundwater that supplies United's well. Activities that constitute the



highest risk are petroleum storage tanks and fueling operations, septic systems, and abandoned animal feedlots. Groundwater at United is vulnerable to contamination by MTBE, a gasoline additive. No MTBE has been detected in United's wells as of this report. United continues to monitor the water quality of its delivered water. A new Surface Water Sanitary Survey was completed in January 2011 and was submitted to CDPH. Copies of the Source Water Assessment Survey / Surface Water Sanitary Survey are available from United at (805) 525-4431.

In December 2002, MWD completed its Source Water Assessment of its State Water Project supplies. State Water Project supplies are considered to be the most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting MWD at (213) 217-6850.

San Nicolas Island

The Navy produces drinking water for NBVC SNI through the desalination of sea water. The RO treatment plant draws seawater from beach wells, desalinates, and treats the water in two RO units. The waste brine from the RO units is discharged to a beach wet well.

A monitoring violation was issued to NBVC SNI in 2011 due to a missed sample. On October 4, 2011, a perchlorate sample collected at the raw water sample point, located prior to the reverse osmosis treatment process, exceeded the maximum contaminant level (MCL) of 6 parts per billion. The sample result was 8.7 parts per billion. NBVC personnel did not collect a follow up sample within 48 hours as required by the Safe Drinking Water Act. Notification was provided to the CDPH and subsequent samples collected at both the raw water sample location and treated water sample locations were below the MCL of 6 parts per billion. Perchlorate is typically removed from source water by the reverse osmosis treatment process, therefore the CDPH agreed to move NBVC SNI's point of compliance for perchlorate from the raw water sample location to a treated water sample location.

HOW IS MY WATER MONITORED?

NBVC monitors the drinking water quality by taking daily, weekly, monthly, quarterly, and annual water

samples according to federal and state drinking water regulations. The site specific tables in this report list the drinking water constituents that were detected during 2011 calendar year.

The PHWA water system failed to collect a sample as required for drinking water standards during the past year and, therefore, was in violation of their permit. PHWA is required to monitor your drinking water for specific contaminants on a regular basis. During calendar year 2011, PHWA did not complete the general mineral/physical analysis of their treated water. However, before the water is delivered to PHWA, UWCD and Calleguas monitored these constituents and their concentrations are within health standards. Furthermore, the treatment provided by PHWA improves or maintains the water quality provided to their customers. PHWA will resume sampling in 2012. There is nothing you need to do at this time.

WHY ARE CONTAMINANTS IN MY 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 **before** it is treated include the following:

- ❖ ***Microbial Contaminants*** Viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- ❖ ***Inorganic Contaminants*** 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 & Herbicides*** May come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- ❖ ***Organic Chemicals*** Including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.
- ❖ ***Radioactive Contaminants*** Can be naturally-occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the EPA and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 some infants can be particularly at risk from infections. These people should seek advice about drinking tap water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Radon is a radioactive gas and known human carcinogen that you cannot see, taste, or smell. Found throughout the U.S., radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water as a

result of showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program at (800) 745-7236 or call EPA's Radon Hotline at (800) SOS-RADON.

HOW CAN I GET MORE INFORMATION?

For additional information or questions regarding this report, please contact, Naval Base Ventura County Water Quality Program Manager at (805) 982-2969.

Other Contacts

**U.S. Environmental Protection Agency
Office of Ground Water & Drinking Water**
Safe Drinking Water Hotline (800) 426-4791
www.epa.gov/ogwdw

Water Quality Data

The following table summarizes drinking water contaminants detected in the water delivered to NBVC Port Hueneme and Point Mugu during the 2011 calendar year. 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 at (800) 426-4791. Unless otherwise noted, the data presented in these tables is from testing done January 1 through December 31, 2011. The State requires that we monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of water quality, is more than one year old.

NBVC, PORT HUENEME/POINT MUGU 2011 WATER QUALITY REPORT

CHEMICALS	UNIT	[MRDL] MCL	PHG (MCLG)	Range & Average	CMWD SOURCE	UWCD SOURCE	BWRDF SOURCE (Blended)	Violation?	Typical Source of Chemical or Contaminant
REGULATED CONTAMINANTS WITH PRIMARY MCLs									
Turbidity (Clarity) (a)	Percent of Supply				23%	77%	100%		
	NTU	TT (0.3)	NS		0.05	0.14	0.1	No	Soil Runoff
Highest Single Value - TT= % of samples < 0.3 NTU					100%	100%	100%		
LEAD AND COPPER									
Lead (NBVC PM)	ppm	0.015	0.0002	Range			ND-0.006	No	Internal corrosion of household water plumbing systems. Samples collected at NBVC PM.
				90th percentile value			0.0024		
Copper (NBVC PM)	ppm	1.3	0.3	Range			0.005-0.43	No	Internal corrosion of household water plumbing systems. Samples collected at NBVC PM.
				90th percentile value			0.276		
MICROBIOLOGICAL									
Total Coliform Bacteria	(b)	2 or 5%	0	Range	0%	0%	0%	No	Natural in Environment
				Average	0%	0%	0%	No	
Total Coliform Bacteria (NBVC)	(b)	2	0	Range	0%	0%	0%	No	Natural in Environment
				Average	0%	0%	0%	No	
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCT PRECURSORS									
Total Trihalomethanes (c)	ppb	80	NS	Range	15-44	19.8-49.8	24.1-43.3	No	By-product of drinking water chlorination
				Highest RAA	24	30.3	30.8		
Haloacetic Acids (c)	ppb	60	NS	Range	4-9	1-6	1.8-6.7	No	By-product of drinking water chlorination
				Highest RAA	6	4.06	3.5		
Bromate (d)	ppb	10	0	Range	ND-8.8	N/A	N/A	No	By-product of drinking water chlorination
				Highest RAA	5.9	N/A	N/A		
Total Chlorine Residual	ppm	[4.0]	[4]	Range	1.8-2.0	1.3-2.4	2.0-3.31	No	Drinking water disinfectant added for treatment
				Highest RAA	1.9	1.91	2.7		
Total Trihalomethanes (NBVC) (c)	ppb	80	NS	Range	N/A	N/A	21.6-33	No	By-product of drinking water chlorination
				Highest RAA	N/A	N/A	25.6		
Haloacetic Acids (HAA5) (NBVC) (c)	ppb	60	NS	Range	N/A	N/A	ND-4	No	By-product of drinking water chlorination
				Highest RAA	N/A	N/A	1.9		
Total Chlorine Residual (NBVC)	ppm	[4.0]	[4]	Range	N/A	N/A	1.27-2.73	No	Drinking water disinfectant added for treatment
				Highest RAA	N/A	N/A	2.1		
INORGANIC CHEMICALS									
Aluminum	ppb	1,000	600	Range	61-99	ND	ND	No	Erosion of natural deposits; residue from water treatment process
				Average	82	ND	ND		
Nitrate (e) (as N)	ppm	10	10	Range	0.4-0.5	ND	1.8	No	Runoff & leaching from fertilizer use & sewage; erosion of natural deposits
				Average	0.4	ND	1.8		
Treatment-related Fluoride (f)	ppm	2	1	Range	0.7-0.9	0.7-0.8	0.81-1.2	No	Water additive that promotes strong teeth
				Highest RAA	0.8	0.75	0.98		
Nitrate (as NO3)	ppm	45	45	Range	ND	4.7-9.5	ND-0.017	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
				Average	ND	6.7	0.008		
Selenium	ppb	50	50	Range	ND	5-9	4	No	Discharge from refineries, mines and chemical manufacturers, runoff.
				Average	ND	7	4		
Arsenic	ppb	10	0.004	Range	2.3	3	ND	No	Erosion of natural deposits; runoff from orchards; electronics production wastes
				Average	2.3	3	ND		
RADIOLOGICALS - analyzed every three years for four consecutive quarters (MWD sampled 2011, CMWD sampled 2009, 2010 and 2011)									
Uranium	pCi/L	20	0.43	Range	ND-2	4.63-8.41	N/A	No	Erosion of natural deposits
				Average	1	4.63	N/A		
Gross Alpha	pCi/l	15	(0)	Range	ND	4.3-6.68	N/A	No	Erosion of natural deposits
				Average	ND	5.29	N/A		
Gross Beta (g)	pCi/L	50	(0)	Range	ND - 4	N/A	N/A	No	Decay of natural deposits and manmade deposits
				Average	ND	N/A	N/A		
SECONDARY STANDARDS - AESTHETIC STANDARDS									
Odor Threshold	TON	3	--	Range	ND	ND	ND	No	Naturally occurring organic materials
				Average	ND	ND	ND		
Specific Conductance	µS/cm	1,600	--	Range	420-754	1010-1270	429-687	No	Substances that form ions when in water; seawater influence
				Average	500	1156	594		
Sulfate	ppm	500	--	Range	54-58	308-420	140	No	Runoff/leaching from natural deposits; industrial wastes
				Average	56	374	140		
Total Dissolved Solids	ppm	1,000	--	Range	280-290	670-900	287-460	No	Runoff/leaching from natural deposits
				Average	280	803	398		
FEDERAL UNREGULATED CHEMICALS REQUIRING MONITORING (UCMR 2)									
N-Nitrosodimethylamine	ppt	NS	NS	Range	ND-9	N/A	N/A		
				Average	5	N/A	N/A		
ADDITIONAL PARAMETERS - Unregulated									
Boron	ppb	NS	NL=1000	Range	190	500-600	0.7		
				Average	190	550	0.7		
Hardness (Total Hardness)	ppm	NS		Range	100-120	400-467	170		
				Average	110	433	170		
pH	pH units	NS		Range	8.1-8.4	7.2	7.6		
				Average	8.2	7.2	7.6		
Potassium	ppm	NS		Range	3	4	4.1		
				Average	3	4	4.1		
Chlorate	ppb	NS	NL=800	Range	26	ND	N/A		
				Average	26	ND	N/A		
Chromium (Total)	ppb	NS		Range	ND	ND-2	ND		
				Average	ND	ND-2	ND		
Corrosivity (h)	AI	NS		Range	12	11.8-11.9	11		
				Average	12	11.85	11		
Radon	pCi/L	NS		Range	ND	129-364	N/A		
				Average	ND	274	N/A		
Total Organic Carbon	ppm	NS		Range	1.6-2.1	0.8-1.3	N/A		
				Average	1.9	1.03	N/A		
Sodium	ppm	NS		Range	52-57	71-79	44		
				Average	54	75	44		
Vanadium	ppb	NS	NL=50	Range	3	N/A	ND		
				Average	3	N/A	ND		

Terms & Abbreviations Used In This Report

AI:	Aggressiveness Index
Maximum Contaminant Level (MCL):	The highest level of a contaminant allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as economically and technologically feasible.
Maximum Contaminant Level Goal (MCLG):	The highest level of a contaminant in drinking water below which there is no known or expected risk to health. The USEPA set MCLGs.
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.
Primary Drinking Water Standards (PDWS):	MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, 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. The California EPA sets PHGs.
Regulatory Action Level (AL):	The level of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
Secondary Drinking Water Standards Treatment Technique (TT):	MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWS's do not affect the health at the MCL level. A required process intended to reduce the level of a contaminant in drinking water.

CMWD SOURCE Calleguas Municipal Water District- Surface Water Source

UWCD SOURCE United Water Conservation District

BWRDF SOURCE Brackish Water Reclamation Demonstration Facility (BWRDF) - Samples taken after CMWD Source and BWRDF water sources were blended.

MWD Metropolitan Water District

UNITS:

ppm	Parts per million or milligrams per liter (mg/L).	NA	Not analyzed
ppb	Parts per billion or micrograms per liter (ug/L)	NTU	Turbidity (clarity) unit of measure
ppt	Parts per trillion or nanograms per liter (ng/L)	TT	Treatment Technique to reduce level in water
ppq	Parts per quadrillion or picograms per liter (pg/L)	µS/cm	MicroSiemen per Centimeter
pCi/L	Pico curies per liter (a measure of radiation)	UR	Unregulated MCL, MCLG or PHG
MPN	Most probable number	NL	Notification Level
ND	Not detectable at testing limit	NR	Not Required
NS	No standard or not applicable	S1	Saturation Index
RAA	Running annual average	TON	Threshold odor number

- (a) The turbidity level of filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 0.1 NTU at any time.
- (b) Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform positive (or 2 samples if a system collects less than 40 samples per month). Calleguas and NBVC collect less than 40, Metropolitan collects greater than 40. Fecal coliform/E. coli MCLs: The occurrence of 2 consecutive total coliform positive samples, one of which containing fecal coliform/E. coli, constitutes an acute MCL violation. These MCLs were not violated in 2011.
- (c) Compliance is based on a running annual average of quarterly distribution system samples.
- (d) Compliance for treatment plants that use ozone is based on a running annual average of monthly samples. UWCD water is not subject to these requirements.
- (e) State MCL is 45 mg/L as Nitrate, which equals 10.16 mg/L as Nitrogen.
- (f) The Metropolitan Water District treats their water by adding fluoride to the naturally occurring level in order to help prevent dental cavities in consumers. The fluoride levels in the treated water are maintained within a range of 0.7-1.3 ppm, as required by Department of Public Health regulations.
- (g) The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L.
- (h) AI measures the aggressiveness of water transported through pipes. Water with AI < 10.0 is highly aggressive and would be very corrosive to almost all materials found in a typical water system. AI > 12.0 indicates non-aggressive water. AI between 10.0 and 11.9 indicates moderately aggressive water.

Note: Values in shaded areas are from PHWA's 2010 analysis. PHWA inadvertently removed this sampling from its 2011 sample schedule. PHWA has reinserted this sample requirement for 2012.