



# NAVAL BASE VENTURA COUNTY 2013 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. The disinfectant is changed from chloramines to chlorine temporarily as needed to maintain water quality. This disinfectant changeover typically occurs two times per year with a duration of approximately four to six weeks each time it occurs. 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. United continues to monitor the water quality of its delivered water. The most recent update for the 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 system.

Additional water quality information for NBVC SNI can be found on the NBVC website at [http://www.cnic.navy.mil/regions/cnrsw/installations/navbase\\_ventura\\_county.html](http://www.cnic.navy.mil/regions/cnrsw/installations/navbase_ventura_county.html) or by contacting NBVC Water Quality Program Manager at (805) 982-2969.

### **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 2013 calendar year.

### **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.
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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.

### **WATER CONSERVATION**

Due to the drought, it is time for NBVC residents and personnel to focus on water conservation. For more information on ways to conserve water, visit [www.epa.gov/watersense/](http://www.epa.gov/watersense/) or contact NBVC Installation Energy Manager at (805) 982-4075.

### **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  
<http://water.epa.gov/drink/index.cfm>

#### **Water Quality Data**

The following table summarizes drinking water contaminants detected in the water delivered to NBVC Port Hueneme and Point Mugu during the 2013 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, 2013. 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 2013 WATER QUALITY REPORT**

CHEMICALS	UNIT	MCL [MRDL]	PHG (MCLG) [MRDLG]	Range & Average	CMWD SOURCE	UWCD SOURCE	BWRDF SOURCE (Blended)	Violation?	Typical Source of Chemical or Contaminant
<b>REGULATED CONTAMINANTS WITH PRIMARY MCLS</b>									
Turbidity (Clarity) (a)	Percent of Supply				49%	51%	100%		
	NTU	TT (0.3)	NS		0.01	0.25	0.2	No	Soil Runoff
					100%	100%	100%		
<b>MICROBIOLOGICAL</b>									
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	
<b>DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCT PRECURSORS</b>									
Total Trihalomethanes (c)	ppb	80	NS	Range	14.6 - 38.2	13 - 31.9	20 - 38	No	By-product of drinking water chlorination
				Highest RAA	22.5	22.9	29.15		
Haloacetic Acids (c)	ppb	60	NS	Range	ND - 12	ND - 7	2.5 - 3.5	No	By-product of drinking water chlorination
				Highest RAA	4.3	4.38	3.9		
Bromate (d)	ppb	10	0.1	Range	3.9 - 13	N/A	N/A	No	By-product of drinking water chlorination
				Highest RAA	7.6	N/A	N/A		
Total Chlorine Residual	ppm	[4.0]	[4]	Range	1.6 - 2.6	1.35 - 2.4	2.28 - 2.78	No	Drinking water disinfectant added for treatment
				Highest RAA	2.2	1.93	2.64		
Total (NBVC) Trihalomethanes (c)	ppb	80	NS	Range	N/A	N/A	18 - 31.6	No	By-product of drinking water chlorination
				Highest RAA	N/A	N/A	24.2		
Haloacetic Acids (HAA5) (NBVC) (c)	ppb	60	NS	Range	N/A	N/A	ND - 7	No	By-product of drinking water chlorination
				Highest RAA	N/A	N/A	2.2		
Total Chlorine Residual (NBVC)	ppm	[4.0]	[4]	Range	N/A	N/A	0.2 - 3.7	No	Drinking water disinfectant added for treatment
				Highest RAA	N/A	N/A	2.1		
<b>INORGANIC CHEMICALS</b>									
Aluminum	ppb	1,000	600	Range	67 - 110	ND	N/A	No	Erosion of natural deposits; residue from water treatment process
				Average	100	ND	N/A		
Barium	ppb	1,000	2,000	Range	ND	25.8 - 24.7	N/A	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
				Average	ND	25.25	N/A		
Chromium	ppb	50	(100)	Range	ND	1 - 2	N/A	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
				Average	ND	1.5	N/A		
Mercury	ppb	2	1.2	Range	ND	0 - 0.02	N/A	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
				Average	ND	0.01	N/A		
Nickel	ppb	100	12	Range	ND	0 - 2	N/A	No	Erosion of natural deposits; discharge from metal factories
				Average	ND	1	N/A		
Nitrate (as N) (e)	ppm	10	10	Range	ND	2.7 - 4.7	2.1 - 3.6	No	Runoff & leaching from fertilizer use & sewage; erosion of natural deposits
				Average	ND	3.7	2.85		
Treatment-related Fluoride (f)	ppm	2	1	Range	0.7 - 1	0.5 - 0.6	0.67 - 0.76	No	Water additive that promotes strong teeth
				Highest RAA	0.8	0.55	0.71		
Nitrate (as NO3)	ppm	45	45	Range	2.2	9.9 - 27.1	N/A	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
				Average	2.2	17.5	N/A		
Selenium	ppb	50	30	Range	ND - 5	10 - 20	N/A	No	Discharge from refineries, mines and chemical manufacturers, runoff.
				Average	5	15	N/A		
Arsenic	ppb	10	0.004	Range	ND	3 - 5	N/A	No	Erosion of natural deposits; runoff from orchards; electronics production wastes
				Average	ND	4	N/A		
<b>RADIOLOGICALS - analyzed every three years for four consecutive quarters (MWD sampled 2011, CMWD sampled 2010 and 2011)</b>									
Uranium	pCi/L	20	0.43	Range	ND - 2	N/A	N/A	No	Erosion of natural deposits
				Average	1	N/A	N/A		
Gross Alpha	pCi/l	15	(0)	Range	ND	2.59 - 8.41	N/A	No	Erosion of natural deposits
				Average	ND	6.34	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		
<b>SECONDARY STANDARDS - AESTHETIC STANDARDS</b>									
Chloride	ppm	500	NS	Range	75 - 77	61 - 62	26 - 28		Runoff/leaching from natural deposits; seawater influence.
				Average	76	61.5	27		
Odor Threshold	TON	3	NS	Range	3	ND	2 - 4		Naturally occurring organic materials
				Average	3	ND	3		
Specific Conductance	µS/cm	1,600	NS	Range	520 - 540	1,360 - 1,470	540 - 590		Substances that form ions when in water; seawater influence
				Average	530	1,413	565		
Sulfate	ppm	500	NS	Range	44 - 51	440 - 580	119 - 130		Runoff/leaching from natural deposits; industrial wastes
				Average	48	499.2	124.5		
Total Dissolved Solids	ppm	1,000	NS	Range	280 - 300	960 - 1,060	340 - 370		Runoff/leaching from natural deposits
				Average	290	1,012.50	355		
<b>ADDITIONAL PARAMETERS - Unregulated</b>									
Alkalinity	ppm	NS	NS	Range	77 - 93	N/A	86 - 95		
				Average	84	N/A	90.5		
Boron	ppm	NL = 1	NS	Range	0.16	0.6 - 0.7	0.66 - 0.69		
				Average	0.16	0.65	0.675		
Calcium	ppm	NS	NS	Range	22 - 26	N/A	40 - 43		
				Average	24	N/A	41.5		
Chlorate	ppb	NL= 800	NS	Range	25	N/A	N/A		
				Average	25	N/A	N/A		
Hardness (Total Hardness)	ppm	NS	NS	Range	110 - 120	574 - 609	156 - 180		
				Average	110	591.5	168		
Magnesium	ppm	NS	NS	Range	12	N/A	15 - 16		
				Average	12	N/A	15.5		
N-Nitrosodimethylamine (NDMA)	ppt	NL= 10	NS	Range	ND - 5	N/A	N/A		
				Average	3	N/A	N/A		
pH	pH units	NS	NS	Range	8.2 - 8.4	7.5 - 7.6	7.9 - 8.0		
				Average	8.3	7.55	7.9		
Potassium	ppm	NS	NS	Range	3	5 - 6	2.5 - 2.7		
				Average	3	5.5	2.6		
Corrosivity (h)	Al	NS	NS	Range	12	N/A	11		
				Average	12	N/A	11		
Radon	pCi/L	NS	NS	Range	ND	319 - 412	N/A		
				Average	ND	370.25	N/A		
Total Organic Carbon	ppm	TT	NS	Range	1.8 - 2.0	0.8 - 2.1	N/A		
				Average	1.9	1.33	N/A		
Sodium	ppm	NS	NS	Range	57 - 60	96	54 - 59		
				Average	58	96	56.5		
Vanadium	ppb	NL= 50	NS	Range	3.2	N/A	N/A		
				Average	3.2	N/A	N/A		

## Terms & Abbreviations Used In This Report

<b>AI:</b>	Aggressiveness Index
<b>Maximum Contaminant Level (MCL):</b>	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.
<b>Maximum Contaminant Level Goal (MCLG):</b>	The highest level of a contaminant in drinking water below which there is no known or expected risk to health. The USEPA set MCLGs.
<b>Maximum Residual Disinfectant Level (MRDL):</b>	The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
<b>Maximum Residual Disinfectant Level Goal (MRDLG):</b>	The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.
<b>Primary Drinking Water Standards (PDWS):</b>	MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
<b>Public Health Goal (PHG):</b>	The level of a contaminant in drinking water below which there is no known or expected risk to health. The California EPA sets PHGs.
<b>Regulatory Action Level (AL):</b>	The level of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
<b>Secondary Drinking Water Standards (SDWS):</b>	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.
<b>Treatment Technique (TT):</b>	A required process intended to reduce the level of a contaminant in drinking water.
<b>CMWD SOURCE</b>	Calleguas Municipal Water District- Surface Water Source
<b>UWCD SOURCE</b>	United Water Conservation District
<b>BWRDF SOURCE</b>	Brackish Water Reclamation Demonstration Facility (BWRDF) - Samples taken after CMWD Source and BWRDF water sources were blended.
<b>MWD</b>	Metropolitan Water District

**UNITS:**

<b>ppm</b>	Parts per million or milligrams per liter (mg/L).	<b>NA</b>	Not analyzed
<b>ppb</b>	Parts per billion or micrograms per liter (ug/L)	<b>NTU</b>	Turbidity (clarity) unit of measure
<b>ppt</b>	Parts per trillion or nanograms per liter (ng/L)	<b>TT</b>	Treatment Technique to reduce level in water
<b>ppq</b>	Parts per quadrillion or picograms per liter (pg/L)	<b>µS/cm</b>	MicroSiemen per Centimeter
<b>pCi/L</b>	Pico curies per liter (a measure of radiation)	<b>UR</b>	Unregulated MCL, MCLG or PHG
<b>MPN</b>	Most probable number	<b>NL</b>	Notification Level
<b>ND</b>	Not detectable at testing limit	<b>NR</b>	Not Required
<b>NS</b>	No standard or not applicable	<b>S1</b>	Saturation Index
<b>RAA</b>	Running annual average	<b>TON</b>	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 1 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: A routine sample and a repeat sample are total coliform positive samples and one of which containing fecal coliform/E. coli, constitutes an acute MCL violation. These MCLs were not violated in 2013.
- (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.