



## Navy Base Ventura County 2017 Consumer Confidence Report

### **IS MY TAP WATER SAFE TO DRINK?**

Yes. In 2017, as in years past, your tap water meets all U.S. Environmental Protection Agency (EPA) and State Water Resources Control Board Division of Drinking Water (State Board) 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. 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 2017. The report also includes details about where your water comes from, what it contains, and how it compares to regulatory standards

*Español: 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 Services District, which is purchased from the Port Hueneme Water Agency (PHWA). The water supply for the PHWA treatment plant comes from the United Water Conservation District (United) and State water imported by the Metropolitan Water District (MDW) of Southern California. The attached report from PHWA describes these sources, source water assessments that were completed on them, and activities to which those water sources are most vulnerable.

The attached PHWA report also includes information on the treatment that PHWA provides, including information on disinfection and recent operational and capital improvements resulting from the drought.

#### **San Nicolas Island**

The Navy produces drinking water for NBVC SNI through the desalination of sea water. Beach wells draw seawater from groundwater and pumps push the water through two Reverse Osmosis (RO) treatment systems that include desalination and water disinfection. The groundwater source is within a watershed this is most vulnerable to contamination from wildlife and fuel storage activities. A 2015 watershed sanitary survey concluded that SNI's source water has not been impacted by these potential contaminants. For additional information please contact, NBVC Water Quality Program Manager at (805) 989-3041.

### **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 the 2017 calendar year. Sample results from PHWA are included in Attachment 1.

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## **WHY ARE CONTAMINANTS IN MY WATER?**

The sources of drinking water (both tap water and commercial bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals (inorganic and in some cases radioactive) and can pick up substances resulting from animals and/or human activities. Contaminants that **may** be present in source water (**before** it is treated) include:

**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.

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

**Cryptosporidium** is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Source monitoring at NBVC SNI in 2017 did **not** indicate the presence of these organisms.

The treatment systems utilized by PHWA and SNI are designed to remove contaminants and ensure that tap water is safe to drink. The EPA and State Board issue regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health. PHWA and the Navy follow and comply with drinking water regulations.

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.

*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).*

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***Unregulated contaminant monitoring*** helps USEPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

***Lead:*** 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 material and components associated with service lines and home plumbing. NBVC 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>.

***PFCs:*** Perfluorooctane sulfonate (PFOS) and perfluorooctane acid (PFOA), together called perfluorinated chemicals (PFCs), are synthetic compounds used to make food packaging, carpets, clothing, cookware, etc. Their most common use on military installations (and other airfields) was as firefighting foam (AFFF). Drinking water from San Nicolas Island's water wells and that supplied to Port Hueneme & Point Mugu from PHWA was tested for PFOA/PFOA. **NO** PFCs were detected. A recent Military Times article noted that Port Hueneme contains potentially harmful levels of PFCs in groundwater; this is shallow groundwater associated with a former user of AFFF and is in no way connected to the NBVC drinking water systems.

## **WATER CONSERVATION**

Ventura County remains in a drought. NBVC residents and personnel are encouraged to continue to conserve water. 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) 989-3752.

## **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) 989-3041.

## **WATER QUALITY DATA**

The following tables summarize drinking water contaminants detected in the water delivered to San Nicolas Island during the 2017 calendar year; Attachment 1 includes NBVC Port Hueneme and Point Mugu. 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, 2017. State Board 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. Therefore, some of the data, though representative of water quality, is more than one year old.

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Summary of Water Quality Results For 2017 - San Nicolas Island

SAN NICOLAS ISLAND PRIMARY DRINKING WATER STANDARDS			Reverse Osmosis			Major Sources in Drinking Water
Parameter (Units)	Percent of Supply		100% Seawater			
	MCL [MRDL]	PHG (MCLG) [MRDLG]	Average	Range / Result	# of Months in Violation	
<b>PRIMARY DRINKING WATER STANDARDS--Mandatory Health-Related Standards</b>						
<b>CLARITY</b>						
Turbidity (NTU) (a)	(TT) % of samples <0.1		Highest Single Value 0.055 100.0%		None	Soil runoff
<b>LEAD AND COPPER</b>						
Lead (ppm) (b)	AL=0.015	0.0002	(b) 0.002	ND - 0.003	None	Internal corrosion of household water plumbing systems; discharge from industrial manufacturers; erosion of natural deposits.
Copper (ppm) (b)	AL=1.3	0.3	(b) 0.096	0.019-0.107	None	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.
<b>DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS</b>						
Haloacetic Acids (ppb) (c)	60	N/A	11	ND-11	None	Quarterly - By-product of drinking water disinfection
Total Trihalomethanes (ppb) (c)	80	N/A	32.7	25.2-32.7	None	By-product of drinking water disinfection
Bromate (ppb)	10	(0)			None	By-product of drinking water disinfection
Free Chlorine Residual (ppm) (d)	[4.0]	[4]	1.914	0.7-3.8	None	Drinking water disinfectant added for treatment
<b>INORGANIC CHEMICALS</b>						
Fluoride (ppm)	2	1	Average	N/A	None	Erosion of natural deposits
Arsenic (ppb)	10	0.004	N/A	2.0	None	Erosion of natural deposits; runoff from orchards; electronics production waste
Nitrate + Nitrite (as N) (ppb)	10,000		N/A	300	None	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite (as N) (ppm)	10	N/A	N/A	0.3	None	Runoff and leaching from fertilizer use; leach-ing from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	50	30	N/A	10	None	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
<b>SECONDARY STANDARDS--Aesthetic Standards</b>						
Chloride (ppm)	500	N/A	N/A	147	None	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (µS/cm)	1,600	N/A	N/A	619	None	Substances that form ions when in water; seawater influence
Total Dissolved Solids (ppm)	1,000	N/A	N/A	310	None	Runoff/leaching from natural deposits

ADDITIONAL PARAMETERS (Unregulated)						
Boron (ppm) (g)	NS	NL = 1	N/A	1.2	None	
Bicarbonate (ppm)	NS		N/A	40	None	
Calcium (ppm)	NS		N/A	14	None	
Sulfate (ppm)	NS		N/A	10.1	None	
Sodium (ppm)	NS		N/A	92	None	Salt present in the water and is generally naturally occurring
Calcium (ppm)	NS		N/A	14	None	
Total Alkalinity (as CaCO <sub>3</sub> ) (ppm)	NS		N/A	30	None	
Total hardness (as CaCO <sub>3</sub> ) (ppm)	NS		N/A	34.9	None	
pH (standard units)	NS		N/A	8	None	
Potassium (ppm)	NS		N/A	3	None	
Corrosivity (AI) (h)	NS		N/A	11	None	

#### ABBREVIATIONS, DEFINITIONS, and NOTES

AL = Action Level                      AI = Aggressiveness Index                      μS/cm = micro Siemens per centimeter  
NS = Not Specified                      TON = Threshold Odor Number                      TT = Treatment Technique  
N/A = Not Applicable                      NTU = Nephelometric Turbidity Units                      pCi/L = picocuries per liter (a measure of radiation)  
ND = None Detected                      ppm = parts per million, or milligrams per liter (mg/L)                      ppb = parts per billion, or micrograms per liter (μg/L)  
NL = Notification Level

**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 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 U.S. 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 health risk. MRDLs are set by the U.S. 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.

**Primary Drinking Water Standard** = MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Treatment Technique (TT)** = A required process intended to reduce the level of a contaminant in drinking water.

- (a) The turbidity level of filtered water shall be less than or equal to 0.1 NTU in 95% of the measurements taken each month and shall not exceed 1.0 NTU.
- (b) 90th percentile value. Samples collected and tested in 2015. Zero sites exceeded the Action Level.
- (c) Compliance is based on a running annual average of distribution system samples.
- (d) Running annual average meets compliance standards. Highest running annual average was reported.
- (g) The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals. 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.
- (h)

**Testing for the Unregulated Contaminant Monitoring Rule 3 was completed in 2015, all results were less than the minimum reporting level.**



NBVC 2017 Consumer Confidence Report

Attachment 1.  
Port Hueneme Water Authority 2017 Annual Water Quality Report

# PORT HUENEME WATER AGENCY

## 2017 ANNUAL WATER QUALITY REPORT TO PURVEYORS

The Port Hueneme Water Agency is committed to providing you with complete and accurate information regarding the safety of the water you drink. The State Water Resources Control Board (SWRCB) requires the Port Hueneme Water Agency (PHWA) to send an Annual Water Quality Report to all customers regarding the water quality they received during the previous calendar year. PHWA tests its water as required by SWRCB regulations and reports these results to SWRCB each month. Additionally, annual SWRCB inspections of the operational policies and procedures at PHWA are conducted. All of this is done to ensure the safety of your drinking water.

This Annual Water Quality Report summarizes the 2017 water quality test results performed by PHWA and Calleguas Municipal Water District (Calleguas). It also includes details about where your water comes from, what it contains, and how it compares to State standards. Water constituents are listed under the appropriate water quality standard and include the maximum contaminant level, federal maximum contaminant level goal or the California public health goal, and the range of results. Water testing is routinely performed for bacteria and protozoan, disinfectant residual, minerals, radioactivity, inorganic and organic chemicals, and other water quality parameters.

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

### Where does my water come from?

The water supply for the PHWA treatment plant comes from the United Water Conservation District (United). United's water comes from groundwater located in the El Rio area of Ventura County. This water is pumped from shallow wells drilled into the Oxnard and Fox Canyon aquifers. These two aquifers, which are naturally high in minerals, are fed by the Santa Clara River drainage basin. The drainage basin receives water from various sources such as rivers, streams, wastewater treatment plants, and agricultural runoff.

In October 2001, United completed a source water assessment survey for their water sources. This assessment provides a survey of potential sources of contamination of the groundwater that supplies United's wells. 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. United continues to monitor the water quality. Copies of the source water assessment survey are available from United at 805-525-4431.

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. In addition the water is disinfected using chloramines instead of chlorine. Chloramines have better taste, fewer odors, and reduces the formation of trihalomethane in the water, which is a known carcinogen.

The drought in California impacted our local groundwater supplies which produced higher Iron and Manganese levels in the water. Iron and Manganese can cause irreversible damage to membrane filters which forced PHWA to temporarily suspend of the use of PHWA's reverse osmosis and nano-filtration units. PHWA is happy to announce that due operational changes and capital improvements made resulting from the drought, PHWA has been operating the reverse osmosis and nano-filtration units since November 2017. We are hopeful that these improvements will allow continued operation of the membranes and provide all customers with better quality water.

*Fish owners - you should chemically remove the chloramines in the PHWA water when preparing your 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 also used at the PHWA treatment plant. MWD water comes from the Sierra Nevada Mountains in northern California and is conveyed through the State Water Project's 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. 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.

In December 2002, MWD completed its source water assessment of its State Water Project supplies. State Water Project supplies are considered to be 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.

#### **Does my water meet EPA and State standards? Is my tap water safe to drink?**

Yes. Your water meets all United States Environmental Protection Agency (USEPA) and SWRCB water quality standards. PHWA did not have any violations of any treatment, monitoring, or reporting requirements during 2017. None of the constituents in the drinking water exceeded the maximum contaminant levels or action levels set by SWRCB or USEPA. The tables in this report list all of the drinking water constituents that were detected during the most recent sampling period as required by SWRCB.

In December 2003, PHWA completed its Vulnerability Assessment of the water facility. This work has improved the security and safety of our water supply.



### Is tap water as safe as bottled water?

The Food and Drug Administration (FDA), not the USEPA, regulates bottled water companies. The marketing of the bottled water companies has led consumers to believe that bottled water has higher quality standards than tap water. The FDA does not require bottled water companies to test for the same constituents (such as giardia and asbestos) that the USEPA requires for tap water. Also, the FDA does not have a prohibition on total coliform bacteria. Total coliform bacteria are prohibited in tap water. The FDA does not regulate bottled water companies that bottle and package water within the individual states. It is the responsibility of each state to regulate its bottled water companies. This accounts for 60-70% of all bottled water companies. Fortunately, California is one of the more progressive states, but as with most of the states, there is a lack of manpower, compared to that provided by USEPA for tap water, for the enforcement of bottled water regulations.

If you do drink bottled water, do the research and educate yourself on the quality of your bottled water. Many people are misled to think that their tap water is not high quality but, in actuality, it is bottled water, which is subject to less rigorous testing and purity standards.

### Why are contaminants in my water?

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). In order to ensure that tap water is safe to drink, the USEPA and SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DHS 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 water from their health care providers. The USEPA/Centers for Disease Control 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).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, wastewater plants 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.

## **Radon**

Radon is a radioactive gas that you cannot see, taste or smell. It is 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 from showering, washing dishes and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will be a small source of radon in indoor air. Radon is a known human carcinogen. 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, you may test the air in your home. There are simple ways to fix a radon problem that are not too costly. For additional information, call the EPA's Radon Hotline (800-SOS-RADON).

## **How can I get more information?**

For additional information or questions regarding this report, please contact Steven Hickox, the City of Port Hueneme's Water Operations Manager, at (805) 986-6566. The public is always welcome to attend PHWA board meetings. These are held monthly on the 3<sup>rd</sup> Monday of the month @ 4pm at the City of Port Hueneme Civic Center located at 250 N. Ventura Road.

**PORT HUENEME WATER AGENCY**  
**2017 Water Quality Report to Purveyors**

Parameter	Units	State MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR	Range Average	Purchased CMWD (Calleguas)	Purchased UWCD (United)	BWRDF (Blended)	Major Sources in Drinking Water
<b>Percent of Supply</b>						19%	81%	100%	

**PRIMARY STANDARDS--Mandatory Health-Related Standards**

**CLARITY (a)**

Combined Filter Effluent Turbidity	NTU	Highest Single Value TT = % of samples <0.3 NTU			0.05	0.53	0.03	Soil runoff
					100%	50%	100%	

**MICROBIOLOGICAL**

Total Coliform Bacteria	(b)	2 or 5.0%	(0)	--	Range Average	ND - 1 0.0%	0.0%	ND - 1 0.0%	Naturally present in the environment
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**INORGANIC CHEMICALS**

Aluminum	ppb	1000	600	50	Range Average	ND - 120 89	0	NA	Erosion of natural deposits; residue from some water treatment process
Arsenic	ppb	10	0.004	2	Range Average	ND - 2.4 ND	3 - 8 5.5	NA	Erosion of natural deposits; runoff from orchards; electronics production wastes
Treatment-related Fluoride (c)	ppm	2.0	1	0.1	Range Highest RAA	0.7 - 1.3 0.8	0.6 0.6	04 - 1.01 .76	Water additive that promotes strong teeth
Nitrate (as N)	ppm	10	10	0.4	Range Average	ND - 0.6 0.6	3.8 - 9.2 6.4	4.4 4.4	Runoff & leaching from fertilizer use & sewage; erosion of natural deposits
Selenium	ppb	50	30	5	Range Average	ND ND	ND - 35 17.5	NA	Discharge from refineries, mines and chemical manufacturers, runoff

**RADIOLOGICALS (analyzed every three years, for four consecutive quarters (MWD sampled 2017, CMWD sampled 2017 and UWCD 2017))**

Gross Alpha Particle Activity	pCi/L	15	(0)	3.0	Range Average	ND - 3.0 ND	4.79 - 8.88 7.51	NA	Erosion of natural deposits
Gross Beta Particle Activity (d)	pCi/L	50	(0)	4.0	Range Average	ND ND	NA	NA	Decay of natural and manmade deposits
Uranium	pCi/L	20	0.43	1.0	Range Average	ND - 1.0 ND	1.82 - 4.66 3.48	NA	Erosion of natural deposits

**DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS**

Bromate (e)	ppb	10	0.1	1.0	Range Highest RAA	3.3 - 8.9 7.4	NA	NA	By-product of drinking water disinfection
Total Chlorine Residual	ppm	[4.0]	[4]	--	Range Highest RAA	1.5 - 2.6 2.3	1.53 - 1.88 1.7	6 - 3.3 2.51	Drinking water disinfectant added for treatment
Haloacetic Acids (f)	ppb	60	--	1.0	Range Highest RAA	6.0 - 12.0 9.5	6 - 9 7.38	5 - 13 7.3	By-product of drinking water disinfection
Total Trihalomethanes (f)	ppb	80	--	1.0	Range Highest RAA	13.0 - 38.5 28.1	23.0 - 52.7 34.9	23 - 55.4 34.5	By-product of drinking water chlorination

**SECONDARY STANDARDS--Aesthetic Standards**

Iron	ppb	300	--	100	Range Average	ND ND	30 - 100 65	ND	Leaching from natural deposits; industrial wastes
Manganese	ppb	50	NL = 500	20	Range Average	ND ND	20 - 40 24.53	ND	Leaching from natural deposits
Odor Threshold	TON	3	--	1	Range Average	ND - 2 2	0	ND	Naturally occurring organic materials
Specific Conductance	µS/cm	1,600	--	--	Range Average	420 - 782 594	1370-1510 1450	1280	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	--	0.5	Range Average	61 - 107 71	463-529 492.2	389	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1,000	--	--	Range Average	316 - 440 347	980-1120 1069	840	Runoff/leaching from natural deposits
Turbidity (monthly)	NTU	5	--	--	Range Average	ND - 0.9 ND	0.12-0.53 0.33	0.3	Soil runoff

**ADDITIONAL PARAMETERS (Unregulated)**

Boron	ppm	NL=1	--	0.1	Range Average	.19 - .30 .19	.6 - .7 .65	.5	
Calcium	ppm	NS	--	--	Range Average	27 - 36 27	141-149 145	111	
Chlorate	ppb	NL=800	--	20	Range Average	ND - 28 27	NA	NA	
Chromium (Total)	ppb	50	NONE	10	Range Average	ND ND	0 - 2 1	NA	
Corrosivity (g)	Al	NS	--	--	Range Average	11.7 - 12.3 12	12.2-12.6 12.4	13.4	
Hardness (Total Hardness)	ppm	NS	--	--	Range Average	118 - 160 120	562-582 572	442	
Magnesium	ppm	NS	--	--	Range Average	12 - 17 13	51 - 51 51	40	
N-Nitrosodimethylamine (NDMA)	ppt	NL=10	--	--	Range Average	ND - 3.2 ND	NA	NA	
pH	pH Units	NS	--	--	Range Average	7.7 - 8.3 8.3	7.1 - 7.4 7.25	8.7	
Potassium	ppm	NS	--	--	Range Average	3.1 - 4.0 3.2	4 4	4	
Radon	pCi/L	NS	--	100.0	Range Average	ND ND	262-388 331.25	NA	
Sodium	ppm	NS	--	--	Range Average	58 - 107 70	95 - 98 96.5	98	
Total Organic Carbon	ppm	TT	--	0.3	Range Average	2.2 - 3.1 2.5	1 - 1.1 1.03	NA	
Vanadium	ppb	NL=50	--	3	Range Average	ND - 4.0 3.9	NA	NA	

# PORT HUENEME WATER AGENCY

## 2017 Water Quality Report to Purveyors

### ABBREVIATIONS AND NOTES

AI = Aggressiveness Index	NL = Notification Level
AL = Federal Regulatory Action Level	NS = No Standard
DLR = Detection Limits for Purposes of Reporting	NTU = Nephelometric Turbidity Units
MCL = Maximum Contaminant Level	pCi/L = PicoCuries per Liter
MCLG = Maximum Contaminant Level Goal	PHG = Public Health Goal
MFL = Million Fibers per Liter	ppm = Parts per Million, or Milligrams per Liter (mg/L)
µS/cm = MicroSiemen per Centimeter	ppb = Parts per Billion, or Micrograms per Liter (µg/L)
MPN = Most Probable Number	ppt = Parts per Trillion, or Nanograms per Liter (ng/L)
MRDL = Maximum Residual Disinfectant Level	ppq = Parts per Quadrillion, or Picograms per Liter (pg/L)
MRDLG = Maximum Residual Disinfectant Level Goal	RAA = Running Annual Average
NA = Not Analyzed	TON = Threshold Odor Number
ND = None Detected	TT = Treatment Technique

CMWD (Calleguas)	Calleguas Municipal Water District- Surface Water Source
UWCD (United)	United Water Conservation District
BWRDF (Blended)	Brackish Water Reclamation Demonstration Facility (BWRDF) - Samples taken after Calleguas and United sources were blended.

- (a) The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1.0 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 collects 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 2017.
- (c) 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 0.6 - 1.2 ppm, as required by Department regulations.
- (d) 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.
- (e) 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.
- (f) Compliance is based on a running annual average of quarterly distribution system samples.
- (g) 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.