

VANDENBERG VILLAGE COMMUNITY SERVICES DISTRICT CONSUMER CONFIDENCE REPORT (CCR) FOR YEAR ENDING DECEMBER 31, 2016

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

Vandenberg Village Community Services District (VVCSD) routinely monitors for constituents in accordance with Federal and State laws. All drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some constituents. It is important to remember that the presence of these constituents does not necessarily pose a health risk. THE DISTRICT HAS MET ALL STANDARDS.

Our water comes from three wells which draw from the Lompoc Uplands Aquifer. Our wells are located at 702 and 704 Highway 1 about 1/4 mile west of the "Wye" intersection. During 2016 Well 1B produced 39%, Well 3A produced 31%, and 3B produced 30% of the water.

In accordance with the State's Drinking Water Source Assessment and Protection (DWSAP) Program, a Drinking Water Source Assessment for all three District wells was completed in April 2001 and updated during a sanitary survey in 2016. The assessments included: A delineation of the areas around a drinking water source through which contaminants might move and reach that drinking water supply; an inventory of possible contaminating activities (PCAs) that might lead to the release of microbiological or chemical contaminants within the delineated area; and a determination of the PCAs to which the drinking water source is most vulnerable. In summary, District wells are considered most vulnerable to the following activities NOT associated with any detected contaminants: National Pollutant Discharge Elimination System/Waste Discharge Requirements (NPDES/WDR) permitted discharges and pesticide/fertilizer/petroleum storage and transfer areas. It is important to note that no contaminants have been detected. The Drinking Water Source Assessment is the first step in the development of a complete drinking water source protection program.

A copy of the complete assessment may be viewed at:

**State Water Resource Control Board (SWRCB)
Division of Drinking Water, Santa Barbara Office
1180 Eugenia Place, Suite 200
Carpinteria, CA 93013-2000**

Or you may request a summary of the assessment be sent to you by contacting:

**Jeff Densmore
District Engineer
805-566-1326**

If you have any questions about this report or your water quality, please contact:

**Michael Garner
Phone: 805-733-2475
Email: mgarner@vvcasd.org**

The Board of Directors holds regularly scheduled Board meetings on the first Tuesday of every month at 7:00 p.m. in the District's office conference room at 3757 Constellation Road. The public is encouraged to attend.

Terms Used In This Report:

- **μ** - Micromhos: a measurement of electrical conductance/ indicator of dissolved minerals in the water.
- **AL** - Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **MCL** - Maximum Contaminant Level: 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. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
- **MCLG** - Maximum Contaminant Level Goal: 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 (USEPA).

- **mfl** - Million Fibers per Liter: A measure of the presence of asbestos fibers that are longer than 10 micrometers.
- **MRDL** - Maximum Residual Disinfectant Level
- **ND** - Not detectable at testing limit
- **NTU** - Nephelometric Turbidity Unit: A measure of the clarity of water. Turbidity in excess of 5NTU is just noticeable to the average person.
- **pCi/L** - picocuries per liter (a measure of radiation)
- **PDWS** - Primary Drinking Water Standards: MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- **PHG** - Public Health Goal: 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.
- **ppb** - parts per billion or micrograms per liter ($\mu\text{g/L}$)
- **ppm** - parts per million or milligrams per liter (mg/L)
- **SDWS** - Secondary Drinking Water Standards: MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Contaminants that may be present in source water include:

- **Inorganic contaminants**, such as salts and metals that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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.

In order to ensure that tap water is safe to drink, USEPA and the SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Microbiological quality monitoring is required of the VVCS distribution system. Required samples are 3 per week. VVCS samples 4 per week. In 2016, we tested 208 samples. One sample tested positive for Total Coliform Bacteria on 10/5/2016. Resampling upstream, downstream, and the sample site tested negative on 10/6/2016. The District received a Monitoring Violation for not taking the required groundwater source sample at the time; however, groundwater source samples were taken two weeks later and were negative for Total Coliform and E. Coli bacteria. The District is in compliance with the Total Coliform Rule.

Radiological water quality is measured by the concentration of Gross Alpha radionuclides. District wells were tested for Gross Alpha in 2010 with the following results: Well 1B (0 pCi/L), Well 3A (0.3 pCi/L), and Well 3B (0 pCi/L). The MCL for Gross Alpha is 15 pCi/L. Radiological testing is due again in 2019.

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 contaminants and potential health effects are available from the Safe Drinking Water Hotline (800-426-4791).

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The State Water Resource Control Board (SWRCB) allows us to monitor for certain contaminants less than once per year because their concentrations are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper sampled: July 2015 Next round of sampling: July 2018	No. of samples collected	90 th percentile level detected	No. Sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	20	5.2	0	15	0.2	Internal corrosion of household water plumbing systems; erosion of natural deposits; discharges from industrial manufacturers.
Copper (ppm)	20	0.98	0	1.3	0.3	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. VVCSD 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

TABLE 2 - SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	02/19/2014	97	77-120	N/A	N/A	Generally found in ground and surface water
Hardness (ppm)	02/19/2014	382	220-470	N/A	N/A	Generally found in ground and surface water

Note: Because treated water is blended from different water sources which have different hardness levels, Detected Levels are calculated based on the amount of water pumped from each well during the reporting period. To obtain the grains per gallon (gpg), as used by the water softener industry, divide the hardness level by 17.1. In this case the gpg is 20.9.

TABLE 3 - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Arsenic (ppb) ¹	02/19/2014	3.2	ND – 6.5	10	N/A (N/A)	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chromium 6 or Hexavalent Chromium ² (ppb)	10/07/2014	ND	ND	10	0.02 (N/A)	Erosion of natural deposits; industrial wastes
Fluoride (ppm)	02/19/2014	0.29	0.22-0.35	2	1 (N/A)	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as NO ₃) (ppm)	03/09/2015	ND	ND	45	45 (N/A)	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

¹While your drinking water meets the federal and state standard for arsenic; it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

²The 0.010-milligram per liter MCL (equivalent to 10 micrograms per liter, µg/L) for Hexavalent Chromium became effective on July 1, 2014.

TABLE 4 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Level Detected	MCL	Typical Source of Contaminant
Color (units)	10	15	Naturally occurring organic materials
Copper (ppm)	ND	1	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron (ppb) after filtration	ND	300	Leaching from natural deposits; industrial wastes
Manganese (ppb) after filtration	ND	50	Leaching from natural deposits
Odor (TON -Threshold Odor Number)	1	3	Naturally occurring organic material
Corrosivity (AI – Aggressive Index)	11.4	N/A	Natural or industrially-influenced balance of hydrogen, carbon, and oxygen in the water, affected by temperature and other factors. (Water with AI \geq 12 is non-aggressive. Water with AI between 10-11.9 is moderately aggressive.)
Foaming Agents (MBAS) (ppb)	ND	500	Municipal and industrial waste discharges
Turbidity - Clarity (ntu)	<0.3	5	Soil Runoff
Total Dissolved Solids (ppm)	736	1000	Runoff/Leaching from natural deposits
Specific Conductance (micromhos)	1150	1600	Substances that form ions when in water
Chloride (ppm)	151	500	Runoff/leaching from natural deposits, seawater influence
Sulfate (ppm)	173	500	Runoff/leaching from natural deposits, industrial wastes

Note: There are no PHGs or MCLGs for constituents with Secondary drinking Water Standards because these are based on aesthetics, not health.

Disinfection Byproducts, Residuals, and Byproduct Precursors	Date Tested	MCL	2016 Average	2016 Range of Detection	Major Sources
Total Trihalomethanes (TTHMs) (ppb)	11/15/2016	80	32.3	N/A	By-product of drinking water chlorination
Haloacetic acids (HAA5s) (ppb)	11/15/2016	60	9.0	N/A	By-product of drinking water chlorination
Free Chlorine Residuals (ppm)	4 per week	MRDL 4.0 (as CL ₂)	0.60	0.20-1.42	Drinking water disinfectant added for treatment

Note: The contaminant MTBE (Methyl Tertiary-Butyl Ether) is a gasoline additive that was banned in 2004. District wells were tested in 2008 and no MTBE was detected. The District’s “Stage 1 Disinfection Byproduct Rule” monitoring has consistently revealed low levels of Total Trihalomethanes (TTHMs) and Haloacetic acids (HAA5s) and has been granted a waiver to reduce monitoring in the main distribution system to a triennial basis, testing is due again in the 1st quarter of 2017. Wells were tested for **27 regulated Volatile Organic Compounds** and all were non-detectable.

Information for your water softener:
 Hardness = 22.3 gpg
 Iron = <100 ppb

