



VAUGHN WATER COMPANY
 10014 Glenn Street
 Bakersfield, CA 93312
 (661) 589-2931
 www.vaughnwater.org



We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1–December 31, 2018.

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

Annual Drinking Water Quality Report

July 2019

FROM THE MANAGER

By Van Grayer

2018 YEAR IN REVIEW AND A LOOK AHEAD
 2018 proved to be a very challenging year for Vaughn Water Company.

We started the year off by making repairs to the damaged 16" diameter well casing at our Atakapa water treatment facility. The extensive casing repairs were completed and the well was returned to service later that summer.

New water quality regulations were established by the State requiring treatment and removal of 1,2,3-Trichloropropane (TCP) from domestic groundwater wells. During first quarter 2018, we modified our treatment plan, replaced the carbon filtration media at four of our existing treatment facilities with new granular activated carbon media, and began removing TCP from the water at our Clarisse 1, Clarisse 2, Heath 1, and Torrey wells. Additionally, four new TCP treatment systems were designed, constructed, and placed into operation at our Atakapa, Hageman 1, Meacham, and Nord wells.

The cost to treat and remove TCP from the groundwater is expensive. We are looking to recover all current and prospective capital costs and operation and maintenance costs from the responsible parties, Dow Chemical and Shell Oil, for the TCP contamination in our wells, in a lawsuit that has been pending since 2012. The discovery period for our case closed April 2019 and we are continuing to prepare for our anticipated day in court late 2019 or early 2020.

Construction of the Company's long awaited new 5,000 square foot warehouse and shop was completed in 2018. The second phase of the project, construction of our new office building at 4600 Rosedale Lane, is anticipated to begin late 2019.

The Company continued to grow and increased its total connections by 155 during 2018. The Company now provides water to approximately 10,700 connections and produced over 3.95 billion gallons of drinking water for the year. These water demands were met using the Company's 12 water wells, 12 booster pumping plants, 8 activated carbon treatment plants, 4 ozone treatment facilities, and the 4 million gallons of above ground water storage capacity.

Vaughn Water Company relies exclusively on groundwater for its water supply and encourages everyone to use this precious resource wisely. In California, and especially in the San Joaquin Valley, continued water conservation efforts are necessary to sustain our limited groundwater supplies. Repairing water leaks immediately, limiting your outdoor watering, and using water wisely will help us meet State conservation regulations.

During the summer months, watering your lawn after 6 pm and prior to 9 am will help reduce the amount of water lost to evaporation. We have distribution system operators available that can help determine if you have a leak, adjust your sprinkler timer, teach you to read your water meter, and show you ways to conserve water. These services are available to every Vaughn Water customer at no charge.

Please repair water leaks immediately. If you see leaks, irrigation water flowing down the street or gutters, or any similar waste, kindly bring it to the attention of the resident or call us at (661) 589-2931.

For more water conservation tips visit www.vaughnwater.org or www.saveourh2o.org.

In order to ensure that tap water is safe to drink, the USEPA and the California Department of Public Health (Department) 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 provide the same protection for public health.

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Where does our water come from?

Vaughn Water Company's water comes from twelve Groundwater Wells.

Name & Location of source(s): Atakapa Well, Clarisse 1 Well, Clarisse 2 Well, Hageman 1 Well, Hageman 2 Well, Heath Well, Meacham 1 Well, Nord Well, Old Town Well, Torrey Well, Verdugo 2 Well, and Willow Pond Well.

An assessment of the listed drinking water sources for Vaughn Water Company was completed in Feb 2015. A copy of the complete assessment is available at the water company's office at 10014 Glenn Street, Bakersfield, CA 93312. You may request a summary of the assessment be sent to you by contacting Vaughn Water Company at (661) 589-2931. The water sources in Vaughn Water Company's system are considered most vulnerable to contaminant plumes; high and low density septic systems; sewer collection systems; oil, gas, and geothermal wells; chemical/petroleum pipelines; and agricultural/irrigation wells.

Vaughn Water Company works hard to provide quality water!

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We put great effort in continual improvement of the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.



We value your input!

The Vaughn Water Company Board meets the first Tuesday of the month at 7:30 PM at the Company's headquarters. For more information please contact our office at (661) 589-2931.

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- Dana Martin Director
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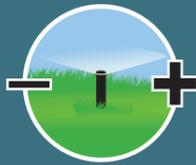
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- Oscar Rivera Utility Person I
- Isaias Rosas Meter Reader Technician I
- Adrian Basiglio Meter Reader Technician I
- Connor Turner Meter Reader Technician I
- Justin Meier Meter Reader Technician I

Water Conservation:

Water Conservation has become a new way of life. Water Conservation habits that are developed when there is ample snowpack will help sustain the water supply through growth and dry years. Vaughn Water Company suggests the continuation of the following water conservation habits:



Water between 6 p.m. and 9 a.m.



Adjust watering frequency according to the weather and season



Check and repair leaking pipes, hoses, sprinklers and toilets



Install water saving shower heads and toilets



Do not use toilets as a waste basket



Use a broom to clean driveways and sidewalks

Drinking Water Test Results for the year 2018

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants	Highest No. of Detections	No. of Months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or E. coli	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or E. coli	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper	No. of samples collected	90th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb) (2016)	33	1.6	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)(2016)	33	.07	0	1.3	0.17	Internal corrosion of household plumbing systems; erosions of natural deposits; leaching from wood preservatives

TABLE 3 – 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)	2016-2017	56.58	20.00-146.00	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2016-2017	52.75	4.99-178.00	None	None	Sum of polyvalent cations present in the water generally magnesium and calcium, the cations are usually naturally occurring.

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

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MHD]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Aluminum (ppm)	2016-2017	0.0	ND	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	2016-2018	2.47	ND-8.60	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2016-2017	0.009	ND–0.113	1	2	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (ppb)	2016-2017	0.0	ND	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2016-2017	0.31	ND–1.30	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	2016-2017	0.00	ND	2	1.2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MHD]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Nitrate (ppm)	2018	2.20	ND–5.90	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Gross Alpha (pCi/L)	2016-2017	2.36	ND – 7.12	15	(0)	Erosion of natural deposits
Uranium (pCi/L)	2016-2017	1.39	ND – 5.01	20	0.43	Erosion of natural deposits
Dibromochloropropane (ppt)	2016-2018	0	ND – 60.0	200	1.7	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Ethylene Dibromide (ppb)	2016-2018	ND	ND	50	10	Discharge from petroleum refineries; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching from grain and fruit crops
THMs (Total Trihalomethanes)(ppb)	2016-2018	.74	ND – 10.0	80	None	By-product of drinking water disinfection
Total Haloacetic Acids (HAA) (ppb)	2018	.10	ND – 2.0	60	None	By-product of drinking water disinfection
Chlorine (ppm)	2018	1.16	0.32–2.00	[4]	[4]	Drinking water disinfectant added for treatment

TABLE 5–DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (ppm)	2016–2017	63.50	12.00–199.00	500	None	Runoff/leaching from natural deposits; seawater influence
Color (Unfiltered) (Units)	2016–2017	ND	ND	15	None	Naturally -occurring organic materials
Turbidity (Units)	2016–2017	.31	.ND – .70	5	None	Soil runoff
TDS (ppm)	2016–2017	240.00	100.00–430.00	1000	None	Runoff/leaching from natural deposits
Specific Conductance (µS/cm)	2016–2017	410.33	192.00–825.00	1600	None	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2016–2017	23.29	ND–50.30	500	None	Runoff/leaching from natural deposits, industrial wastes
Iron (ppb)	2016–2017	ND	ND	300	None	Leaching from natural deposits; industrial wastes

TABLE 6–DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level
Boron (ppm)	2016-2017	.15	ND – .40	1
Vanadium (ppb)	2016-2017	1.92	ND – 6.0	50
Radon (pCi/L)	2000-2004	.299	31 – 682	None
1,2,3 - Trichloropropane (TCP) (ppt)	2018	3.95	ND – 19.0	5

We routinely monitor for the presence of drinking water contaminants. Water sample results received on June 26, 2018 reported 1,2,3 – Trichloropropane levels of 8.0 parts per trillion at one of our 12 active wells during 2nd quarter 2018. Although this result is over the MCL, compliance is based on a four quarter running annual average and the Vaughn Water System is in compliance. The company has installed and operates Granular Activated Carbon to remove the TCP from our water sources.

Laboratory studies indicate that some people who use water containing TCP in excess of the notification level over many years may have an increased risk of cancer.

*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Additional General Information on Drinking Water

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. Vaughn Water Company 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/safewater/lead>.

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 USEPA's Safe Drinking Water Hotline (1-800-426-4791). 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. USEPA/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 (1-800-426-4791).

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 include:

- Microbial contaminants, such as viruses and bacteria that 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the California Department of Public Health (Department) 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 provide the same protection for public health.

Additional Information and Explanations

About Arsenic: While 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 cost 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.

About Nitrate (as N): Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

About Gross Alpha: Certain minerals 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.

About Uranium: Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.

About Radon: Radon is a radioactive gas that you can't 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 in most cases 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, 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 aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (1-800-SOS-RADON).

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

Compliance with Other Regulations

The State requires us to test our water on a regular basis to ensure its safety. During 2018, we met all sampling, treatment and reporting requirements, except for 1,2,3 TCP as noted below in Table 6.

TERMS USED IN THIS REPORT

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. 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 U.S. Environmental Protection Agency (USEPA).

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 highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): 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.

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

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

pCi/L: picocuries per liter (a measure of radiation)