

VALLEY CENTER MUNICIPAL  
WATER DISTRICT

2020  
WATER QUALITY  
REPORT



Consumer Confidence  
Report

Annual Report on  
Water Quality for 2020

# Valley Center Municipal Water District

## 2020 Water Quality Report

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

Valley Center Municipal Water District (VCMWD) is committed to supplying safe water that meets or surpasses state and federal safety standards and achieves the highest standards of customer satisfaction. *The U.S. Environmental Protection Agency (EPA) and the California State Division of Drinking Water (DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems and require the publication and distribution of this report to our customers and the community we serve.*

We are pleased to report that the quality of water delivered by the Valley Center Municipal Water District meets or exceeds all State and Federal standards. ***Your tap water is safe to drink.***

This report is a snapshot of the water quality of VCMWD's water deliveries in calendar year 2020. Included are details about where the water comes from, what it contains, and how it compares to the DDW standards. If you are interested in more information about your water supply or water supplier, please feel free to contact our administrative offices at 760-735-4500, reach us on our website: [www.valleycenterwater.org](http://www.valleycenterwater.org) (which includes links to Metropolitan and the San Diego County Water Authority) or attend one of our Board meetings on the 1st and 3rd Monday of each month at 2:00 p.m via Live Stream video on our website. Due to the COVID-19 State of Emergency and pursuant waivers to certain Brown Act provisions under the Governor's Executive Orders, this Board Meeting is being conducted via Web Conference and Live Stream, and there will be no physical location from which members of the public may participate.

*For specific questions or information about water quality, please contact our Operations and Facilities Department and ask for Lee Hicks or Brian Lovelady (760-735-4512).*

## Water Quality Information

Generally, the sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, seawater desalination and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- ◆ **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water 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 storm water runoff, and septic systems.
- ◆ **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

### *Are there any precautions the public should consider?*

As previously stated, the water supplied by VCMWD meets or exceeds all State and Federal safety standards and is safe to drink. However, all 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. In order to ensure that tap water is safe to drink, EPA and DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. *More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791) or by viewing the USEPA's website at [www.epa.gov/safewater](http://www.epa.gov/safewater).*

DDW regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. *Immunocompromised 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. *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 (1-800-426-4791).*

**Lead**, if present and at elevated levels, 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. The VCMWD 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>.

### ***What is your water supplier doing to keep the tap water safe?***

Under the guidance of the DDW, VCMWD regularly conducts over 400 tests from 21 strategically positioned sample points to guarantee a ***safe level of disinfectant residual*** and the ***bacteriological safety*** of your water supply. We also monitor our supply for the levels of ***Trihalomethanes*** and ***Haloacetic Acids***, which are disinfection byproducts and are suspected to be human carcinogens. Finally, the District administers an active and comprehensive **Backflow Prevention Program**, which protects our water supply from the possibility of contamination coming from the customer's side of the meter.

In addition to our water quality efforts, the Metropolitan Water District performs over 300,000 analyses each year to monitor over 115 contaminants and characteristics of its supplies, including tests for water clarity (Turbidity), organic chemicals (pesticides, PCBs), volatile organic compounds, inorganic compounds, disinfection byproducts (DBPs), disinfectant residuals and radionuclides. Metropolitan also monitors for contaminants that are not yet regulated (i.e., assigned a safety limit) to help the EPA and DDW determine where certain contaminants occur and whether the contaminants need to be regulated in the future.

## ***Your Water Agency's Sources of Supply***

For VCMWD, your retail water supplier, the sources of water for our 26,780 customers are the Metropolitan Water District of Southern California (Metropolitan) and the San Diego County Water Authority, through the aqueduct facilities owned and operated by both Metropolitan and the San Diego County Water Authority.

Metropolitan imports water into Southern California from two sources: a 242-mile-long Colorado River Aqueduct which brings water from the Colorado River, and the 444-mile-

long State Water Project California Aqueduct that carries water from the Sacramento-San Joaquin Delta to southern California. Once in the Metropolitan system, the supply is then treated at the Robert F. Skinner Filtration Plant (RFSFP) located in Western Riverside County, one of Metropolitan's seven regional filtration plants.

In December 2002, Metropolitan Water District of Southern California completed its source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/storm water runoff, increasing urbanization in the watershed and wastewater. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. Additional information regarding this topic may be obtained at [www.mwdh2o.com](http://www.mwdh2o.com).

Additionally, VCMWD also receives treated water from the San Diego County Water Authority's Twin Oaks Valley Filtration Plant (TOVFP), located in San Marcos, CA. The TOVTP is fed by two sources, a variable blend of Colorado River/State Water Project water and Desalinated Sea Water from the Carlsbad "Bud Lewis" Seawater Desalination Plant located by the Encina Power Plant, 15 miles west of the TOVTP.

After treatment at the RFSFP and the TOVFP, the water flows through 7 aqueduct connections off of the 1st and 2nd SDCWA Aqueducts and the SDCWA 2A Pipeline into the VCMWD water system. Once in the VCMWD system, water is delivered through 340 miles of pressurized water mains, 141 million gallons of covered storage in 41 reservoirs, and 27 pumping stations, further protecting its quality.

## **VALLEY CENTER MUNICIPAL WATER DISTRICT**

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PARAMETER (a)	Units	MCL [MRDL]	PHG (MCLG) [MRDLG]	Skinner Treatment Plant Test Results		Twin Oaks Treatment Plant Test Results		Carlsbad Desalination Plant Test Results		Major Sources in Drinking Water			
				Range	Average	Range	Average	Range	Average				
<b>PRIMARY STANDARDS – MANDATORY HEALTH RELATED STANDARDS</b>													
<b>CLARITY</b>													
Combined Filter Effluent Turbidity	NTU %	TT = 1 TT(b)	NA	Highest %<0.3	0.09 100%	0.012-0.014 % <0.1	0.013 100%	Highest % <0.1	0.08 100%	Soil runoff			
<b>INORGANIC CHEMICALS</b>													
Arsenic	ppb	10	0.004	ND	ND	ND	ND	ND	ND	Natural deposits erosion, glass and electronics production wastes			
Nitrate (as N) (i)	ppm	10	10	ND	ND	ND - 0.4	ND	ND	ND	Runoff and leaching from fertilizer use; sewage; natural deposit erosion			
Fluoride Treatment-related (I)	ppm	2.0	1	0.6 - 0.9	0.7	0.5 - 0.8	0.6	0.605 - 0.796	0.705	Water additive for dental health			
<b>RADIOLOGICAL</b>													
Uranium	pCi/L	20	0.43	ND-2	2	NA	1	ND	ND	Erosion of natural deposits			
<b>DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS</b>													
VCMWD Total Trihalomethanes (e)	ppb	80	NA	VCMWD Distribution System				By-product of drinking water chlorination					
				Range		Highest LRAA		6.9-30.7	18				
VCMWD Haloacetic Acid (d)	ppb	60	NA	VCMWD Distribution System				Range	Highest LRAA	By-product of drinking water chlorination			
				0.0-9.8		7		0.0-9.8	7				
VCMWD Total Chlorine Residual (Chloramines)	ppm	[4.0]	[4.0]	VCMWD Distribution System				Range	Average	Drinking water disinfectant added for treatment			
				1.3-2.2		1.88		1.3-2.2	1.88				
<b>CONTAMINANTS MONITORED BUT NOT DETECTED</b>													
VCMWD Total Coliform Bacteria (c) (m)	%	5.0	0	VCMWD Distribution System				Naturally present in the environment					
				Range		Average		ND-1	ND				
VCMWD Fecal Coliform Bacteria and E. Coli (c) (m)	CFU /mL	0	0	VCMWD Distribution System				Range	Average	Human and animal fecal waste			
				ND		ND		ND	ND				
<b>INORGANIC CHEMICALS</b>													
VCMWD Copper (f) Triennial 2019	ppm	AL = 1.3	0.3	VCMWD Distribution System				Internal corrosion of household plumbing; natural deposit erosion					
				Range		Average		90 <sup>th</sup> Percentile	0.318				
VCMWD Lead (f) Triennial 2019	ppb	AL = 15	0.2	VCMWD Distribution System				Range	Average	Internal corrosion of household plumbing; natural deposit erosion			
				90 <sup>th</sup> Percentile		ND		90 <sup>th</sup> Percentile	ND				
<b>SECONDARY STANDARDS – AESTHETIC STANDARDS</b>													
Chloride	ppm	500	NA	81-92	86	73-81	77	54-100	74.6	Runoff/leaching from natural deposits; seawater influence			
Specific Conductance	µs/cm	1600	NA	796-956	876	NA	660	291.9-515.7	404.0	Substances that form ions in water; seawater influence			
Sulfate	ppm	500	NA	152-208	180	63-100	82	12-16.7	13.68	Runoff/leaching from natural deposits; industrial waste			
Total Dissolved Solids(TDS)	ppm	1000	NA	472-588	530	NA	300	140-276	205	Runoff/leaching from natural deposits; seawater influence			
<b>OTHER PARAMETERS</b>													
Alkalinity (as CaCO <sub>3</sub> )	ppm	NA	NA	105-121	113	NA	97	46-104	64.43				
Boron	ppb [ppm]	NL= 1000	NA	NA	130	NA	130	[0.36-0.78]	[0.55]	Runoff/leaching from natural deposits; industrial waste			
Calcium	ppm	NA	NA	52-72	62	29-37	33	16.68-31.88	22.68				
Corrosivity (k) (as Aggressive Index)	AI	NA	NA	12.3-12.5	12.4	NA	12	8.52-10.88	10.58	Elemental balance in water; affected by temperature, other factors			
Corrosivity (g) (as Saturation Index)	SI	NA	NA	0.39-0.73	0.56	NA	0.41	0.04-0.63	0.31	Elemental balance in water; affected by temperature, other factors			
Hardness (CaCO <sub>3</sub> )	ppm	NA	NA	211-273	242	120-150	135	41.7-79.7	56.71	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium & calcium present in water			
Magnesium	ppm	NA	NA	20-26	23	13-15	14	0.89-0.98	0.93	Runoff/leaching from natural deposits			
Ph	Units	NA	NA	8.1	8.1	7.4-8.2	7.8	8.27-8.80	8.51				
Potassium	ppm	NA	NA	4.0-4.8	4.4	3.1-3.5	3.3	NA		Salt present in the water, naturally occurring			
Sodium	ppm	NA	NA	76-98	87	61-65	63	45.4-66	55.1	Various natural and man-made sources			
Total Organic Carbon (TOC)	ppm	TT	NA	1.9-2.6	2.3	2.2-2.5	2.2	NA	NA	Various natural and man-made sources			
VCMWD Color	Units	15	NA	VCMWD Distribution System				Range	Average	Naturally occurring organic materials			
				<1		<1		<1	<1				
VCMWD Odor Threshold (h)	TON	3	NA	VCMWD Distribution System				Range	Average	Naturally occurring organic materials			
				<1		<1		<1	<1				
VCMWD Turbidity (b)	NTU	5	NA	VCMWD Distribution System				Range	Average	Soil runoff			
				<0.10-0.66		0.098		<0.10-0.66	0.098				
<b>UCMR 3(j) (Unregulated Contaminant Monitoring Rule)</b>													
PARAMETER	Units	MCL	[DLR] MRL	Test Results		Major Sources in Drinking Water							
				Range	Average								
Chlorate	ppb	NL=800	[20]	34-80	52.1	By product of water chlorination							
Chromium	ppb	50	[10]	0.38-0.40	0.39	Industrial waste discharges, natural causes							
Hexavalent Chromium	ppb	10	[1]	0.040-0.071	0.054	Industrial waste discharges, natural causes							
Molybdenum	ppb	NA	1	2.9-4.7	4.0	Mineral salt oxidation							
Strontium	ppb	NA	0.3	600-1100	900	Decay of natural deposits							
Vanadium	ppb	NL=50	[3]	0.20-0.21	0.206	Mineral and fossil fuel deposits							

#### 2020 FOOTNOTES

(a) Data shown are annual averages and ranges.

(b) As Primary Standards, 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 for more than one hour. Turbidity is a measure of the cloudiness of the water and is an indicator of treatment performance.

(c) Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform positive. When collecting <40 samples, if two or more are total coliform positive, the MCL is violated. The MCL was not violated.

E. coli MCLs: The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/E. coli, constitutes an acute violation. Standards and results are based on distribution system monthly sampling averages. Compliance is based on distribution system sampling from all pressure zones. 416 samples were analyzed in 2020. The MCL was not violated.

(d) Calculated from the average of quarterly samples. Compliance is based on a running annual average of 16 distribution system samples. VCMWD was in compliance with the Stage 2 Disinfection By-Products (D/DBP) Rule.

(e) Calculated from the average quarterly samples. Compliance is based on a running annual average of 16 distribution system samples. VCMWD was in compliance with the Stage 2 Disinfection By-Products (D/DBP) Rule.

(f) Lead and copper are regulated in a Treatment Technique under the Lead and Copper Rule. The lead and copper results for 2020 are from 30 water samples collected from the consumers' tap throughout the VCMWD distribution system. The federal action level, which triggers water systems into taking treatment steps if exceeded in more than 10% of the tap water samples, is 1.3 ppm for copper and 15 ppb for lead. There were zero samples that exceeded the action level.

(g) Positive SI index = non-corrosive; tendency to precipitate and/or deposit scale on pipes

Negative SI index = corrosive; tendency to dissolve calcium carbonate.

(h) Results are from VCMWD's laboratory's flavor-profile analysis that detects odor occurrences more accurately.

(i) State MCL is 45 ppm as nitrate, which equals 10 ppm as (N).

(j) In 2014, the USEPA required VCMWD to test for a specific list of compounds.

# Valley Center Municipal Water District's Water Sources

