

## Your Water Agency's Source of Supply

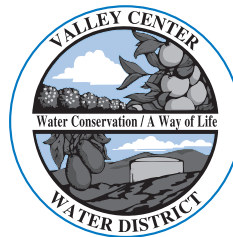
For the Valley Center Municipal Water District, your retail water supplier, the sole source of water for our 25,630 customers is the Metropolitan Water District of Southern California (Metropolitan) through the aqueduct facilities owned and operated by the San Diego County Water Authority.

Metropolitan imports water into Southern California from two sources: a 242-mile-long aqueduct that brings Colorado River water from Lake Havasu, and a 444-mile-long aqueduct that carries water from the Sacramento-San Joaquin Delta. Water from these sources travels to the Metropolitan system through pressurized large diameter pipes, open aqueduct canals and open reservoirs. The supply is then treated at the Robert F. Skinner Filtration Plant located in Western Riverside County.

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. A copy of the assessment can be obtained by contacting Metropolitan by phone at (213) 217-6850.

After treatment at the Skinner Filtration Plant, the water flows into five aqueduct pipelines and is delivered to the Valley Center Municipal Water District. Once in the Valley Center system, which includes 297 miles of water mains, 42 reservoirs, and 27 pumping stations, the water supply remains in pressurized pipelines and covered reservoirs, further protecting its quality.

## Valley Center Municipal Water District's Water Sources



### VALLEY CENTER MUNICIPAL WATER DISTRICT

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## VALLEY CENTER MUNICIPAL WATER DISTRICT

## 2009 WATER QUALITY REPORT



### Consumer Confidence Report

### Annual Report on Water Quality for 2009

# Valley Center Municipal Water District 2009 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 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 Department of Public Health (CDPH) 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 the Valley Center M.W.D.'s water deliveries in calendar year 2009. Included are details about where the water comes from, what it contains, and how it compares to the California Department of Public Health standards. If you are interested in more information about your water supply or water supplier, please feel free to contact our administrative offices at 760-749-1600, 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 Mondays of each month, at 2:00 p.m. Meetings are held at the District Offices, 29300 Valley Center Rd., Valley Center, and are open to the public.

**For specific questions or information about water quality, please contact our Field Operations Department and ask for Thad Klimas or Greg Hoyle.**

## Water Quality Information

Generally, the sources of drinking water (both tap 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 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.
- 💧 **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 Valley Center Municipal Water District 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>.
- 💧 **Pesticides and herbicides**, which 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, 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 the VallAs previously stated, the water supplied by the Valley Center Municipal Water District 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 CDPH 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).**

CDPH 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).**

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

Under the guidance of the CDPH, the Valley Center Municipal Water District 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 aggressive 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, PCB's), volatile organic compounds, inorganic compounds, disinfection byproducts (DBP's), disinfectant residuals and radionuclides. Metropolitan also monitors for contaminants that are not yet regulated (i.e., assigned a safety limit) to help EPA and CDPH to determine where certain contaminants occur and whether the contaminants need to be regulated in the future.

# 2009 Water Quality Data - Valley Center Municipal Water District

Our water quality information for 2009 is listed in the tables on this page. Contained in the table are the test results for clarity and microbiological safety. Also included are results for 16 semi-volatile, inorganic, and secondary standards (aesthetic). Finally, the table includes results for 14 "other parameters" for which there are no current state or federal standards.

## What do all the abbreviations mean?

A number of abbreviations are contained on the Water Quality table which are important to your understanding of the data, and those are:

**Maximum Contaminant Level or 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 or 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 Disinfection Level or MRDL.**

**Maximum Residual Disinfection Level Goal or MRDLG.**

**Public Health Goal or 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 or PDWS:** MCLs 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 SDWS do not affect the health at the MCL levels.

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

## Important! 2009 Water Quality Report

If appropriate, please post this report so that others may review its contents. Additional copies may be obtained by contacting the District at (760) 749-1600.

PARAMETER (a)	Units	MCL (MRDL)	PHG (MCLG) (MRDLG)	Test Results Range	Test Results Average	Major Sources in Drinking Water
Percent State Project Water	%	NA	NA	6-52	29	
<b>PRIMARY STANDARDS – MANDATORY HEALTH RELATED STANDARDS</b>						
<b>CLARITY</b>						
Combined Filter Effluent Turbidity	NTU %	0.3 95(b)	NA	Highest % <0.3	0.08 100%	Soil runoff
<b>MICROBIOLOGICAL</b>						
Heterotrophic Plate Count (HPC) (i)	CFU/mL	TT	N/A	ND	ND	Naturally present in the environment
Total Coliform Bacteria (c)(s)	%	5.0	0	NA	0	Naturally present in the environment
Fecal Coliform Bacteria and E. Coli (c) (s)	CFU/mL	0	0	0	0	Human and animal fecal waste
Cryptosporidium (l)	Oocysts/ 200L	TT	0	ND	ND	Human and animal fecal waste
Giardia (l)	Cysts/ 200L	TT	0	ND	ND	Human and animal fecal waste
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
Acrylamide	NA	TT	0	TT	TT	Water treatment chemical impurities
Epichlorohydrin	NA	TT	0	TT	TT	Water treatment chemical impurities
<b>INORGANIC CHEMICALS</b>						
Barium	ppb	1000	2000	ND-110	ND	Oil and metal refineries discharge; natural deposit erosion
Copper (f) Tri-annual (2007)	ppm	AL = 1.3	0.3	90 <sup>th</sup> Percentile	0.261	Internal corrosion of household plumbing; natural deposit erosion
Fluoride Treatment-related (q)	ppm	2.0	1	0.7-1.3	0.8	Water additive for dental health
Lead (f) Tri-annual (2007)	ppb	AL = 15	0.2	90 <sup>th</sup> Percentile	<5	Internal corrosion of household plumbing; natural deposit erosion
Nitrate (as N) (k)	ppm	10	10	ND- 0.4	ND	Runoff and leaching from fertilizer use; sewage; natural deposit erosion
Perchlorate (j)	ppb	6	6	ND	ND	Industrial waste discharge
<b>RADIOLOGICAL</b>						
Gross Alpha Particle Activity	pCi/L	15	0	3.3-4.3	3.6	Erosion of natural deposits
Gross Beta (o) Particle Activity	pCi/L	50	0	ND-8.8	ND	Decay of natural and man-made deposits
Uranium	pCi/L	20	0.43	2.3-2.7	2.5	Erosion of natural deposits
<b>DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS</b>						
Total Trihalomethanes (e)	ppb	80	NA	24.1-50.9	33.2	By-product of drinking water chlorination
Haloacetic Acid (d)	ppb	60	NA	8.9-22.1	16.6	By-product of drinking water chlorination
Total Chlorine Residual	ppm	4	4	1.5–3.0	2.4	Drinking water disinfectant added for treatment
DBP Precursors Control	ppm	TT	NA	TT	TT	Various natural and man-made sources
<b>SECONDARY STANDARDS – AESTHETIC STANDARDS</b>						
Chloride	ppm	500	NA	93-100	97	Runoff/leaching from natural deposits; seawater influence
Color	Units	15	NA	1-2	2	Naturally occurring organic materials
Methyl-tert-Butyl-Ether (MTBE) (m)	ppb	5	13	ND	ND	Gasoline discharge from watercraft engines
Odor Threshold (h)	Units	3	NA	0-<1	<1	Naturally occurring organic materials
Specific Conductance	uS/cm	1600	NA	760-1100	960	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NA	130-250	220	Runoff/leaching from natural deposits; industrial waste
Total Dissolved Solids (TDS)	ppm	1000	NA	440-640	580	Runoff/leaching from natural deposits; seawater influence
Turbidity (b)	NTU	5	NA	0.04-0.05	0.05	Soil runoff
<b>OTHER PARAMETERS</b>						
Alkalinity	ppm	NA	NA	94- 120	110	
Boron	ppb	NL-1000	NA	130-140	140	Runoff/leaching from natural deposits; industrial waste
Calcium	ppm	NA	NA	44-74	65	
Chlorate	ppb	NL=800	NA	ND-79	34	By-product of drinking water chlorination; industrial processes
Chromium VI (n)	ppb	NA	NA	0.08-0.23	0.16	Industrial waste discharge; could be naturally present as well
Corrosivity (p) (as Aggressive Index)	AI	NA	NA	11.9-12.3	12.2	Elemental balance in water; affected by temperature, other factors
Corrosivity (g) (as Saturation Index)	SI	NA	NA	0.08-0.39	0.31	Elemental balance in water; affected by temperature, other factors
Hardness	ppm	NA	NA	190-300	270	Municipal and industrial discharges
Magnesium	ppm	NA	NA	20-29	26	
N-Nitrosodi-Methylamine (NDMA) (r)	ppb	NL=0.01	0.003	ND -0.01	ND	By-product of drinking water chloramination; industrial processes
pH	Units	NA	NA	7.9-8.0	7.9	
Potassium	ppm	NA	NA	4.2-5.0	4.7	
Sodium	ppm	NA	NA	78-100	93	
Total Organic Carbon (TOC)	ppm	TT	NA	1.8-2.3	2.2	Various natural and man-made sources

## ABBREVIATIONS AND FOOTNOTES

A	=	Absence
AI	=	Aggressive Index
AL	=	Action Level: the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow
CFU/mL	=	Colony-forming units per milliliter
DBP	=	Disinfection Byproducts
HPC	=	Heterotrophic Plate Count
MCL	=	Maximum Contaminant Level
MCLG	=	Maximum Contaminant Level Goal
MRDL	=	Maximum Residual Disinfectant Level
MRDLG	=	Maximum Residual Disinfectant Level Goal
N	=	Nitrogen
NA	=	Not Applicable
ND	=	Non Detectable
NL	=	Notification Level
NTU	=	Nephelometric Turbidity Units is a measure of the suspended material in water
P	=	Presence
pCi/L	=	Pico Curies per liter (a measure of radiation)
PHG	=	Public Health Goal
ppb	=	Parts per Billion
ppm	=	Parts per Million
ppt	=	Parts per Trillion
SI	=	Saturation Index
TOC	=	Total Organic Carbon
TT	=	Treatment Technique: a required process intended to reduce the level of a contaminant in drinking water
µS/cm	=	Micromhos per centimeter

(a) Data shown are annual averages and ranges.

(b) 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. 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 2009. 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 1 Disinfection By-Products (D/DBP) Rule.

(e) Calculated from the average quarterly samples. Compliance is based on a running annual average of 40 distribution system samples. VCMWD was in compliance with the Stage 1 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 2007 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.

(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 contracted laboratory's flavor-profile analysis that detects odor occurrences more accurately.

(i) In 2009, all distribution samples collected had detectable total chlorine residuals and no HPC was required. HPC reporting level is 1 CFU/mL.

(j) Perchlorate reporting level is 2 ppb.

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

(l) In 2009, the five (5) treatment plant effluents had no detectable Cryptosporidium and Giardia.

(m) MTBE reporting level is 0.5 ppb.

(n) Chromium VI reporting level is 0.03 ppb.

(o) 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.

(p) AI <10.0 = highly aggressive and very corrosive water. AI >12.0 = Non-aggressive water. AI (10.0 – 11.9) = Moderately aggressive water.

(q) Metropolitan was in compliance with all provisions of the State's Fluoridation System Requirements. For additional information, visit the Health Department's fluoridation website: [www.cdph.ca.gov/certific/drinkingwater/Pages/Fluoridation.aspx](http://www.cdph.ca.gov/certific/drinkingwater/Pages/Fluoridation.aspx).

(r) Analysis conducted by Metropolitan water Quality Laboratory using Standard Methods 6450B.

(s) There is no range or average for total coliform sample results. VCMWD had no coliform present samples in 2009. Samples are collected on Mondays, and the number collected per month is either 32 or 40.