

CITY OF POWAY

WATER QUALITY REPORT

REPORTING FOR
CALENDAR YEAR 2018



We are pleased to send you our 2018 Water Quality Report.

This brochure explains how drinking water provided by the City of Poway is of the highest quality. Included is a listing of results from water quality tests as well as an explanation of where our water comes from and tips on how to interpret the data.

At the City of Poway, we routinely monitor our water supplies for the entire range of elements that have the potential to degrade the quality of your water. If a potential problem is detected, our water treatment personnel take measures to eliminate the problem.

We do not settle for meeting health and safety standards - our goal is to exceed them in every instance. For additional

information please call Thomas White, Water Treatment Plant Supervisor, at the City of Poway Lester J. Berglund Water Treatment Plant (858) 668-4751.

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.

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

Be Water Smart!

Here are a few simple tips that conserve a lot of water and save you money:



Water outdoor plants wisely. Reduce evaporation by watering early in the morning; mulching your gardens; and setting your mower blades one notch higher.



Adjust settings for your clothes washer. Nearly 22 percent of indoor home water use comes from doing laundry. Save energy by washing your clothes on cooler settings, and save water by setting your machine to the proper load size.



Time your shower! Challenge everyone in your family to take five-minute showers to conserve water, save energy and keep dollars in your pocket.



Explore your options. Look for WaterSense labeled faucets, toilets and showerheads – they've been tested to reduce water use and provide exceptional performance.



Repair leaky toilets. Add 12 drops of food coloring into the tank. If color appears in the bowl one hour later, your toilet is leaking.

SURFACE WATER SOURCES

The City of Poway relies on two surface water sources: water that is imported from the San Diego County Water Authority and local rainfall captured by Lake Poway. The imported water comprises the majority of the water needs of the community, accounting for 99.5% of the raw water supply.

The raw water is received from the Northern California Aqueduct and Colorado River Systems. These sources of water are pumped to the Lester J. Bergland Water Treatment Plant and to Lake Poway for storage.

THE TREATMENT PROCESS

To ensure a safe drinking water supply, the raw water undergoes a series of treatment processes including: coagulation, flocculation, sedimentation, filtration, taste/odor control, corrosion control, and disinfection.

These treatment processes ensure that water of the highest quality is available to all our customers.



THE DISINFECTION PROCESS

The City of Poway employs two methods of disinfection. The first, chlorine, effectively eliminates water-borne diseases from the public water supply. The second, chloramines, a combination of chlorine and ammonia, further improves the quality of our water supply and reduces the formation of disinfection byproducts.

WATER QUALITY MONITORING

The State Water Resources Control Board (SWRCB) is responsible for enforcing Drinking Water Quality Regulations, as set forth by the United States Environmental Protection Agency (USEPA).

The USEPA regulations are composed of primary and secondary standards: Primary standards relate to the protection of public health. These standards specify limits for substances in water that may be harmful to humans if consumed in excess of those limits.

Secondary standards relate to aesthetic qualities of water such as taste, odor, or clarity. These standards specify limits for substances that may influence consumer acceptance of the water.

REQUIRED HEALTH INFORMATION

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. Some



people may be more vulnerable to certain 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 from their health care providers about drinking water.

PARAMETER	UNITS	STATE MCL [MRDL]	PHG (MCLG) [MRDLG]	TREATMENT PLANT EFFLUENT		DISTRIBUTION SYSTEM		LAKE POWAY WATER		IMPORTED WATER		SOURCES OF CONTAMINATION IN DRINKING WATER
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	
PRIMARY STANDARDS- Mandatory Health Related Standards Established by the State of California, State Water Resources Control Board - Division of Drinking Water.												
CLARITY												
Turbidity	NTU	0.3 (TT)	NA	Highest Reading = 0.10		<0.1	<0.1 - 0.258	NA	NA	NA	NA	Soil run-off
	%	95 (a)	NA	% < 0.3: 100%		NA	NA	NA	NA	NA	NA	
INORGANIC CHEMICALS												
Aluminum	ppm	1	0.6	0.082	ND - 0.187	NA	NA	ND	NA	ND	NA	Residue from treatment processes
Arsenic	ppb	10	0.004	NA	NA	NA	NA	2.14	NA	2.1	NA	Erosion of natural deposits
Fluoride (naturally-occurring)	ppm	2.0	1	NA	NA	NA	NA	0.292	NA	0.2	NA	Erosion of natural deposits
Nitrate (as Nitrogen)	ppm	10	10	NA	NA	ND	<0.40 - 0.729	ND	NA	ND	NA	Run-off & leaching from fertilizer use
RADIOACTIVITY												
Gross Alpha	pCi/L	15	(0)	NA	NA	NA	NA	ND	NA	ND	ND - 3.7	Erosion of natural deposits
Gross Beta (d)	pCi/L	50	(0)	NA	NA	NA	NA	NA	NA	ND	NA	Decay of natural and man-made deposits
Uranium	pCi/L	20	0.43	NA	NA	NA	NA	NA	NA	ND	ND - 1.3	Erosion of natural deposits
MICROBIOLOGICAL												
Total Coliform Bacteria (b)	%	5.0%	(0)	0%		Highest % positive = 0%		524	7 - 2420	720	93 - 12,000	Naturally present in environment
E. coli	(b)	(b)	(0)	# positives = 0		# positives = 0		25	ND - 233	2	ND - 7	Human and animal fecal waste
Heterotrophic Plate Count (HPC)	CFU/mL	TT	NA	<1	<1 - 1	<1	<1 - 89	NA	NA	NA	NA	Naturally present in the environment
DISINFECTION BYPRODUCTS AND DISINFECTANT RESIDUALS												
Total Trihalomethanes (TTHM's) (e)	ppb	80	NA	NA	NA	55.1	43.4 - 61.9	NA	NA	NA	NA	Byproduct of drinking water disinfection
Haloacetic acids (HAA5) (e)	ppb	60	NA	NA	NA	24.4	10.1 - 30.2	NA	NA	NA	NA	Byproduct of drinking water disinfection
Chlorine Residual as Chloramine (c)	ppm	[4]	[4]	NA	NA	3.05	0.95 - 3.68	NA	NA	NA	NA	Disinfectant added for treatment
SECONDARY STANDARDS- Aesthetic Standards Established by the State of California, State Water Resources Control Board - Division of Drinking Water.												
Aluminum	ppb	200	NA	82	ND - 187	NA	NA	ND	NA	ND	NA	Residue from treatment processes
Chloride	ppm	500	NA	NA	NA	NA	NA	96.8	NA	79	NA	Run-off / leaching of natural deposits
Color	units	15	NA	NA	NA	<1	<1 - 11	6	NA	4	3 - 5	Naturally occurring organic materials
Odor Threshold	TON	3	NA	NA	NA	<1	<1 - 1	<1	NA	7	NA	Naturally occurring organic materials
Specific Conductance	umhos/cm	1600	NA	NA	NA	NA	NA	813	NA	771	763 - 779	Substances that form ions in water
Sulfate	ppm	500	NA	NA	NA	NA	NA	177	NA	145	NA	Run-off / leaching of natural deposits
Total Dissolved Solids	ppm	1000	NA	NA	NA	NA	NA	471	NA	462	458 - 465	Run-off / leaching of natural deposits
Turbidity	NTU	5	NA	0.04	0.02 - 0.10	<0.1	<0.1 - 0.258	0.270	NA	0.7	0.6 - 0.8	Soil run-off
UNREGULATED CONTAMINANTS - May become regulated in the future												
FOURTH UNREGULATED CONTAMINANT MONITORING RULE (UCMR 4)												
Manganese	NA	NA	NA	NA	NA	NA	NA	0.5375	0.85 - 1.30	NA	NA	Naturally present in environment
HAA5	NA	NA	NA	NA	NA	19.87	15 - 27.7	NA	NA	NA	NA	Byproduct of drinking water disinfection
HAA6Br	NA	NA	NA	NA	NA	19.87	15.6 - 25.9	NA	NA	NA	NA	Byproduct of drinking water disinfection
HAA9	NA	NA	NA	NA	NA	36.39	28.1 - 44.6	NA	NA	NA	NA	Byproduct of drinking water disinfection
Bromide	NA	NA	NA	NA	NA	NA	NA	89	45 - 130	NA	NA	Naturally present in environment
Total Organic Carbon	NA	NA	NA	NA	NA	NA	NA	2.1	ND - 2.9	NA	NA	Naturally present in environment
OTHER PARAMETERS												
Alkalinity	ppm	NA	NA	NA	NA	NA	NA	92.0	NA	114	108 - 121	Run-off/leaching of natural deposits
Boron	ppb	NA	NL=1000	NA	NA	NA	NA	148	NA	120	NA	Erosion of natural deposits
Calcium	ppm	NA	NA	NA	NA	NA	NA	45.4	NA	51	50 - 52	Run-off / leaching of natural deposits
Hardness as Calcium Carbonate	ppm	NA	NA	NA	NA	NA	NA	216	NA	204	202 - 206	Leaching from natural deposits
Magnesium	ppm	NA	NA	NA	NA	NA	NA	22.0	NA	20	19 - 20	Run-off / leaching of natural deposits
Potassium	ppm	NA	NA	NA	NA	NA	NA	4.74	NA	3.8	3.7 - 3.9	Leaching from natural deposits
Sodium	ppm	NA	NA	NA	NA	NA	NA	76.4	NA	72	71 - 74	Run-off / leaching of natural deposits
Total Organic Carbon	ppm	TT	NA	NA	NA	NA	NA	3.91	3.40 - 4.21	3.2	3.1 - 3.3	Natural and manmade deposits
LEAD AND COPPER RULE												
Copper	ppm	AL=1.3	0.3	(90th percentile = 0.050)		0.022	<0.050 - 0.083	0 out of 32 above AL (no violations)				Internal corrosion of household plumbing systems
Lead	ppb	AL=15	0.2	(90th percentile = <5.0)		<5.0	<5.0 - 19.2	1 out of 32 above AL (no violations)				

DEFINITIONS AND NOTES:

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.

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 (PDWS): MCLs for contaminants that affect health along with their monitoring, treatment, and reporting requirements.

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.

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.

(a) TURBIDITY: A measure of the cloudiness of water; indicates effectiveness of the filtration system. Must be less than 0.3 NTU in 95% of monthly readings, and always less than 5.0 NTU.

(b) MICROBIOLOGICAL: No more than 5.0% of monthly samples may be total coliform-positive. Two consecutive positives, one being E-coli, is a violation. No MCL violations in 2018 occurred.

(c) Chlorine Residual averages are for the highest running annual average (RAA) for 2018. RAA is the average of the four most recent quarters results.

(d) SWRCB considers 50 pCi/L to be the level of concern for beta particles.

(e) TTHM, HAA5 averages based on a single sample. Locational Running Annual Averages are the highest of all locations collected (LRAA) for 2018.



ADDITIONAL PUBLIC INFORMATION:

In accordance with the mandate of the Safe Drinking Water Act (SDWA), the California State Water Resources Control Board (SWRCB) has developed the Drinking Water Source Assessment and Protection (DWSAP) Program to evaluate watershed vulnerability to potential contamination sources. The City of Poway completed its assessment in December 2015. The assessment documents are available for public review upon request from the Poway City Clerk's Office, (858) 668-4535, or the SWRCB Sacramento Office (see IMPORTANT PHONE NUMBERS below).

Metropolitan Water District (MWD) SOURCE WATER ASSESSMENT:

MWD of Southern California completed its source water assessments - watershed sanitary surveys of the Colorado River in December 2016, and the State Water Project in June 2017. Colorado River supplies are considered to be most vulnerable to recreation, urban/stormwater run-off, increasing urbanization in the watershed, and wastewater. State Water Project supplies are considered to be most vulnerable to urban/stormwater run-off, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting Metropolitan by phone at (800) 354-4420.

UNREPORTED WATER QUALITY PARAMETERS:

Only "detected" parameters are included in this report, as required by the State. Over 85 additional water quality parameters were investigated, and not detected at the detection limits required by the State of California.

LEAD AND COPPER RULE:

Mandated by the EPA effective in 1992, the Rule monitors for lead and copper contamination after the water has left the distribution system. Water is collected from selected representative household faucets every three years. The most recent sampling was in August 2016, and the next sampling is due in July 2019.

METHYL-tert-BUTYL-ETHER (MTBE):

Not detected in Poway water supply. MTBE has been found in some groundwater wells in California. The source is most likely from leaking underground gasoline storage tanks. Poway relies on surface water sources which are less vulnerable to MTBE contamination.

OPPORTUNITY FOR PUBLIC PARTICIPATION:

The City Council meets on the 1st and 3rd Tuesday of each month at 7:00 P.M. in the Poway Council Chambers at City Hall, located at 13325 Civic Center Drive.

INFORMATIVE WEB SITES:

EPA Drinking Water Website : <http://water.epa.gov/drink/index.cfm>
 EPA Drinking Water Website : <https://www.epa.gov/dwstandardsregulations/2018-drinking-water-standards-and-advisory-tables>
 State Water Resources Control Board : http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/NotificationLevels.html

IMPORTANT PHONE NUMBERS:

City of Poway Water Treatment Plant..... (858) 668-4751
 EPA Safe Drinking Water Hotline..... (800) 426-4791
 SWRCB, Office of Drinking Water..... (916) 341-5254

ABBREVIATIONS:

AL = Action Level	NL = Notification Level	pCi/L = pico Curies per liter	umhos/cm = micromhos/centimeter
NA = Not Applicable	NS = No Standard	ppb = parts per billion (ug/L)	CFU/mL = Colony-Forming Units per Milliliter
NC = Not Collected	NTU = Nephelometric Turbidity Units	ppm = parts per million (mg/L)	
ND = None Detected		TT = Treatment Technique	

USEPA and Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium (a micro-organism which can cause gastrointestinal illness, but which is eliminated through effective treatment including filtration, sedimentation, and disinfection) and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

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 run-off, 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 run-off, and residential uses.
- Radioactive contaminants, that can be naturally occurring or a result of oil and gas production and mining activities.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and may also come from gas stations, urban stormwater run-off, agricultural application, and septic systems.

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 compounds associated with service lines and home plumbing. The City of Poway 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>.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board 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.