

CITY OF POWAY

Water

Quality Report

REPORTING FOR CALENDAR YEAR 2017



We are pleased to send you our 2017 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.



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 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.



USEPA and Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* (a microorganism 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.

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

CITY OF POWAY ANNUAL WATER QUALITY REPORT 2017

PARAMETER	UNITS	STATE MCL	PHG (MCLG)	TREATMENT PLANT EFFLUENT		DISTRIBUTION SYSTEM		LAKE POWAY WATER		IMPORTED WATER		SOURCES OF CONTAMINATION IN DRINKING WATER
		[MRDL]	[MRDLG]	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 = 0.12		<0.1	<0.1 - 0.14	0.31	0.31	NA	NA	Soil run-off
	%	95 (a)	NA	% < 0.3: 100%		NA	NA	NA	NA	NA	NA	
INORGANIC CHEMICALS												
Aluminum	ppm	1	0.6	ND	ND - .06	NA	NA	ND	NA	0.057	NA	Residue from treatment processes
Arsenic	ppb	10	0.004	NA	NA	NA	NA	2.02	NA	ND	NA	Erosion of natural deposits
Fluoride (naturally-occurring)	ppm	2.0	1	NA	NA	NA	NA	0.292	NA	0.1	NA	Erosion of natural deposits
Nitrate (as Nitrogen)	ppm	10	10	NA	NA	0.29	ND - .72	0.212	NA	ND	NA	Run-off & leaching from fertilizer use
RADIOACTIVITY												
Gross Alpha	pCi/L	15	(0)	NA	NA	NA	NA	ND	ND	ND	ND - 3.7	Erosion of natural deposits
Gross Beta (d)	pCi/L	50	(0)	NA	NA	NA	NA	NA	NA	ND	ND	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%	0%	Highest % positive = 0%		431	ND - 2420	300	2 - 18,000	Naturally present in environment
E. coli	(b)	(b)	(0)	# positives = 0		# positives = 0		2.6	ND - 12	3	ND - 11	Human and animal fecal waste
Heterotrophic Plate Count (HPC)	CFU/mL	TT	NA	0.16	ND - 2	0.05	ND - 2	NA	NA	NA	NA	Naturally present in the environment
DISINFECTION BYPRODUCTS AND DISINFECTANT RESIDUALS												
Total Trihalomethanes (TTHM's)	ppb	80	NA	NA	NA	57 (c)	31.0 - 77.6 (e)	NA	NA	NA	NA	Byproduct of drinking water disinfection
Haloacetic acids (HAA5)	ppb	60	NA	NA	NA	21 (c)	11.5 - 29.2 (e)	NA	NA	NA	NA	Byproduct of drinking water disinfection
Chlorine Residual as Chloramine	ppm	[4]	[4]	NA	NA	3.0 (c)	0.85 - 3.96	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	5	ND - 62.4	NA	NA	ND	NA	57	NA	Residue from treatment processes
Chloride	ppm	500	NA	NA	NA	NA	NA	100	NA	55	52 - 58	Run-off / leaching of natural deposits
Color	units	15	NA	NA	NA	0.62	ND - 0.10	11	NA	10	5 - 15	Naturally occurring organic materials
Odor Threshold	TON	3	NA	NA	NA	0.001	ND - 0.10	ND	NA	10	NA	Naturally occurring organic materials
Specific Conductance	umhos/cm	1600	NA	NA	NA	NA	NA	762	NA	482	465 - 500	Substances that form ions in water
Sulfate	ppm	500	NA	NA	NA	NA	NA	184	NA	74	71 - 77	Run-off / leaching of natural deposits
Total Dissolved Solids	ppm	1000	NA	NA	NA	NA	NA	510	NA	283	282 - 284	Run-off / leaching of natural deposits
Turbidity	NTU	5	NA	0.05	0.02 - 0.12	0.009	ND - 0.14	0.314	NA	1.1	1.0 - 1.2	Soil run-off
UNREGULATED CONTAMINANTS - May become regulated in the future												
Boron	ppb	NA	NL=1000	NA	NA	NA	NA	145	NA	110	NA	Erosion of natural deposits
Vanadium	ppb	NA	NL=50	NA	NA	NA	NA	ND	NA	3.1	NA	Erosion of natural deposits
OTHER PARAMETERS												
Alkalinity	ppm	NA	NA	NA	NA	NA	NA	97	NA	76	70 - 81	
Calcium	ppm	NA	NA	NA	NA	NA	NA	46.7	NA	30	29 - 30	Run-off / leaching of natural deposits
Hardness as Calcium Carbonate	ppm	NA	NA	NA	NA	NA	NA	180	NA	117	116 - 118	Leaching from natural deposits
Magnesium	ppm	NA	NA	NA	NA	NA	NA	27.9	NA	12	NA	Run-off / leaching of natural deposits
Potassium	ppm	NA	NA	NA	NA	NA	NA	5.12	NA	3.0	2.9 - 3.1	
Sodium	ppm	NA	NA	NA	NA	NA	NA	83.0	NA	48	45 - 50	Run-off / leaching of natural deposits
Total Organic Carbon	ppm	TT	NA	NA	NA	NA	NA	4.00	3.57 - 4.45	3.9	3.2 - 4.7	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)		

*14 City of Poway schools requested lead sampling in 2017.

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 2017 occurred.

(c) TTHM, HAA, and Chlorine Residual averages are for the highest running annual average (RAA) for 2017. 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) The average is based on a single sample. Locational Running Annual Average is the highest of all locations collected (LRAA) for 2017

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 75 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.

WATER CONSERVATION TIPS:

- + Fix leaking faucets, hoses, pipes, toilets, sprinklers, etc.
- + Wash full loads only of laundry and dishes.
- + Install water-saving devices in faucets, toilets, showers, and appliances.
- + Use mulch around plants, shrubs, and trees.

OPPORTUNITY FOR PUBLIC PARTICIPATION:

The City Council meets on the 1st and 3rd Tuesday of each month at 7:00 P.M. in the 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/certific/drinkingwater/NotificationLevels.shtml

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