

## 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. Berglund Water Treatment Plant and to Lake Poway for storage.

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.

## WATER QUALITY MONITORING

The California Department of Health Services 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.

## 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-by-products.

## 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. 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 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:

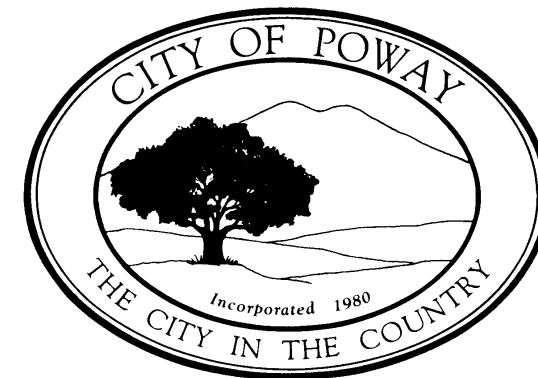
- + Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- + Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater run-off, industrial 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 by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater run-off, agricultural application, and septic systems.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Department of Health Services (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 must provide the same protection for public health.

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# City of Poway Annual Water Quality Report - 2006



We are pleased to send you our 2006 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 Kevin O'Reilly, Water Treatment Plant Supervisor, at the City of Poway Lester J. Berglund Water Treatment Plant (858) 668-4751.

# CITY OF POWAY ANNUAL WATER QUALITY REPORT 2006

| PARAMETER   | UNITS    | STATE MCL          | PHG [MCLG] | TREATED WATER BEFORE DISTRIBUTION SYSTEM |                 | TREATED WATER AFTER DISTRIBUTION SYSTEM |                                      | LAKE POWAY WATER |             | IMPORTED WATER |             | MAJOR SOURCES OF CONTAMINATION IN DRINKING WATER |
|---|----------|--------------------|------------|--|-----------------|---|--------------------------------------|------------------|-------------|----------------|-------------|--|
|   |          |                    |            | AVERAGE                                  | RANGE           | AVERAGE                                 | RANGE                                | AVERAGE          | RANGE       | AVERAGE        | RANGE       |  |
|   |          |                    |            | Highest Reading = 0.26<br>% < 0.3: 100%  |                 | < 0.1                                   | <0.1 - 0.324                         | NA               | NA          | NA             | NA          |  |
| <b>PRIMARY STANDARDS- Mandatory Health Related Standards Established by the State of California, Department of Health Services</b>  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>CLARITY</b>  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Turbidity   | NTU %    | 0.3 (TT)<br>95 (a) | NA<br>NA   | Highest Reading = 0.26<br>% < 0.3: 100%  |                 | < 0.1                                   | <0.1 - 0.324                         | NA               | NA          | NA             | NA          | Soil runoff                                      |
| <b>INORGANIC CHEMICALS</b>  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Aluminum  | ppm      | 1                  | 0.6        | <0.05                                    | <0.05 - 0.0686  | NC                                      | NC                                   | <0.05            | <0.05       | <0.05          | <0.05       | Residue from treatment processes                 |
| Arsenic   | ppb      | 50                 | 0.004      | NC                                       | NC              | NC                                      | NC                                   | <2.0             | <2.0        | <2.0           | <2.0        | Erosion of natural deposits                      |
| Fluoride  | ppm      | 2.0                | 1          | NC                                       | NC              | NC                                      | NC                                   | 0.250            | 0.250       | 0.20           | 0.16 - 0.23 | Erosion of natural deposits                      |
| Nitrate (as Nitrogen)   | ppm      | 10                 | 10         | NC                                       | NC              | 0.24                                    | <0.20 - 0.52                         | <0.20            | <0.20       | <0.4           | <0.4 - 0.45 | Runoff & leaching from fertilizer use            |
| <b>RADIOACTIVITY</b>  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Gross Alpha   | pCi/L    | 15                 | (0)        | NC                                       | NC              | NC                                      | NC                                   | <3.0             | <3.0        | <3.0           | <3.0        | Erosion of natural deposits                      |
| Gross Beta  | pCi/L    | 50                 | (0)        | NC                                       | NC              | NC                                      | NC                                   | <4.0             | <4.0        | <4.0           | <4.0        | Decay of natural deposits                        |
| Uranium   | pCi/L    | 20                 | 0.43       | NC                                       | NC              | NC                                      | NC                                   | 2.76             | 2.76        | 1.5            | 1.5         | Erosion of natural deposits                      |
| <b>MICROBIOLOGICAL</b>  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Total Coliform Bacteria   | (b)      | 5.0%               | (0)        | 0%                                       | 0%              | Highest % positive = 1.7                |                                      | NA               | NA          | NA             | NA          | Naturally present in environment                 |
| Fecal Coliform ( <i>E. coli</i> )   | (b)      | (b)                | (0)        | # positives = 0                          | # positives = 0 | # positives = 0                         |                                      | NA               | NA          | NA             | NA          | Human and animal fecal waste                     |
| <b>DISINFECTION BYPRODUCTS AND DISINFECTANT RESIDUALS</b>   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Total Trihalomethanes (TTHM's) (c)  | ppb      | 80                 | NA         | NC                                       | NC              | 53.7                                    | 30.8 - 59.4                          | NC               | NC          | NA             | NA          | By-product of water chlorination                 |
| Haloacetic acids (HAA's) (c)  | ppb      | 60                 | NA         | NC                                       | NC              | 28.4                                    | 18.3 - 32.1                          | NC               | NC          | NA             | NA          | By-product of water disinfection                 |
| Chlorine Residual as Chloramine (c)   | ppm      | 4.0                | 4.0        | NA                                       | NA              | 2.65                                    | 0.21 - 3.93                          | NA               | NA          | NA             | NA          | Disinfectant added for treatment                 |
| <b>SECONDARY STANDARDS- Aesthetic Standards Established by the State of California, Department of Health Services</b>   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Aluminum  | ppb      | 200                | 600        | <50                                      | < 50 - 68.6     | NC                                      | NC                                   | <50              | <50         | <50            | <50         | Residue from treatment processes                 |
| Chloride  | ppm      | 500                | NA         | NC                                       | NC              | NC                                      | NC                                   | 85.2             | 85.2        | 78             | 68 - 95     | Runoff / leaching of natural deposits            |
| Color   | units    | 15                 | NA         | NC                                       | NC              | 1                                       | <1 - 3                               | 17               | 17          | 2              | 1 - 2       | Naturally occurring organic materials            |
| Specific Conductance  | umhos/cm | 1600               | NA         | NC                                       | NC              | NC                                      | NC                                   | 786              | 786         | 748            | 650 - 880   | Substances that form ions in water               |
| Sulfate   | ppm      | 500                | NA         | NC                                       | NC              | NC                                      | NC                                   | 165              | 165         | 154            | 118 - 184   | Runoff / leaching of natural deposits            |
| Total Dissolved Solids  | ppm      | 1000               | NA         | NC                                       | NC              | NC                                      | NC                                   | 524              | 524         | 438            | 381 - 518   | Runoff / leaching of natural deposits            |
| Turbidity   | NTU      | 5                  | NA         | 0.07                                     | 0.04 - 0.26     | < 0.1                                   | <0.1 - 0.324                         | 0.600            | 0.600       | 0.06           | 0.05 - 0.08 | Soil runoff                                      |
| <b>UNREGULATED CONTAMINANTS - May become regulated in the future</b>  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Boron   | ppb      | NA                 | AL=1000    | NC                                       | NC              | NC                                      | NC                                   | 151              | 151         | 140            | 100 - 160   | Erosion of natural deposits                      |
| Chromium VI (Hexavalent Chromium)   | ppb      | NA                 | 1          | NC                                       | NC              | NC                                      | NC                                   | <0.2             | <0.2        | 0.08           | 0.04 - 0.12 | Industrial waste discharge                       |
| Perchlorate   | ppb      | NA                 | AL=6       | NC                                       | NC              | NC                                      | NC                                   | <4               | <4          | <4             | <4 - 4.6    | By-product of industrial processes               |
| <b>OTHER PARAMETERS</b>   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Alkalinity  | ppm      | NA                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 117              | 117         | 88             | 80 - 100    |  |
| Calcium   | ppm      | NA                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 54.5             | 54.5        | 47             | 40 - 55     | Runoff / leaching of natural deposits            |
| Chlorate  | ppb      | NA                 | 800        | NC                                       | NC              | NC                                      | NC                                   | NC               | NC          | 33             | 25 - 41     | By-product of water chlorination                 |
| Hardness as calcium carbonate   | ppm      | NA                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 256              | 256         | 200            | 174 - 234   | Leaching from natural deposits                   |
| Magnesium   | ppm      | NA                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 23.6             | 23.6        | 20             | 18 - 23.5   | Runoff / leaching of natural deposits            |
| Phosphorus  | ppb      | NA                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 113              | 39.3 - 185  | NC             | NC          |  |
| Potassium   | ppm      | NA                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 5.82             | 5.82        | 3.7            | 3.5 - 4.3   |  |
| Sodium  | ppm      | NA                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 66.7             | 66.7        | 72             | 62 - 88     | Runoff / leaching of natural deposits            |
| Total Organic Carbon  | ppm      | TT                 | NA         | NC                                       | NC              | NC                                      | NC                                   | 4.43             | 3.67 - 5.66 | 2.4            | 2.0 - 3.1   | Natural and manmade deposits                     |
| <b>LEAD AND COPPER RULE</b>   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| Copper  | ppm      | AL=1.3             | 0.17       | (90th percentile = 0.068)                | 0.040           | 0.006 - 0.130                           | 0 out of 30 above AL (no violations) |                  |             |                |             | Internal corrosion of household plumbing systems |
| Lead  | ppb      | AL=15              | 2          | (90th percentile = 1.8)                  | < 1             | <1 - 4.4                                | 0 out of 30 above AL (no violations) |                  |             |                |             |  |
| <b>ABBREVIATIONS:</b>   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| AL = Action Level   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| NA = Not Applicable   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| NC = Not Collected  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| ND = None Detected  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| NS = No Standard  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| NTU = Nephelometric Turbidity Units   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| pCi/L = pico Curies per liter   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| ppm = parts per million (mg/L)  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| ppb = parts per billion (ug/L)  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| TT = Treatment Technique  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| umhos/cm = micromhos/centimeter   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>DEFINITIONS and NOTES:</b>   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>MAXIMUM CONTAMINANT LEVEL (MCL):</b> 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. |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>MAXIMUM CONTAMINANT LEVEL GOAL (MCLG):</b> 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.   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>PUBLIC HEALTH GOAL (PHG):</b> 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.   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>PRIMARY DRINKING WATER STANDARD (PDWS):</b> MCLs for contaminants that affect health along with their monitoring, treatment, and reporting requirements.   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>TREATMENT TECHNIQUE (TT):</b> A required process intended to reduce the level of a contaminant in drinking water.  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>REGULATORY ACTION LEVEL (AL):</b> The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>(a) TURBIDITY:</b> 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>(b) MICROBIOLOGICAL:</b> 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 2006 occurred.   |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |
| <b>(c) TTHM, HAA, and Chlorine Residual averages are for the highest running annual average (RAA) for 2006. RAA is the average of the four most recent quarters results.</b>  |          |                    |            |  |                 |   |                                      |                  |             |                |             |  |

## ADDITIONAL PUBLIC INFORMATION

In accordance with the mandate of the Safe Drinking Water Act (SDWA), the California Department of Health Services (CDHS) 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 March 2000. The assessment documents are available for public review upon request from the Poway City Clerk's Office, (858) 668-4535, or the CDHS Sacramento Office (see IMPORTANT PHONE NUMBERS below).

## Metropolitan Water District (MWD) SOURCE WATER ASSESSMENT:

In December 2002, MWD 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 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.

## 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 July, 2004, and the next sampling is due in July, 2007.

## 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
- + Water the lawn, garden, and agriculture in the early morning or evening
- + Use mulch around plants, shrubs, and trees.

## OPPORTUNITY FOR PUBLIC PARTICIPATION

The City Council meets on the 1st, 2nd, 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:

Environmental Protection Agency (EPA) Office of Water : [www.epa.gov/safewater](http://www.epa.gov/safewater)  
State of California, Department of Health Services (DHS) : [www.dhs.ca.gov/ps/ddwem](http://www.dhs.ca.gov/ps/ddwem)

## IMPORTANT PHONE NUMBERS

City of Poway Water Treatment Plant..... (858) 668-4751  
EPA Safe Drinking Water Hotline..... (800) 426-4791  
California DHS, Office of Drinking Water..... (916) 449-5600

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