The water delivered to you by Glendale Water & Power continuously passes tough State and Federal quality standards. This booklet is a detailed report on the water we delivered to you in 2006. You can be assured that your Glendale water is of the highest quality and is SAFE TO DRINK.
City of Glendale Water & Power
WATER QUALITY
2006 Water Quality Report to our Customers

Sustaining top-quality water in Glendale requires a dedicated joint effort to meet your drinking water expectations.

The Glendale City Council and the Glendale Water & Power Commission regularly address issues that affect the quality of your water.

The GWP Water Section, through constant attention, maintains an excellent water system that continuously meets all State and Federal drinking water regulations. This is accomplished by on-going testing of our water and continual improvements to our water system facilities. Through these water quality maintenance programs, we make certain that we continue our tradition of providing you with a reliable, safe, high-quality supply of water.

The tables inside this report list all the chemicals that were detected in Glendale’s water during the 2006 calendar year. The presence of these in the water does not indicate that the water poses a health risk. This data reflects testing done between January 1, 2006 through December 31, 2006, unless otherwise noted. We tested your water for over 165 contaminants in 2006.

Common Contaminants in Drinking Water

The sources of drinking water for 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. It can also 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, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, 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** 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, are byproducts of industrial process and petroleum production. They can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants** can be either naturally occurring or the result of oil and gas production, and mining activities.

Sources of Glendale’s Water

In 2006, Glendale Water & Power delivered 10.24 billion gallons of (drinking water quality) water to the City’s customers. 71% of that water was purchased from the Metropolitan Water District (MWD). This water is sourced from Northern California. Before it is delivered to Glendale, it is treated at MWD’s treatment plant in Granada Hills and is monitored by MWD in their water quality laboratory.

Eight percent (8%) of GWP water came from the City’s Glorietta Wells and the Verdugo Park Water Treatment Plant. Groundwater extracted from the San Fernando Basin and conveyed through the Glendale Water Treatment Plant accounted for 21% of our supplies. Water from both the Verdugo Basin and the San Fernando Basin is blended with MWD water before being delivered throughout the City.

Source water assessments were conducted in 2000, and updated in 2006, for wells in the Verdugo Basin. In primarily urban areas, they are considered to be most vulnerable to contamination from underground gasoline storage tanks and installed sewer lines. Programs to control contamination from fertilizers and pesticides were put in place in 2000 and private septic systems have been eliminated. Two of the wells are potentially vulnerable to contamination from a gasoline station that was previously located in the basin. Before being introduced into the system, water from two of the wells is treated at the Verdugo Park Water Treatment Plant and water from three of the wells is blended with water from MWD.

In addition, GWP also delivered 380 million gallons of recycled water. This is not included in the chart above as it is used for irrigation purposes only and not for drinking water.

Water Quality Terms You Will Find in This Report

- **Maximum Contaminant Level Goal (MCLG)** is 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 (USEPA).
- **Public Health Goal (PHG)** is 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 (CalEPA).
- **Maximum Contaminant Level (MCL)** is the highest level of a contaminant that is allowed in drinking water. 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 Residual Disinfectant Level Goal (MRDLG)** is the level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the USEPA.
- **Notification Level** is the advisory levels developed by California Dept. of Health Services (DHS).
- **Primary Drinking Water Standard (PDWS)** is the maximum contaminant and maximum disinfection residual level for contaminants that affect health. This standard reflects monitoring, reporting, and water treatment requirements.
- **Regulatory Action Level** is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

A Message From Ignacio Troncoso
Director of Glendale Water & Power

Every year, GWP provides you with a report on the quality of the drinking water we delivered to you the previous year. This booklet is our report for 2006. As you read through it, you will see that Glendale’s water conforms to all Federal and State quality standards.

This improved technology, the SolarBee, takes the place of our bottom pipe circulation system (see page 3).

On the chemical side, we are investigating different approaches in the chemical treatment of our water. We are studying the use of chlorite, a new water treatment that could enhance the effectiveness and reliability of the chemicals presently used and minimize the amount of chlorine needed (see page 5).

GWP is also continuing our leadership role in the development of a technology to remove chromium 6 from drinking water. The objective of the final stage of this three phase program is to construct full-scale demonstration facilities at the Glendale Water Treatment Plant.

We could not continue to deliver our high quality water if it weren’t for our GWP employees’ sense of responsibility in serving you, our customers. Through their commitment to ongoing training and education, our GWP employees have become certified specialists in their fields and bring expert skills to safeguarding the quality of your water.

Reservoir Replacement Project

In 2006, work continued on a major infrastructure project in the Cheviot Chase area – the replacement of a 14.5 million gallon concrete reservoir constructed in the 1920’s. The Environmental Review was completed in early 2006, a design consultant was hired as well as a construction management consultant and, by the end of 2006, the Preliminary Design was nearly complete. In 2007, the final design will be completed and the project will be advertised for construction bids. Construction is expected to begin by early 2008 and requires two years to complete.

WHAT WE ACCOMPLISHED IN 2006

Water System Improvement Projects

There are 380 miles of water mains in Glendale with the average age of 55 years. Glendale Water & Power has an ongoing citywide program of improving our water system with main replacement and cleaning and lining projects. By the end of 2006, we had replaced over 8,000 feet of water mains for the year. In many areas where the structural integrity of the pipe is in question, we are replacing 6-inch diameter cast iron mains with new 8-inch ductile iron mains. The goal of this ongoing program is to increase water flow, improve water quality and expand fire protection for all our GWP customers.

WHERE DOES YOUR DRINKING WATER COME FROM?

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>ACRE FELT</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Water District</td>
<td>22,238</td>
<td>71%</td>
</tr>
<tr>
<td>Glendale Water Treatment Plant</td>
<td>4,533</td>
<td>14%</td>
</tr>
<tr>
<td>Glorietta Wells and Verdugo Park Water Treatment Plant</td>
<td>2,648</td>
<td>8%</td>
</tr>
<tr>
<td>TOTAL DRINKING WATER</td>
<td>31,429 acre feet</td>
<td>10.24 billion gallons</td>
</tr>
</tbody>
</table>

Water & Power
SolarBee Helps Maintain High Water Quality

The newest “buzz” at Glendale Water & Power is the introduction of the SolarBee into our water system. A technology also used by other water agencies in California, the SolarBee is a solar-powered circulator that improves the quality of water stored in reservoirs by constantly circulating the water.

To maintain our high level of water quality, in 2006, GWP installed SolarBee water circulators in all our reservoirs and recycled water tanks. With the SolarBee circulating the reservoir up to 10,000 gallons of water per minute can be constantly circulated with a minimum amount of turbulence. Solar panels atop the reservoir charge a large battery which then powers the pump motor to keep water circulating inside the reservoir. Since the battery is always fully charged, the SolarBee works continuously even on rainy and cloudy days.

To maintain a safe and healthy water system, different levels of disinfectant are added to our reservoirs each week. It’s important that the water inside our reservoirs circulates so that the disinfectant mixes evenly.

### Units
- **Organic Chemicals**
- **Inorganic Chemicals**
- **Regulated Contaminants with Secondary MCLs**

### Data Table

#### ORGANIC CHEMICALS

<table>
<thead>
<tr>
<th>Chemical</th>
<th>PHG (MCLG)</th>
<th>MWD Jensen Plant</th>
<th>Glendale Water Treatment Plant</th>
<th>Verdugo Park Water Treatment Plant</th>
<th>Major Sources of Contaminants in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ppm</td>
<td>Range</td>
<td>Average</td>
<td>ND</td>
<td>ND Discharge from factories, dry cleaners, and auto shops</td>
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<td>ND Discharge from factories, dry cleaners, and auto shops</td>
</tr>
</tbody>
</table>

### Nitrate

Nitrate levels in the Glendale distribution system do not exceed the 45 parts per million (ppm) limit established by State and Federal regulations. Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. It can interfere with the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should ask advice from your health care provider.

#### NITRATE

- **Health Risk for Infants:** Nitrate levels above 45 ppm may affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should ask advice for your health care provider.

#### REGULATED CONTAMINANTS WITH SECONDARY MCLs

<table>
<thead>
<tr>
<th>Chemical</th>
<th>NS</th>
<th>ppm</th>
<th>Range</th>
<th>Average</th>
<th>ND</th>
<th>ND</th>
<th>ND</th>
<th>ND</th>
<th>ND</th>
<th>ND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>ppm</td>
<td>500</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>4.5</td>
<td>21</td>
<td>66</td>
<td>95</td>
<td>137</td>
</tr>
<tr>
<td>Iron</td>
<td>ppm</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>3</td>
<td>21</td>
<td>32</td>
<td>122</td>
<td>118</td>
</tr>
<tr>
<td>Manganese</td>
<td>ppm</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>19</td>
<td>137</td>
<td>137</td>
<td>137</td>
</tr>
<tr>
<td>Silver</td>
<td>ppm</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Total Dissolved Solids (TDS)</td>
<td>ppm</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>236</td>
<td>304</td>
<td>367</td>
<td>406</td>
<td>406</td>
</tr>
<tr>
<td>Turbidity</td>
<td>NTU</td>
<td>5</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>Zine</td>
<td>ppm</td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
<td>1.28</td>
<td>1.28</td>
<td>1.28</td>
<td>1.28</td>
<td>1.28</td>
</tr>
</tbody>
</table>

### Abbreviations:
- **NA:** Not Analyzed
- **ND:** None Detected
- **NL:** Non-Detection Level
- **NS:** Not Specified
- **AL:** Regulatory Action Level
- **PHG:** Public Health Goal
- **ppm:** parts per million
- **pCi/L:** Picocuries per liter

### Chart Notes:
- **A:** Nitrate has a secondary MCL of 10 ppm as nitrate which is greater than 10 ppm as N.
- **B:** Standard is for Radium-226 and -228 combined.
- **C:** These results were before blending.

### Footnotes:
- **1:** Source waters are blended to decrease the concentrations of contaminants which results in an increase in the quality of the water we deliver to your homes.
- **2:** Chlorate was formed during chlorination.
- **3:** These results were before blending unless otherwise noted.
As always, please contact our Water Quality Section for older adults when their gums begin to recede.

Fluoride strengthens tooth enamel making teeth more resistant to decay. It fights against cavities. Fluoride benefits people of all ages.

The City uses both chlorine and chloramines for disinfection. The City has mandated its own unregulated contaminants. The contaminants are listed below and all analyses have been non-detect. Glendale sampled four groundwater sources requiring semi-annual testing and one surface water source requiring quarterly test. An administrative order was received from EPA because quarterly tests were incomplete due to laboratory interaction and one semi-annual test was late.

The Unregulated Contaminant Monitoring Regulation is a revision to the Safe Drinking Water Act. It requires State and Federal agencies to ensure that tap water is safe to drink, the California Department of Health Services (CDHS) and the USEPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDHS regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

To ensure that tap water is safe to drink, the California Department of Health Services (CDHS) and the USEPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDHS regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

The 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. More information about contaminants and potential health effects can be obtained by calling the USEPA’s Safe Drinking Water Hotline (1-800-426-4791).

State and Federal Agencies

The Water Quality Section of Glendale’s Water Quality Section

UNREGULATED CHEMICAL MONITORING REGULATION (California Department of Health Services)

The California Department of Health Services required the sampling of nine unregulated chemicals. To date, seven of these chemicals are reported below. The results from the remaining three are tabulated at right.

Acetochlor s-ethyl dipropylthiocarbamate (EPTC) Nitrobenzene

State and Federal Agencies

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State and Federal agencies thoroughly regulate the water we deliver to our customers by requiring significant water quality sampling. They require over 8,000 tests each year. The laboratory testing costs alone are over $100,000 annually, plus staff time involved in collecting the water samples. Additionally, the State monitors our water system and reviews the test results to ensure that required sampling is occurring and that we meet all regulatory requirements.

Water Quality Maintenance and Regulation

The City uses both chlorine and chloramines for disinfection. Some locations may alternate from chloramines to chlorine depending on operating conditions. Customers with special water quality needs such as kidney dialysis or aquariums should prepare for removal of chloraminations as well as chlorines. GWP also uses additional programs to maintain the high quality of our water including flushing distribution water mains, maintaining an effective cross-connection control program, cleaning reservoirs and tanks, and conducting water quality testing in storage facilities and water mains throughout the City.

Water Fluoridation Set to Begin at End of 2007

In 1995, California enacted legislation that requires large public water systems to fluoridate their water supply if funding is provided. Metropolitan Water District (MWD) provided funding for this process and is planning to begin adding fluoride to their treated water supply. Public notices will be issued when the exact date has been determined. Because Glendale receives 70% of its water from MWD, this will affect our water supplies as well.

Chloride Study

The drinking water Glendale Water & Power purchases from Metropolitan Water District contains the disinfectant chloramines, a chlorine/ammonia mixture that provides continuous disinfection throughout the distribution system.

Chloramines are regulated through AWWA standard C650. Chloramines have a secondary maximum contaminant level (MCL) of 0.2 mg/L.

Now the City uses both chlorine and chloramines for disinfection. The City has mandated its own unregulated contaminants. The contaminants are listed below and all analyses have been non-detect. Glendale sampled four groundwater sources requiring semi-annual testing and one surface water source requiring quarterly test. An administrative order was received from EPA because quarterly tests were incomplete due to laboratory interaction and one semi-annual test was late.

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Histidine is not regulated under current regulations.

Histamine is not regulated under current regulations.

(a) Compliance is based on system-wide average annual.

(b) Chloramines have an MCL of 0.2 mg/L.

(c) Combined with MWD supply.

(d) Glendale Water Treatment Plant.

(e) To the public.

(f) Chloramines are added at 0.6 ppm. The MCL was not violated.

(g) Higher chlorine additions to help maintain the chloramines residual level.

(h) Clinical study conducted in the spring, summer, and fall of 2007, is being conducted in the Glenoaks Canyon area of Glendale.

(h) Analysis was on sample blended with MWD supply.

(i) Bacteria have an MCL of 0.2 mg/L.

(j) Compliance is based on system-wide average annual.

(k) Chloramines are added at 0.6 ppm. The MCL was not violated.

(l) Chloramines are added at 0.6 ppm. The MCL was not violated.

(m) Bacteria have an MCL of 0.2 mg/L.

(n) Compliance is based on system-wide average annual.

(o) Chloramines have an MCL of 0.2 mg/L.

(p) Chloramines are added at 0.6 ppm. The MCL was not violated.

(q) Chloramines are added at 0.6 ppm. The MCL was not violated.
City of Glendale Water & Power
2006 Water Quality Report to Our Customers

This information is very important. Please have someone translate it for you or contact the City for a translation as follows:

Esta información es muy importante. Por favor pidale a alguien que se lo traduzca. O llame a la Ciudad para una traducción. Leonardo Bocanegra (818) 548-2062.

 brazilian portuguese translation: Por favor pergunte a alguém para traduzir isso. O leia o a cidade para uma tradução. Leonardo Bocanegra (818) 548-2062.

Shant Boodanian (818) 550-4759.

You may also visit our website at www.GlendaleWaterAndPower.com

Customer Participation and Assistance
Comments from the public are welcome and may be presented at the Glendale Water and Power Commission meetings held the first Monday of each month, at 4:00 PM, in the Glendale City Council Chambers, 613 E. Broadway.

If you have any questions regarding the quality of your drinking water or would like more information about Glendale water, please write to:

Ray Notario
Water Quality Section, Glendale Water & Power
141 N. Glendale Avenue, Level 4, Glendale, CA 91206 or call (818) 548-3962 or 548-2062.

After hours and for water emergencies call (818) 548-2011.

You may also visit our website at www.GlendaleWaterAndPower.com

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