

# City of Glendale *Water & Power*

# WQR.10

## Water Quality Report for 2009



### **IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**

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 2009. You can be assured that your Glendale water is of the highest quality and is **SAFE TO DRINK**.

## From the General Manager's Desk

Glenn Steiger, General Manager, Glendale Water & Power



100 years ago, the new City of Glendale established a municipal water and electric utility. Safe drinking water was a priority then and, we are proud to say, it remains a top priority today. Glendale Water & Power has a history of reliable service to the citizens of Glendale... a century of delivering healthy, high-quality water to the community.

In the past year, as we complete our first 100 years of operation, GWP has achieved many milestones:

- The Chevy Chase Reservoir reconstruction has been completed on time and on budget. It will provide sustained reliability of good quality water for many years to come.
- We are continuing expansion of our Recycled Water System. We plan to have a complete build-out of the system in five years. Each year, we increase the number of recycled water service connections.
- We are also continuing our multi-year, citywide water main replacement and relining project. To date, we have rehabilitated or replaced more than 30 miles of old water mains and expect the entire program to be completed in approximately five years.
- GWP has taken a leadership role in a nationwide research program to develop chromium 6 removal technologies for drinking water. Two large scale treatment facilities have been constructed in Glendale and will operate to demonstrate state of the art chromium 6 removal strategies.
- In August 2009, the Glendale City Council activated Phase II of our mandatory water conservation ordinance, calling for a water usage reduction of 10%. **Congratulations, GWP customers.** You have responded by achieving an average of 18% water savings since August 2009. **Well done!**
- We are extremely proud of the Gold Award we received from the Association of Metropolitan Water Agencies.

Moving forward into our second 100 years, GWP will continue to provide reliable, clean, healthy water to the citizens of Glendale and continue to look for new techniques that will give us the ability to provide even better service for our customers.



## Glendale Water Earns Gold Award

In 2009, Glendale Water & Power earned a nationwide honor for public drinking water systems by receiving the Association of Metropolitan Water Agencies' Gold Award for Exceptional Utility Performance.

AMWA, an organization representing the nation's largest publicly owned drinking water utilities, recognized nine public drinking water systems for outstanding achievement. The AMWA selection process looks for utilities that provide high levels of performance for water quality, customer satisfaction, employee and leadership development, operational optimization, financial viability, infrastructure stability, operational resiliency, community sustainability, water resource adequacy, and stakeholder understanding and support.

Thanks to all our customers for your help and support.

## Water Quality Terms You Will Find in This Report

### • 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 (EPA).

### • 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.

### • 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.

### • Treatment Technique (TT):

A required process intended to reduce the level of a contaminant in drinking water.

### • 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.

### • Primary Drinking Water Standard (PDWS):

MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

## Chromium 6 Removal Facilities

Due to improper management and disposal of waste products by various manufacturers, the City of Glendale's groundwater supply in the San Fernando Valley was contaminated with a wide variety of chemicals, including chromium 6 and volatile organic compounds (VOCs). In 2000, the Glendale Water Treatment Plant began operating to remove VOCs in the groundwater.

Glendale is leading a research program to develop technologies to remove chromium 6 from drinking water. Two large-scale treatment facilities have been constructed and will be operated in 2010 to demonstrate the newly-developed technologies. The majority of funding for this project has come from state and federal agencies. As part of the American Water Works Association's 2010 spring conference, representatives from water utilities throughout California and Nevada had the opportunity to visit these treatment plants.





# Glendale's Recycled Water System

Increasingly stringent regulations, mandatory water conservation, rising water demands, and limits on imported water have made finding alternative water sources for non-potable use vital in operating a public water supply system. A secondary water supply for non-human consumption becomes even more critical during periods of prolonged drought.

Glendale is one of those few cities and municipalities that have an existing recycled water system in place. Its main framework – transmission mains, pumping stations, distribution pipelines, storage facilities, and services – was installed in the early 1990s. This tertiary treated water comes from the Los Angeles-Glendale Water Reclamation Plant.

The usage of recycled water in Glendale has substantially increased in the last 20 years. From 19 service connections in the mid 90s, the system grew to 59 service connections by the end of 2009. In Glendale, recycled water is used for landscape irrigation, restroom flushing, street cleaning, cooling towers, dust control, and soil compaction. The western portion of the recycled system was extended to irrigate the San Fernando Road parkways, medians, and vegetation along the railroad tracks. By using recycled water, Glendale saved more than 540 million gallons of potable water in 2009.

In the near future, recycled water will serve the DreamWorks complex, Disney Animation

Child Care Center, Glendale Memorial Hospital, a housing project, and three high schools. Eleven large commercial buildings have already been dual plumbed to allow the use of recycled water and are waiting for the extension of the distribution line to their locations. Department staff are developing a master plan for the expansion of the recycled system. Recycled water usage is projected to increase significantly after these improvements and additions are completed.

Future recycled water projects will continue to reduce the need to purchase expensive imported water from the Metropolitan Water District and these savings can be diverted to maintain and operate the existing system.

# Glendale Responds to Water Shortage



The water shortage problems we have been experiencing during the last four years are severe and different from any we have experienced before. They have been caused by numerous concerns that cannot be solved simply by increased rainfall and snowfall alone. Adding to California's drought problems are court decisions limiting the amount of water that can be delivered from Northern California to the farmers in California's Central valleys and urban areas in Southern California.

In August 2009, the Glendale City Council activated Glendale's Mandatory Water Conservation Phase 2. Phase 2 calls for a 10% water

reduction within the city including restrictions limiting landscape watering to Tuesdays, Thursdays and Saturdays, 10 minutes per watering station.

To enable citizens to report water wasting anonymously, GWP activated a 24 hour hotline 818-550-4426 and a reporting procedure on line at [www.GlendaleWaterAndPower.com](http://www.GlendaleWaterAndPower.com).

By December 2009, Glendale citizens had responded to the City's request for 10% water conservation by reducing their water usage an average of 18%. Well done!!!

***The challenge: To continue water usage reductions whether or not mandatory water conservation restrictions are in place.***

# Cross-Connection Control Program

Contamination of public water supplies through cross-connection has caused more waterborne disease outbreaks in the United States than any other reported factor. To protect against cross-connections, Glendale Water & Power has the primary responsibility to determine if hazards exist in the customers' premises and what degree of protection is required to protect the public water supply.

Backflow conditions can result from an unexpected change in water pressure between the customer's water supply and the distribution system. Backflow protection is extremely important where toxic chemicals or waste water are handled under pressure. Unusually high water demands, fires, main breaks, fire hydrant testing, and/or broken

hydrants due to a vehicular accident may cause negative pressure in a water main that could siphon unwanted chemicals into the system. A backflow prevention device can prevent that from occurring.

Glendale's cross-connection control program includes site survey and inspection, identification of an existing or potential cross-connection, degree of hazard, and determining the appropriate level of backflow protection. Backflow prevention devices must be tested at least once a year. GWP notifies customers when the test is due. The notification includes a test form to be completed by a certified tester of the LA County Department of Public Health, a list of certified testers, and a public information brochure about the program.



This program is one of the many tools that the water department uses to assure the delivery of a safe potable water supply to our customers.

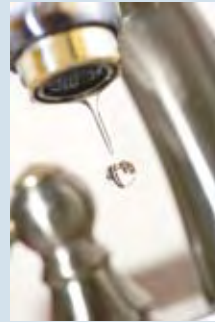
## Common Contaminants in Drinking Water

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. 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, 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.
- **Pesticides and herbicides**, that 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 process and petroleum production and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants** that can be naturally-occurring or be the result of oil and gas production and mining activities.

## Important Information for People with Compromised Immune Systems

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. The 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).



## Sources of Glendale's Drinking Water

In 2009, Glendale delivered 9.16 billion gallons of potable (drinking water quality) water to the City's customers. 66% of that water was purchased from the Metropolitan Water District (MWD), after being imported from Northern California and the Colorado River. Before it was delivered to Glendale, it was treated at MWD's treatment plants in

Granada Hills and La Verne and monitored by MWD in their water quality laboratory.

Water from local sources made up 34% of our drinking water supplies and was blended with MWD water before being delivered to your home and business. 26% of GWP water was groundwater extracted from the San Fernando Basin and conveyed through the Glendale Water Treatment Plant. Water from the City's Glorietta Wells and the Verdugo Park Water Treatment Plant accounted for 8% of our supplies.

Source water assessments were conducted in 2006, and updated in 2007, for five wells in the Verdugo Basin. Located in an urban area, they are considered to be potentially vulnerable to contamination from underground gasoline storage tanks (a gasoline station was previously located in the area) and installed sewer lines. Private septic systems were eliminated. In 2000, programs to control contamination from fertilizers and pesticides were put in place. Before being introduced into the water system, water from two wells is treated at the Verdugo Park Water Treatment Plant and water from three wells is blended with water from MWD.

WHERE DOES YOUR DRINKING WATER COME FROM?		
SOURCE	ACRE FEET	PERCENTAGE
Metropolitan Water District	18,632	66%
Glendale Water Treatment Plant	7,180	26%
Glorietta Wells	1,772	6%
Verdugo Park Water Treatment Plant	538	2%

## For Your Information...

### Lead

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 components associated with service lines and home plumbing. GWP 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>.

### Nitrate

Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm may also 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 for advice from your health care provider.

# Maintaining Glendale's Water Quality

The GWP water system includes 30 water storage facilities capable of holding 185 million gallons of drinking water at any given time and 400 miles of pipeline. To keep this system performing and maintaining good water quality, GWP employs a multi-front effort, involving staff from the Water Quality, Operations, and Engineering Groups.

## Water Quality Group

The Water Quality Group is responsible for sampling water in the storage facilities and distribution system on a weekly, monthly, quarterly and annual basis. These samples are either tested at GWP's local laboratory for operational purposes, or sent out to a larger laboratory for state and federally required compliance tests. Hundreds of samples are collected and tested every month. Water quality staff respond to customer complaints and inquiries. At GWP,

our customers' satisfaction is key, and we make every effort to resolve problems as quickly as possible. The water quality group is also responsible for identifying state and

federal regulations that govern water utilities and ensuring that the proper actions are taken to achieve and maintain compliance. It is not unusual to see members of this group collecting samples, flushing hydrants, and visiting locations throughout the City.

## Operations Group

The Operations Group operates pumping stations throughout the City to move water from our storage facilities into transmission mains and to our customers. This group coordinates deliveries with the Metropolitan Water District, our wholesale water agency



whose water comprises over 65% of Glendale's supplies. They regularly drain and clean Glendale's storage reservoirs and tanks, exercise and replace valves, and respond to

main breaks, restoring service as soon as possible. The operators regularly visit the 30 storage facilities within the City to make sure everything is in order. They work long hours, seven days a week including holidays, to ensure the quality and safety of the water GWP serves our customers.

## Engineering Group

The Engineering Group is responsible for implementing capital improvement projects throughout the City, many of which involve maintaining the City's 400 miles of water mains. In some cases, mains are "cleaned and lined" using a process that greatly improves the interior condition of the pipeline. If the structural integrity of a pipeline is in question, it is replaced. When water storage facilities are taken out of service for cleaning, our engineering department staff inspect these reservoirs

and tanks for any needed repairs. Please visit [www.glendalewaterandpower.com](http://www.glendalewaterandpower.com) for more information about GWP's projects and activities.

## 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 chloramines as well as chlorine.

## State and Federal Agencies

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and the State Department of Public Health (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.

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 inspects our water system and reviews the test results to ensure that required sampling is occurring and that we meet all regulatory requirements.

**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 EPA's Safe Drinking Water Hotline (1-800-426-4791).**

**DETECTED CONTAMINANTS AT GLENDALE'S WATER SOURCES**

	Units	Notification Level	State DLR		MWD Weymouth Plant (n)	MWD Jensen Plant (n)	Glendale Treatment Plant (e)	Glorietta Wells (e)	Verdugo Park Treatment Plant	Major Sources of Contaminants in Drinking Water
<b>STATE REGULATED CONTAMINANTS WITH NO MCLs</b>										
Boron	ppb	1,000	100	Range	120 - 140	190 - 220	0.13 - 0.23	NA	NA	Runoff/leaching from natural deposits; industrial wastes
				Average	130	200	0.20			
Chromium VI	ppb	NS	1	Range	0.04 - 0.13	0.36 - 0.63	3.1 - 12.0	0.26 - 0.38	0.65	Industrial waste discharge
				Average	0.13	0.50	9.12 (i)	0.33	0.65	
Vanadium	ppb	50	3	Range	ND - 3.8	ND - 3.4	4.3 - 6.9	4.1 - 4.1	4	Naturally-occurring; industrial waste discharge
				Average	3.2	6.4	5.4	4.1	4	

**LEAD AND COPPER RULE (g)**

	Units	Action Level	PHG	No. of Samples	90th Percentile	No. of sites exceeding action level	Major Sources of Contaminants in Drinking Water
<b>SAMPLES FROM CUSTOMERS TAPS (COLLECTED EVERY 3 YEARS)</b>							
Copper (h)	ppb	1300	300	73	300	0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	ppb	15	0.20	73	ND	0	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

**CITYWIDE SAMPLING**

	Units	State MCL [MRDL]	MCLG [MRDLG]	Citywide Average	Range	Major Sources of Contaminants in Drinking Water
<b>SAMPLES FROM DISTRIBUTION SYSTEM</b>						
Total Coliform Bacteria	%	5.0 (f)	0	0.18	0 - 1.55	Naturally present in the environment
Fecal Coliform and <i>E. Coli</i>		(f)	0	0	0	Human and animal fecal waste
Total Trihalomethanes (TTHM) (j)	ppb	80	NS	37.9	13 - 67	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (j)	ppb	60	NS	9.1	1.5 - 15.0	By-product of drinking water disinfection
Total Chlorine Residual	ppm	[4]	[4]	1.2	0.02 - 3.5	Drinking water disinfectant added for treatment

**WATER CONSTITUENTS OF INTEREST TO THE PUBLIC**

	Units		MWD Weymouth Plant (n)	MWD Jensen Plant (n)	Glendale Treatment Plant (e)	Glorietta Wells (e)	Verdugo Park Treatment Plant
Alkalinity	ppm	Range	100 - 130	84 - 93	206 - 218	140 - 193	190 - 225
		Average	120	90	212	168	211
Bromate	ppb	Range	NA	4.2 - 12.0	ND	NA	NA
		Average		6.9			
Calcium	ppm	Range	54 - 76	27 - 33	91 - 96	92 - 99	120 - 130
		Average	68	31	93.5	95	123
Chlorate (m)	ppb	Range	ND - 79	ND	81 - 380	146 - 200	150 - 172
		Average	74		151	166	164
Hardness (k)	ppm	Range	230 - 310	120 - 130	330 - 350	362 - 400	477 - 530
		Average	280	130	340	378	495
Magnesium	ppm	Range	23 - 30	11 - 12	26 - 27	32 - 37	43 - 50
		Average	27	13	26.3	34	45
N - Nitrosodiethylamine (NDEA)	ppb	Range	ND	ND	ND - 3.7	NA	NA
		Average			0.2		
N - Nitrosodimethylamine (NDMA) (q)	ppb	Range	ND - 0.005	0.002 - 0.006	ND - 0.003	0.005	NA
		Average			0.001	0.005	
pH	pH Units	Range	7.8 - 8.0	8.1 - 8.3	8.1	6.6 - 8.4	6.6 - 8.6
		Average	7.9	8.2	8.1	7.3	7.2
Potassium	ppm	Range	4.2 - 5.3	2.6 - 2.9	4.0 - 4.3	3.0 - 3.6	3.3 - 3.9
		Average	4.8	2.8	4.1	3.2	3.6
Sodium	ppm	Range	84 - 100	66 - 74	51 - 54	41 - 52	52 - 59
		Average	99	68	53	47	55
Total Organic Carbon (TOC)	ppm	Range	1.9 - 2.4	1.2 - 1.7	1.4 - 2.9	NA	NA
		Average	2.3	1.7	1.8		



**Abbreviations**

- AL = Regulatory Action Level
- cu = color units
- DLR = Detection Limits for purposes of reporting
- DPH = Department of Public Health
- MCL = Maximum Contaminant Level
- MCLG = Maximum Contaminant Level Goal
- MRDL = Maximum Residual Disinfectant Level
- MRDLG = Maximum Residual Disinfectant Level Goal
- MWD = Metropolitan Water District of Southern CA
- NA = Not Analyzed
- ND = None Detected
- NL = Notification Level
- NS = No Standard
- NTU = Nephelometric Turbidity Units
- pCi/L = picoCurries per liter
- PHG = Public Health Goal
- ppb = parts per billion
- ppm = parts per million
- TT = Treatment Technique

**Footnotes (For all charts)**

- a) As the result of blending, actual level of tetrachloroethylene (PCE) in water served ranged between ND and 0.7 ppb, with an average of 0.6 ppb.
- b) Aluminum has a secondary MCL of 200 ppb.
- c) As the result of blending, actual level of nitrate in water served ranged between ND and 22.0 ppm, with an average of 9.7 ppm.
- d) Standard is for Radium-226 and -228 combined. (calculated)
- e) These results were before blending unless otherwise noted.
- f) Total coliform MCL: No more than 5% of the monthly samples may be total coliform-positive.
- g) Lead and Copper Rule compliance based on 90th percentile of all samples being below the Action Level. Samples were taken from 73 customer taps. Testing is required every three years. This data was collected in 2008.
- h) Copper has a secondary MCL of 1000 ppb.
- i) Analysis was on water before blending with MWD supply.
- j) Compliance is based on system-wide annual average.
- k) Hardness in grains/gallon can be found by dividing ppm by 17.1. For example, 280 ppm = 16.4 grains/gallon.
- l) For GWP sources, data represents the amount of naturally occurring fluoride. For MWD sources, data represents after MWD began fluoridation. Glendale's distribution system fluoride levels were monitored in 2009 - range 0.24 ppm - 0.98 ppm with an average of 0.70 ppm.
- m) Chlorate has a DPH Notification level of 800 ppb. Chlorate is a by-product of liquid chlorine.
- n) During 2009, Glendale received MWD water primarily from the Weymouth Treatment Plant.
- o) Turbidity is a measure of the cloudiness of the water. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system. Treatment Technique for turbidity applies to MWD's Weymouth and Jensen plants and the Verdugo Park Water Treatment Park. It does not apply to the Glendale Water Treatment Plant or Glorietta Wells.
- p) MWD reported nitrate (as N) instead of nitrate (as NO3) as was reported by GWP. The MCL and PHG for nitrate (as N) are both 10 ppm.
- q) In 2009, GWP conducted sampling in compliance with the Federal Unregulated Contaminant Monitoring Rule. Of the 25 contaminants that were tested, only NDMA was detected (Range:0.002ppb-0.011ppb, Average:0.005ppb)

DETECTED CONTAMINANTS A						
	Units	State MCL	PHG or [MCLG]		MWD Weymouth Plant (n)	MW
<b>ORGANIC CHEMICALS</b>						
Tetrachloroethylene (PCE) (a)	ppb	5	0.06	Range	ND	
				Average		
Methyl-tert-butyl-ether (MTBE)	ppb	13	13	Range	ND	
				Average		
<b>INORGANIC CHEMICALS</b>						
Aluminum (b)	ppb	1000	600	Range	110 - 240	
				Average		
Barium	ppb	1000	2000	Range	110 - 140	
				Average		
<b>RADIOLOGICALS</b>						
Gross Alpha Particle Activity	pCi/L	15	[0]	Range	ND - 7.6	
				Average		
Gross Beta Particle Activity	pCi/L	50	[0]	Range	ND - 9.7	
				Average		
Combined Radium (d)	pCi/L	5	[0]	Range	ND	
				Average		
Strontium	pCi/L	8	0.35	Range	ND	
				Average		
Tritium	pCi/L	20000	400	Range	ND	
				Average		
Uranium	pCi/L	20	0.43	Range	2.4 - 3.4	
				Average		
<b>REGULATED CONTAMINANTS WITH SECONDARY MCLS</b>						
Chloride	ppm	500	NS	Range	89 - 100	
				Average		
Color	cu	15	NA	Range	1 - 2	
				Average		
Manganese	ppb	50	NL = 500	Range	ND	
				Average		
Odor	TON	3	NS	Range	2	
				Average		
Sulfate	ppm	500	NS	Range	180 - 260	
				Average		
Total Dissolved Solids (TDS)	ppm	1000	NS	Range	510 - 660	
				Average		
Turbidity (o)	NTU	TT	NS	Range	0.05 - 0.06	
				Average		
Zinc	ppb	5000	NS	Range	ND	
				Average		

## GLENDALE'S WATER SOURCES

D Jensen Plant (n)	Glendale Treatment Plant (e)	Glorietta Wells (e)	Verdugo Park Treatment Plant	Major Sources of Contaminants in Drinking Water
ND	ND	0.85 - 2.40 1.43 (a)	ND	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
ND	ND	ND - 0.85 0.23	ND	Leaking underground storage tanks; discharge from petroleum and chemical factories; previously used as gasoline additive
ND - 100 76	ND - 30 0.6	ND	ND - 32 8	Residue from some surface water treatment processes; erosion of natural deposits
2.5 - 3.9 3.1	ND - 1.1 1.1	ND	ND - 1.0 0.3	Erosion of natural deposits, glass and electronics production wastes; runoff from orchards
ND	65 - 96 78	87 - 120 107	82 - 110 94	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
ND	3.2 - 13.0 9.4	ND - 3.0 1.4	ND - 4.4 1.8	Discharge from steel and pulp mills; erosion of natural deposits
0.6 - 0.9 0.8	0.33 - 0.40 0.37	0.15 - 0.23 0.20	0.24 - 0.36 0.28	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
ND	ND - 5.3 0.11	ND	ND	Erosion of natural deposits; discharge from metal factories
0.6 - 0.9 0.8	22 - 23 22.5	28 - 46 38 (c)	16 - 19 18	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
ND - 7.3 3.4	ND - 11 4	ND - 8.4 4.0	3.7 - 12.0 8.5	Erosion of natural deposits
ND - 5.2 ND	ND - 7.7 3.1	3.1 - 4.1 3.6	ND - 6.6 2.8	Decay of natural and man-made deposits
ND	ND - 2.4 0.7	ND - 1.2 0.13	ND - 1.0 0.3	Erosion of natural deposits
ND	NA	0.7 - 0.9 0.8	ND	Decay of natural and man-made deposits
ND	NA	202 - 204 203	ND	Decay of natural and man-made deposits
1.6 - 2.0 1.8	5.0 - 13.4 8.4	5.2 - 7.4 6.3	7.4 - 8.0 7.6	Erosion of natural deposits
77 - 82 79	58 - 60 59	86 - 96 93	110 - 120 116	Runoff/leaching from natural deposits; seawater influence
1 - 2 2	ND - 5.0 4.8	ND	ND - 3.0 0.28	Naturally occurring organic materials
ND	ND - 2.8 0.1	ND	ND	Leaching from natural deposits; industrial wastes
2 2	2 - 4 2	1 - 2 1	1 - 3 1.4	Naturally occurring organic materials
56 - 70 66	130 - 130 130	130 - 180 142	200 - 210 203	Runoff/leaching from natural deposits; industrial wastes
310 - 340 330	554 - 580 567	550 - 674 613	670 - 824 757	Runoff/leaching from natural deposits; seawater influence
0.04 - 0.05 0.04	ND - 0.25 0.13	0.05 - 1.60 0.27	0.04 - 0.40 0.13	Soil runoff
ND	ND	ND - 26 4	ND	Runoff/leaching from natural deposits; industrial wastes



# CELEBRATING 100 YEARS



## OF RELIABLE SERVICE



Glendale's continuing priority for safe, quality water supplies began early in the history of our City.

In 1909, at the time the City of Glendale became a municipal electric utility, 14 private water companies operated wells in Glendale. Undersized water mains, insufficient storage facilities and lack of a circulating system caused concerns about the possible pollution of the City's domestic water supplies.

Prompted by these concerns, in 1912 Glendale citizens began to look for answers. After many months of discussions, it became apparent that the citizenry were divided into two groups with very

different ideas. One group favored establishing a Glendale municipal water system. The other advocated annexation to the City of Los Angeles which would make Glendale eligible to receive imported water from the Owens Valley through the Los Angeles Aqueduct.

In 1914, the controversy was solved when a Glendale bond issue favoring the creation of a municipal water system passed by an overwhelming majority vote. Initially, the four largest private water companies were purchased and a municipal water system was added to the electric system of the Glendale Public Service Department. Eventually, all private water companies became part of the municipal water system.



Your Trusted Community Utility

Glendale Water & Power  
141 North Glendale Ave., Level 4  
Glendale, CA 91206

PRESORTED  
STANDARD  
U.S. POSTAGE  
**PAID**  
GLENDALE, CA 912  
PERMIT #1728



# WQR.10

## City of Glendale *Water & Power* 2009 Water Quality Report to Our Customers

**This information is very important.** Please have someone translate it for you.

**Esta informacion es muy importante.** Por favor pidale a alguien que se lo traduzca.

Այս տեղեկությունը շատ կարևոր է: Խնդրում ենք, որ մեկին թարգմանել տաք այն:

此資訊十分重要。請您找人幫您翻譯。

यह सूचना अत्यंत ही महत्त्वपूर्ण है। कृपया किसी से इसका अनुवाद करा लीजिए।

これは非常に重要な情報です。どなたかに翻訳をお願いしてください。

이 정보는 매우 중요합니다. 누군가에게 번역해달라고 하십시오.

Ang impormasyon na ito ay mahalagang-mahalaga.

Mangyaring maghanap ng makakapagsalin nito para sa inyo.

### Customer Participation and Assistance

Comments from the public are welcome and may be presented at the Glendale *Water & 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, Principal Water Quality Specialist, Water Quality Section, Glendale *Water & Power* 141 N. Glendale Ave., Level 4, Glendale, CA 91206 or call (818) 548-3962 or (818) 548-2062.

You may also visit our website at [www.GlendaleWaterAndPower.com](http://www.GlendaleWaterAndPower.com)

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