

City of Glendale *Water & Power*

WQR.08

2008 Water Quality Report



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 2008. 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



Almost a century ago, Glendale Water & Power began delivering high-quality drinking water to the community of Glendale. Today, as we approach our 100th year of service, we are proud that providing safe, reliable drinking water continues to be a top priority. The Water Section of GWP, through constant attention by our knowledgeable staff, maintains an excellent water system that, without fail, passes tough Federal and State quality standards and meets your expectations.

Maintaining a high degree of water reliability requires both short-term and long-range planning and recognition of the importance of incorporating new technological advances as they become available.

GWP continues to be a national leader in the development of a technology to remove chromium 6 from drinking water. To complete the final stages of the program, a full-capacity demonstration facility is currently under construction and should be operational by late summer 2009 at our Glendale Water Treatment Plant.

In 2008, we installed additional programmable automatic flushing units to replace the periodic manual flushing process that was previously used. These new units accomplish the same results but with a reduced amount of wasted water.

More than 100 water samples are collected per week from various areas throughout the City. To assure the accuracy of the samples, we have replaced all 37 of our neighborhood sampling stations with new facilities.

To increase water flow, improve water quality and expand fire protection, GWP began a citywide, multi-year water pipeline replacement and rehabilitation program in late 2003. As the work continues, to this date, we have replaced or relined over 75,000 feet of water mains.

A handwritten signature in blue ink, appearing to read 'Glenn Steiger'.



Chromium 6

Chromium is a naturally occurring element found in rocks, plants, animals, soil and groundwater. In water, the common forms of chromium are chromium 3 and chromium 6. Chromium 3 is an essential human body nutrient that plays a role in carbohydrate and lipid metabolism. In contrast, chromium 6 is a more toxic form that was shown to be carcinogenic via ingestion in animal studies conducted by the National Toxicology Program.

Due to improper management and disposal of waste products by various manufacturers, the City of Glendale's groundwater supply in the San Fernando Valley has been contaminated with a wide variety of chemicals, including chromium 6 and volatile organic chemicals (VOCs). In 2000, the Glendale Water Treatment Plant (GWTP) began operating to remove VOCs in the groundwater. The GWTP removes the VOCs to non-detected levels. The operation of the treatment plant has greatly reduced our dependence on imported water from the Metropolitan Water District of Southern California. In 2008, water from the GWTP accounted for 23% of our supplies.

Even though the treatment plant was not designed for chromium 6 removal, Glendale Water and Power has taken proactive measures to limit chromium 6 concentrations in the water delivered to Glendale residents to levels far lower than the federal standard for total chromium of 100 parts per billion (ppb) and the California standard of 50 ppb. In a continuing effort to provide high quality water to our customers and in anticipation of a chromium 6 specific drinking water standard, Glendale has taken a leadership role in a \$4.5 million multi-phase research program to develop chromium 6 removal technologies for drinking water. During the next phase of the program, two large scale treatment facilities will be constructed to demonstrate state of the art chromium 6 removal technologies.

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.

- **Maximum Residual Disinfectant Level (MRDL):**

The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

- **Maximum Residual Disinfectant Level Goal (MRDLG):**

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 EPA.

- **Primary Drinking Water Standard (PDWS):**

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

- **Treatment Technique (TT):**

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

Glendale Residents have a Lot of Questions about their Drinking Water.

The following article presents short discussions about three topics that were of interest for Glendale residents in 2008.

Pharmaceuticals in Drinking Water

During 2008 there were a number of articles published about the detection of medications and personal care products in drinking water. A variety of chemicals, including medications, caffeine, fragrances, vitamins, and cosmetics, have been detected at extremely low levels in source water, including surface water sources that Glendale purchased from the Metropolitan Water District of Southern California.

How do these chemicals get out into the environment and into our source waters? It can happen in several ways. Whenever we take medicine prescribed by our doctor, some of the medicine will be excreted and gets into the wastewater and can eventually make it to untreated sources of drinking water. When we use shampoos, creams, oils, colognes, insect repellents, etc. a small amount of this material is washed down the drain when we shower or take a bath. The presence of these chemicals in drinking water is not new. They have probably been in sources of water since people first started using these compounds and taking medications. What is new is that our ability to detect smaller and smaller amounts of these compounds has improved dramatically. With today's technology we can measure drops of a compound mixed into an amount of water equal to 1000 Olympic sized swimming pools.

Research is underway to assess the risks of the traces of these compounds. The highest concentration of any of these detected compounds is approximately 5 million times lower than the therapeutic dose.

What can you do to help? Ask your pharmacist if they can take back your unused medications; Otherwise, dispose of unused medications in the trash, unless there are certain requirements that they must be disposed of by flushing down the toilet.

Fluoridation

For a little more than one year, Glendale has been receiving fluoridated water from the Metropolitan Water District (MWD) of Southern California. In late 2007 the MWD began adding a small amount of fluoride to the drinking water it delivers. Glendale

receives about 70% of our supplies from MWD. When MWD began adding fluoride to its supplies, Glendale began testing to determine the levels of fluoride throughout the City.

Before MWD began adding fluoride, the levels of fluoride in Glendale drinking water was approximately 0.2 mg/L. With fluoride treatment, during 2008 the average levels of fluoride ranged from approximately 0.6 mg/L to 0.8 mg/L. GWP water customers using or considering the use of fluoride supplements should discuss this issue with their health care provider.

Despite fluoride's proven record, many consumers may not be familiar with its benefits or may be concerned about drinking fluoridated water. You can find additional information at the following website: <http://www.mwdh2o.com/fluoridation/index.html>.

Hardness

One of the most common questions we get from Glendale residents is about the hardness of their drinking water. Due to various environmental and regulatory challenges with importing water from northern California, MWD began serving Glendale and nearby cities 100% Colorado River water in 2008. Colorado River water is a hard water. In addition our local supplies of groundwater are hard waters as well.

What is hardness? Hardness is caused primarily by the presence of calcium and magnesium ions that occur naturally in water. Is hard water bad for you? Not at all.

Hard waters can require a considerable amount of soap to produce a lather. Hard water can also cause a white film or spots to form on glassware and kitchen and bathroom fixtures. Hardness can form particles when the water is boiled so you may see deposits on your tea kettle and other cooking utensils. It can even make "bathtub rings" more noticeable.

There are detergents and cleaning agents available that counteract the hardness in the water without forming scale or deposits. Look for a phrase like "works in hard water" on the label. In the tables contained in this report you will find information on hardness for the various sources of Glendale's drinking water.



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).

Recycled Water

Glendale's recycled water system helps minimize the impacts of drought and helps conserve our valuable sources of drinking water.

Recycled water is domestic wastewater that, after extensive treatment, is suitable for public area irrigation, commercial laundries, street cleaning, and cooling tower use. It can also be used to flush toilets and urinals. Even though the end product of all of this treatment meets federal and state drinking water standards, recycled water cannot be used for human consumption.

Glendale provides recycled water service for irrigation to several parks, golf courses and cemeteries, for cooling towers at the Power Plant and for toilet and urinal flushing in several dual-plumbed buildings. By the end of 2008, Glendale had added 950 feet of water mains to the recycled system and had 45 recycled water users.

Future expansion of the system includes the installation of distribution mains in Central Avenue, in the downtown area, and on the west side of Glendale. Two additional planned projects will provide recycled water to several schools for irrigation and use in toilets and urinals, add additional dual-plumbed buildings, and irrigate a portion of the 134 Freeway.

Recycled water is a valuable alternative source of water for Glendale and is critical towards meeting our water conservation goal. The goal of the recycled water program is to meet 7% of the total water demand of the City. This will reduce the costs of purchasing imported water and help Glendale become less dependent on imported sources of water.

Building a Reservoir



Demolition of the old Chevy Chase 968 Reservoir began in January 2008. The roof is being finished on the north half of the new reservoir and it will be filled in summer 2009.

WHERE DOES YOUR DRINKING WATER COME FROM?

SOURCE	ACRE FEET	PERCENTAGE
Metropolitan Water District	21,211	68.6%
Glendale Water Treatment Plant	7,282	23.5%
Glorietta Wells	1,751	5.7%
Verdugo Park Water Treatment Plant	680	2.2%

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 byproducts 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.

Sources of Glendale's Drinking Water

In 2008, Glendale Water & Power delivered 10.08 billion gallons of potable (drinking water quality) water to the City's customers. 68.6% of that water was purchased from the Metropolitan Water District (MWD), after being imported from Northern California and the Colorado River. Before it is delivered to Glendale, it is treated at MWD's treatment plants in Granada Hills and La Verne and is monitored by MWD in their water quality laboratory.

Water from local sources makes up 31% of our drinking water supplies and is blended with MWD water before being delivered to your homes and businesses. 23.5% 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 7.9% 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 basin) 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.

SolarBee[®] and Improving Efficiency

Over the past two years, GWP staff implemented a number of steps to maintain better control of water quality within the distribution system. The improvements include increased monitoring and testing, as well as better mixing in all of our storage facilities through the installation of solar-powered circulators. With these solar-powered SolarBee mixers floating in the storage facility, up to 10,000 gallons of water per minute can be constantly circulated with a minimum amount of turbulence. Where previously a reservoir might stratify due to temperature differences, the SolarBee thoroughly mixes the entire reservoir 24 hours a day, 7 days per week.

Solar panels atop the storage facility charge a large battery, which then powers the pump motor to keep water circulating. The SolarBees work even on rainy and cloudy days. Because the units operate on solar power there is no energy cost and little required maintenance.

To maintain a safe and healthy water system, different levels of disinfectant are added to our reservoirs each week. The SolarBees help ensure that the disinfectant is evenly mixed. During 2008, in large part due to the functioning of the SolarBees and an increased level of monitoring and testing by staff, Glendale Water was able to reduce the amount of chlorine disinfectant added to the storage facilities by approximately 50%.



Overview of Water Quality sample collection – laboratory testing – new sample stations

With alarming stories of pharmaceuticals and other emerging contaminants in drinking water gaining national news coverage, some Glendale residents might wonder what GWP is doing to address these issues. In an effort to provide the safest, cleanest, and most esthetically pleasing water to Glendale customers, GWP's Water Quality staff routinely collects *more than one hundred* samples from over *seventy* locations each week. These locations include the thirty tanks and reservoirs where drinking water is stored and thirty-seven dedicated sampling stations throughout the Glendale water distribution system. In addition to routine samples, GWP also conducts various sampling events to comply with the numerous stringent requirements prescribed by the United States Environmental Protection Agency (EPA) and the California Department of Public Health (CDPH). Depending on what sample is collected, some are tested on-site, some are tested in GWP's own laboratory, and others are sent to a specialized laboratory for more in-depth testing. To ensure that all of the samples collected by water quality staff are the best possible representations of the water flowing through Glendale's distribution system, various improvements have been made recently to the sampling facilities. One example is the replacement of the thirty-seven sampling stations. The new sample stations will help ensure that all of the samples taken from these sampling stations are truly representative of the water served to our customers. Water quality is at the top of GWP's priorities.

Operations and Maintenance

Have you ever wondered what it takes for a City like Glendale to maintain a reliable system that continuously supplies safe and potable water to its consumers without long service interruptions?

With 397 miles of pipeline, 8,500 valves, approximately 33,200 meters, and 30 water storage tanks and reservoirs with a total capacity of 185 million gallons, keeping these parts of the system performing properly takes a considerable effort from 60 dedicated employees.

To keep our system functioning, major programs have been established. Some of these programs include the regular

cleaning of storage reservoirs and tanks, exercising and replacing valves on a regular basis, and pipeline cleaning and re-lining.

In 2008, about 40,000 linear feet of existing pipes were cleaned and re-lined, more than 15,000 linear feet of pipes were replaced, 194 new valves were installed, and 109 new fire hydrants were added to the system. Flow tests conducted after the pipelines were re-lined show a substantial increase in flow and pressure. The additional hydrants and increase in flow further improve the fire fighting capability of the city.

Years ago, Glendale installed dedicated sampling stations throughout the City to monitor water quality. Over the years these

dedicated sampling stations have shown increasing signs of wear. During 2008 all of the sampling stations were replaced.

To further improve the quality of water served, eleven (11) automatic flushing units have been installed on dead ends that are normally manually flushed. These units have significantly improved water circulation at these locations.

Other projects completed included updating our computer mapping system and a comprehensive effort to maintain our 8,500 valves. The completion of these two projects will assist field personnel to accurately and efficiently operate the water supply system during system shutdown, and during emergency situations.

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
STATE REGULATED CONTAMINANTS WITH NO MCLS										
Boron	ppb	1,000	100	Range	130 - 160	150 - 200	150 - 250	118 - 131	ND	Runoff/leaching from natural deposits; industrial wastes
				Average	150	180	220	124		
Chromium VI	ppb	NS	1	Range	0.1 - 0.3	0.3 - 0.5	4.0 - 11.0	ND	0.24 - 0.30	Industrial waste discharge
				Average	0.2	0.4	7.7 (i)			
Vanadium	ppb	50	3	Range	3.1 - 4.0	4.6 - 5.1	4.0 - 8.0	5.0 - 5.5	3.7 - 4.8	Naturally-occurring; industrial waste discharge
				Average	3.6	4.9	5.3	5.3	4.3	

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
SAMPLES FROM CUSTOMERS' TAPS (COLLECTED EVERY 3 YEARS)							
Copper (h)	ppb	1300	170	73	300	0	Internal corrosion of household pipes; erosion of natural deposits
Lead	ppb	15	2	73	ND	0	Internal corrosion of household pipes; erosion of natural deposits

CITYWIDE SAMPLING

	Units	State MCL [MRDL]	MCLG [MRDLG]	Citywide Average	Range	Major Sources of Contaminants in Drinking Water
SAMPLES FROM DISTRIBUTION SYSTEM						
Total Coliform Bacteria	%	5.0 (f)	0	0.29	0 - 1.08	Naturally present in the environment
Fecal Coliform and E. Coli		(f)		0	0	Human and animal fecal waste
Total Trihalomethanes (TTHM) (j)	ppb	80	NS	43.5	16 - 81	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (j)	ppb	60	NS	12.3	1.6 - 22.0	By-product of drinking water chlorination
Total Chlorine Residual	ppm	[4]	[4]	1.3	ND - 4.6	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	101 - 122	81 - 92	206 - 218	143 - 198	186 - 201
		Average	109	86	212	166	193
Calcium	ppm	Range	52 - 74	23 - 32	91 - 96	92 - 96	120 - 130
		Average	60	28	94	94	123
Chlorate (m)	ppb	Range	52	16	86 - 233	118 - 153	153 - 153
		Average			156	136	153
Hardness (k)	ppm	Range	214 - 308	108 - 130	330 - 350	372 - 385	477 - 510
		Average	253	121	340	380	494
Magnesium	ppm	Range	21 - 29	11 - 13	26 - 27	34 - 36	43 - 45
		Average	25	12	26	35	44
N - Nitrosodimethylamine (NDMA)	ppt	Range	ND	2.4 - 7.4	ND - 3.4	ND	NA
		Average			2.7		
pH	pH Units	Range	8.0 - 8.2	8.2 - 8.4	8.1 - 8.3	6.3 - 8.4	6.5 - 8.1
		Average	8.1	8.3	8.2	7.1	7.0
Potassium	ppm	Range	4.0 - 5.2	2.6 - 3.0	4.0 - 4.3	3.1 - 3.7	3.5 - 3.7
		Average	4.5	2.8	4.1	3.3	3.6
Sodium	ppm	Range	84 - 109	56 - 68	51 - 54	40 - 53	52 - 57
		Average	94	61	53	47	55
Total Organic Carbon (TOC)	ppm	Range	1.7 - 2.4	1.5 - 1.9	NA	NA	NA
		Average	2.2	2.1			

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
- ppt = parts per trillion
- TON = Threshold Odor Number
- 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 0.16 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 24.9 ppm, with an average of 14 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 is based on 90th percentile of all samples below the Action Level. Samples were taken from 73 customer taps. Testing is required every three years. Most recent 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 calculated by dividing ppm by 17.1. For example, 120 ppm = 7.02 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 2008 - range 0.22 ppm - 1.20 ppm with an average of 0.64 ppm.
- m) Chlorate has a DPH Notification level of 800 ppb. Chlorate is a by-product of liquid chlorine.
- n) During 2008, Glendale received MWD water primarily from the Weymouth Treatment Plant. Glendale received MWD water from the Jensen Treatment Plant only during the first quarter of 2008.
- 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) In January 2008, there was an unconfirmed low-level detection of bis (2-ethylhexyl) phthalate in one of the Glorietta wells. Follow-up monthly testing did not indicate the presence of this contaminant. The laboratory indicated possible contamination of the sample.

DETECTED CONTAMINANTS AT

DETECTED CONTAMINANTS AT						
ORGANIC CHEMICALS (p)						
Tetrachloroethylene (PCE)	ppb	5	0.06	Range	ND	
				Average		
INORGANIC CHEMICALS						
Aluminum (b)	ppb	1000	600	Range	60 - 250	
				Average	146	
Barium	ppb	1000	2000	Range	105 - 125	
				Average	116	
Fluoride (l)	ppm	2	1	Range	0.6 - 1.0	
				Average	0.8	
Nitrate	ppm	45	45	Range	ND - 2.6	
				Average	2.2	
Gross Alpha Particle Activity	pCi/L	15	[0]	Range	ND - 7.6	
				Average	5.2	
Combined Radium (d)	pCi/L	5	[0]	Range	ND	
				Average		
Tritium	pCi/L	20000	400	Range	ND	
				Average		
REGULATED CONTAMINANTS WITH SECONDARY MCLS						
Chloride	ppm	500	NS	Range	92 - 104	
				Average	96	
Manganese	ppb	50	NL = 500	Range	ND	
				Average		
Sulfate	ppm	500	NS	Range	159 - 275	
				Average	209	
Turbidity (o)	NTU	TT	NS	Range	0.05 - 0.06	
				Average	0.06	

GLENDALE'S WATER SOURCES

Jensen Plant (n)	Glendale Water Treatment Plant (e)	Glorietta Wells (e)	Verdugo Park Water Treatment Plant	Major Sources of Contaminants in Drinking Water
ND	ND	0.8 - 3.6 1.7 (a)	ND	Discharge from factories, dry cleaners, and auto shops
ND	ND	ND - 0.70 0.14	ND	Petroleum refinery discharges; fire retardants; solder; electronics
56 - 120 95	ND - 73 49	ND	ND	Residue from water treatment process; natural deposits erosion
2.0 - 2.8 2.3	ND - 1.4 1.4	ND	ND	Erosion of natural deposits, glass and electronics production wastes
ND	64 - 110 88	95 - 130 114	84 - 90 87	Oil and metal refinery, aerospace discharges; erosion of natural deposits
ND	6.0 - 14.0 7.9	ND - 1.2 0.2	ND - 1.1 0.6	Discharge from steel and pulp mills; erosion of natural deposits
0.6 - 0.9 0.8	0.33 - 0.40 0.37	0.17 - 0.24 0.21	0.24 - 0.27 0.26	Erosion of natural deposits; water additive for dental health
ND	ND - 14 14	ND	ND	Erosion of natural deposits; discharge from metal factories
2.6 - 4.0 3.1	21 - 28 23	26 - 51.4 38.3 (c)	14 - 20 18	Runoff and leaching from fertilizer use; sewage; natural erosion
ND - 7.3 3.4	ND - 11 4	ND - 8.4 4.0	3.7 - 12 8.5	Erosion of natural deposits
ND - 5.2 ND	ND - 7.7 3.1	3.1 - 4.1 3.6	ND - 4.1 2.1	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	0.31 - 0.40 0.39	Decay of natural and man-made deposits
ND	NA	202 - 204 203	203 - 243 225	Decay of natural and man-made deposits
1.6 - 2.0 1.8	5 - 13.4 8.4	5.2 - 7.4 6.3	7.4 - 8.0 7.6	Erosion of natural deposits
72 - 80 75	52 - 60 56	89 - 100 96	120 - 130 125	Runoff/leaching from natural deposits; seawater influence
1 - 2 2	ND	ND	ND - 5.0 0.7	Naturally occurring organic materials
ND	ND - 2.3 2.3	ND	ND	Leaching from natural deposits
2 2	NA	ND - 1 1	ND - 3.0 1.2	Naturally occurring organic materials
47 - 71 58	120 - 140 127	130 - 160 145	200 - 220 210	Runoff/leaching from natural deposits; industrial wastes
283 - 333 307	510 - 572 530	598 - 670 633	734 - 786 760	Runoff/leaching from natural deposits; seawater influence
0.04 - 0.05 0.04	ND - 0.40 0.14	ND - 0.65 0.22	0.01 - 0.22 0.06	Soil runoff
ND	ND	ND - 29 4.8	ND - 24 12	Runoff/leaching from natural deposits; industrial wastes

Unregulated Contaminant Monitoring Regulation (EPA)

The Unregulated Contaminant Monitoring Regulation required Glendale to monitor for 11 contaminants that were unregulated. The contaminants are listed below and all analysis were non-detect. Glendale sampled four groundwater sources requiring semiannual test and one surface water source requiring quarterly test. An administrative order was received from EPA because two quarterly tests were incomplete due to laboratory issues and one semi-annual test was late. Low level of MTBE was detected at Glorietta Well No. 6 in 2008.

2,4-Dinitroluene	DCPA di and mono-acid degratate	Molinate	Perchlorate
2,6-Dinitroluene	Dichlorodiphenyldichloroethylene (4,4'-DDE)	MTBE	Terbacil
Acetochlor	s-ethyl dipropylthiocarbamate (EPTC)	Nitrobenzene	

Unregulated Chemical Monitoring Regulation (California Department of Public Health)

The California Department of Public Health required the monitoring of nine unregulated chemicals. Six that were below detectable levels are listed below. The results from the remaining three, boron, chromium 6 and vanadium, are presented in the data tables.

Dichlorodifluoromethane (Freon 12)	Perchlorate	tert-Butyl alcohol (TBA)
Ethyl-tert-butyl-ether (ETBE)	tert-Amyl-methyl-ether (TAME)	Trichloropropane (1,2,3-TCP)

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.

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. 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.

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).

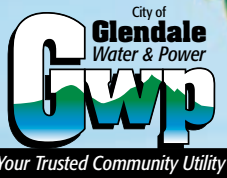


Lead and Copper in Drinking Water

In 1992, the United States Environmental Protection Agency (EPA) published the Lead and Copper Rule, requiring water agencies throughout the country to conduct sampling of homes for the presence of lead and copper in their drinking water. This regulation requires that the water samples be obtained within the home for three consecutive years, and then every three years thereafter. Lead and copper are not normally found in source water, but can be leached from interior plumbing and fixtures due to corrosion. The use of plumbing fixtures and solder containing lead was banned in 1986. GWP conducted its most recent Lead and Copper Rule sampling event during the months of June through September of 2008. For the testing conducted during 2008, all of the lead and copper results in Glendale were well below regulatory limits. The EPA has provided the following general guidance regarding lead in drinking water:

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>.



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

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WQR.08

City of Glendale *Water & Power* 2008 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, 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

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