

From the General Manager's Desk – Stephen M. Zurn

Dear Valued Customer,
Glendale Water and Power is committed to delivering high quality drinking water that meets stringent government standards. This annual report documents that the water we serve to all our customers meets state (California Department of Public Health) and federal (U.S. Environmental Protection Agency) drinking water quality standards. GWP is responsible to ensure that these standards are met. Highly trained and qualified employees monitor the water system and collect water samples that are tested at state certified laboratories.

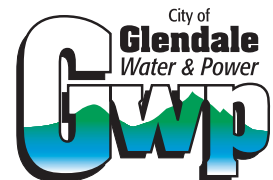
The Consumer Confidence Report (CCR) confirms that all drinking water supplied by GWP complies with state and federal drinking water quality standards. GWP conducted more than 13,000 water quality tests last year to maintain these standards.

GWP is the leader in Chromium 6 research. GWP's findings were used by California Department of Public Health to

define the standard for Maximum Contaminant Level (MCL) for Chromium 6 in California.

In addition to ensuring a high quality of drinking water, GWP is investing in its water infrastructure to deliver water reliably to our water users. We recently issued a \$35 million bond to replace, upgrade, or clean/line main pipelines to ensure water pressure and flow are delivered to meet consumers' needs. These projects will continue to provide additional benefits to our consumers by providing adequate fire protection to maintain the City's Class I rating for its Fire Department resulting in lower property insurance rates. As we move forward, we will continue to provide our consumers with reliable and high quality drinking water.

Thank you for your continued support.



Your Trusted Community Utility

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

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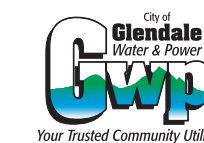


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City of Glendale Water & Power Water Quality Report for 2013

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 2013.



State and Federal Regulation

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

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 4:00PM, in the Glendale City Council Chambers, 613 E. Broadway. Please write to: James Saenz, Water Quality Manager, Water Quality Section, Glendale Water & Power 141 N. Glendale Ave., Level 4, Glendale, CA 91206 or call (818) 548-3962. This report can also be downloaded on GWP's website www.GlendaleWaterAndPower.com

Water Quality Terms in This Report

Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG):

The level of Contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Public Health Goal (PHG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Primary Drinking Water Standard (PDWS):

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

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.

Regulatory Action Level:

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT):

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

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, and can 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, that 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, that 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, which are by-products of industrial processes and petroleum production, and can, come from gas stations, urban storm water 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.

Explanation Regarding Contaminants

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).

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City of Glendale Water & Power 2013 Water Quality Report to Our Customers

Follow us on:

COGwaterpower GlendaleWaterAndPower

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.

Napakahalaga ang impormasyon na ito. Mangyaring ipasalin ninyo para sa inyong pang unawa.

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. USEPA/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 Water

In 2013 Glendale Water and Power delivered 9.0 billions gallons of potable water to our customers. 65% was purchased from the Metropolitan Water District, after being imported and treated from Northern California and the Colorado River. 34% comes from local groundwater sources extracted from the Verdugo and San Fernando Basins. In addition, 1% of the water used in 2013 was recycled water delivered by the Los Angeles-Glendale Water Reclamation Plant. The plant's highly treated wastewater meets or exceeds the water quality standards for recycled water and is used ONLY for irrigation and industrial processes.

Hundreds of water samples are collected and analyzed weekly, both internally and by outside laboratories. We continue to exceed all state and federal water quality standards. In 2013, The California Department of Public Health conducted a Sanitary Survey of our water system. It was concluded that our water system is well operated and maintained by qualified and professional staff.

DETECTED CONTAMINANTS AT GLENDALE'S WATER SOURCES											
	Units	Noti- fication Level	State DLR [PHG]		MWD Weymouth Plant (n)	MWD Jensen Plant (n)	Glendale Treatment Plant (e)	Verdugo Park Treatment Plant	Glorietta Wells (e)	Foothill Well (r)	Major Sources of Contaminants in Drinking Water
CONTAMINANTS WITH NO MCLS											
Boron	ppb	1,000	100	Range Average	150 150	160 160	110 - 200 170	NA	NA	NA	Runoff/leaching from natural deposits; industrial wastes
Chlorate (m)	ppb	800	20	Range Average	28 - 72 62	25	91 - 320 174	NA	NA	NA	By-product of drinking water chlorination; industrial processes
Chromium 6	ppb	NS	1 [0.02]	Range Average	ND	ND	1.7 - 12.0 8.0 (i)	NA	NA	NA	Industrial waste discharge; runoff/leaching from natural deposits
N-Nitrosodimethylamine (NDMA)	ppb	0.01	0.002	Range Average	ND - 0.003 ND	ND - 0.005 0.003	ND	NA	NA	NA	By-product of drinking water chloramination; industrial processes
N-Nitrosodibutylamine (NDBA)	ppb	NA	NA	Range Average	ND	ND	ND - 4.3 3.6	NA	NA	NA	By-product of drinking water chloramination; industrial processes
Vanadium	ppb	50	3	Range Average	3 3	3.2 3.2	3.5 - 6.0 4.7	NA	NA	NA	Naturally-occurring; industrial waste discharge

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	54	430	0	Internal corrosion of household pipes; erosion of natural deposits; wood preservative leaching
Lead	ppb	15	0.20	54	ND	2	Internal corrosion of household pipes; discharges from industrial manufacturer; 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	0.22	0 - 1.3	Naturally present in the environment
Fecal Coliform and E. Coli		(f)	0	0	0	Human and animal fecal waste
Total Trihalomethanes (TTHM) (j)	ppb	80	NS	42.3	23 - 67	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (j)	ppb	60	NS	8.5	0 - 20	By-product of drinking water disinfection
Total Chlorine Residual	ppm	[4]	[4]	1.02	0 - 3.6	Drinking water disinfectant added for treatment
Bromate (u)	ppb	10	(0.1)	(q)	3.9 - 13.0	By-product of drinking water ozonation

WATER CONSTITUENTS OF INTEREST TO THE PUBLIC								
	Units		MWD Weymouth Plant (n)	MWD Jensen Plant (n)	Glendale Treatment Plant (e)	Verdugo Park Treatment Plant	Glorietta Wells (e)	Foothill Well (r)
Alkalinity	ppm	Range Average	76 - 130 110	77 - 93 84	210 210	170 170	160 - 210 183	160 160
Calcium	ppm	Range Average	56 - 61 58	22 - 26 24	87 - 100 96	94 94	94 - 100 96.3	79 79
Corrosivity (t) Aggressive Index	Al	Range Average	12.3 12.3	12 12	NA	NA	12 12	12 12
Hardness (k)	ppm	Range Average	230 - 250 240	10 - 120 110	380 380	380 380	380 - 420 393	310 310
Magnesium	ppm	Range Average	21 - 23 22	12 12	27 - 31 29	35 35	35 - 39 36	28 28
pH	pH Units	Range Average	8.1 8.1	8.2 - 8.4 8.3	8.3 8.3	0 - 8.5 7.3	6.9 - 7.3 7.1	6.8 - 7.3 7.1
Potassium	ppm	Range Average	4.0 - 4.3 4.2	2.6 - 2.7 2.6	4.1 - 4.6 4.4	4.0 - 4.0 4	3.2 - 3.9 3.5	4.6 - 4.6 4.6
Sodium	ppm	Range Average	79 - 85 82	57 - 60 58	43 - 54 49	65 65	44 - 51 47	32 32
Total Organic Carbon (TOC)	ppm	Range Average	2.1 - 2.7 2.4 (q)	1.8 - 2.0 1.9 (q)	NA	NA	NA	NA

Abbreviations

- cu = color units
- DLR = Detection Limits for purposes of reporting
- DPH = Department of Public Health
- MCL = Maximum Contaminant Level
- MCLG = Maximum Contaminant Level Goal
- mg/L = milligrams per liter
- 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
- TON = Threshold Odor Number
- TT = Treatment Technique

Footnotes (For all charts)

- a) As the result of blending, in the actual level of tetrachloroethylene (PCE) and trichloroethylene (TCE) in the water served, only PCE was detected - 0.53 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 31 and 17.0 ppm, with an average of 10.16 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 54

customer taps. Testing is required every three years. This data was collected in 2011. Next testing is 2014.

- 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. Started quarterly sampling for the stage 2 DBPR Monitoring Plan on May 14, 2012. MCL was not exceeded in 2013 quarterly sampling, no violation.
- k) Hardness in grains/gallon can be found by dividing ppm by 171. For example, 240 ppm (mg/l) = 14 grains/gallon.
- l) For GWP sources, data represents the amount of naturally occurring fluoride. For MWD sources, data is after fluoride added at MWD treatment plant. Glendale's distribution system fluoride levels were monitored in 2013 - range 0.46 ppm - 0.88 ppm with an average of 0.67 ppm.
- m) Chlorate has a DPH Notification level of 800 ppb. Chlorate is a by-product of liquid chlorine. MWD range results were given distribution system wide.
- n) During 2013, Glendale received MWD water mostly from 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 filtration systems. Treatment Technique for turbidity applies to MWD's Weymouth and Jensen plants and the Verdugo Park Treatment Plant. It does not apply to the Glendale Water Treatment Plant or Glorietta Wells.
- p) MWD received an exemption from CDPH to report Nitrate (as N) instead of Nitrate (as NO3) in their CCR.
- q) MWD constituents were expressed as Highest RAAs. RAA = Running Annual Average; highest RAA is the highest of all Running Annual Averages calculated as average of all the samples collected within a twelve-month period.
- r) Foothill Well started delivering water in May 2011.
- s) Water from the Foothill Well is blended with system water, actual level of nitrate in water served ranged between 5.4 and 20 ppb, with an average of 13 ppb.
- t) Al < 10.0 = Highly aggressive and very corrosive water, Al >= 12 = Non-aggressive water, Al (10.0 - 11.9) = Moderately aggressive water
- u) Compliance was based on RAA. Bromate was tested at effluent of Jensen Treatment Plant where ozone is used.

Nitrate

Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Nitrate in drinking water at levels above 45 mg/L 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 mg/L 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 advice from your health care provider.

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,

Chromium 6 Summary

For the past eleven years, GWP has been managing a major research effort to develop technologies for the removal of hexavalent chromium (chromium 6) from drinking water supplies. In 2010, Glendale built two large scale demonstration treatment facilities to remove chromium 6. Both treatment technologies have proven to successfully remove chromium 6 from water supplies. The operations of these test facilities has provided researchers on the State and Federal level with technical and cost data.

In February 2013, Glendale delivered the Final Project Report regarding the operation data of the chromium 6 treatment facilities to the California Department of Public Health which will be utilizing the Report in its process of setting the Maximum Contaminant Level of chromium 6 in the State's drinking water. The full report is available at www.GlendaleWaterAndPower.com

DETECTED CONTAMINANTS AT GLENDALE'S WATER SOURCES											
	Units	State MCL	PHG or [MCLG]		MWD Weymouth Plant (n)	MWD Jensen Plant (n)	Glendale Treatment Plant (e)	Verdugo Park Water Treatment Plant	Glorietta Wells (e)	Foothill Well (r)	Major Sources of Contaminants in Drinking Water
ORGANIC CHEMICALS											
Methyl-tert-butyl-ether (MTBE)	ppb	13	13	Range Average	ND	ND	ND	ND	ND - 0.6 0.6	ND	Leaking underground storage tanks; discharge from petroleum and chemical factories; previously used as gasoline additives
Tetrachloroethylene (PCE) (a)	ppb	5	0.06	Range Average	ND	ND	ND	0.60 0.60	ND - 2.3 1.2	ND - 0.56 0.24	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Trichloroethylene (TCE) (a)	ppb	5	1.7	Range Average	ND	ND	ND	ND	ND	ND	Discharge from metal degreasing sites and other factories
Dioxane	ppb	4	4	Range Average	ND	ND	ND - 1.2 1.2	NA	NA	NA	Herbicide runoff
INORGANIC CHEMICALS											
Aluminum (b)	ppb	1000	600	Range Average	95 - 220 140 (q)	67 - 110 84 (q)	ND	47 47	ND	ND	Residue from some water treatment process; natural deposits erosion
Antimony	ppb	6	20	Range Average	ND	ND	ND - 1.2 1.2	ND	ND	ND	Petroleum refinery discharges; fire retardants; solder; electronics
Arsenic	ppb	10	0.004	Range Average	ND	ND	ND	1.1 1.1	ND	1.1 1.1	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium	ppb	1000	2000	Range Average	ND	ND	64 - 110 79	87 87	ND - 120 77	89 89	Discharges of oil drilling waste and from metal refineries; erosion of natural deposits
Chromium, Total	ppb	50	[100]	Range Average	ND	ND	1.1 - 13.0 7.6	ND	ND	1.1 1.1	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (l)	ppm	2	1	Range Average	0.7 - 1.0 0.8	0.7 - 0.8 0.8	NA	0.5 0.5	0.20 - 0.23 0.21	0.18 - 0.25 0.20	Erosion of natural deposits; water additives that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	ppm	45	45	Range Average	2.3 2.3 (p)	2.3 2.3 (p)	5.3 - 5.5 5.4	14 14	23 - 38 31.5 (c)	45 - 48 45.85 (s)	Runoff and leaching from fertilizer use septic tank and sewage; natural erosion
Nickel	ppb	100	12	Range Average	ND	ND	ND - 5.4 5.4	ND	ND	ND	Erosion of natural deposits; discharge from metal factories
Selenium	ppb	50	30	Range Average	ND	ND	ND - 5.0 2.8	ND	ND	ND	Refineries, mines, and chemical waste discharge; runoff from livestock lots
RADIOLOGICALS											
Gross Alpha Particle Activity	pCi/L	15	[0]	Range Average	ND - 3 ND	ND	ND - 11 4	6.15 - 6.15 6.15	5.32 - 6.61 5.77	3.38 3.38	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50	[0]	Range Average	ND - 6 4	ND - 4 ND	ND - 7.7 3.1	ND	NA	NA	Decay of natural and man-made deposits
Combined Radium (d)	pCi/L	5	[0]	Range Average	ND	ND	ND - 2.4 0.7	ND	ND	ND	Erosion of natural deposits
Strontium	pCi/L	8	0.35	Range Average	ND	ND	0.62 - 0.68 0.66	ND	NA	NA	Decay of natural and man-made deposits
Tritium	pCi/L	20000	400	Range Average	ND	ND	NA	250 250	NA	NA	Decay of natural and man-made deposits
Uranium	pCi/L	20	0.43	Range Average	1 - 2 2	ND - 2 1	2.57 - 13.29 7.16	5.3 5.3	ND - 8.2 4.6	3.1 3.1	Erosion of natural deposits
REGULATED CONTAMINANTS WITH SECONDARY MCLS											
Chloride	ppm	500	NS	Range Average	84 - 91 88	75 - 77 76	65 65	100 100	94 - 110 101	64 64	Runoff/leaching from natural deposits; seawater influence
Color	cu	15	NA	Range Average	1 1	1 - 2 2	ND	ND - 5.0 0.53	ND	ND	Naturally occurring organic materials
Iron	ppb	300	NA	Range Average	ND	ND	ND	ND	ND	ND	Leaching from natural deposits; industrial waste
Manganese	ppb	50	NL = 500	Range Average	ND	ND	ND - 5.3 3.7	ND	ND	ND	Leaching from natural deposits; industrial wastes
Odor	TON	3	NS	Range Average	3 - 6 4	3 3	ND	ND - 8 1	1 - 1 1	1 1	Naturally occurring organic materials
Specific Conductance	uS/cm	1600	NA	Range Average	850 - 890 870	520 - 540 530	890 890	NA	NA	NA	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NS	Range Average	170 - 190 180	44 - 51 48	130 130	180 180	130 - 140 137	89 89	Runoff/leaching from natural deposits; industrial waste
Total Dissolved Solids (TDS)	ppm	1000	NS	Range Average	520 - 540 530	280 - 300 290	570 570	650 650	580 - 680 637	450 450	Runoff/leaching from natural deposits; seawater influence
Turbidity (o)	NTU	TT	NS	Range Average	ND	ND	0.079 0.079	0.07 - 0.44 0.14	0.07 - 0.16 0.12	0.11 0.11	Soil runoff