A Message from General Manager Stephen M. Zurn

As California faces ongoing challenges related to weather, resource availability, and regulatory restrictions, Glendale Water & Power continues its focus on operating efficiently, effectively, and in an environmentally friendly manner to provide our customers with the highest level of service.

California's severe drought has created extraordinary challenges for utilities throughout the state. Both urban and agricultural water usage is impacted by the drought's effects on groundwater and reservoir levels. Conservation and resource planning are at the forefront as we face the prospect of ongoing supply issues and potential cutbacks in water deliveries.

In FY 2014, GWP conducted an extensive multi-media community outreach campaign to communicate the seriousness of the drought and the importance of conservation. GWP also made significant progress towards completing research for hexavalent chromium removal prior to the State's adoption of an MCL level for hexavalent chromium levels in drinking water. We also successfully completed the Adam's Hill Water Main Replacement Project and improved the water delivery and the fire protection in that area. Across town GWP crews worked hard to complete the Canada Street cleaning and lining project that will improve the water quality in that area. As we look towards the future many more water quality projects are on schedule that will ensure high quality water is delivered to our customers in a reliable manner well into the future.

As GWP continues to work diligently in its efforts to be a responsible and efficient service provider we are grateful for the cooperation from our community and City leaders. Together, we will maintain our commitment to a sustainable future and ensure that GWP remains strong and viable.

Thank you for your support.

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 a Contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

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 CalEPA.

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.

Source Water Contaminants

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.

Disinfection By-Products, which include Trihalomethanes (THMs) and Haloacetic Acids (HAAs), are generated by the interaction between naturally occurring matter and disinfectants, such as chlorine.

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).

City of Glendale Water & Power
Your Trusted Community Utility

Glendale Water & Power
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City of Glendale Water & Power
2014 Water Quality Report to Our Customers

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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 tradusca.

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).

Glendale Water and Power

Glendale Water and Power (GWP) water was established in 1914. GWP provides water service to almost all residential, commercial and industrial consumers located within the incorporated areas of the City. GWP is the retail provider of water service to all consumers in the city except for a small areas in the northern portion served by Crescenta Valley Water District. GWP currently has approximately 33,700 service connections within 31 square miles. The potable water system has seven main pressure zones and consists of 397 miles of water mains, 28 pumping stations, 30 reservoirs and tanks, and 2 treatment plants: Verdugo Park Water Treatment Plant and Glendale Water Treatment Plant.

Sources of Glendale's Water

In 2014 Glendale Water and Power delivered 9.0 billion gallons of potable water to our customers. 68% was purchased from the Metropolitan Water District, after being imported and treated from Northern California and the Colorado River. 26% comes from local groundwater sources extracted from the Verdugo and San Fernando Basins. In addition, 6% of the water used in 2014 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.

WQR.15

City of Glendale Water & Power
Water Quality Report for 2014

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 2014.

City of Glendale Water & Power — *Your Trusted Community Utility*
glendale california

State and Federal Regulation

In order to ensure that tap water is safe to drink, the USEPA and State Water Resource Control Board, Division of Drinking Water (DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DDW 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

DETECTED CONTAMINANTS AT GLENDALE'S WATER SOURCES

	Units	Notification Level	State DLR [PHG]		MWD Weymouth Plant	MWD Jensen Plant	Glendale Treatment Plant (c)	Verdugo Park Treatment Plant (o)	Glorietta Wells	Foothill Well	Major Sources of Contaminants in Drinking Water
CONTAMINANTS WITH NO MCLs											
Boron	ppb	1,000	100	Range	110	160	120 - 200	–	NA	NA	Runoff/leaching from natural deposits; industrial wastes
				Average	110	160	160				
Chlorate (k)	ppb	800	20	Range	21 - 105		100 -320	–	130	NA	By-product of drinking water chlorination; industrial processes
				Average	102	36	166				
Chlorodifluoromethane	ng/L	[80]	NS	Range	NA	NA	NA	–	180	NA	Used as a refrigerant, solvent, and in fluorocarbon resins
				Average							
Molybdenum	ppb	[1]	NS	Range	NA	NA	2.9 - 7.5	–	4.1	NA	Naturally-occurring element; commonly used as chemical reagent
				Average			5				
N-Nitrosodimethylamine (NDMA)	ppt	10	2	Range	ND - 5.0	ND - 5.0	ND	–	NA	NA	By-product of drinking water chloramination; industrial processes
				Average	ND - 5.0	2.2					
N-Nitrosodiethylamine (NDEA)	ppb	10	0.005	Range	NA	NA	ND - 0.002	–	NA	NA	By-product of drinking water chloramination; industrial processes
				Average			0.002				
N-Nitroso-N-propylamine (NDPA)	ppb	10	0.007	Range	NA	NA	ND - 0.002	–	NA		By-product of drinking water chloramination; industrial processes
				Average			0.002				
Vanadium	ppb	50	3	Range	ND	4.8	4.3 - 9.2	–	NA	NA	Naturally-occurring; industrial waste discharge
				Average		4.8	5.5				

LEAD AND COPPER RULE (e)

	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 (f)	ppb	1300	170	51	260	0	Internal corrosion of household pipes; erosion of natural deposits; wood preservative leaching
Lead	ppb	15	0.20	51	ND	0	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 (d)	0	0.63	0.0 - 4.29	Naturally present in the environment
Fecal Coliform and E. Coli		(d)	0	0	0	Human and animal fecal waste
Total Trihalomethanes (TTHM) (h)	ppb	80	NS	29.4	13 - 48	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (h)	ppb	60	NS	7.9	0 - 21	By-product of drinking water disinfection
Bromate (n)	ppb	10	(0.1)	–	4.4 - 13	By-product of drinking water ozonation

WATER CONSTITUENTS OF INTEREST TO THE PUBLIC

	Units		MWD Weymouth Plant	MWD Jensen Plant	Glendale Treatment Plant (c)	Verdugo Park Treatment Plant (o)	Glorietta Wells	Foothill Well
Alkalinity	ppm	Range	127 - 128	84 - 94	NA	–	150 - 200	150 - 160
		Average	128	89			172	155
Calcium	ppm	Range	74	26 - 36	91 - 95	–	88 - 100	76 - 79
		Average	74	31	93		95.0	78
Corrosivity (m) Aggressive Index	AI	Range	12.5	12	NA	–	12	12
		Average	12.5	12			12	12
Hardness (i)	ppm	Range	284 - 294	114 - 136	NA	–	380 - 400	310
		Average	289	125			387	310
Magnesium	ppm	Range	25 - 26	12	27 - 31	–	33 - 36	27
		Average	25	12	29		34	27
pH	pH Units	Range	8.1	8.1 - 8.3	7.9 - 8.4	–	ND - 8.2	0.0 - 7.6
		Average	8.1	8.2	8.2		6.8	6.8
Potassium	ppm	Range	4.4 - 4.7	2.6 - 2.7	3.1 - 4.4	–	3.1 - 3.6	4.2 - 4.2
		Average	4.6	2.7	3.8		3.3	4.2
Sodium	ppm	Range	89 - 96	69 - 73	48 - 54	–	43 - 49	32
		Average	93	71	51		46	32
Total Organic Carbon (TOC)	ppm	Range	2.4 - 2.7	1.3 - 2.1	NA	–	NA	NA
		Average	2.5	1.9				

Abbreviations

cu = color units
DLR = Detection Limits for purposes of reporting
DDW = Division of Drinking Water
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) Aluminum has a secondary MCL of 200 ppb.
b) Standard is for Radium-226 and -228 combined (calculated).
c) These results were before blending unless otherwise noted.
d) Total coliform MCL: No more than 5% of the monthly samples may be total coliform-positive.
e) Lead and Copper Rule compliance based on 90th percentile of all samples being below the Action Level. Samples were taken from 51 customer taps. Testing is required every three years. This data was collected in 2014. Next testing is 2017.
f) Copper has a secondary MCL of 1000 ppb.
g) Analysis was on water before blending with MWD supply.
h) 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 2014 quarterly sampling, no violation.
i) Hardness in grains/gallon can be found by dividing ppm by 17.1. For example, 289 ppm (mg/L) = 16.9 grains/gallon.
j) 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 2014 - range 0.61 ppm - 0.82 ppm with an average of 0.71 ppm.
k) Chlorate has a DDW Notification level of 800 ppb. Chlorate is a by-product of liquid chlorine. MWD range results were given distribution system wide.
l) Water from the Foothill Well is blended with system water, actual level of nitrate in water served ranged between 8 and 20 ppb, with an average of 13.3 ppb.
m)AI < 10.0 = Highly aggressive and very corrosive water. AI >/= 12 = Non-aggressive water. AI (10.0 - 11.9) - Moderately aggressive water.
n) Compliance was based on RAA. Bromate was tested at effluent of Jensen Treatment Plant where ozone is used.
o) Verdugo Park Water Treatment Plant was offline in 2014.

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. Glendale's water is tested at the source for contamination then treated to maintain levels below the MCL to ensure the water delivered to our customers is safe to drink.

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.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (1-800-426-4791).

Public Notification

Impaired groundwater sources may be monitored for certain chemicals with notification levels. A Notification Level (NL) is used to provide information about certain non-regulated chemicals in drinking water that lack MCLs. Monitoring by public water systems for chemicals with notification levels is not required. It is recommended that the drinking water System provide customer notification in the Consumer Confidence Report.

During 2014, GWP collected samples for N-Nitrosodi-n-propylamine (NDPA) for the Glendale Operable Unit (GOU). NDPA is part of a family of chemicals called "Nitrosamines", which are not part of the required routine monitoring. NDPA was detected in the raw, untreated groundwater at levels exceeding the NL. After the blending of the groundwater from the eight extraction wells the NDPA level at the Glendale Water Treatment Plant, prior to entry of the Glendale drinking water system, was not detected. GWP staff continues to monitor for the chemical under the guidance of the DDW staff and will continue to monitor and report on all water quality constituents as part of normal water quality activities.

DETECTED CONTAMINANTS AT GLENDALE'S WATER SOURCES

	Units	State MCL	PHG or [MCLG]		MWD Weymouth Plant	MWD Jensen Plant	Glendale Treatment Plant (c)	Verdugo Park Water Treatment Plant (o)	Glorietta Wells	Foothill Well	Major Sources of Contaminants in Drinking Water
ORGANIC CHEMICALS											
Methyl-tert-butyl-ether (MTBE)	ppb	13	13	Range	ND	ND	ND	–	ND - 0.53	ND	Leaking underground storage tanks; discharge from petroleum and chemical factories; previously used as gasoline additives
				Average					0.0		
Tetrachloroethylene (PCE)	ppb	5	0.06	Range	ND	ND	ND	–	0.5 - 3.0	ND - 0.77	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
				Average					1.4	0.43	
Trichloroethylene (TCE)	ppb	5	1.7	Range	ND	ND	ND	–	ND	ND	Discharge from metal degreasing sites and other factories
				Average							
Dioxane	ppb	4	4	Range	ND	ND	ND - 1.0	–	NA	NA	Herbicide runoff
				Average			1.0				
INORGANIC CHEMICALS											
Aluminum (a)	ppb	1000	600	Range	70 - 230	ND - 110	ND	–	ND	ND	Residue from some water treatment process; natural deposits erosion
				Average	136	81					
Arsenic	ppb	10	0.004	Range	ND	2.2	ND - 5.3	–	1.1 - 1.2	1.4	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
				Average		2.2	1.8		1.2	1.4	
Barium	ppb	1000	2000	Range	112	112	5.7 - 100	–	110 - 130	99	Discharges of oil drilling waste and from metal refineries; erosion of natural deposits
				Average	112	112	78		117	99	
Chromium 6	ppb	10	0.02	Range	ND	ND	1.2 - 11.0		0.27 - 0.70	1.3	Industrial waste discharge; runoff/leaching from natural deposits
				Average			7.1 (g)		0.32	1.3	
Chromium, Total	ppb	50	[100]	Range	ND	ND	ND - 11	–	0.54	ND	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
				Average			6.5				
Fluoride (j)	ppm	2	1	Range	0.6 - 1.0	0.7 - 0.9	NA	–	0.19- 0.22	0.19 - 0.21	Erosion of natural deposits; water additives that promotes strong teeth; discharge from fertilizer and aluminum factories
				Average	0.8	0.8			0.21	0.20	
Nitrate	ppm	45	45	Range	ND	12	23 - 27	–	25 - 38	45 - 48	Runoff and leaching from fertilizer use septic tank and sewage; natural erosion
				Average			25.2		31.5	46.0 (l)	
Nickel	ppb	100	12	Range	ND	ND	ND - 6.3	–	ND	ND	Erosion of natural deposits; discharge from metal factories
				Average			5.6				
Selenium	ppb	50	30	Range	ND	ND	ND - 6.7	–	ND	ND	Refineries, mines, and chemical waste discharge; runoff from livestock lots
				Average			3.5				
RADIOLOGICALS											
Gross Alpha Particle Activity	pCi/L	15	[0]	Range	ND - 4	ND - 5	ND - 11	–	3.35 - 6.61	3.85 - 3.85	Erosion of natural deposits
				Average	ND	3	4		5.05	3.85	
Gross Beta Particle Activity	pCi/L	50	[0]	Range	4 - 6	ND - 5	ND - 7.7	–	NA	NA	Decay of natural and man-made deposits
				Average	5	ND	3.1				
Combined Radium (b)	pCi/L	5	[0]	Range	ND	ND	ND - 2.4	–	ND	ND	Erosion of natural deposits
				Average			0.7				
Strontium	pCi/L	8	0.35	Range	ND	ND	0.63 - 0.66	–	NA	NA	Decay of natural and man-made deposits
				Average			0.64				
Uranium	pCi/L	20	0.43	Range	2 - 3	2 - 3	1.1 - 7.4	–	5.6 - 9.4	3.6	Erosion of natural deposits
				Average	3	2	3.3		7.1	3.6	
REGULATED CONTAMINANTS WITH SECONDARY MCLS											
Chloride	ppm	500	NS	Range	86 - 92	85 - 86	56 - 72	–	89 - 99	62	Runoff/leaching from natural deposits; seawater influence
				Average	89	86	60		95	62	
Color	cu	15	NA	Range	1	1	NA	–	ND	ND	Naturally occurring organic materials
				Average	1	1					
Iron	ppb	300	NA	Range	ND	ND	ND - 44	–	ND	ND	Leaching from natural deposits; industrial waste
				Average			40				
Manganese	ppb	50	NL = 500	Range	ND	ND	ND - 3.3	–	ND	ND	Leaching from natural deposits; industrial wastes
				Average			2.7				
Odor	TON	3	NS	Range	2	3	NA	–	ND - 1	ND	Naturally occurring organic materials
				Average	2	3			0		
Specific Conductance	uS/cm	1600	NA	Range	946 - 1010	588 - 631	NA	–	ND	NA	Substances that form ions in water; seawater influence
				Average	987	610					
Sulfate	ppm	500	NS	Range	227 - 238	63 - 75	120 - 140	–	130 - 140	89	Runoff/leaching from natural deposits; industrial waste
				Average	233	69	132		133	89	
Total Dissolved Solids (TDS)	ppm	1000	NS	Range	604 - 641	325 - 355	340 - 580	–	600 - 670	460 - 520	Runoff/leaching from natural deposits; seawater influence
				Average	623	340	545		628	490	
Turbidity	NTU	TT	NS	Range	ND	ND	0.15 - 0.14	–	0.051 - 0.059	0.056	Soil runoff
				Average			0.07		0.06		