

A Message from General Manager Stephen M. Zurn

I want to take this opportunity to thank you for conserving and reducing your water usage during the unprecedented drought of 2015. Glendale Water & Power was able to meet the State's mandatory water conservation requirements because of your efforts.

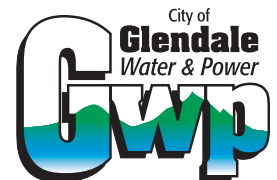
GWP's Water Quality and Water Operations Sections worked diligently managing the water system during 2015. The mandated cutbacks in water usage required a different approach to operating the system and GWP's team members rose to the challenge by optimizing the production, movement, and storage of water within the system to best manage the reductions.

In FY 2015, GWP successfully completed a long range Master Plan assessing the condition of the water systems infrastructure and prioritizing future capital replacements in order to ensure near term reliability enhancements and continued high levels of service for generations to come. Projects completed in 2015 included, the Beaudry

Terrace area main replacement project, upgrades to the Water Division's SCADA system (the computer system that monitors and controls the water facility operations), and the Upper Scholl Recycled Water Tank rehabilitation project.

The drought of 2015 provided heightened awareness about water and GWP will continue to provide outreach and information on the complexities and challenges the utility manages when providing water service to the nearly 200,000 residents of Glendale. To meet these challenges GWP will continue to change and adapt to issues such as continuous regulatory changes, water supply challenges, and aging infrastructure, while remaining cost conscious and efficient. Working with City leaders and you, GWP will continue to be "Your Trusted Community Utility".

Thank you for your support.



Your Trusted Community Utility

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

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WQR.16

City of Glendale Water & Power Water Quality Report for 2015

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 2015.



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).

WQR.16

City of Glendale Water & Power 2015 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

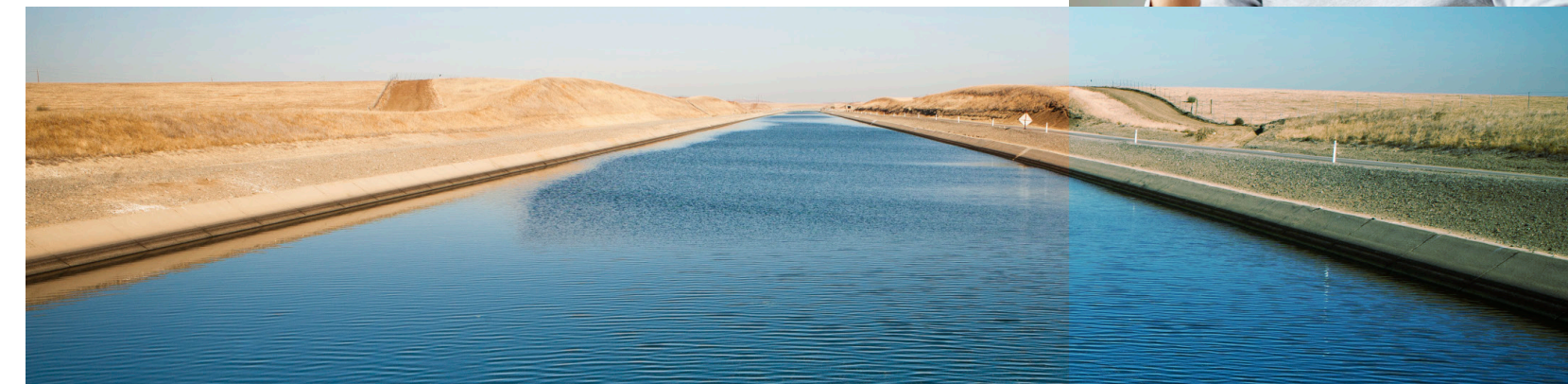
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants 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).

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 area 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 2015 Glendale Water and Power delivered 7.5 billion gallons of potable water to our customers. 60% was purchased from the Metropolitan Water District, after being imported and treated from Northern California and the Colorado River. 33% comes from local groundwater sources extracted from the Verdugo and San Fernando Basins. In addition, 7% of the water used in 2015 was recycled water delivered by the Los Angeles-Glendale Water Reclamation Plant. The plant's highly treated waste water meets or exceeds the water quality standards for recycled water and is used ONLY for irrigation and industrial processes.



State and Federal Regulation

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) 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	Noti- fication Level	State DLR [PHG]		MWD Weymouth Plant	MWD Jensen Plant	Glendale Treatment Plant	Verdugo Park Treatment Plant (n)	Glorietta Wells	Foothill Well	Major Sources of Contaminants in Drinking Water
CONTAMINANTS WITH NO MCLS											
Boron	ppb	1,000	100	Range Average	120 120	240 240	0.11 - 0.21 0.18	-	NA	NA	Runoff/leaching from natural deposits; industrial wastes
Chlorate (j)	ppb	800	20	Range Average	91 - 147 104 70		100 -270 162	-	NA	NA	By-product of drinking water chlorination; industrial processes
N-Nitrosodimethylamine (NDMA)	ppt	10	2	Range Average	ND - 6.0 ND 2.1 - 2.2		ND	-	NA	NA	By-product of drinking water chloramination; industrial processes
N-Nitrosodiethylamine (NDEA)	ppb	10	0.005	Range Average	NA	NA	ND	-	NA	NA	By-product of drinking water chloramination; industrial processes
Vanadium	ppb	50	3	Range Average	ND	7.7 7.7	ND - 6 5	-	NA	NA	Naturally-occurring; industrial waste discharge

LEAD AND COPPER RULE (d)							
	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 (e)	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 (c)	0	0.88	0.0 - 3.4	Naturally present in the environment
Fecal Coliform and E. Coli		(c)	0	0	0	Human and animal fecal waste
Total Trihalomethanes (TTHM) (g)	ppb	80	NS	37.8	19 - 62	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (g)	ppb	60	NS	6.8	0 - 14	By-product of drinking water disinfection
Total Chlorine Residual	ppm	[4]	[4]	0.95	0.0 - 3.8	Drinking water disinfectant added for treatment
Bromate (m)	ppb	10	(0.1)		1.1 - 13	By-product of drinking water ozonation

WATER CONSTITUENTS OF INTEREST TO THE PUBLIC								
	Units		MWD Weymouth Plant	MWD Jensen Plant	Glendale Treatment Plant	Verdugo Park Treatment Plant (n)	Glorietta Wells	Foothill Well
Alkalinity	ppm	Range Average	123 - 129 126	89 - 92 91	160 - 270 215	-	160 - 210 183	160 160
Calcium	ppm	Range Average	77 - 78 78	36 36	91 - 96 94	-	93 - 100 96.7	77 77
Corrosivity (l) Aggressive Index	Al	Range Average	12.5 12.5	2.1 - 12.3 12.2	NA	-	12 - 12 12	12 12
Corrosivity Saturation Index	Al	Range Average	0.56 - 0.58 0.57	0.21 - 0.51 0.36	NA	-	NA	NA
Hardness (h)	ppm	Range Average	296 - 304 300	130 - 134 132	350 350	-	380 - 410 393	310 310
Magnesium	ppm	Range Average	26 - 28 27	10 - 11 11	23 - 27 25	-	35 - 38 36	28 28
pH	pH Units	Range Average	8.1 8.1	8.2 - 8.4 8.3	8.2 8.2	-	6.9 - 8.1 7.4	7.0 - 7.6 7.3
Potassium	ppm	Range Average	4.8 - 5.0 4.9	2.5 - 2.9 2.7	4.2 - 4.3 4.25	-	3.0 - 3.7 3.4	4.2 - 4.2 4.2
Sodium	ppm	Range Average	90 - 102 100	90 - 92 91	51 - 53 52	-	44 - 51 46.7	32 32
Total Organic Carbon (TOC)	ppm	Range Average	2.4 - 2.8 2.6	1.2 - 2.4 1.6	0.31 0.31	-	NA	NA

Abbreviations
cu = color units
DLR = Detection Limits for purposes of reporting
DPH = Department of Public Health
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
a) Aluminum has a secondary MCL of 200 ppb.
b) Standard is for Radium-226 and -228 combined (calculated).
c) Total coliform MCL: No more than 5% of the monthly samples may be total coliform-positive.
d) 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.

Nitrate
Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Nitrate in drinking water at levels above 10 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 10 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.

Monitoring Requirements Not Met for the City of Glendale Water and Power
Under the guidance of the State Water Resources Control Board, Division of Drinking Water, GWP is required to monitor your drinking water for specific contaminants on a regular basis. Results of this regular monitoring are an indicator of whether or not our drinking water meets health standards. During the month of June 2015, GWP failed to perform a monitoring requirement, described below, and therefore, was in violation of the State Water Resources Control Board drinking water regulations. Even though this failure was not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation. There is nothing you need to do at this time.

GWP did not collect the required water samples within the acceptable time frame from our groundwater wells after total coliform was found to be present in our distribution system on June 30, 2015. Bacteriological samples were collected from our four groundwater wells on July 7, 2015. They should have been collected no later than July 2, 2015. A water system using groundwater must collect, within 24 hours of notification of the total coliform positive sample, a sample from each ground water source in use at the time the total coliform positive sample was collected. Groundwater samples are collected monthly to monitor for presence of bacteria.

In cooperation with the State Water Resources Control Board, Division of Drinking Water Glendale Water and Power's primary goal is to provide our customers with reliable and sustainable water and power services that are cost effective and innovative. If you should have any questions or concerns please contact James Saenz at (818) 548-3962.

DETECTED CONTAMINANTS AT GLENDALE'S WATER SOURCES											
	Units	State MCL	PHG or [MCLG]		MWD Weymouth Plant	MWD Jensen Plant	Glendale Treatment Plant	Verdugo Park Water Treatment Plant (n)	Glorietta Wells	Foothill Well	Major Sources of Contaminants in Drinking Water
ORGANIC CHEMICALS											
Methyl-tert-butyl-ether (MTBE)	ppb	13	13	Range Average	ND	ND	ND	-	ND - 0.54 0.02	ND	Leaking underground storage tanks; discharge from petroleum and chemical factories; previously used as gasoline additives
Tetrachloroethylene (PCE)	ppb	5	0.06	Range Average	ND	ND	ND	-	ND - 2.3 1.2	ND - 0.51 0.10	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Trichloroethylene (TCE)	ppb	5	1.7	Range Average	ND	ND	ND	-	ND	ND	Discharge from metal degreasing sites and other factories
Simazine	ppb	4	4	Range Average	ND	ND	NA	-	ND - 0.053 0.009	ND	Herbicide runoff
INORGANIC CHEMICALS											
Aluminum (a)	ppb	1000	600	Range Average	88 - 200 156	ND - 84 ND	ND	-	ND	ND	Residue from some water treatment process; natural deposits erosion
Antimony	ppb	6	20	Range Average	ND	ND	ND	-	ND	ND	Petroleum refinery discharges; fire retardants; solder; electronics
Arsenic (o)	ppb	10	0.004	Range Average	2.1 2.1	3.3 3.3	ND	-	ND	ND	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium	ppb	1000	2000	Range Average	122 122	ND	58 - 96 71.5	-	100 - 130 117	98 98	Discharges of oil drilling waste and from metal refineries; erosion of natural deposits
Chromium 6	ppb	10	0.02	Range Average	ND	ND	1.9 - 14.0 6.7 (f)	-	NA	NA	Industrial waste discharge; runoff/leaching from natural deposits
Chromium, Total	ppb	50	[100]	Range Average	ND	ND	ND - 13.0 6.2	-	ND	1.4 1.4	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (i)	ppm	2	1	Range Average	0.6 - 1.0 0.8	0.6 - 0.9 0.7	0.26 - 0.46 0.34	-	0.18 - 0.20 0.19	0.19 - 0.20 0.197	Erosion of natural deposits; water additives that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	ppm	10	10	Range Average	ND	3.6 - 4.1 2.7	4.6 - 6.2 5.5	-	5.5 - 8.5 7.2	10 - 11 10.15 (k)	Runoff and leaching from fertilizer use septic tank and sewage; natural erosion
Nickel	ppb	100	12	Range Average	ND	ND	ND - 10.0 0.15	-	ND	ND	Erosion of natural deposits; discharge from metal factories
Selenium	ppb	50	30	Range Average	ND	ND	ND - 10.0 0.1	-	ND	ND	Refineries, mines, and chemical waste discharge; runoff from livestock lots
RADIOLOGICALS											
Gross Alpha Particle Activity	pCi/L	15	[0]	Range Average	ND - 4 ND	ND - 5 3	7.9 7.9	-	3.35 - 6.61 5.05	3.85 - 3.85 3.85	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50	[0]	Range Average	4 - 6 5	ND - 5 ND	1.3 1.3	-	NA	NA	Decay of natural and man-made deposits
Combined Radium (b)	pCi/L	5	[0]	Range Average	ND	ND	ND - 2.4 0.7	-	ND	ND	Erosion of natural deposits
Strontium	pCi/L	8	0.35	Range Average	ND	ND	0.63 - 0.66 0.64	-	NA	NA	Decay of natural and man-made deposits
Uranium	pCi/L	20	0.43	Range Average	2 - 3 3	2 - 3 2	5.7 - 5.8 5.75	-	5.6 - 9.4 7.1	3.6 3.6	Erosion of natural deposits
REGULATED CONTAMINANTS WITH SECONDARY MCLS											
Chloride	ppm	500	NS	Range Average	98 - 102 100	85 - 86 86	56 - 64 61	-	88 - 99 94	59 59	Runoff/leaching from natural deposits; seawater influence
Color	cu	15	NA	Range Average	1 1	1 1	ND	-	ND	ND	Naturally occurring organic materials
Iron	ppb	300	NA	Range Average	ND	ND	ND	-	ND	ND	Leaching from natural deposits; industrial waste
Manganese	ppb	50	NL = 500	Range Average	ND	ND	ND - 20.0 1.4	-	ND	ND	Leaching from natural deposits; industrial wastes
Odor	TON	3	NS	Range Average	2 2	2 2	ND	-	ND - 1.0 0.67	ND	Naturally occurring organic materials
Specific Conductance	uS/cm	1600	NA	Range Average	1030 - 1060 1040	692 - 703 698	880 880	-	930 - 1000 960	750 750	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NS	Range Average	252 - 261 257	108 - 112 110	140 140	-	130 - 140 133	89 89	Runoff/leaching from natural deposits; industrial waste
Total Dissolved Solids (TDS)	ppm	1000	NS	Range Average	654 - 665 660	405 405	540 - 580 560	-	590 - 650 623	510 510	Runoff/leaching from natural deposits; seawater influence
Turbidity	NTU	TT	NS	Range Average	ND	ND	0.072 - 0.073 0.0725	-	ND	0.069 0.069	Soil runoff