A Message from General Manager Stephen M. Zurn

and reducing your water usage during the unprecedented Water Division's SCADA system (the computer system drought of 2015. Glendale Water & Power was able to meet that monitors and controls the water facility operations), the State's mandatory water conservation requirements and the Upper Scholl Recycled Water Tank rehabilitation because of your efforts.

worked diligently managing the water system during about water and GWP will continue to provide outreach 2015. The mandated cutbacks in water usage required a and information on the complexities and challenges the different approach to operating the system and GWP's utility manages when providing water service to the nearly team members rose to the challenge by optimizing the 200,000 residents of Glendale. To meet these challenges production, movement, and storage of water within the GWP will continue to change and adapt to issues such as 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 continue to be "Your Trusted Community Utility". in order to ensure near term reliability enhancements Thank you for your support. and continued high levels of service for generations to come. Projects completed in 2015 included, the Beaudry

I want to take this opportunity to thank you for conserving Terrace area main replacement project, upgrades to the project.

GWP's Water Quality and Water Operations Sections The drought of 2015 provided heightened awareness continuous regulatory changes, water supply challenges, and aging infrastructure, while remaining cost conscious and efficient. Working with City leaders and you, GWP will

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).



Your Trusted Community Utilit

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

WQR.16

City of Glendale Water & Power 2015 Water Quality Report to Our Customers

Follow us on:

S 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 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 अतयंत ही महततवपूरण है। कृपया कसीि से इसका अनुवाद करा लीजएि। 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).

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.



WOR.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.







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



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 - 104	147 70	100 -270 162	-	NA	NA	By-product of drinking water chlorination; industrial processes
N-Nitrosodimethylamine (NDMA)	ppt	10	2	Range Average	ND ND	- 6.0 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 (I) Aggressive Index	AI	Range Average	12.5 12.5	2.1 - 12.3 12.2	NA	-	12 - 12 12	12 12			
Corrosivity Saturation Index	AI	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			
рН	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 Analvzed
- 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

of rainfall or agricultural activity. Nitrate in drinking water at components. When your water has been sitting for sever levels above 10 mg/L is a health risk for infants of less than hours, you can minimize the potential for lead exposure six months of age. Such nitrate levels in drinking water can flushing your tap for 30 seconds to 2 minutes before usir interfere with the capacity of the infant's blood to carry oxygen, water for drinking or cooking. If you are concerned abo resulting in a serious illness; symptoms include shortness of lead in your water, you may wish to have your water tested breath and blueness of the skin. Nitrate levels above 10 mg/L Information on lead in drinking water, testing methods, ar may also affect the ability of the blood to carry oxygen in steps you can take to minimize exposure is available from t other individuals, such as pregnant women and those with Safe Drinking Water Hotline or at http://www.epa.gov/lead. certain specific enzyme deficiencies. If you are caring for an Infants and young children are typically more vulnerab infant, or you are pregnant, you should ask advice from your to lead in drinking water than the general population. health care provider. Glendale's water is tested at the source for is possible that lead levels at your home may be high contamination then treated to maintain levels below the MCL than at other homes in the community as a result to ensure the water delivered to our customers is safe to drink. materials used in your home's plumbing. If you a Lead

problems, especially for pregnant women and young or flush your tap for 30 seconds to 2 minutes before usin children. Lead in drinking water is primarily from materials and tap water. Additional information is available from the USEF components associated with service lines and home plumbing. Safe Drinking Water Hotline (1-800-426-4791).

GWP is responsible for providing high quality drinking wate Nitrate levels may rise quickly for short periods of time because but cannot control the variety of materials used in plumbi

concerned about elevated lead levels in your home If present, elevated levels of lead can cause serious health water, you may wish to have your water tested and

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 yo drinking water for specific contaminants on a regular basis. Results of this regular monitoring are an indicator of whether or n 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. Eve though this failure was not an emergency, as our customers, you have a right to know what you should do, what happene 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 tot 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 usin groundwater must collect, within 24 hours of notification of the total coliform positive sample, a sample from each ground statement of the total coliform positive sample and the sample from each ground statement of the sample from each groun water source in use at the time the total coliform positive sample was collected. Groundwater samples are collected month to monitor for presence of bacteria.

In cooperation with the State Water Resources Control Board, Division of Drinking Water Glendale Water and Power's prima 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.

e) Copper has a secondary MCL of 1000 ppb. f) Analysis was on water before blending with MWD supply. g) Compliance is based on system-wide annual average for the stage

2 DBPR.

0.63 ppm.

distribution system wide.

with an average of 3.16 ppm.

h) Hardness in grains/gallon can be found by dividing ppm by 17.1. i) 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 2015 - range 0.38 ppm - 0.79 ppm with an average of

j) Chlorate has a DDW Notification level of 800 ppb. Chlorate is a by-product of liquid chlorine. MWD range results were given

k) Water from the Foothill Well is blended with system water, actual level of nitrate in water served ranged between 1.8 and 4.6 ppm,

 AI < 10.0 = Highly aggressive and very corrosive water. AI >/= 12 = Non-aggressive water. AI (10.0 - 11.9) - Moderately aggressive water m) Compliance was based on RAA. Bromate was tested at effluent of Jensen Treatment Plant where ozone is used as a disinfectant. Nerdugo Park Water Treatment Plant was offline in 2015. While your drinking water meets the federal and state standard fo arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to othe health effects such as skin damage and circulatory problems.

								Vordure			
	Units	State MCL	PHG or [MCLG]		MWD Weymouth Plant	MWD Jensen Plant	Glendale Treatment Plant	Park Water Treatment Plant (n)	Glorietta Wells	Foothill Well	Major Sources of Contaminants in Drinking Water
ORGANIC CHEMICALS	1	1	1				1	1			
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 petra and chemical factories; previously used as gasoline addit
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 facto
Simazine	ppb	4	4	Range Average	ND	ND	NA	-	ND - 0.053 0.009	ND	Herbicide runoff
INORGANIC CHEMICAL	S	1	1					1			
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; glas 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 refiner 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 platin erosion of natural deposits
luoride (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 prom strong teeth; discharge from fertilizer and aluminum f
litrate	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
lickel	ppb	100	12	Range Average	ND	ND	ND - 10.0 0.15	-	ND	ND	Erosion of natural deposits; discharge from metal fact
Selenium	ppb	50	30	Range Average	ND	ND	ND - 10.0 0.1	-	ND	ND	Refineries, mines, and chemical waste discharge; runo livestock lots
RADIOLOGICALS	,	1	1		1		1	1			
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
Jranium	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 CONTAMIN	NANTS WIT	H SECOND	ARY 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 influe
Color	cu	15	NA	Range Average	1	1 1	ND	-	ND	ND	Naturally occurring organic materials
ron	ppb	300	NA	Range Average	ND	ND	ND	-	ND	ND	Leaching from natural deposits; industrial waste
langanese	ppb	50	NL = 500	Range Average	ND	ND	ND - 20.0 1.4	-	ND	ND	Leaching from natural deposits; industrial wastes
Ddor	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 wast
otal 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 influe
Turbidity	NTU	тт	NS	Range	ND	ND	0.072 - 0.073	-	ND	0.069	Soil runoff