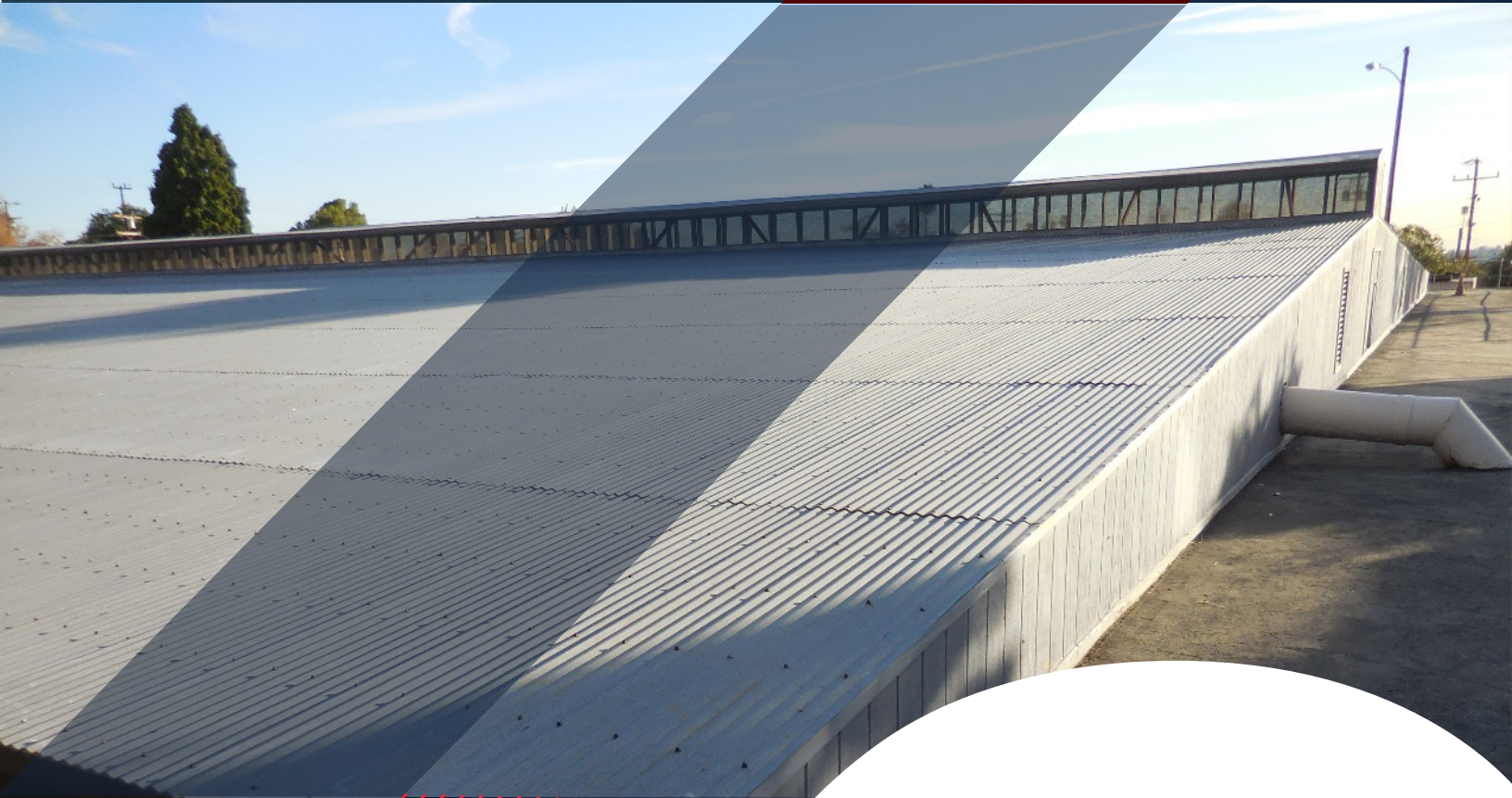


# LINCOLN AVENUE WATER COMPANY



2019

ANNUAL  
REPORT  
OF  
OPERATIONS

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# Lincoln Avenue Water Company

March 31, 2020

John Clairday, President  
Board of Directors  
Lincoln Avenue Water Company  
564 W Harriet Street  
Altadena, CA 91001



Dear Mr. Clairday:

On behalf of Staff and Management of Lincoln Avenue Water Company (Lincoln Avenue), I am pleased to present the 2019 Annual Report of Operations.

We entered 2019 with a welcomed above average rainfall. This allowed us to continue the operation of our Surface Water Treatment Plant for the majority of the year. We produced a total of 242 acre feet of surface water which helped us minimize our purchase of expensive imported water. We will continue to responsibly utilize this valuable water resource when available.

Investing in our infrastructure is critical for providing our customers with reliable and safe drinking water. This year our major capital improvement project was the North Glenrose Reservoir Rehabilitation.

Due to be completed in May 2020, this project entails the removal of the galvanized iron support columns & roof. Replacing both with stronger cast in place concrete in addition to other site improvements.

Once completed this durable structure will not only improve water service reliability, it will be a prime site for a future solar array system. Utilizing clean energy and reducing cost will remain one of the company's long term goals.

In 2019 we reinvested \$1.6 million into our capital improvement program. I am very happy to report that all improvements were made without having to increase water rates to our customers.

While we continue to plan for the next capital project we never lose focus on the importance of maintaining and operating a water system that has served our shareholders for more than 120 years.

The professional staff at Lincoln Avenue remains committed to providing the highest quality and most reliable water service to our customers at the most economically feasible cost.

Sincerely,  
Lincoln Avenue Water Company

A handwritten signature in black ink, appearing to read "J Betancourt Torres".

Jennifer Betancourt Torres  
General Manager



# NORTH GLENROSE RESERVOIR

The Glenrose Reservoir site consists of 2 below grade concrete structures. The South Reservoir was built in 1891 and has a storage capacity of 2.7 million gallons. In response to the growing population and need for reliable drinking water, in 1937 Lincoln Avenue built the North Reservoir adding an additional 1.8 million gallons of storage capacity to this site.

In 2019 Lincoln Avenue's proactive infrastructure repair and upgrade program focused on the rehabilitation of North Glenrose Reservoir. This project began with a structural evaluation. In order for the engineers to conduct a thorough inspection it was necessary to drain the reservoir to fully expose the concrete floor and steel support columns in addition to providing access to the interior wood frame roof.



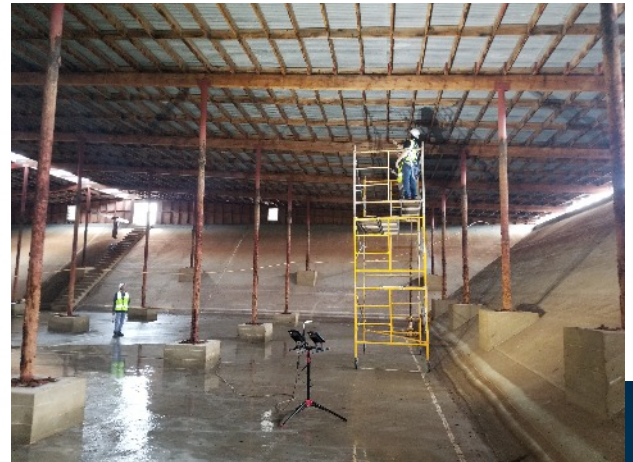
An arial view of the site before construction.



South east corner of the reservoir.



After sustaining significant damage from strong winds, the roof was rebuilt in 1999. Recent inspection showed the corrugated metal was still in good condition. However, the wood showed signs of deterioration.



A panoramic view of the drained reservoir.



# NORTH GLENROSE RESERVOIR



While the concrete floor and corrugated metal roof was deemed to be in good condition, the inspection found that the wood frame and iron support columns had multiple areas of deterioration. It was decided that a reliable and robust concrete structure would be the best option for the important facility.

Following almost a year of planning, mobilization of equipment and material, the construction began in November. With an aggressive construction deadline, the project quickly shifted to the demolition phase. Where applicable, materials removed from the structure were recycled.





# NORTH GLENROSE RESERVOIR



With the roof completely removed, once detached from the concrete footing, a crane was used to lift the old support columns out of the 18 foot deep reservoir.

Following a thorough cleaning, rebar is installed and forms are placed to increase the size of each footing. This was necessary to support additional weight of the concrete columns and roof.





# NORTH GLENROSE RESERVOIR



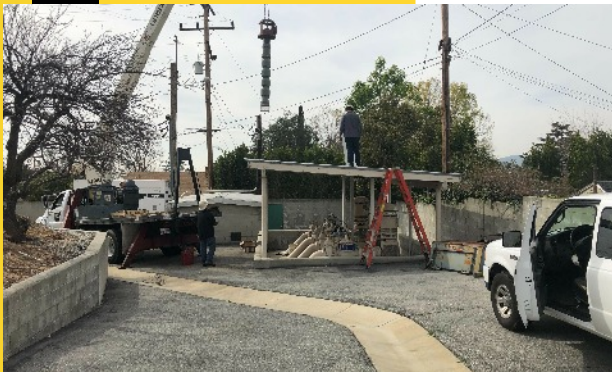
In addition to increasing the footing and column size it was also necessary to construct a new stem wall to further support the additional weight of the roof.

By the end of 2019 the column forms were onsite and ready for placement, almost two weeks ahead of schedule.





# BOOSTER PUMP REHABILITATION



The cost to lift water to the highest point of our distribution system (2200 feet above sea level) is a significant budget expense. Making sure that our booster stations are operating as efficiently as possible will have a positive impact on our power cost.







Lincoln Avenue has more than 1,000 isolation valves in the distribution system. And while we are proud of our proactive maintenance program, there will always be some emergency repairs throughout the year.

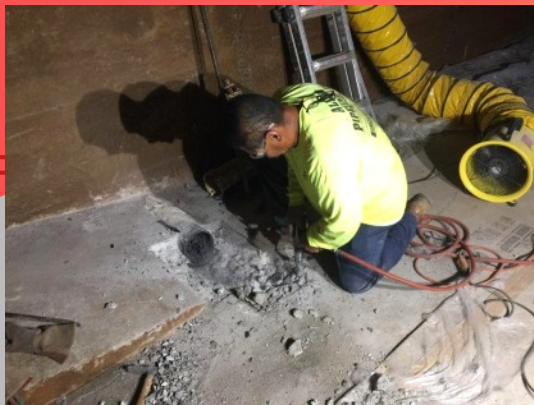


Pictured here is the Lincoln Avenue team repairing a leaking valve on Glenrose Avenue.

## WATERWORKS REPAIRS

It's not often that we need to drain a reservoir but when the time comes we want to make sure all components are functioning properly.

During scheduled maintenance we took the opportunity to replace this aged drain valve.





# Facility Tour



Taking a look into our 200,000 gallon treated groundwater storage facility.

In August we had the pleasure of hosting a tour for the staff of Senator Anthony Portantino, Congresswoman Judy Chu and LA County Supervisor Kathryn Barger.

The tour included Lincoln's groundwater and surface water treatment plants, compliance requirements & storage facilities. We highlighted significant events of our 123 year history in addition to the challenges of the future.

Operator, Jack Harms, provides information on the Surface Water Treatment Plant.



The group had the opportunity to tour the North Glenrose Reservoir site prior to construction activities.



## Doctor of Water Award Recipient

The Southern California Water Utilities Association (SCWUA) has been providing valuable resources to the waterworks industry since 1932.

Each year SCWUA honors longtime active members with the prestigious Doctor of Water Award.

In 2019 this honor was awarded to Lincoln Avenue Water Company Director, Lawrence Duncan.

Congratulations Mr. Duncan!



SCWUA President, James Prior (left) presents the award to Lawrence Duncan (right).



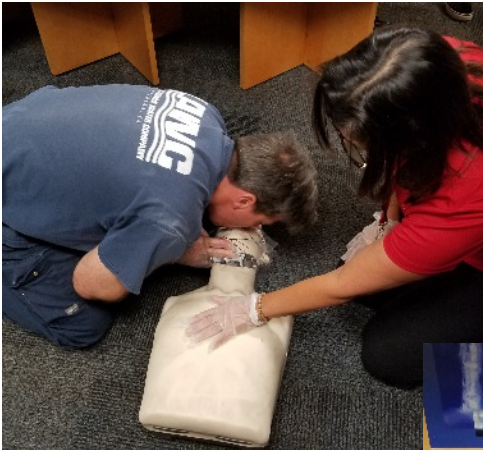
# CPR, AED & FIRST AID TRAINING

Whether in the office, out in the field or at home an emergency can happen at any time. If someone is injured or becomes ill, basic first aid training can prevent the situation from becoming worse and could help save a life.

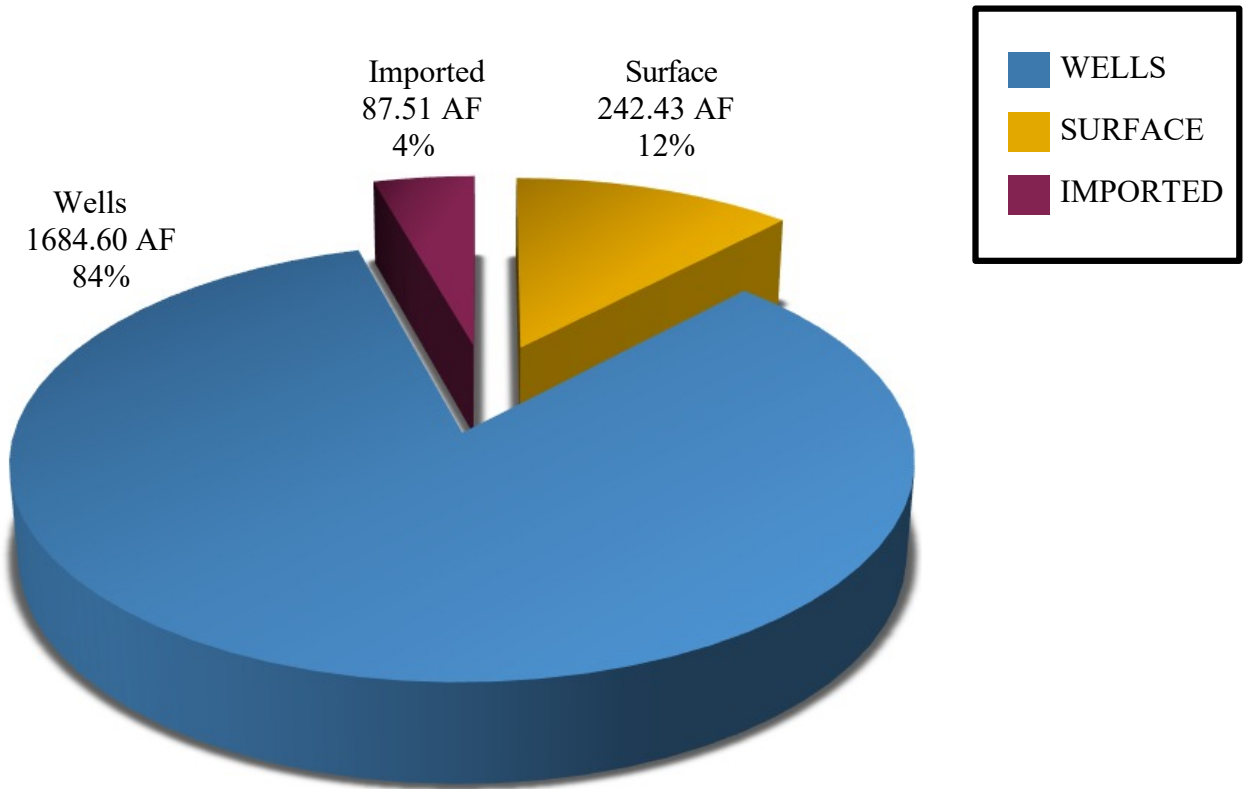


In 2019 Lincoln Avenue partnered with American Red Cross to provide comprehensive training which will prepare our staff for a wide range of situations.

Knowing how to respond quickly, correctly and efficiently is an invaluable tool to help protect each other during an emergency.



2019 WATER PRODUCTION  
BY SOURCE



Wells	1,684.60 AF
Surface	242.43 AF
Imported	87.51 AF
Total Production	<hr/> 2,014.54 AF



**WATER SALES AND PRODUCTION FOR 2019  
IN ACRE FEET**

<b>MONTH</b>	<b>IMPORTED WATER PURCHASE</b>	<b>WELL PRODUCTION</b>	<b>LOCAL SURFACE WATER</b>	<b>TOTAL PRODUCTION</b>	<b>SALES</b>	<b>RAIN FALL (INCHES)</b>
January	0.51	136.34	18.62	155.47	115.08	7.46
February	0	75.17	26.92	102.09	88.91	12.55
March	0	63.83	52.75	116.58	80.51	3.78
April	3.12	108.54	47.30	158.96	130.66	0.43
May	3.17	96.19	49.24	148.6	135.84	2.92
June	48.62	103.18	30.86	182.66	133.64	0.41
July	30.46	178.60	14.85	223.91	178.97	0
August	0	227.03	1.89	228.92	213.02	0
September	0	210.53	0	215.38	212.32	0.27
October	1.63	206.65	0	208.28	194.23	0
November	0	163.46	0	163.46	196.59	2.24
December	0	115.08	0	115.08	115.59	6.10
<b>TOTAL</b>	<b>87.51</b>	<b>1684.60</b>	<b>242.43</b>	<b>2014.54</b>	<b>1798.43</b>	<b>36.16</b>

**PUMPED FROM WELLS**

WELL #3	0.27
WELL #5	252.43
WELL #6	1431.90
<b>TOTAL</b>	<u>1684.60</u>

Total Production	2014.54
Total Sales	<u>-1798.43</u>
Subtotal	216.11
Treatment Plant Operation & Water Quality Control	<u>-54.94</u>
Non-Sales Production	161.17 or 8%

**Non-Sales Production** is water used for routine water quality sampling, evaporation from reservoirs, irrigating at Company sites, water quality flushing, pipeline ditch compaction, fire fighting, fire training, leaks on mains, etc.

The Company's well production consists of 567 acre feet annual decreed right plus spread credit from mountain run-off, and available leased groundwater rights.



**ENERGY COST BY WELLS AND PUMPING STATIONS**

2015 - 2019

PUMPING STATIONS	2019 ANNUAL		2018 ANNUAL		2017 ANNUAL		2016 ANNUAL		2015 ANNUAL	
	ENERGY COST	COST/AF	ENERGY COST	COST/AF	ENERGY COST	COST/AF	ENERGY COST	COST/AF	ENERGY COST	COST/AF
Well #3 (Pump to Main Plant)	493.40		1,104.99		22,453.11		43,575.63		\$46,657.37	
	N/A		84.35		75.47		72.90		\$77.89	
Well #5 (Pump to Main Plant)	17,302.41		5,544.79		11,690.17		65,635.50		70,407.46	
	68.54		65.23		66.73		65.05		70.52	
Well #6 (Pump to Main Plant)	110,599.19		155,201.39		68,304.34					
	77.24		80.85		100.21					
Main Plant (Pump to Glenrose Resv.)	99,378.19		116,716.73		95,843.33		111,084.41		108,920.30	
	55.27		54.32		46.33		58.05		55.52	
Glenrose Reservoir (Pump to Wapello Resv.)	34,375.46		35,405.63		39,256.78		38,950.26		37,992.59	
	36.23		32.23		38.47		38.88		40.20	
Wapello Reservoir (Pump to Ware & La Vina & Swigart Resv.)	39,396.18		44,594.31		43,256.69		40,686.37		40,013.54	
	53.91		51.39		53.81		54.70		53.71	
Ware Reservoir (Pump to Coulter Resv.)	704.18*		1284.19*		4,153.23		11,356.20		11,267.75	
	6.10		6.28		23.98		54.46		53.58	
<b>TOTAL ANNUAL ENERGY COST</b>	<b>\$302,249.01</b>		<b>\$359,852.03</b>		<b>\$284,962.65</b>		<b>\$311,288.37</b>		<b>\$315,259.01</b>	

\*Total cost prior to applying Solar Energy Generation Credit \$7,395.18



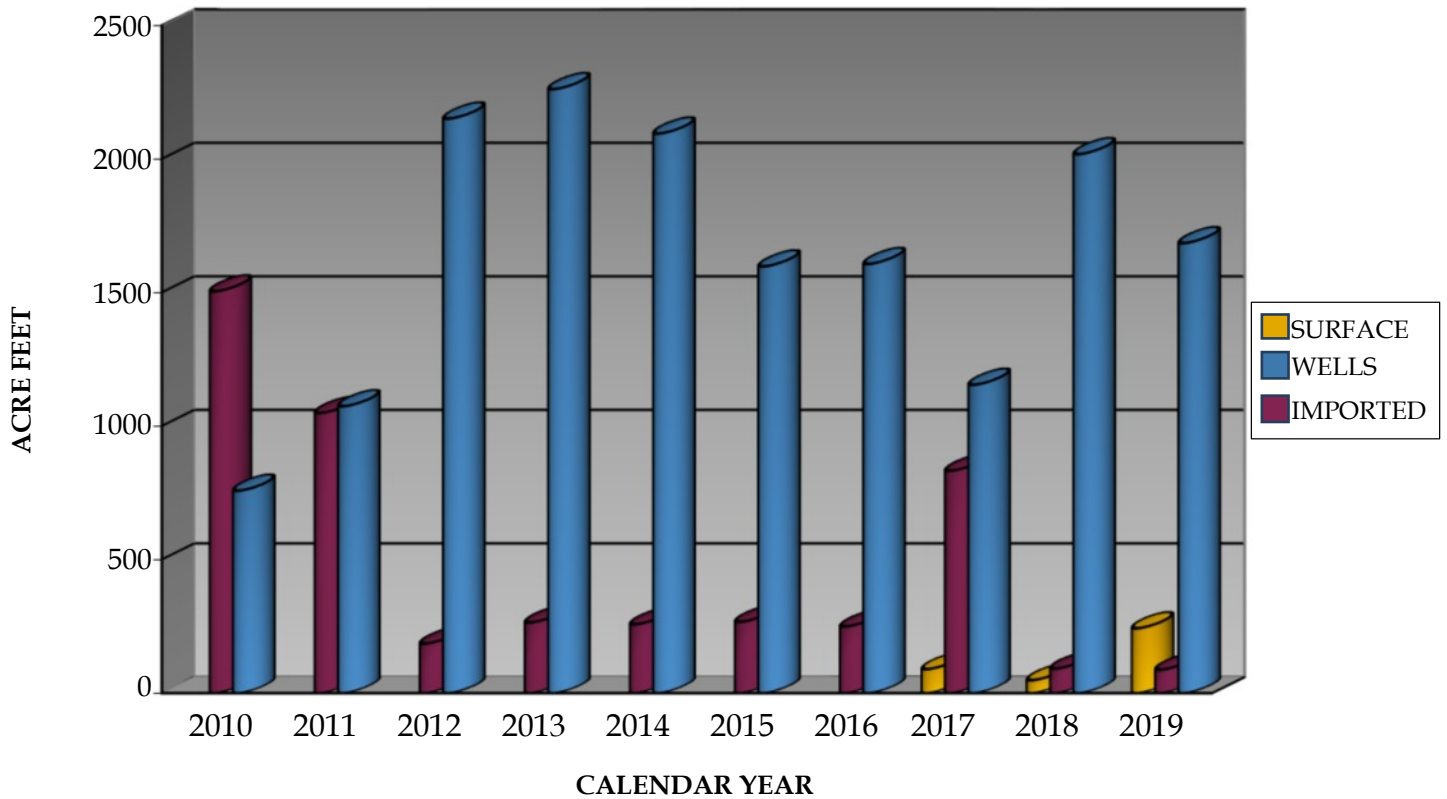
**ANNUAL PRODUCTION IN ACRE FEET**  
2010 - 2019

CALENDAR YEAR	WELL #3	WELL #5	WELL #6	SURFACE	IMPORTED	TOTAL PRODUCTION	LESS LEASE WATER DELIVERY	ACTUAL PRODUCTION (LINCOLN)	RAINFALL (INCHES)
<b>2019</b>	<b>0.27</b>	<b>252.43</b>	<b>1431.90</b>	<b>242.43</b>	<b>87.51</b>	<b>2014.54</b>	<b>0</b>	<b>2014.54</b>	<b>36.16</b>
2018	13.10	85.00	1919.72	48.23	91.55	2157.61	0	2157.61	15.99
2017	297.50	175.19	681.60	89.49	832.43	2076.21	0	2076.21	19.47
2016	597.73	1008.99		0	249.26	1855.98	0	1855.98	18.60
2015	599.02	998.41		0	266.71	1864.14	0	1864.14	10.22
2014	944.15	1150.76		0	257.49	2352.40	0	2352.40	14.88
2013	989.88	1271.38		0	264.35	2525.61	96.39	2429.22	10.13
2012	691.28	1459.58		0	185.33	2336.19	0	2336.19	18.20
2011	599.17	474.85		0	1048.62	2122.64	0	2122.64	17.65
2010	757.68	0.03		0	1504.14	2261.85	108.70	2153.15	37.00

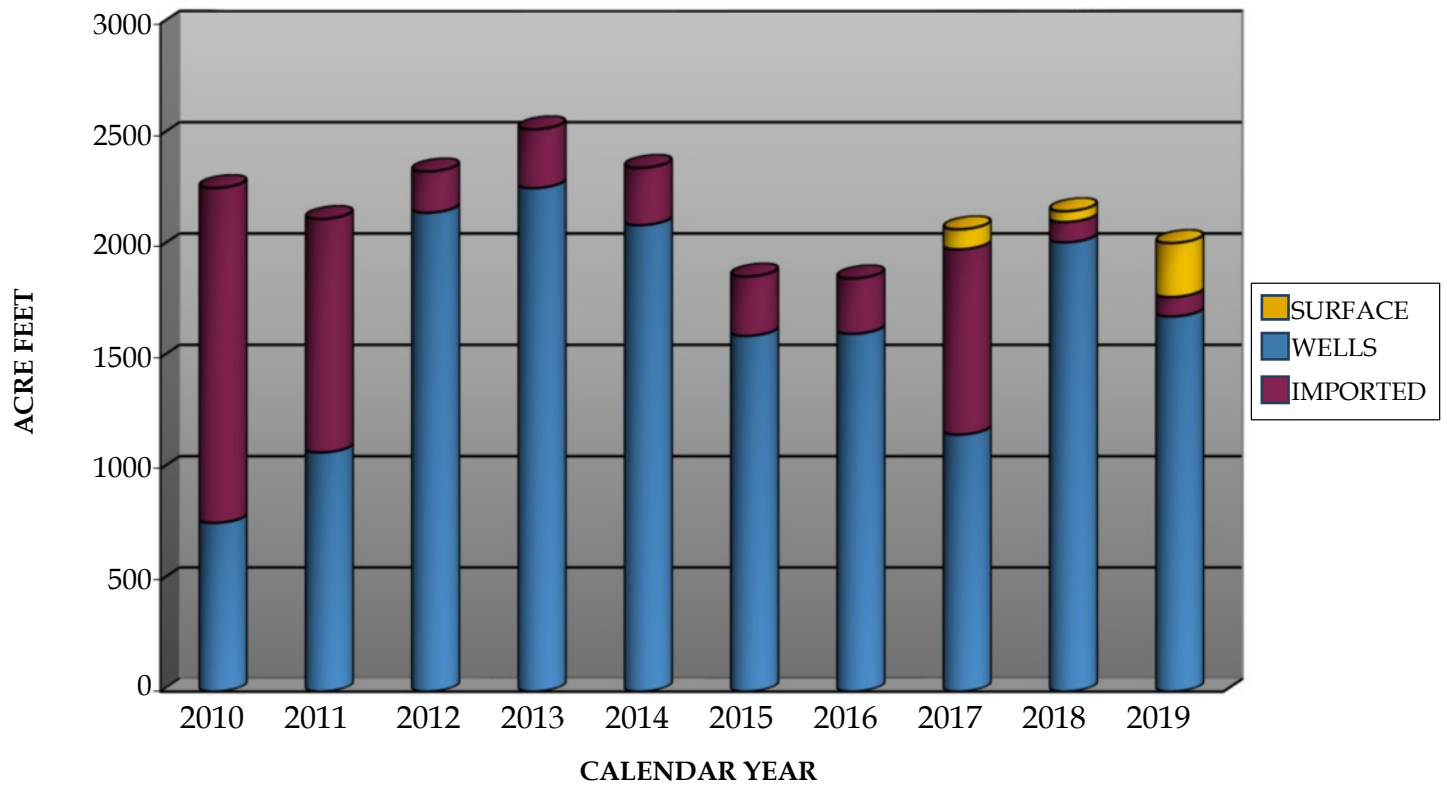
*Note: Well 6 began operation in August 2017*



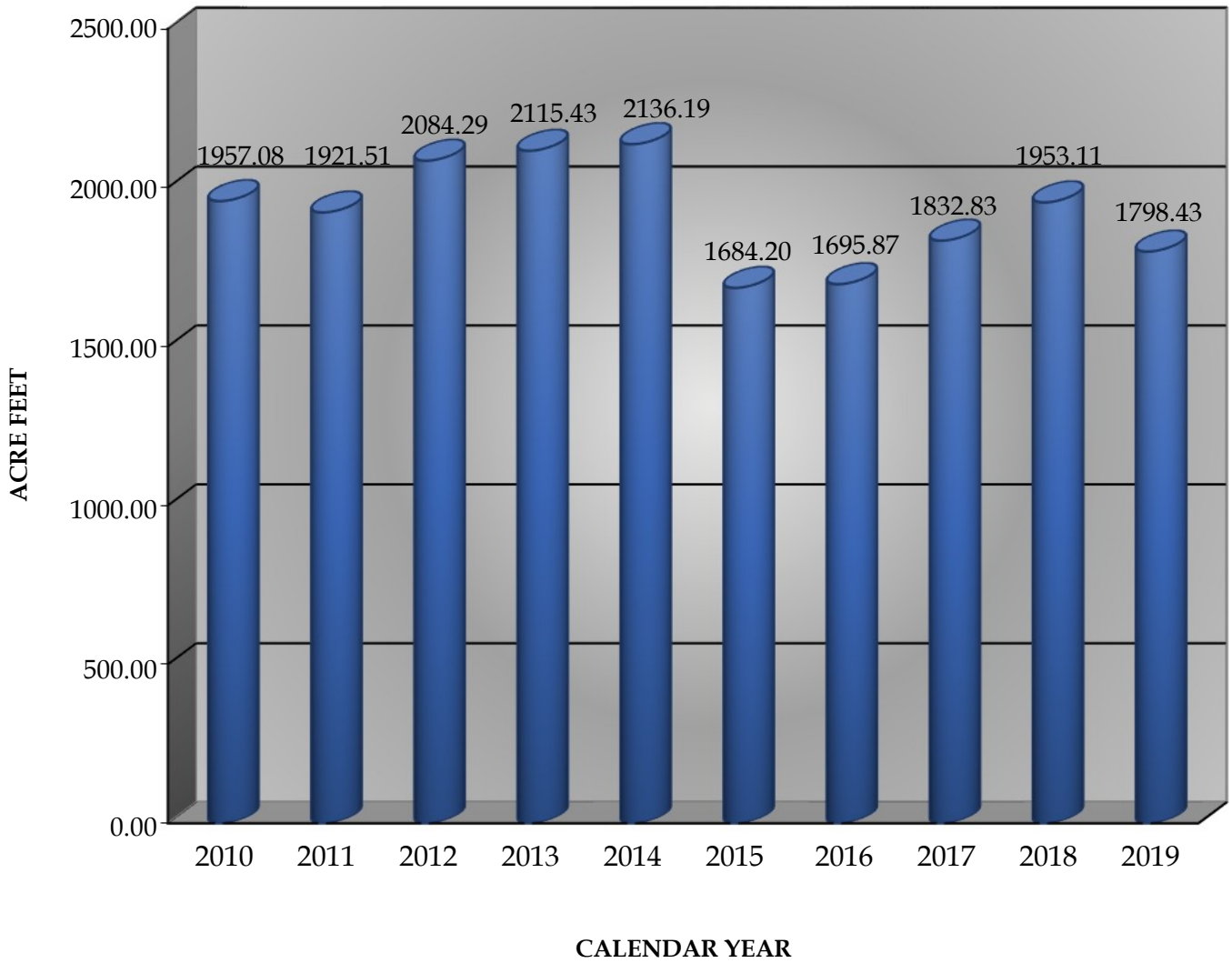
### ANNUAL PRODUCTION BY SOURCE - SURFACE, WELLS & IMPORTED



### TOTAL ANNUAL PRODUCTION - SURFACE, WELLS & IMPORTED



**ANNUAL WATER SALES IN ACRE FEET  
2010 - 2019**





## METERS AND SERVICE CONNECTIONS

New service connections installed in 2019	2
Meters replaced in 2019	284
Distribution system service connections in 2019	4476
2019 average consumption per meter per day - Residential	323 gal.
2019 average consumption per meter per day - Commercial	1382 gal.
2019 average consumption per capita per day - Residential	92 gal.

## NUMBER OF METERS BY SIZE

5/8"	2656
3/4"	1347
1"	366
1½"	28
2"	70
3"	6
4"	3
<b>TOTAL</b>	<b>4476</b>

## WELL PRODUCTION CAPACITY

Well #3 (drilled 1924)	900 GPM
Well #5 (drilled 1971)	1100 GPM
Well #6 (drilled 2016)	2000 GPM

## DISTRIBUTION LINES IN LINEAR FEET

Distribution System	288,323
Pumping Lines	18,128
TOTAL	306,451 or 58 miles



## ANNUAL CANYON WATER BASIN RECHARGE IN ACRE FEET

### CANYON WATER BASIN RECHARGE

Swigart	141.70
El Prieto	43.46
Millard/La Vina*	786.15
<b>TOTAL</b>	<b>971.31</b>

All canyon water that flows to the spreading basin is metered with an allowable extraction the following year based on Raymond Basin Management Board percolation calculations.

\*Maximum allowable spread credit for Millard/La Vina is 0.65 CFS.

## WATER QUALITY



California State Water Resources Control Board, Division of Drinking Water (DDW) requires Lincoln Avenue Water Company to take distribution system water quality samples which include bacteriological, total trihalomethanes, volatile organic compounds, general physical, general mineral and inorganics, along with other scheduled analyses. Lincoln's system was in compliance with DDW water quality standards at all times during 2019.

# LINCOLN AVENUE WATER COMPANY

## 2019 WATER QUALITY REPORT

### INTRODUCTION

Lincoln Avenue Water Company (Lincoln Avenue) is committed to keeping you informed about the quality of your drinking water. This report is provided to you annually. It includes information describing where your drinking water comes from, the constituents found in your drinking water and how the water quality compares with the regulatory standards. We are proud to report that during 2019, the drinking water provided by Lincoln Avenue met or surpassed all Federal and State drinking water standards. We remain dedicated to providing you with a reliable supply of high quality drinking water.

Lincoln Avenue, a mutual water company, serves approximately 16,000 people in the northwest region of Altadena, an unincorporated area of Los Angeles County. As a mutual water company, the shareholders are its customers that are served by its distribution system. The General Manager oversees the company's operations and reports to a five person Board of Directors that meets monthly at the company offices located at 564 West Harriet Street, Altadena, California 91001. For more information, you may contact Ms. Jennifer Betancourt Torres, General Manager, at 626-798-9101, extension 213.

### WHERE DOES MY DRINKING WATER COME FROM?

In 2019, Lincoln Avenue distributed approximately 2,015 acre-feet of water to its customers. This amounts to about 657 million gallons. One acre-foot is enough water to cover one acre of land, one foot deep with water, or approximately 325,900 gallons. Eighty-four percent of the water came from two wells pumping from the Raymond groundwater basin. Four percent of the total was purchased from the Metropolitan Water District of Southern California (MWD), a regional wholesaler of imported surface water. This water is a blend of Colorado River water delivered through MWD's Colorado River Aqueduct and surface water from Northern California delivered through the State of California Water Project Aqueduct. MWD's water is filtered and disinfected at the Weymouth Filtration Plant in La Verne. The remaining twelve percent of Lincoln Avenue's water came from local surface water in Millard Canyon. Just like MWD, Lincoln Avenue must filter and disinfect its local surface water source in Millard Canyon. The Millard Canyon treatment facility meets the same stringent water quality standards as MWD's treatment plant. Chlorine disinfectant is added to all water served by Lincoln Avenue to kill microorganisms and prevent re-growth of bacteria in storage reservoirs and distribution pipelines.

### DRINKING WATER SOURCE ASSESSMENT

In accordance with the Federal Safe Drinking Water Act, an assessment of the groundwater sources for Lincoln Avenue was completed in May 2002. The purpose of the drinking water source assessment is to promote source water protection by identifying types of activities in the proximity of the drinking water sources which could pose a threat to the water quality. The assessment concluded that Lincoln Avenue's groundwater sources are considered most vulnerable to the following activities or facilities associated with contaminants detected in the water supply: gasoline stations, dry cleaners, automobile repair shops, high density housing and parking lots. In addition, the groundwater sources are considered most vulnerable to the following activity or facility not associated with contaminants detected in the water supply: recreational area-surface water source. Furthermore, an assessment of Lincoln Avenue's surface water source was completed in October 2000. The assessment concluded that Lincoln Avenue's surface water source is considered vulnerable to the following activity or facility associated with contaminants detected in the water supply: recreation and low density septic system use. In addition, the surface water source is considered vulnerable to historic mining operations, for which no associated contaminant has been detected. A copy of the complete assessment is available at Lincoln Avenue Water Company at 564 West Harriet Street, Altadena, California 91001. You may request a summary of the assessment to be sent to you by contacting our office at (626) 798-9101.

Every five years, MWD is required by the State Water Resources Control Board, Division of Drinking Water (DDW) to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters. The most recent watershed sanitary surveys of MWD's source water supplies from the Colorado River was updated in 2015 and the State Water Project was updated in 2016. Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/stormwater runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater. The United States Environmental Protection Agency (USEPA) also requires MWD to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWD completed its SWA in December 2002. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed. A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling MWD at (800) CALL-MWD.

### WHAT ARE WATER QUALITY STANDARDS?

In order to ensure that tap water is safe to drink, the USEPA and DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water standards established by USEPA and DDW set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The chart in this report shows the following types of water quality standards:

- **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.



# LINCOLN AVENUE WATER COMPANY

## 2019 WATER QUALITY REPORT

- **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.
- **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- **Primary Drinking Water Standard:** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- **Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- **Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Notification Level (NL):** An advisory level which, if exceeded, requires the drinking water system to notify the governing body of the local agency in which users of the drinking water reside (i.e. city council, county board of supervisors).

### WHAT IS A WATER QUALITY GOAL?

In addition to mandatory water quality standards, USEPA and DDW have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes the following water quality goals:

- **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 USEPA.
- **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.
- **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.

### WHAT CONTAMINANTS MAY BE PRESENT IN SOURCES OF 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, 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.
- **Radioactive contaminants**, that can be naturally-occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural applications, and septic systems.

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).

### WHAT IS IN MY DRINKING WATER?

As in past years, the Water Quality Charts compare the quality of your tap water to State and Federal drinking water standards. The water quality charts list all the regulated drinking water contaminants and other contaminants of interest, including unregulated contaminants requiring monitoring, that were **detected** during the 2019 calendar year or from the results of the most recent testing done in accordance with the monitoring regulations. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. More than 100 regulated contaminants have been tested that **were not detected** in drinking water delivered by Lincoln Avenue; the list of non-detected contaminants is not included in the chart.

**Most contaminants detected in our groundwater and surface water sources** occur in your drinking water from erosion of natural deposits in soils. However, several detected contaminants are present in tap water as the result of the treatment process itself, corrosion of plumbing fixtures, or from industrial discharges:

- **Aluminum in the MWD treated surface water** comes from a treatment chemical used to assist in the removal of soil particles and microorganisms.

# LINCOLN AVENUE WATER COMPANY

## 2019 WATER QUALITY REPORT

- **Trihalomethanes and Haloacetic Acids** are organic chemicals that form when chlorine is added to disinfect the water. These chemicals are monitored in the distribution system.
- **Nitrate in groundwater** could come from fertilizers or leakage from old septic tanks. Nitrate in your drinking water may have exceeded one-half the MCL in 2019, but it was never greater than the MCL. Nitrate in drinking water at levels above 10 milligrams per liter (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.
- **Perchlorate is an inorganic chemical** that is used in solid rocket propellants, fireworks, explosives and flares, which originated from past discharges at the Jet Propulsion Laboratory (JPL), the known perchlorate plume site. Levels of perchlorate detected in our wells in May 2004 exceeded the then DDW Notification Level of 6 micrograms per liter (µg/L). In June of 2004, Lincoln Avenue's customers were notified that water from these wells would not be delivered to them and the wells would remain off-line. In July of 2004, Lincoln Avenue completed the installation of an Ion Exchange treatment system to remove perchlorate from our well water to a non-detectable level. The system is now working in tandem with our existing Granular Activated Carbon (GAC) System to remove volatile organic contaminants in our well water. With this arrangement, Lincoln Avenue provides safe drinking water to its customers.
- **The groundwater pumped by our two wells contains several volatile organic chemicals (VOCs)**, including Carbon Tetrachloride (CTC), Tetrachloroethylene (PCE), and Trichloroethylene (TCE). The untreated groundwater exceeds the MCL for CTC. In order to use this important component of our total water supply, in 1992, we constructed a GAC treatment plant for the removal of the VOCs. A condition of our permit to operate this plant states that the treatment process must remove all the VOCs to non-detectable levels. PCE, CTC and TCE in the treated water of the GAC treatment plant were monitored on a weekly basis and no VOCs were detected in the fully-treated water during 2019.

**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. Lincoln Avenue 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 Hot Line or at <https://www.epa.gov/lead>.

**Groundwater is protected from many infectious organisms**, such as the parasite *Cryptosporidium*, by the natural filtration action of water percolating through soils. Current conventional surface water treatment methods remove most *Cryptosporidium* organisms when they are present, but 100 percent elimination cannot be guaranteed. MWD has detected *Cryptosporidium* in some areas of their watershed but has never detected the organism in their treated water. There is no evidence that *Cryptosporidium* has entered the Lincoln Avenue water supply. However, **some people may be more vulnerable to contaminants in drinking water than the general population**. Immunocompromised 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).

### DRINKING WATER FLUORIDATION

*"Community water fluoridation helps us meet [health] goals; as it is one of the most cost-effective, equitable, and safe measures communities can take to prevent tooth decay and improve oral health."* **U.S. Surgeon General**

In November 2007, MWD joined a majority of the nation's public water suppliers by adding fluoride to drinking water in order to prevent tooth decay. In line with recommendations from DDW, as well as the U.S. Centers for Disease Control and Prevention, MWD began adjusting the natural fluoride level in imported water, which ranges from 0.1 part per million (ppm) to 0.3 ppm. MWD was in compliance with all provisions of the State's fluoridation system requirements. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 ppm.

Lincoln Avenue does not add additional fluoride to the local water delivered to you because fluoride occurs naturally in groundwater. As shown on the water quality table, the average fluoride concentration in Lincoln Avenue's groundwater is 0.74 ppm.

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 43 fluoridate their drinking water. There are many places to go for additional information about the fluoridation of drinking water. They include:

**U.S. Centers for Disease Control and Prevention:** <https://www.cdc.gov/fluoridation/index.html>

**American Water Works Association:** [www.awwa.org](http://www.awwa.org)

**State Water Resources Control Board, Division of Drinking Water:**

[http://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml)



# LINCOLN AVENUE WATER COMPANY

## 2019 WATER QUALITY REPORT

### METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA TREATED SURFACE WATER

Chemical	MCL	PHG or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
<b>Primary Drinking Water Standards -- Health Related Standards</b>							
<b>Organic Chemicals</b>							
Toluene (ppb)	150	150	0.6	0.6	No	2019	Discharge from petroleum and chemical refineries
<b>Inorganic Chemicals</b>							
Aluminum (ppm)	1	0.6	0.12	ND - 0.11	No	2019	Water treatment process residue
Bromate (ppb)	10	0.1	1.9	ND - 8.1	No	2019	Byproduct of Drinking Water Disinfection
Fluoride (ppm)	2	1	0.7	0.6 - 0.9	No	2019	Treatment additive for dental health
Nitrate (ppm as N)	10	10	0.5	0.5	No	2019	Runoff and leaching from fertilizer use
<b>Secondary Drinking Water Standards -- Aesthetic Standards, Not Health-Related</b>							
Aluminum (ppb)	200	600	120	ND - 110	No	2019	Water treatment process residue
Chloride (ppm)	500	n/a	50	46 - 55	No	2019	Runoff or leaching from natural deposits
Color (Color Units)	15	n/a	ND	ND - 1	No	2019	Naturally-occurring organic materials
Iron (ppb)	300	n/a	240	240	No	2019	Runoff or leaching from natural deposits
Odor (threshold odor number)	3	n/a	1	1	No	2019	Naturally-occurring organic materials
Specific Conductance (µmho/cm)	1,600	n/a	470	440 - 500	No	2019	Substances that form ions in water
Sulfate (ppm)	500	n/a	73	65 - 81	No	2019	Runoff or leaching from natural deposits
Total Dissolved Solids (ppm)	1,000	n/a	270	240 - 290	No	2019	Runoff or leaching from natural deposits
<b>Unregulated Chemicals Requiring Monitoring</b>							
Hardness (ppm as CaCO3)	Not Regulated	n/a	110	100 - 120	No	2019	Runoff or leaching from natural deposits
Sodium (ppm)	Not Regulated	n/a	50	46 - 54	No	2019	Runoff or leaching from natural deposits

**MCL** = Maximum Contaminant Level; **MCLG** = federal MCL Goal; **n/a** = not applicable; **ND** = not detected; **NL** = Notification Level; **PHG** = California Public Health Goal; **ppb** = parts-per-billion; **ppm** = parts-per-million; **ppt** = parts-per-trillion; **µmho/cm** = micromhos per centimeter

Turbidity - combined filter effluent Metropolitan Water District Weymouth Filtration Plant	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.3 NTU	0.04	No	Soil Runoff
2) Percentage of samples less than 0.3 NTU	95%	100%	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT). A treatment technique is a required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly. **NTU** = nephelometric turbidity units

### LINCOLN AVENUE WATER COMPANY MILLARD CANYON SURFACE WATER TREATMENT PLANT

Chemical	MCL	PHG or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
<b>Primary Drinking Water Standards -- Health Related Standards</b>							
<b>Radiologicals</b>							
Uranium (pCi/L)	20	0.43	5.9	5.9	No	2018	Erosion of natural deposits
<b>Inorganic Chemicals</b>							
Aluminum (ppm)	1	0.6	<0.05	ND - 0.12	No	Monthly	Water treatment process residue; erosion of natural deposits
Arsenic (ppb)	10	0.004	2.8	2.8	No	2019	Runoff or leaching from natural deposits
Fluoride (ppm)	2	1	1.4	0.79 - 1.8	No	2019	Runoff or leaching from natural deposits
<b>Secondary Drinking Water Standards -- Aesthetic Standards, Not Health-Related</b>							
Aluminum (ppb)	200	600	<50	ND - 120	No	Monthly	Water treatment process residue; erosion of natural deposits
Chloride (ppm)	500	n/a	9.4	9.4	No	2019	Runoff or leaching from natural deposits
Color (Color Units)	15	n/a	7.5	7.5	No	2019	Naturally-occurring organic materials
Odor (threshold odor number)	3	n/a	1	1	No	2019	Naturally-occurring organic materials
Sulfate (ppm)	500	n/a	28	28	No	2019	Runoff or leaching from natural deposits
Specific Conductance (µmho/cm)	1,600	n/a	420	420	No	2019	Substances that form ions in water
Total Dissolved Solids (ppm)	1,000	n/a	250	250	No	2019	Runoff or leaching from natural deposits
Turbidity (NTU)	5	n/a	0.1	0.1	No	2019	Soil run-off
<b>Unregulated Chemicals Requiring Monitoring</b>							
Hardness (ppm as CaCO3)	Not regulated	n/a	196	196	n/a	2019	Runoff or leaching from natural deposits
Sodium (ppm)	Not regulated	n/a	19	19	n/a	2019	Runoff or leaching from natural deposits

**MCL** = Maximum Contaminant Level; **MCLG** = Federal MCL Goal; **n/a** = not applicable; **pCi/L** = picoCuries per liter; **ND** = not detected; **<** = average is below the detection limit for purposes of reporting (DLR); **NTU** = nephelometric turbidity units; **PHG** = California Public Health Goal; **ppb** = parts-per-billion; **ppm** = parts-per-million; **µmho/cm** = micromhos per centimeter

Turbidity - combined filter effluent	Treatment Technique	Turbidity Measurements	TT Violations?	Typical Source of Contaminant
1) Highest single turbidity measurement	1 NTU	0.32	No	Soil run-off
2) Percentage of samples less than 0.3 NTU	95%	97%	No	Soil run-off

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Millard Canyon Surface Water Treatment Plant treated water is a good indication of effective filtration. Filtration is called a "treatment technique" (TT). A treatment technique is a required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly.

# LINCOLN AVENUE WATER COMPANY

## 2019 WATER QUALITY REPORT

LINCOLN AVENUE WATER COMPANY GROUNDWATER QUALITY							
Chemical	MCL	PHG or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
<b>Primary Drinking Water Standards -- Health Related Standards</b>							
<b>Radiologicals</b>							
Gross Alpha Particle (pCi/L)	15	(0)	5.48	3.88 - 7.95	No	2018	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	7.4	7 - 8.1	No	2018	Erosion of natural deposits
<b>Inorganic Chemicals</b>							
Arsenic (ppb)	10	0.004	<2	ND - 2.4	No	2018	Runoff or leaching from natural deposits
Fluoride (ppm)	2	1	0.74	0.68 - 0.79	No	2018	Erosion of natural deposits
Nitrate (ppm as N)	10	10	5.3	4.7 - 5.5	No	Monthly	Runoff and leaching from fertilizer use
<b>Secondary Drinking Water Standards -- Aesthetic Standards, Not Health-Related</b>							
Chloride (ppm)	500	n/a	43	43	No	2018	Erosion of natural deposits
Odor (threshold odor number)	3	n/a	1	1	No	2018	Naturally-occurring organic materials
Specific Conductance (µmho/cm)	1,600	n/a	670	660 - 670	No	2018	Substances that form ions in water
Sulfate (ppm)	500	n/a	69	68 - 69	No	2018	Erosion of natural deposits
Total Dissolved Solids (ppm)	1,000	n/a	420	410 - 420	No	2018	Erosion of natural deposits
<b>Unregulated Chemicals Requiring Monitoring</b>							
Hardness (ppm as CaCO <sub>3</sub> )	Not Regulated	n/a	261	257 - 264	No	2018	Erosion of natural deposits
Sodium (ppm)	Not Regulated	n/a	28	26 - 30	No	2018	Erosion of natural deposits
<b>MCL</b> = Maximum Contaminant Level; <b>MCLG</b> = Federal MCL Goal; <b>n/a</b> = not applicable; <b>ND</b> = not detected; <b>pCi/L</b> = picoCuries per liter; <b>PHG</b> = California Public Health Goal; <b>ppb</b> = parts-per-billion; <b>ppm</b> = parts-per-million; <b>µmho/cm</b> = micromhos per centimeter; <b>&lt;</b> = average is below the detection limit for purposes of reporting (DLR)							
LINCOLN AVENUE WATER COMPANY TREATED SURFACE WATER AND GROUNDWATER QUALITY							
Unregulated Chemicals Requiring Monitoring	MCL	PHG or (MCLG)	Average Amount	Range of Detections	Most Recent Tests		
Bromide (ppb) *	n/a	n/a	13	ND - 50	2018		
Manganese (ppb) **	SMCL = 50	n/a	<0.4	ND - 0.45	2018		
Total Organic Carbon (ppb) *	n/a	n/a	1,700	1,400 - 2,000	2018		
<b>MCL</b> = Maximum Contaminant Level; <b>MCLG</b> = Federal MCL Goal; <b>PHG</b> = California Public Health Goal; <b>ppb</b> = parts-per-billion; <b>SMCL</b> = Secondary MCL * Monitoring required for only Millard Canyon raw water ** Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated chemicals requiring monitoring.							
LINCOLN AVENUE WATER COMPANY DISTRIBUTION SYSTEM WATER QUALITY							
Chemical	MCL or (MRDL)	PHG or (MRDLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Tests	Typical Source of Contaminant
Total Trihalomethanes (ppb) <sup>†</sup>	80	n/a	46	ND - 104	No	Quarterly	Byproducts of chlorine disinfection
Haloacetic Acids (ppb) <sup>†</sup>	60	n/a	45	ND - 136	No	Quarterly	Byproducts of chlorine disinfection
Total Chlorine Residual (ppm) <sup>†</sup>	(4)	(4)	1.1	0.3 - 2.2	No	Weekly	Drinking water disinfectant
Color (color units) <sup>††</sup>	15	n/a	<3	ND - 5	No	Monthly	Naturally-occurring organic materials
Odor (threshold odor number) <sup>††</sup>	3	n/a	1	1 - 2	No	Monthly	Naturally-occurring organic materials
Turbidity (NTU) <sup>††</sup>	5	n/a	<0.1	ND - 0.8	No	Monthly	Soil run-off
<sup>†</sup> Regulated with a primary MCL; <sup>††</sup> Regulated with a secondary MCL; <b>NTU</b> = nephelometric turbidity units; <b>ppb</b> = parts-per-billion; <b>ppm</b> = parts-per-million; <b>MCL</b> = Maximum Contaminant Level; <b>MRDL</b> = Maximum Residual Disinfectant Level; <b>MRDLG</b> = Maximum Residual Disinfectant Level Goal; <b>ND</b> = not detected; <b>NTU</b> = nephelometric turbidity units; <b>PHG</b> = California Public Health Goal; <b>n/a</b> = not applicable; <b>&lt;</b> = average is below the detection limit for purposes of reporting (DLR) Four locations in the distribution system are tested quarterly for Total Trihalomethanes and Haloacetic Acids; thirteen locations are tested monthly for color, odor, and turbidity. In addition, thirteen locations are tested weekly for coliform bacteria and chlorine residual.							
Lead / Copper	Action Level (AL)	PHG	90th Percentile Value	Sites Exceeding AL/ Number of Sites Tested	AL Violation?	Typical Source of Contaminant	
Lead (ppb)	15	0.2	ND	1/45	No	Corrosion of household plumbing	
Copper (ppm)	1.3	0.3	0.26	0/45	No	Corrosion of household plumbing	
Every three years, at least 30 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2019. Lead was detected in two samples; one result exceeded the AL, but the result did not exceed the AL in a subsequent resampling. Copper was detected in thirty-one samples; however, none of the results exceeded the AL. A regulatory action level is the concentration of a chemical which if exceeded in more than 10 percent of the samples, triggers treatment or other requirements that a water system must follow. In 2019, no school sites submitted requests to be sampled for lead.							
Unregulated Chemicals Requiring Monitoring	MCL	PHG or (MCLG)	Average Amount	Range of Detections	Most Recent Tests		
Haloacetic acids (HAA5) (ppb)	n/a	n/a	1.3	1.3	2019		
Haloacetic acids (HAA6Br) (ppb)	n/a	n/a	1.87	1.87	2019		
Haloacetic acids (HAA9) (ppb)	n/a	n/a	2.5	2.5	2019		
<b>MCL</b> = Maximum Contaminant Level; <b>MCLG</b> = Federal MCL Goal; <b>PHG</b> = California Public Health Goal; <b>ppb</b> = parts-per-billion							

## BOARD OF DIRECTORS FOR THE YEAR 2019



**JOHN CLAIRDAY**

**PRESIDENT**

John Clairday, a graduate of the University of Southern California and Loyola Law School, has served on Lincoln Avenue's Board since 1993. Mr. Clairday recently retired, after 27 years, from the Metropolitan Water District of Southern California, where he served as Chief Deputy General Counsel within the legal department, and as manager of the District's Real Estate Group. In addition to serving as President of Lincoln Avenue's Board, Mr. Clairday is a member of the San Gabriel Valley Habitat for Humanity Board of Directors.



**ROBERT J. GOMPERZ**

**VICE PRESIDENT**

Robert J. Gomperz has been a Board member since 1990. He is retired from the Metropolitan Water District of Southern California where he coordinated various communications programs to the public about Metropolitan's programs and policies. Mr. Gomperz has been a public relations professional for more than four decades. He has a degree in Management from the University of Redlands. Prior to joining Metropolitan, he was Pasadena City College's Public Information Director for 12 years. Mr. Gomperz also represented West Altadena for 10 years as a Foothill Municipal Water District director and as a Southern California region director on the Association of California Water Agencies Board.



**LAWRENCE W. DUNCAN**

**1ST VICE PRESIDENT**

Lawrence W. Duncan is a retired textile industry supervisor and a 52-year Altadena resident. Mr. Duncan is entering his 19th year as a member of the Lincoln Board and also serves as the Company's Community Liaison Officer.



**ANN R. DOUGHERTY**

**TREASURER**

Ann R. Dougherty is a retired Management Consultant. She worked as an Executive Director for various non-profit organizations for 27 years. She currently serves on the Advisory Board for the San Gabriel Valley Habitat for Humanity where she has been involved for 22 years. She is a 48-year resident of Altadena.



**DIEGO FERNANDEZ**

**ASSISTANT SECRETARY**

Diego Fernandez is an Operating Partner with the El Cholo Restaurant Management Group LLC. He started work with El Cholo at the age of 18 and in 1994 he was promoted to the position of General Manager. In 2000 he became an Operating Partner. As a partner, Diego has been involved with the opening of El Cholo-Pasadena, Rose City Catering and Hart Pony Baseball & Softball. Mr. Fernandez brings a broad array of business and management skills to Lincoln Avenue. Mr. Fernandez has lived in Altadena for the past 14 years and was appointed to the Board in 2014.

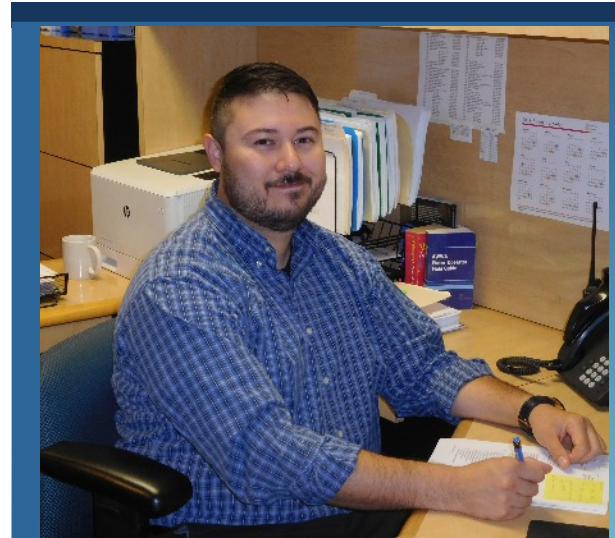


# Office Staff



*Maria Roxanna Autran*

Office Supervisor  
oversees Bookkeeping/Accounting  
and all administrative compliance.



*Benjamin Bowen*

Water Quality Coordinator  
and Administrative Assistant  
oversees all areas of water quality compliance.



*Wendy Childs*

Customer Service Representative,  
Water Stock Clerk and  
Water Conservation Coordinator



*Jesus Bugarin*

Customer Service Representative  
and Administrative Assistant

# Field Staff



**Left to right:**

Michael Cotter, Field Supervisor  
Asia Smith, Field Supervisor  
Bartolo Gonzalez, Field Representative  
Dave Castillo, Field Representative  
Nicholas Carino, Field Representative  
Jack Harms, Field Representative  
Jeremy Rogers, Field Representative