

WATER QUALITY REPORT

2019



LETTER FROM THE GENERAL MANAGER

At Anaheim Public Utilities, **our goal is to ensure that we deliver high quality water and reliable services to our customers** – including 360,000 residents, 20,000 businesses, and more than 50 schools. This is the result of hard work by our employees who conduct and oversee more than 44,000 water quality tests, 2,300 hydrant inspections, and 6,800 valve tests each year.

A major highlight in 2018 was the **completion of the rehabilitation of the La Palma Water Complex** that was in need of upgrades after more than 60 years of service to the Central and West Anaheim communities. The complex supplies more than 50 million gallons of water per day to our customers, and can serve approximately **9% of Anaheim's water demand**. The complex received a new pump station and the reconstruction of a 4 million gallon reservoir that meets current seismic standards making it more resilient during natural disasters.

With an emphasis on maintaining a sustainable city, we have continued our efforts to collect and reuse water. Regionally, we receive recycled water through the Orange County Water District that is in the process of expanding their Groundwater

LA PALMA WATER COMPLEX SUPPLIES MORE THAN
50 MILLION GALLONS
OF WATER PER DAY

Replenishment System, which will add to Orange County's resiliency during future droughts. Locally, we expanded our very own recycled water system to irrigate almost 7 acres of Pearson Park, Anaheim's premier and oldest park. The expansion will save our city more than 6 million gallons of potable water per year. This expansion means that a good portion of the downtown Anaheim area – including around City Hall, Anaheim West Tower, and Pearson Park – uses recycled water for irrigation.

While these milestones are important to our sustainable future, we are always cognizant that **our customers value affordable and safe drinking water**, which is why we work hard to control costs, ensure we meet the highest quality standards, and maintain competitive water rates compared to other Orange County providers. If you have any questions about your water quality, please don't hesitate to get in touch at [714.765.4556](tel:714.765.4556) or waterquality@anaheim.net, or go to anaheim.net/utilities for information on ways to save on your water bill.

Sincerely,
Dukku Lee
General Manager

ANAHEIM'S SOURCES OF SUPPLY



Anaheim has clean reliable sources which provide water to homes and businesses.

Anaheim's water supply is a blend of groundwater from our own wells, as well as water imported from Northern California and the Colorado River by **The Metropolitan Water District of Southern California (MWD)**, who serves approximately 19 million customers across six counties.

The source water for our wells is a natural aquifer that is replenished with water from the Santa Ana River, local rainfall, and imported water.

Managed by the Orange County Water District, the groundwater basin is 350 square miles in area and lies beneath most of northern and central Orange County. Anaheim and more than 20 cities and retail water districts pump from the groundwater basin to provide water to homes and businesses.

GROUNDWATER BASIN:

350 SQUARE
MILES

WATER QUALITY INFORMATION



WATER QUALITY STANDARDS

Drinking water standards established by the U.S. EPA and the State Water Resources Control Board 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 public health goals (PHGs) or maximum contaminant levels goals (MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

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.

PRIMARY DRINKING WATER STANDARD:

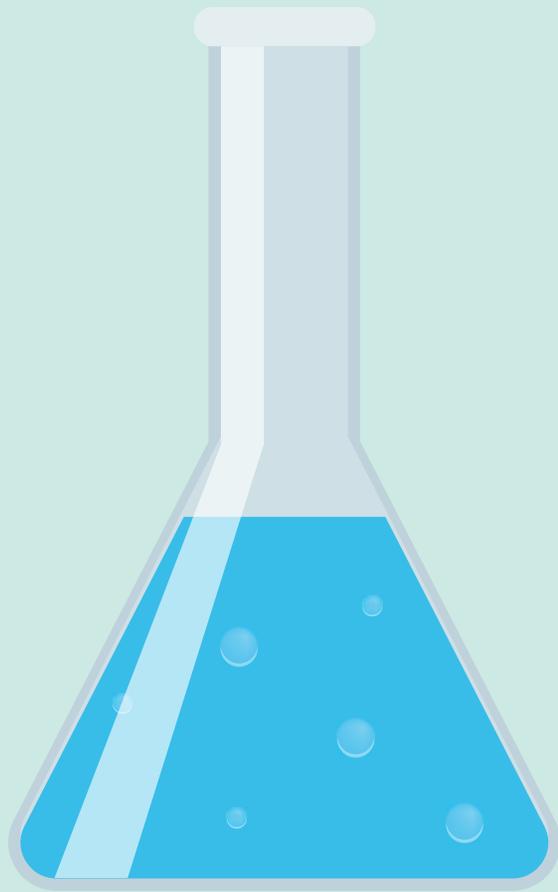
MCLs and MRDLs for contaminants that affect health, along with their monitoring and reporting requirements, and water treatment requirements.

REGULATORY 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):

The level above which a water agency is required to notify its governing body if an unregulated contaminant is found in its drinking water.



WATER QUALITY GOAL

In addition to mandatory water quality standards, the U.S. EPA and California EPA have set voluntary water quality goals for some contaminants. The chart in this report includes three types of water quality goals:

MCLG

MAXIMUM CONTAMINANT
LEVEL GOAL

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

MRDLG

MAXIMUM RESIDUAL
DISINFECTANT LEVEL GOAL

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.

PHG

PUBLIC HEALTH GOAL

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.

CITY OF ANAHEIM WATER QUALITY



2019 CITY OF ANAHEIM WATER QUALITY (based on 2018 data)

Chemical	MCL	PHG (MCLG)	Groundwater Average Amount	Lenain Average Amount	MWD Average Amount	Range of Detections	Most Recent Sampling Date	Typical Source of Contaminant
Radiologicals								
Uranium (pCi/L)	20	0.43	5.6	3.2	ND	ND - 9.6	2018	Erosion of Natural Deposits
Gross Alpha (pCi/L)	15	(0)	<3	6.7	ND	ND - 6.7	2017	Erosion of Natural Deposits
Organic Chemicals								
Trichloroethylene (ppb)	5	1.7	<0.5	ND	ND	ND - 1.8	2018	Chemical Factories Discharge
1,1-Dichloroethene (ppb)	6	10	<0.5	ND	ND	ND - 2.5	2018	Chemical Factories Discharge
Inorganic Chemicals								
Aluminum (ppm)	1	0.6	ND	ND	0.11	ND - 0.31	2018	Water Treatment Chemical
Arsenic (ppb)	10	0.004	ND	2.6	ND	ND - 2.6	2018	Erosion of Natural Deposits
Barium (ppm)	1	2	<0.1	0.12	0.12	ND - 0.12	2018	Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.43	0.38	0.7	0.28 - 0.9	2018	Erosion of Natural Deposits, Water Additive
Nitrate as N (ppm)	10	10	2.7	ND	ND	ND - 5.4	2018	Fertilizers, Septic Tanks
Nitrate+Nitrite as N (ppm)	10	10	2.7	ND	ND	ND - 5.4	2018	Fertilizers, Septic Tanks
Disinfection Byproducts								
Bromate (ppb)	10 (RAA)	0.1	n/a	6	4	ND - 14	2018	Water Disinfection Byproduct
Secondary Standards*								
Aluminum (ppb)	200*	600	ND	ND	110	ND - 310	2018	Water Treatment Chemical
Chloride (ppm)	500*	n/a	88	100	95	56 - 115	2018	Erosion of Natural Deposits
Color (units)	15*	n/a	ND	ND	ND	ND - 5	2018	Natural Organic Materials
Odor (threshold odor number)	3*	n/a	ND	1	2	ND - 4	2018	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	924	1000	930	655 - 1110	2018	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	140	237	206	96 - 250	2018	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	577	670	580	380 - 702	2018	Erosion of Natural Deposits
Turbidity (NTU)	5*	n/a	0.08	0.05	ND	ND - 0.2	2018	Erosion of Natural Deposits

MEETS OR EXCEEDS ALL STATE AND FEDERAL WATER QUALITY STANDARDS BASED ON 2018 DATA

2019 CITY OF ANAHEIM WATER QUALITY (based on 2018 data)

Chemical	MCL	PHG (MCLG)	Groundwater Average Amount	Lenain Average Amount	MWD Average Amount	Range of Detections	Most Recent Sampling Date	Typical Source of Contaminant
Unregulated Contaminants Requiring Monitoring								
Bicarbonate (as HCO ₃) (ppm)	Not Regulated	n/a	229	140	n/a	140 - 276	2018	Erosion of Natural Deposits
Boron (ppb)	NL=1,000	n/a	150	130	130	ND - 250	2018	Erosion of Natural Deposits
Chromium, Total (ppb) (a)	50	n/a	0.64	<0.2	<0.2	ND - 2.0	2018	Erosion of Natural Deposits
Chromium, Hexavalent (ppb) (a)	Not Regulated	0.02	0.22	0.03	0.04	ND - 2.3	2018	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	98	69	60	52 - 113	2018	Erosion of Natural Deposits
Dichlorodifluoromethane (ppb)	NL=1,000	n/a	<0.5	ND	ND	ND - 0.6	2018	Industrial Waste Discharge
Magnesium (ppm)	Not Regulated	n/a	18	27	24	10 - 27	2018	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	7.8	8.1	8.1	7.5 - 8.2	2018	Erosion of Natural Deposits
Potassium (ppm)	Not Regulated	n/a	4.1	5.2	4.6	3.5 - 5.2	2018	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	65	95	95	41 - 103	2017	Erosion of Natural Deposits
Total Alkalinity (ppm as CaCO ₃)	Not Regulated	n/a	188	119	109	99 - 226	2018	Erosion of Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	18	15	14	3.4 - 21	2018	Erosion of Natural Deposits
Total Hardness (ppm as CaCO ₃)	Not Regulated	n/a	316	262	247	183 - 365	2018	Erosion of Natural Deposits
Total Organic Carbon (ppm)	Not Regulated	TT	0.3	2.8	2.4	ND - 3.2	2018	Various Natural and Man-made Sources
Chlorate (ppb) (a)	NL=800	n/a	233	222	31	ND - 622	2018	Byproduct of chlorine disinfection
Molybdenum (ppb) (a)	Not Regulated	n/a	4.5	4.7	5.0	3.1 - 6.1	2015	Erosion of Natural Deposits
Strontium (ppb) (a)	Not Regulated	n/a	938	1038	986	539 - 1200	2015	Erosion of Natural Deposits
Vanadium (ppb) (a)	NL=50	n/a	3.6	2.5	ND	ND - 4.5	2018	Erosion of Natural Deposits
1,4-Dioxane (ppb) (a)	NL=1	n/a	0.39	ND	ND	ND - 0.64	2018	Chemical Factories Discharge
Chlorodifluoromethane (ppb) (a)	Not Regulated	n/a	<0.08	ND	ND	ND - 0.17	2015	Industrial Waste Discharge
Perfluorooctane sulfonate (ppb) (a)	NL=0.013	n/a	<0.04	ND	ND	ND - 0.07	2015	Industrial Waste Discharge
Perfluorooctanoic acid (ppb) (a)	NL=0.014	n/a	<0.02	ND	ND	ND - 0.03	2015	Industrial Waste Discharge

ppm = parts-per-million; ppb = parts-per-billion; pCi/L = picoCuries per liter; NTU = nephelometric turbidity units; NL = notification level; n/a = not applicable; RAA = running annual average
 ND = not detected; < = average is less than the detection limit for reporting purposes; MCL = Maximum Contaminant Level; MCLG = federal MCL Goal; PHG = California Public Health Goal
 µmho/cm = micromho per centimeter; TT = treatment technique; *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).
 (a) UCMR3 (Federal Unregulated Contaminant Monitoring Rule / Phase 3) - detection/reporting levels are much lower than current California regulatory detection/reporting level standards.

MEETS OR EXCEEDS ALL STATE AND FEDERAL WATER QUALITY STANDARDS BASED ON 2018 DATA

2019 CITY OF ANAHEIM WATER QUALITY (based on 2018 data)

	Treatment Technique	Turbidity Measurements	Sample Date	Typical Source of Contaminant
Turbidity - treatment plant combined filter effluent				
1) Highest single turbidity measurement	1 NTU	Lenain = 0.16 NTU	2018	Soil run-off
	1 NTU	MWD = 0.07 NTU	2018	Soil run-off
2) Percentage of samples less than 0.3 NTU	95%	Lenain = 100%	2018	Soil run-off
	95%	MWD = 100%	2018	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 the City of Anaheim's and Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique". 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.

MEETS OR EXCEEDS ALL STATE AND FEDERAL WATER QUALITY STANDARDS BASED ON 2018 DATA

2019 CITY OF ANAHEIM WATER QUALITY (based on 2018 data)

	MCL MRDL/MRDLG	Average Amount	Range of Detection	Typical Source of Contaminant
Disinfection Product				
Total Trihalomethanes (ppb)	80	Highest LRAA = 55	12 - 81	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	Highest LRAA = 12	2.0 - 21	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	1.0	ND - 2.6	Disinfectant Added for Treatment
Aesthetic Quality				
Color (color units)	15*	ND	ND	Erosion of Natural Deposits
Odor (threshold odor number)	3*	1	ND - 1	Erosion of Natural Deposits
Turbidity (ntu)	5*	0.09	0.05 - 0.32	Erosion of Natural Deposits

Total trihalomethanes and haloacetic acids are tested quarterly at 12 locations. Chlorine residual disinfectant levels are tested weekly at 51 locations. Color, odor, and turbidity are tested monthly at 12 locations. **MRDL** = Maximum Residual Disinfectant Level; **MRDLG** = Maximum Residual Disinfectant Level Goal; **LRAA** = Locational Running Annual Average; **ND** = not detected; **ntu** = nephelometric turbidity units; *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (color, odor, clarity).

LEAD AND COPPER LEVELS AT RESIDENTIAL TAPS

	Action Level (AL)	Health Goal	90th Percentile Value	Sites Exceeding AL/number of Sites	Typical Source of Contaminant
Lead (ppb)	15	0.2	ND<5	1 / 53	Corrosion of Household Plumbing
Copper (ppm)	1.3	0.3	0.26	0 / 53	Corrosion of Household Plumbing

Every three years, at least 50 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2018. Lead was detected in 3 samples; one exceeded the action level. Copper was detected in 40 samples; none exceeded the action level. The regulatory action level is the concentration which, if exceeded in more than ten percent of the homes tested, triggers treatment or other requirements that a water system must follow. The City of Anaheim complied with the lead and copper action levels. In 2018, thirteen schools requested lead testing in Anaheim.

MEETS OR EXCEEDS ALL STATE AND FEDERAL WATER QUALITY STANDARDS BASED ON 2018 DATA

BASIC INFORMATION ABOUT DRINKING WATER

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells.

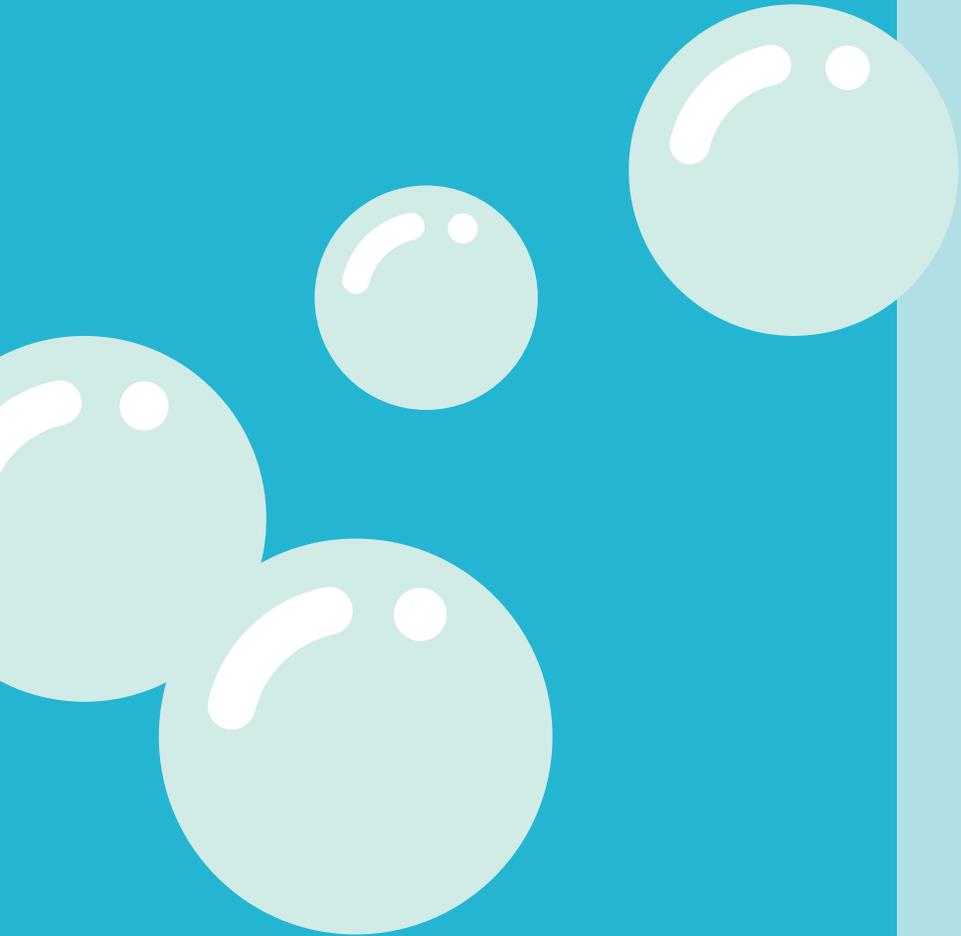


THE EPA WOULD LIKE YOU TO KNOW:

"As water travels over the surface of 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 animal or human activity. All 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. In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in the water provided by public water systems. State Board Regulations also establish limits for contaminants in bottled water that provide the same protection for public health. More information about contaminants and potential health effects can be obtained at [water.epa.gov/drink](https://www.water.epa.gov/drink) or by calling the U.S. EPA's Safe Drinking Water Hotline at **800.426.4791**."

THROUGHOUT CALIFORNIA, THE EPA WANTS YOU TO BE AWARE THAT 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
- Pesticides and herbicides, that may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses, radioactive contaminants, that can be naturally occurring or the result of oil and gas production or mining activities
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, and the urban storm water runoff, agricultural application and septic systems



INFORMATION ABOUT LEAD IN TAP WATER

Anaheim Public Utilities is responsible for providing high-quality drinking water, but cannot control the variety of materials used in home plumbing components. If you would like a free water quality test, please contact us to schedule your assessment.

THE EPA WOULD LIKE YOU TO KNOW:

"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. Anaheim Public Utilities is responsible for providing high-quality drinking water, but cannot control the variety of materials used in home plumbing components. **When your water has been sitting for several hours, you can minimize the potential for lead exposure by running your tap for 30 seconds to two minutes before using it for drinking or cooking.** If you are concerned about lead in your water, you may wish to have it tested.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline, **800.426.4791**, or online at epa.gov/lead."

RUN YOUR TAP WATER FOR

30 SECONDS
TO 2 MINUTES

NOTICE FOR IMMUNO- COMPROMISED PEOPLE

THE EPA WOULD LIKE YOU TO KNOW:

“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. The U.S. EPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from [water.epa.gov/drink](https://www.water.epa.gov/drink) or the Safe Drinking Water Hotline **800.426.4791**.”



Immunocompromised
people should seek advice
about drinking water from
their health care providers

SOURCE WATER ASSESSMENTS

GROUND WATER ASSESSMENT

Anaheim has completed source water assessments of areas around each well and around the Walnut Canyon Reservoir, which provides imported water to the Lenain Water Treatment Facility. As in any urban area, Orange County's groundwater is considered potentially vulnerable to contamination from sources such as gas stations, dry cleaners, and industrial activities.

To help prevent surface contamination of our wells, we seal the upper 400 to 500 feet of the well casing. A copy of the complete assessment is available at the State Water Resources Control Board, Division of Drinking Water, 605 W. Santa Ana Boulevard, Building 28, Santa Ana, CA 92701. You may request a summary of the assessment by contacting the Division of Drinking Water - Sanitary Engineer at **714.547.0430** or Anaheim's Environmental Services Division at **714.765.4288**.

IMPORTED WATER ASSESSMENT

The Metropolitan Water District of Southern California (MWD) updated its source water assessment of the Colorado River and State Water Project supplies in 2012. Colorado River supplies are considered to be most vulnerable to recreation contamination, urban/storm water runoff, increasing urbanization, and wastewater. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting MWD by phone, **at 213.217.6850**.

MORE THAN

44,000

TESTS CONDUCTED

TO ASSESS OUR WATER QUALITY

CONTACT INFORMATION

For information about this report or your water quality in general, please contact our Water Quality Laboratory at **714.765.4556**, or feel free to e-mail us at waterquality@anaheim.net. You may also address water quality and other utility issues by attending a Public Utilities Board meeting, typically scheduled for 5 p.m. on the fourth Wednesday of each month, at 201 South Anaheim Boulevard, Anaheim, California, 11th Floor Conference Room. Contact the U.S. Environmental Protection Agency to learn more about the potential health effects of contaminants listed in this report, visit water.epa.gov/drink or call their hotline at **800.426.4791**.



**Questions about
your water?
Contact us for
answers.**

City of Anaheim

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ANAHEIM PUBLIC UTILITIES STAFF

Dukku Lee - General Manager

Janet Lonneker - Assistant General Manager, Electric Services

Brian Beelner - Assistant General Manager, Finance and Administration

Graham Bowen - Assistant General Manager, Power Supply

Michael Moore - Assistant General Manager, Water Services

Janis Lehman - Chief Risk Officer

David Albaugh - Administrative Services Manager

THIS INFORMATION ABOUT YOUR DRINKING WATER IS VERY IMPORTANT

For more
information or
translation,
contact us at
714.765.3300

Esta información acerca de su agua potable es muy importante.
Para más información o traducción, llámenos al **714.765.3300**.

귀하의 음용수에 관한 이 정보는 매우 중요합니다.
보다 상세한 정보, 또는 번역은 **714.765.3300** 으로 문의하십시오.

这则有关饮用水的信息非常重要。
欲了解更多信息或译文，请致电**714.765.3300**与我们联系。

Ang impormasyong ito tungkol sa inyong inuming tubig ay
napakahalaga. Para sa karagdagang impormasyon o
pagsasaling-wika, makipag-ugnay sa amin sa **714.765.3300**.