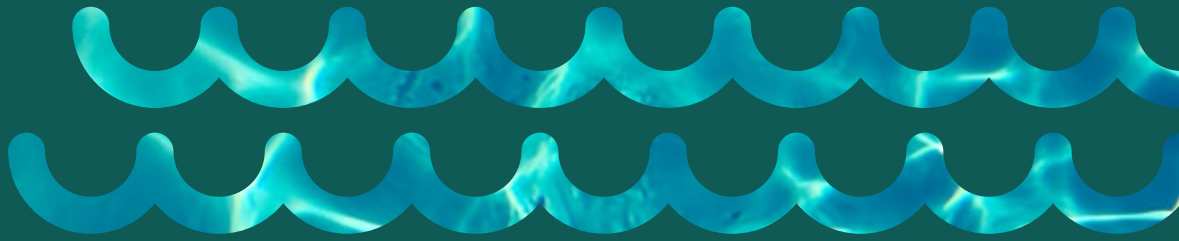
2020 WATER QUALITY REPORT

ANAHEIM PUBLIC UTILITIES

Letter from the

GENERAL MANAGER



Like you, Anaheim Public Utilities is adapting to the realities of recent world events and the onset of coronavirus (COVID-19). As a safety-driven organization, we have had to redefine how we interact with our customers, fellow employees, and even our own families.

With so many residents and businesses affected in some fashion, we are working to ensure that drinking water remains safe and reliable while offering a variety of assistance programs to help customers. This includes no service disconnections for nonpayment, postponing non-essential planned outages, waiving late fees, and offering payment plans and emergency assistance.

How can we be sure that Anaheim's water is safe to drink? We conduct more than 44,000 water quality tests each year at our certified water quality laboratory. Anaheim's water supplies meet or exceed federal and state regulations and go through disinfection and treatment processes.

In addition to coronavirus, recent regulations have been issued regarding per- and polyfluoroalkyl substances (PFAS) and Anaheim has transitioned from groundwater to more imported water supplies. PFAS are a group of manufactured chemicals used in a variety of industries such as carpets, non-stick cookware, and firefighting foams since the 1940s and have been found in trace amounts in groundwater supplies. With many of our wells shut down, we are developing groundwater treatment options to be able to use lower cost groundwater for the long-term benefit of customers.

For more than 140 years, Anaheim Public Utilities has had the honor of serving the community with its water needs, and we will continue to help our customers emerge from the unprecedented impacts we are all experiencing together.

If you have any questions about your water quality, please do not hesitate to get in touch with us at **714.765.4556** or **waterquality@anaheim.net**, or visit **www.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 (OCWD)**, 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.

Having multiple sources available ensure Anaheim can continue supplying safe and reliable water. Each water source is tested to make sure we continue to supply the highest quality water.

WATER QUALITY INFORMATION

ANAHEIM PUBLIC UTILITIES

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.

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.

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.

CITY OF ANAHEIM WATER QUALITY

ANAHEIM PUBLIC UTILITIES

2020 CITY OF ANAHEIM WATER QUALITY (BASED ON 2019 DATA)

Chemical	MCL	PHG (MCLG)	Groundwater Average Amount	MWD Average Amount	Range of Detections	Most Recent Sampling Date	Typical Source of Contaminant
Radiologicals							
Uranium (pCi/L)	20	0.43	7.2	ND	ND - 12.5	2019	Erosion of Natural Deposits
Gross Alpha (pCi/L)	15	(0)	<3	ND	ND - 10.4	2019	Erosion of Natural Deposits
Organic Chemicals							
Trichloroethylene (ppb)	5	1.7	<0.5	ND	ND - 2.3	2019	Chemical Factories Discharge
1,1-Dichloroethene (ppb)	6	10	<0.5	ND	ND - 2.6	2019	Chemical Factories Discharge
Toluene (ppb)	150	150	ND	0.6	ND - 0.6	2019	Chemical Factories Discharge
Inorganic Chemicals							
Aluminum (ppm)	1	0.6	ND	0.12	ND - 0.11	2019	Water Treatment Chemical
Arsenic (ppb)	10	0.004	<2	ND	ND - 2.3	2019	Erosion of Natural Deposits
Barium (ppm)	1	2	<0.1	0.12	ND - 0.10	2019	Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.45	0.7	0.1 - 0.9	2019	Erosion of Natural Deposits, Water Additive
Nitrate as N (ppm)	10	10	2.5	0.5	1.2 - 4.8	2019	Fertilizers, Septic Tanks
Nitrate+Nitrite as N (ppm)	10	10	2.5	0.5	1.2 - 4.8	2019	Fertilizers, Septic Tanks
Disinfection Byproducts							
Bromate (ppb)	10 (RAA)	0.1	n/a	2	ND - 8.1	2019	Water Disinfection Byproduct
Secondary Standards*							
Aluminum (ppb)	200*	600	ND	123	ND - 110	2019	Water Treatment Chemical
Chloride (ppm)	500*	n/a	85	53	46 - 115	2019	Erosion of Natural Deposits
Color (units)	15*	n/a	ND	ND	ND - 5	2019	Natural Organic Materials
Odor (threshold odor number)	3*	n/a	ND	1	ND - 1	2019	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	904	492	435 - 1110	2019	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	136	82	65 - 197	2019	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	558	285	244 - 702	2019	Erosion of Natural Deposits
Turbidity (NTU)	5*	n/a	0.08	ND	ND - 0.2	2019	Erosion of Natural Deposits

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.
(b) **UCMR4** (Federal Unregulated Contaminant Monitoring Rule / Phase 4) - detection/reporting levels are much lower than current California regulatory detection/reporting level standards.
ppt = parts-per-trillion; **PFOA + PFOS (ppt)** = Sum of Perfluorooctanoic acid (ppt) and Perfluorooctanesulfonate acid (ppt); **HA** = health advisory

ANAHEIM PUBLIC UTILITIES

2020 CITY OF ANAHEIM WATER QUALITY (BASED ON 2019 DATA)

Chemical	MCL	PHG (MCLG)	Groundwater Average Amount	MWD Average Amount	Range of Detections	Most Recent Sampling Date	Typical Source of Contaminant
Unregulated Contaminants Requiring Monitoring							
Bicarbonate (as HCO3) (ppm)	Not Regulated	n/a	226	n/a	154 - 264	2019	Erosion of Natural Deposits
Boron (ppb)	NL=1,000	n/a	150	120	ND - 250	2019	Erosion of Natural Deposits
Chromium, Total (ppb) (a)	50	n/a	0.64	n/a	ND - 2.0	2015	Erosion of Natural Deposits
Chromium, Hexavalent (ppb) (a)	Not Regulated	0.02	0.22	ND	ND - 2.3	2019	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	96	28	23 - 113	2019	Erosion of Natural Deposits
Dichlorodifluoromethane (ppb)	NL=1,000	n/a	<0.5	ND	ND - 0.7	2019	Industrial Waste Discharge
Magnesium (ppm)	Not Regulated	n/a	17	13	10 - 22	2019	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	7.9	8.5	7.5 - 8.5	2019	Erosion of Natural Deposits
Potassium (ppm)	Not Regulated	n/a	4.1	2.6	2.2 - 5.1	2019	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	65	53	43 - 94	2019	Erosion of Natural Deposits
Total Alkalinity (ppm as CaCO3)	Not Regulated	n/a	185	70	67 - 217	2019	Erosion of Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	18	7	6 - 21	2019	Erosion of Natural Deposits
Total Hardness (ppm as CaCO3)	Not Regulated	n/a	310	118	101 - 365	2019	Erosion of Natural Deposits
Total Organic Carbon (ppm) (b)	Not Regulated	TT	0.32	2.4	0.16 - 2.6	2019	Various Natural and Man-made Sources
Chlorate (ppb) (a)	NL = 800	n/a	233	49	ND - 622	2018	Byproduct of chlorine disinfection
Molybdenum (ppb) (a)	Not Regulated	n/a	4.5	n/a	3.1 - 5.3	2015	Erosion of Natural Deposits
Strontium (ppb) (a)	Not Regulated	n/a	938	n/a	539 - 1200	2015	Erosion of Natural Deposits
Vanadium (ppb) (a)	NL=50	n/a	3.7	ND	ND - 5.1	2019	Erosion of Natural Deposits
1,4-Dioxane (ppb) (a)	NL=1	n/a	0.39	n/a	0.18 - 0.64	2015	Chemical Factories Discharge
Chlorodifluoromethane (ppb) (a)	Not Regulated	n/a	<0.08	ND	ND - 0.17	2015	Industrial Waste Discharge
Bromide (ppm) (b)	Not Regulated	n/a	0.18	n/a	0.09 - 0.28	2019	Erosion of Natural Deposits
Manganese (ppb) (b)	Not Regulated	n/a	0.86	2.10	<0.4 - 4.1	2019	Erosion of Natural Deposits
Germanium (ppb) (b)	Not Regulated	n/a	0.04	0.10	<0.3 - 0.4	2019	Erosion of Natural Deposits
Perfluorooctanesulfonate acid (ppt)	NL = 6.5	HA = 70	33.6	ND	ND - 59.0	2019	Industrial Waste Discharge
Perfluorooctanoic acid (ppt)	NL = 5.1	HA = 70	13.3	ND	ND - 26.9	2019	Industrial Waste Discharge
PFOA + PFOS (ppt)	Not Regulated	HA = 70	46.9	ND	ND - 84.2	2019	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.
(b) **UCMR4** (Federal Unregulated Contaminant Monitoring Rule / Phase 4) - detection/reporting levels are much lower than current California regulatory detection/reporting level standards.
ppt = parts-per-trillion; **PFOA + PFOS (ppt)** = Sum of Perfluorooctanoic acid (ppt) and Perfluorooctanesulfonate acid (ppt); **HA** = health advisory

ANAHEIM PUBLIC UTILITIES

2020 CITY OF ANAHEIM WATER QUALITY (BASED ON 2019 DATA)

Turbidity - treatment plant combined filter effluent	Treatment Technique	Turbidity Measurements	Sample Date	Typical Source of Contaminant
1) Highest single turbidity measurement	1 NTU	MWD = 0.05 NTU	2019	Soil run-off
2) Percentage of samples less than 0.3 NTU	95%	MWD = 100%	2019	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.

2020 CITY OF ANAHEIM DISTRIBUTION SYSTEM WATER QUALITY (BASED ON 2019 DATA)

	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	Typical Source of Contaminant
Disinfection Byproducts				
Total Trihalomethanes (ppb)	80	Highest LRAA = 47	12 - 30	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	Highest LRAA = 10	2.9 - 8.3	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	1.3	0.1 - 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*	0.10	0.01 - 0.24	Erosion of Natural Deposits
UCMR4 Analyses - Haloacetic Acids (a)				
Bromochloroacetic Acid (ppb)	n/a	2.45	2.1 - 2.9	Byproducts of Chlorine Disinfection
Bromodichloroacetic Acid (ppb)	n/a	1.07	1.0 - 1.2	Byproducts of Chlorine Disinfection
Chlorordibromoacetic Acid (ppb)	n/a	0.72	0.7 - 0.8	Byproducts of Chlorine Disinfection
Dibromoacetic Acid (ppb)	n/a	1.16	1.0 - 1.3	Byproducts of Chlorine Disinfection
Dichlororacetic Acid (ppb)	n/a	3.13	2.4 - 4.1	Byproducts of Chlorine Disinfection
Trichlororacetic Acid (ppb)	n/a	1.48	1.3 - 1.8	Byproducts of Chlorine Disinfection

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).
(a) **UCMR4** (Federal Unregulated Contaminant Monitoring Rule / Phase 4) - detection/reporting levels are much lower than current EPA/California regulatory detection/reporting level standards.

	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 2019, two schools requested lead testing in Anaheim.

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** 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

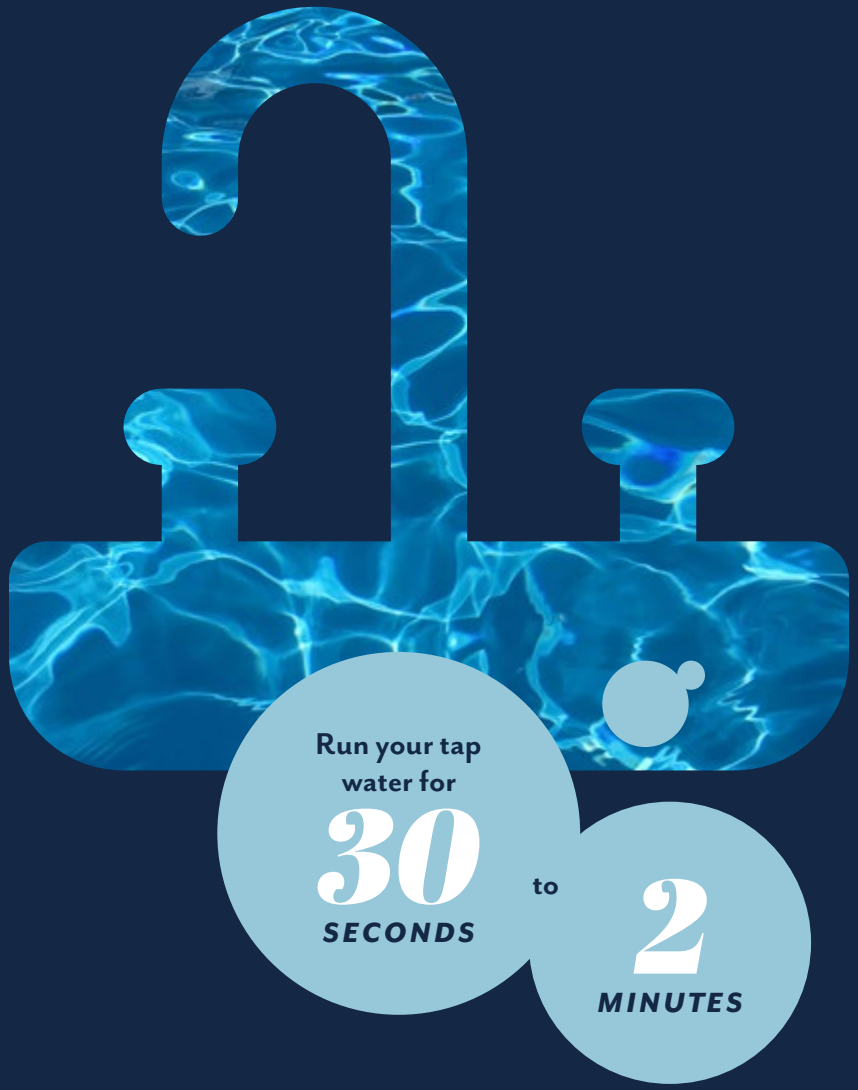
LEAD IN TAP WATER

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**."



ANAHEIM PUBLIC UTILITIES

Notice for

IMMUNO–COMPROMISED PEOPLE

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

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** or the Safe Drinking Water Hotline **800.426.4791**."

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. These water sources are tested throughout the year to ensure the supplied water remains safe.

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**.

City of Anaheim

LEADERSHIP

CITY COUNCIL

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Jordan Brandman - District 2
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Lucille Kring - District 4
Stephen Faessel - Mayor Pro Term, District 5
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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

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**.

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**.

ANAHEIM PUBLIC UTILITIES