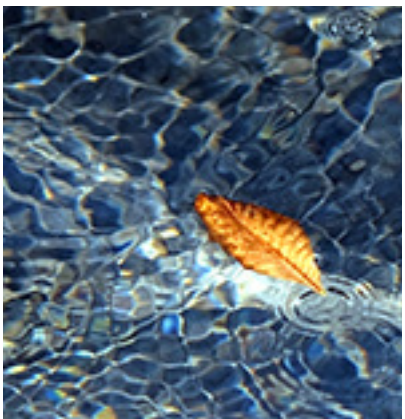
ANAHEIM'S

Water Quality Report

YEAR 2017

ANAHEIM

PUBLIC UTILITIES



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LETTER FROM THE

General Manager

Dear Anaheim Water Customer:

Delivering high quality water to Anaheim customers is a responsibility that Anaheim Public Utilities employees take very seriously. Over 44,000 water quality tests are conducted annually throughout the city – that's an average of 120 tests every day. Anaheim operates its own fully accredited water quality testing laboratory, and utilizes state certified laboratories for tests that require specialized equipment to ensure that the water provided to Anaheim customers meets or exceeds standards established by the U.S. Environmental Protection Agency and the State Water Resources Control Board, Division of Drinking Water.

While we can assure you that water has been properly treated before it reaches your home or business, you may still have questions about your water quality. Anaheim Public Utilities offers no cost water quality testing services, and we will send our technician to test the water at your request. If you have any questions about your water quality, we're here to help. Please get in touch at 714.765.4556 or waterquality@anaheim.net.

Safe and reliable drinking water is an important part of any thriving community. California endured an extended drought, and, thanks in large part to your conservation efforts, we were able to meet the State's required water conservation goals. Only this past winter have water storage levels increased due to above average rainfall and a much improved snowpack. However, water conservation needs to become part of our everyday routine. If you would like a survey of your home or business to assess your water use and provide you with conservation ideas and rebate opportunities, please visit our website at www.anaheim.net/utilities.

Lastly, I would like to thank all our customers for bearing through the long drought and supporting Anaheim Public Utilities' commitment to the highest standards of performance. As a public agency, we are here to serve you, your families, and local businesses with high quality water every day.

Dukku Lee

ANAHEIM'S

Sources of Supply

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

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). Customers may also receive water from Anaheim's owned and operated Lenain Water Treatment Facility.

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.

Water Quality Information

Basic Information

ABOUT DRINKING WATER

THE EPA WOULD LIKE YOU TO KNOW

"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 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
- 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
- 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
- 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.

Safe Drinking Water Hotline

800

426-4791

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**."

NOTICE FOR

Immunocompromised

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 (CDC) 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**."

WHAT ARE
Water Quality Standards?

DRINKING WATER STANDARDS ESTABLISHED BY THE U.S. EPA AND 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:

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.

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.

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.

WHAT IS A

Water Quality Goal?

IN ADDITION TO MANDATORY WATER QUALITY STANDARDS, U.S. EPA AND CAL/EPA HAVE SET VOLUNTARY WATER QUALITY GOALS FOR SOME CONTAMINANTS. THE CHART IN THIS REPORT INCLUDES THREE TYPES OF 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 U.S. Environmental Protection Agency.

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.

CITY OF ANAHEIM

Water Quality

MEETS OR EXCEEDS ALL STATE AND FEDERAL WATER QUALITY STANDARDS BASED ON 2016 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	5.1	4.7	3.0	2.0 - 8.5	2016	Erosion of Natural Deposits
Gross Alpha (pCi/L)	15	(0)	<3	ND	ND	ND - 4	2016	Erosion of Natural Deposits
Gross Beta (pCi/L)	50(a)	(0)	n/a	n/a	5	4 - 6	2016	Decay of Natural and Man-made Deposits
Organic Chemicals								
Trichloroethylene (ppb)	5	1.7	<0.5	ND	ND	ND - 1.0	2016	Chemical Factories Discharge
1,1-Dichloroethene (ppb)	6	10	<0.5	ND	ND	ND - 1.0	2016	Chemical Factories Discharge
Microbiological								
Total Coliform Bacteria (b)	5.0%	(0)	Distribution System-wide average: 0.03%			ND - 0.39%	2016	Naturally present in the environment
Inorganic Chemicals								
Aluminum (ppm)	1	0.6	ND	0.08	0.16	ND - 0.30	2016	Water Treatment Chemical
Arsenic (ppb)	10	0.004	ND	<2	ND	ND - 2.2	2016	Erosion of Natural Deposits
Barium (ppm)	1	2	<0.1	0.12	0.14	ND - 0.14	2016	Erosion of Natural Deposits
Chromium, Hexavalent (ppb)	10	0.02	<1	ND	ND	ND - 2.1	2016	Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.43	0.32	0.7	0.29 - 1.0	2016	Erosion of Natural Deposits, Water Additive
Nitrate as N (ppm)	10	10	2.8	ND	ND	ND - 5.0	2016	Fertilizers, Septic Tanks
Nitrate+Nitrite as N (ppm)	10	10	2.8	ND	ND	ND - 5.0	2016	Fertilizers, Septic Tanks
Disinfection Byproducts								
Bromate (ppb)	10 (RAA)	0.1	n/a	3	1.2	ND - 9	2016	Water Disinfection Byproduct
Secondary Standards*								
Aluminum (ppb)	200* RAA	600	ND	80	164	ND - 300	2016	Water Treatment Chemical
Chloride (ppm)	500*	n/a	88	100	103	57 - 115	2016	Erosion of Natural Deposits
Color (units)	15*	n/a	ND	ND	1	ND - 1	2016	Natural Organic Materials
Odor (threshold odor number)	3*	n/a	ND	2	2	ND - 3	2016	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	911	987	1038	743 - 1069	2016	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	139	251	259	120 - 262	2016	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	574	660	654	464 - 674	2016	Erosion of Natural Deposits
Turbidity (NTU)	5*	n/a	0.04	0.03	ND	ND - 0.2	2016	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) Gross Beta MCL: DDW considers 50 pCi/L to be the level of concern. The official MCL is '4 millirem/year (approximately 200 pCi/L) annual dose equivalent to the total body or any internal organ'.
(b) Total coliform MCL: No more than 5.0% of the monthly samples may be total coliform positive. The MCL was not violated.
(c) UCMR3 (Federal Unregulated Contaminant Monitoring Rule / Phase 3) - detection/reporting levels are much lower than current California regulatory detection/reporting level standards.

CITY OF ANAHEIM

Water Quality

MEETS OR EXCEEDS ALL STATE AND FEDERAL WATER QUALITY STANDARDS BASED ON 2016 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 HCO3) (ppm)	Not Regulated	n/a	234	150	n/a	150 - 276	2016	Erosion of Natural Deposits
Boron (ppb)	NL=1,000	n/a	140	150	150	ND - 240	2016	Erosion of Natural Deposits
Chromium, Total (ppb) (c)	50	n/a	0.64	<0.2	<0.2	ND - 2.0	2016	Erosion of Natural Deposits
Chromium, Hexavalent (ppb) (c)	10	0.02	0.44	0.03	0.04	ND - 2.3	2016	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	99	67	76	62 - 108	2016	Erosion of Natural Deposits
Dichlorodifluoromethane (ppb)	NL=1,000	n/a	<0.5	ND	ND	ND - 2.6	2016	Industrial Waste Discharge
Magnesium (ppm)	Not Regulated	n/a	18	28	26	16 - 28	2016	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	7.8	7.8	8.1	7.4 - 8.3	2016	Erosion of Natural Deposits
Potassium (ppm)	Not Regulated	n/a	4.1	4.8	5.1	3.6 - 5.1	2016	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	66	99	104	41 - 107	2016	Erosion of Natural Deposits
Total Alkalinity (ppm as CaCO3)	Not Regulated	n/a	192	120	119	112 - 226	2016	Erosion of Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	19	17	17	15 - 20	2016	Erosion of Natural Deposits
Total Hardness (ppm as CaCO3)	Not Regulated	n/a	321	292	298	250 - 347	2016	Erosion of Natural Deposits
Total Organic Carbon (ppm)	Not Regulated	TT	0.32	2.6	2.5	ND - 3.1	2016	Various Natural and Man-made Sources
Chlorate (ppb) (c)	NL = 800	n/a	233	222	109	ND - 622	2016	Byproduct of chlorine disinfection
Molybdenum (ppb) (c)	Not Regulated	n/a	4.5	4.7	5.0	3.1 - 6.1	2015	Erosion of Natural Deposits
Strontium (ppb) (c)	Not Regulated	n/a	938	1038	986	539 - 1200	2015	Erosion of Natural Deposits
Vanadium (ppb) (c)	NL=50	n/a	3.7	2.5	2.6	2.2 - 6.1	2015	Erosion of Natural Deposits
1,4-Dioxane (ppb) (c)	NL=1	n/a	0.39	ND	ND	0.18 - 0.64	2015	Chemical Factories Discharge
Chlorodifluoromethane (ppb) (c)	Not Regulated	n/a	<0.08	ND	ND	ND - 0.17	2015	Industrial Waste Discharge
Perfluorooctanesulfonate acid (ppb) (b)	Not Regulated	n/a	<0.04	ND	ND	ND - 0.07	2015	Industrial Waste Discharge
Perfluorooctanoic acid (ppb) (c)	Not Regulated	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) Gross Beta MCL: DDW considers 50 pCi/L to be the level of concern. The official MCL is '4 millirem/year (approximately 200 pCi /L) annual dose equivalent to the total body or any internal organ'.
(b) Total coliform MCL: No more than 5.0% of the monthly samples may be total coliform positive. The MCL was not violated.
(c) UCMR3 (Federal Unregulated Contaminant Monitoring Rule / Phase 3) - detection/reporting levels are much lower than current California regulatory detection/reporting level standards.

Turbidity - treatment plant combined filter effluent	Treatment Technique	Turbidity Measurements	Sample Date	Typical Source of Contaminant
1) Highest single turbidity measurement	1 NTU	Lenain = 0.12 NTU	2016	Soil run-off
	1 NTU	MWD = 0.05 NTU	2016	Soil run-off
2) Percentage of samples less than 0.3 NTU	95%	Lenain = 100%	2016	Soil run-off
	95%	MWD = 100%	2016	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.

CITY OF ANAHEIM

Water Quality

MEETS OR EXCEEDS ALL STATE AND FEDERAL WATER QUALITY STANDARDS BASED ON 2016 DATA

	MCL MRDL/MRDLG	Average Amount	Range of Detection	Typical Source of Contaminant
Disinfection Product				
Total Trihalomethanes (ppb)	80	Highest LRAA = 71	18 - 90	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	Highest LRAA = 15	3.4 - 22	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	0.9	ND - 3.4	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 - 0.38	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	0 / 52	Corrosion of Household Plumbing
Copper (ppm)	1.3	0.3	0.11	0 / 52	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 2015. Lead was detected in 2 samples; none exceeded the action level. Copper was detected in 23 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.

SOURCE

Water Assessments

"MORE THAN 44,000 TESTS WERE CONDUCTED TO ASSESS OUR WATER QUALITY."

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**.

Contact

INFORMATION

QUESTIONS ABOUT YOUR WATER? CONTACT US FOR ANSWERS

For information about this report or your water quality in general, please contact our Water Quality Laboratory at **714.765.4556**, or e-mail us at **waterquality@anaheim.net**. You may also address water quality and other utility issues by attending a Public Utilities Board meeting scheduled for 5 p.m. on the fourth Wednesday of each month, at Anaheim West Tower, 11th Floor Conference Room, Anaheim, California.

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**.

We comply with the Americans with Disabilities Act. For this information in other formats, contact: 714.765.3300, TTY 714.765.5125 or visit anaheim.net/utilities.

CITY OF ANAHEIM

CITY COUNCIL

Tom Tait, Mayor
Council Member James Vanderbilt - Mayor Pro Tem
Council Member Kris Murray - At Large
Council Member Denise Barnes - District 1
Council Member Jose F. Moreno - District 3
Council Member Lucille Kring - District 4
Council Member Stephen Faessel - District 5
Paul Emery, City Manager

PUBLIC UTILITIES BOARD

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Robert W. Hernandez, Board Member
Lon Cahill, Board Member
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Ernesto Medrano, Board Member

ANAHEIM PUBLIC UTILITIES STAFF

Dukku Lee, General Manager
Janet Lonneker, AGM, Electric Services
Brian Beelner, AGM, Finance and Administration
Graham Bowen, AGM, Power Supply
Michael Moore, AGM, Water Services
Janis Lehman, Chief Risk Officer
David Albaugh, Administrative Services Manager

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

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.

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。

Thông tin này về nước uống của quý vị rất quan trọng. Để biết thêm thông tin hoặc bản dịch khác, xin liên lạc chúng tôi theo số 714.765.3300.

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

This information about your drinking water is very important.
For more information or translation, contact us at 714.765.3300.