

2010 Water Quality Report



PUBLIC UTILITIES

Letter from the General Manager

Dear Anaheim Water Customer,

THIS REPORT CONTAINS IMPORTANT DETAILS about your city's water quality. I encourage you to read it and to contact us with any questions you might have.


State and federal regulations require that this annual water quality report be sent to every customer to ensure you are kept informed about your water supply and its quality. We are glad to have this opportunity to show you that Anaheim continues to meet, and in many cases exceed, all drinking water requirements. In 2009, we conducted over 44,000 analyses to ensure that your water is clean and safe to drink. If you have any questions about water quality, or if you would like to request a home water test, please contact our Water Quality Laboratory at 714.765.4556, or email us at waterquality@anaheim.net.



Anaheim Public Utilities will continue to maintain a high quality, reliable water supply, even in times of drought – and we are also doing our part to conserve. We appreciate your support, and hope that you, too, will continue to use this precious resource wisely.

Marcie L. Edwards

Marcie L. Edwards
GENERAL MANAGER
ANAHEIM PUBLIC UTILITIES

An aerial photograph of a large reservoir, likely Lake Arrowhead, showing a bridge crossing the water. The surrounding landscape is hilly and green, with some buildings visible in the distance. The water is a deep blue color.

The winter snow pack and recent rains have eased the state's water problems, but not solved them. Continued conservation and wise use of water remain the keys to our water future.

What You Need to Know About Your Water, and How it May Affect You

Sources of Supply

ANAHEIM'S WATER SUPPLY is a blend of groundwater from our own wells and water imported from Northern California and the Colorado River by the Metropolitan Water District of Southern California (MWD). 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.



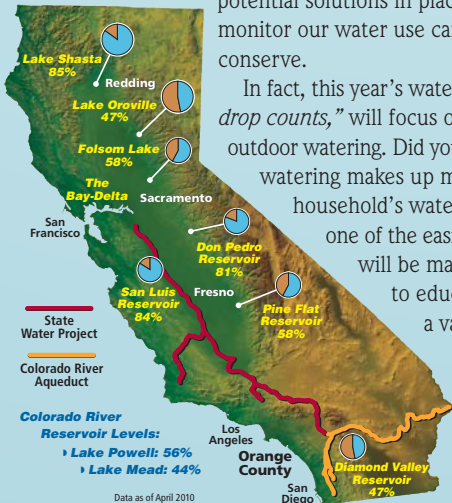
Anaheim and more than 20 cities and retail water districts pump from the groundwater basin to provide water to homes and businesses. Your water source depends on where you live or work within the boundaries of our community. Generally, the source of water for areas east and south of the 57 and 91 freeway interchange is imported water. The central and western portions of Anaheim mostly receive groundwater or a blend with imported supplies.

Future Water Outlook

THE CITY ITSELF HAS MADE GREAT STRIDES towards drastically reducing our water usage. In fact, Anaheim's City government has cut its water use by more than 9% from July 1, 2008 through June 30, 2009 – versus the same period ending June 30, 2008. Happily, Anaheim customers have begun to make a difference as well, reducing water use by 5% already.

Anaheim has also proactively pursued the use of innovative water technologies that may prove to be valuable solutions to our current water crisis; the more water we can supply with alternate sources, the better off our situation will be. We've been exploring a variety of avenues, from water recycling to desalination. By 2020, we expect these alternative supplies to provide 32% of our water. However, even with these potential solutions in place, it's crucial that we monitor our water use carefully and continue to conserve.

In fact, this year's water campaign, "Because every drop counts," will focus on the highest water drain: outdoor watering. Did you know that outdoor watering makes up more than 50% of an average household's water use? Fortunately it is also one of the easiest places to cut back. We will be making every effort this year to educate Anaheim customers on a variety of water-saving techniques in landscape design, planting, sprinkler systems, watering, and fertilizers, and ensure that they know about the many



Three years of drought and declining imports of supplemental water from Northern California and the Colorado River to our region are forcing the draw down of water stored in key reservoirs up and down the state, as illustrated by this map



there are still significant restrictions on the amount of water that Southern California is allowed to import from the north. Even the significant amounts of rainfall we've received are not enough to compensate for the past several dry winters. We ask that you continue to conserve water.

We are proud of the amount of water Anaheim residents and businesses have saved so far. Nevertheless, in order to prosper in this reduced-water environment, we must continue to incorporate water-efficient habits into our daily lives. Please visit our website at anaheim.net/utilities to learn about incentives, rebates, and tips that can make it easier for you to do your part.

Basic Information About Drinking Water Contaminants

THE SOURCES OF DRINKING WATER (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land or through the layers of the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal and human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production or mining activities
- Pesticides and herbicides, which may come from a variety of sources, such as agriculture, urban storm water runoff and residential uses
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban storm water runoff, agricultural application and septic systems.



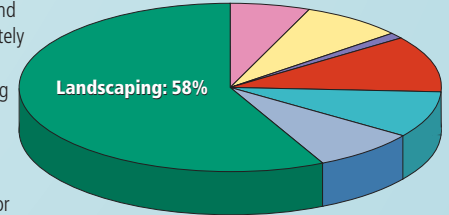
rebates and incentives available.

California is dealing with very real water supply challenges – three consecutive dry years, declining reservoir levels hovering near record lows, and the fact that the current regulations have restricted deliveries of water from Northern to Southern California. Recent rains have helped, but bear in mind that



How Residential Water is Used in Orange County

Outdoor watering of lawns and gardens makes up approximately 60% of home water use. By cutting your outdoor watering by 1 or 2 days a week, you can dramatically reduce your overall water use.



Visit www.bewaterwise.com for water saving tips and ideas for your home and business.

- Faucets: 6%
- Dishwashers: 1%
- Clothes Washers: 9%
- Leaks: 7%
- Toilets: 11%
- Showers & Baths: 8%

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in the water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. 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 U.S. EPA's Safe Drinking Water Hotline at 800.426.4791.



Everyone can do something to save water: use drought-tolerant plants, install synthetic turf, install a "smart" irrigation controller, purchase a water-efficient clothes washer, make sure your dishwasher is full before running it. Simply cut back on the water used for daily living: don't run the water while shaving or brushing teeth, take shorter showers, use a broom instead of a hose to clean driveways and sidewalks – the list is endless, and so much of it is very easy to do. Visit the websites listed on the next page for information on California's water supply situation and what you can do to preserve this precious resource.



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. To learn more about the potential health effects of contaminants listed in this report, call the U.S. Environmental Protection Agency hotline at 800.426.4791.

Este informe contiene información muy importante sobre su agua potable. Para más información ó traducción, favor de contactar a Customer Service Representative. Telefono: 714.765.4151. Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

Bản báo cáo có ghi những chi tiết quan trọng về phẩm chất nước trong cộng đồng quý vị. Hãy nhờ người thông dịch, hoặc hỏi một người bạn biết rõ về vấn đề này.

이 보고서는 귀하의 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충분히 이해하시는 친구와 상의하십시오.

For information in other formats, contact: 714.765.4157, TTY 714.765.5424 or visit www.anaheim.net

Water Quality Issues of Note

Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those 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. 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 the Safe Drinking Water Hotline 800.426.4791.

Radon Advisory

Radon is a colorless, odorless gas that is formed from radioactive decay of uranium in the ground, which is found throughout the U.S. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes and can get into indoor air when released from tap water during showering, dishwashing, and other household activities. Breathing air containing radon can lead to lung cancer. The radon entering a home through tap water, however, is negligible compared to the amount which enters the home through soil. The U.S. EPA Action Level for radon in indoor air is 4.0 picocuries per liter. Radon from

What are Water Quality Standards?

Drinking water standards established by the U.S. EPA and CDPH 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.
- ▶ **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.
- ▶ **Notifications 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.
- ▶ **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- ▶ **Primary Drinking Water Standard:** MCLs 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.

How are Contaminants Measured?

Water is sampled and tested throughout the year. Contaminants are measured in:

- ▶ parts per million (ppm) or milligrams per liter (mg/l)
- ▶ parts per billion (ppb) or micrograms per liter (µg/l)
- ▶ parts per trillion (ppt) or nanograms per liter (ng/l)

What is a Water Quality Goal?

In addition to mandatory water quality standards, U.S. EPA and CDPH 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 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. EPA.
- ▶ **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.

your tap water contributes no more than 0.1 picocurie per liter in your indoor air. If you are concerned about radon in your home, test the air. Fix your home if the level of radon is 4 picocuries per liter of air or higher – there are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program (800.745.7236), the EPA Safe Drinking Water Hotline (800.426.4791), or the National Safety Council Radon Hotline (800.SOS.RADON).

About Lead in Tap Water

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 plumbing components.

2009 City of Anaheim Groundwater Quality

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant
Radiologicals							
Alpha Radiation (pCi/L)	15	(0)	8.9	5.8 – 13	No	2009	Erosion of Natural deposits
Radon (pCi/L)	Not Regulated	n/a	352	322 – 439	No	2009	Soil Gas from Natural Deposits
Uranium (pCi/L)	20	0.43	8.2	5.5 – 12	No	2009	Erosion of Natural Deposits
Organic Chemicals							
1,1-Dichloroethylene (ppb)	6	10	<0.5	ND – 0.7	No	2009	Chemical Factories Discharge
Trichloroethylene TCE (ppb)	5	1.7	<0.5	ND – 0.5	No	2009	Chemical Factories Discharge
Inorganic Chemicals							
Arsenic (ppb)	10	0.004	<2	ND – 3.2	No	2009	Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.43	0.25 – 0.52	No	2009	Erosion of Natural Deposits
Nitrate as NO ₃ (ppm)	45	45	14	2.1 – 22	No	2009	Fertilizers, Septic Tanks
Nitrate+Nitrite as N (ppm)	10	10	3.1	0.5 – 4.9	No	2009	Fertilizers, Septic Tanks
Secondary Standards*							
Color (units)	15	n/a	<1	ND – 4	No	2009	Natural Organic Materials
Chloride (ppm)	500*	n/a	84	33 – 117	No	2009	Erosion of Natural Deposits
Specific Conductance (µmho/cm)	1,600*	n/a	901	594 – 1,100	No	2009	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	137	76 – 171	No	2009	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	551	354 – 658	No	2009	Erosion of Natural Deposits
Turbidity (ntu)	5*	n/a	0.15	ND – 0.50	No	2009	Erosion of Natural Deposits
Unregulated Contaminants Requiring Monitoring							
Bicarbonate (as HCO ₃) (ppm)	Not Regulated	n/a	233	207 – 265	n/a	2009	Erosion of Natural Deposits
Boron (ppb)	NL = 1,000	n/a	140	ND – 320	n/a	2009	Erosion of Natural Deposits
Chromium-6 (ppb)	Not Regulated	n/a	<1	ND – 2.9	n/a	2009	Industrial Waste Discharge
Calcium (ppm)	Not Regulated	n/a	99	70 – 113	n/a	2009	Erosion of Natural Deposits
Dichlorodifluoromethane (ppb)	NL = 1,000	n/a	<0.5	ND – 2.8	n/a	2009	Industrial Waste Discharge
Magnesium (ppm)	Not Regulated	n/a	18	13 – 23	n/a	2009	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	8.0	7.8 – 8.2	n/a	2009	Erosion of Natural Deposits
Potassium (ppm)	Not Regulated	n/a	4.3	3.1 – 9.3	n/a	2009	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	67	38 – 95	n/a	2009	Erosion of Natural Deposits
Total Alkalinity (ppm as CaCO ₃)	Not Regulated	n/a	191	170 – 217	n/a	2009	Erosion of Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	19	13 – 22	n/a	2009	Erosion of Natural Deposits
Total Hardness (ppm as CaCO ₃)	Not Regulated	n/a	322	230 – 373	n/a	2009	Erosion of Natural Deposits
Vanadium (ppb)	NL = 50	n/a	4.2	ND – 8.0	n/a	2009	Erosion of Natural Deposits

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; ntu = nephelometric turbidity units; NL = notification level; ND = not detected; n/a = not applicable; < = 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 *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

2009 City of Anaheim Lenain Water Treatment Plant

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant
Radiologicals							
Alpha Radiation (pCi/L)	15	(0)	4.4	4.4	No	2005	Erosion of Natural Deposits
Uranium (pCi/L)	20	0.43	4.6	4.6	No	2004	Erosion of Natural Deposits
Inorganic Chemicals							
Aluminum (ppm)	1	0.6	0.18	0.10 – 0.27	No	2009	Water Treatment Chemical
Barium (ppm)	1	2	0.14	0.14	No	2009	Erosion of Natural Deposits
Bromate (ppb)	10	0.1	<5	ND – 7.0	No	2009	Byproduct of Ozone Disinfection
Fluoride (ppm)	2	1	0.34	0.34	No	2009	Erosion of Natural Deposits
Secondary Standards*							
Aluminum (ppb)	200*	600	180	100 – 270	No	2009	Water Treatment Chemical
Chloride (ppm)	500*	n/a	110	110	No	2009	Erosion of Natural Deposits
Odor Threshold (TON)	3*	n/a	1	1	No	2009	Natural Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	1,000	1,000	No	2009	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	270	270	No	2009	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	680	680	No	2009	Erosion of Natural Deposits
Turbidity (ntu)	5*	n/a	0.05	0.03 – 0.11	No	2009	Erosion of Natural Deposits
Unregulated Contaminants Requiring Monitoring							
Bicarbonate (ppm)	Not Regulated	n/a	160	160	n/a	2009	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	72	72	n/a	2009	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	28	28	n/a	2009	Erosion of Natural Deposits
Potassium (ppm)	Not Regulated	n/a	5.4	5.4	n/a	2009	Erosion of Natural Deposits
pH (units)	Not Regulated	n/a	7.7	7.4 – 8.1	n/a	2009	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	100	100	n/a	2009	Erosion of Natural Deposits
Total Alkalinity (ppm)	Not Regulated	n/a	128	110 – 145	n/a	2009	Erosion of Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	18	18	n/a	2009	Erosion of Natural Deposits
Total Hardness (ppm as CaCO ₃)	Not Regulated	n/a	300	300	n/a	2009	Erosion of Natural Deposits

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; ntu = nephelometric turbidity units; ND = not detected; n/a = not applicable; < = average is less than the detection limit for reporting purposes; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal; ton = threshold odor number *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Turbidity – combined filter effluent	Treatment Technique	Turbidity Measurements	TT Violation?	Most Recent Sampling Date	Typical Source of Contaminant
1) Highest single turbidity measurement	1 ntu	0.11	No	2009	Soil run-off
2) Percentage of samples less than 0.5 NTU	95%	100%	No	2009	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 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.

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 Hotline or online at: www.epa.gov/safewater/lead.

Want Additional Information?

There's a wealth of information on our website about your drinking water quality and water issues in general, at anaheim.net/utilities. Click on Public Utilities, then on Focus on Water Quality. Or, feel free to contact our water quality staff at 714.765.4556. Other useful resources are listed below:

Orange County Water District: www.ocwd.com

Water Education Foundation: www.watereducation.org

Metropolitan Water District of Southern California: www.mwdh2o.com

**California Department of Public Health,
Division of Drinking Water and Environmental Management:**
www.cdph.ca.gov/certlic/drinkingwater

U.S. Environmental Protection Agency: www.epa.gov/safewater

California Department of Water Resources: www.water.ca.gov

Water Conservation Tips: www.bewaterwise.com • www.wateruseitwisely.com



Recent regulatory actions to protect endangered fish species have restricted water deliveries from Northern California. This has forced Southern California to draw down even further its storage reservoirs, like Diamond Valley Lake, near Hemet.



Water conservation doesn't have to inconvenience our lives to be effective. Simple changes in how we do our daily tasks can have a tremendous impact on our water usage. A little effort can save a lot of water.

2009 Metropolitan Water District of Southern California Treated Surface Water

Chemical	MCL	PHG, or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Radiologicals – Tested in 2008						
Alpha Radiation (pCi/L)	15	(0)	5.6	3.8 – 9.3	No	Erosion of Natural Deposits
Beta Radiation (pCi/L)	50	(0)	4.3	ND – 6.4	No	Decay of Man-made or Natural Deposits
Uranium (pCi/l)	20	0.42	3.3	2.9 – 3.7	No	Erosion of Natural Deposits
Inorganic Chemicals – Tested in 2009						
Aluminum (ppm)	1	0.6	0.17	0.10 – 0.23	No	Treatment Process Residue, Natural Deposits
Arsenic (ppb)	10	0.004	2.3	ND – 2.6	No	Erosion of Natural Deposits
Barium (ppm)	1	2	0.13	0.12 – 0.14	No	Erosion of Natural Deposits
Fluoride (ppm) treatment-related	Control Range 0.7 – 1.3 ppm Optimal Level 0.8 ppm		0.8	0.7 – 0.9	No	Water Additive for Dental Health
Nitrate as NO ₃ (ppm)	45	45	1.7	0.9 – 1.9	No	Agriculture Runoff and Sewage
Nitrate + Nitrite as N (ppm)	10	10	0.4	ND – 0.4	No	Agriculture Runoff and Sewage
Secondary Standards* – Tested in 2009						
Aluminum (ppb)	200*	600	170	100 – 230	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	97	89 – 99	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	2	1 – 2	No	Runoff or Leaching from Natural Deposits
Odor (threshold odor number)	3*	n/a	2	2	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	1,000	880 – 1,100	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	240	190 – 250	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	610	530 – 640	No	Runoff or Leaching from Natural Deposits
Turbidity (ntu)	5*	n/a	0.04	0.04 – 0.05	No	Runoff or Leaching from Natural Deposits
Unregulated Chemicals – Tested in 2009						
Alkalinity, total as CaCO ₃ (ppm)	Not Regulated	n/a	120	98 – 120	n/a	Runoff or Leaching from Natural Deposits
Boron (ppb)	Not Regulated	n/a	130	120 – 140	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	68	56 – 75	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO ₃ (ppm)	Not Regulated	n/a	280	240 – 300	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gal)	Not Regulated	n/a	16	14 – 18	n/a	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	27	23 – 29	n/a	Runoff or Leaching from Natural Deposits
pH (pH units)	Not Regulated	n/a	7.9	7.8 – 8.0	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	4.8	4.3 – 5.1	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	98	86 – 100	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	Not Regulated	TT	2.3	2.0 – 2.6	n/a	Various Natural and Man-made Sources
Vanadium (ppb)	Not Regulated	n/a	3.1	ND – 3.4	n/a	Runoff or Leaching from Natural Deposits

ppb = parts-per-billion; **ppm** = parts-per-million; **ppt** = parts-per-trillion; **pCi/L** = picoCuries per liter; **ntu** = nephelometric turbidity units; **µmho/cm** = micromhos per centimeter; **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; **n/a** = not applicable; **TT** = treatment technique *Contaminant is regulated by a secondary standard.

Turbidity – combined filter effluent	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.3 NTU	0.06	No	Soil Run-off
2) Percentage of samples less than 0.3 NTU	95%	100%	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 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.

2009 City of Anaheim Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	19	1.1 – 69	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	5.9	ND – 19	No	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	0.9	0.1 – 2.7	No	Disinfectant Added for Treatment
Aesthetic Quality					
Color (color units)	15*	ND	ND	No	Erosion of Natural Deposits
Odor (threshold odor number)	3*	1	1	No	Erosion of Natural Deposits
Turbidity (ntu)	5*	0.1	0.03 – 0.30	No	Erosion of Natural Deposits

12 locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; 11 locations are tested quarterly for color, odor and turbidity. **MRDL** = Maximum Residual Disinfectant Level; **ND** = not detected; **MRDLG** = Maximum Residual Disinfectant Level Goal; **ntu** = nephelometric turbidity units. *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Lead and Copper Action Levels at Residential Taps

Action Level (AL)	Health Goal	90th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source of Contaminant	
Lead (ppb)	15	0.2	ND < 5	0 / 57	No	Corrosion of Household Plumbing
Copper (ppm)	1.3	0.3	0.23	0 / 57	No	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 2009. Lead was detected in 2 samples; none exceeded the action level. Copper was detected in 29 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

Imported Water Assessment

In December 2002, the Metropolitan Water District of Southern California completed its source water assessment of the Colorado River and State Water Project supplies. 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 Metropolitan by phone at 213.217.6850.

Groundwater 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 Treatment Plant. 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.

A copy of the complete assessment is available at: Department of Public Health, Drinking Water Field Operations Branch, 28 Civic Center Drive, Room 325, Santa Ana, CA 92701. You may request a summary of the assessment by contacting DPH Sanitary Engineer Yen Tran at 714.558.4707 or Anaheim's Environmental Services Division at 714.765.4277.

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Anaheim Public Utilities

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