

**2018
WATER QUALITY REPORT**



CITY OF FOUNTAIN VALLEY
A NICE PLACE TO LIVE

City of
Fountain Valley
PUBLIC WORKS DEPARTMENT

Your 2018 Water Quality Report

State
Water
Project

Since 1990, California public water utilities have been providing an annual Water Quality Report to their customers. **This year's report covers calendar year 2017 drinking water quality testing and reporting.** The City of Fountain Valley Water Department (City) vigilantly safeguards your water supply and, as in years past, the water delivered to your home meets or exceeds the quality standards required by federal and state regulatory agencies. The U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board, Division of Drinking Water (DDW) are the agencies responsible for establishing and enforcing drinking water quality standards.

Pursuant to the California Safe Drinking Water Act, the City monitors over 100 chemicals in your water supply. This report includes only the chemicals actually detected in the water. In some cases, the City goes beyond what is required by testing for unregulated chemicals that may have known health risks but do not have drinking water standards. Unregulated chemical monitoring helps USEPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals to protect public health.

Through drinking water quality testing programs carried out by the Orange County Water District (OCWD) for groundwater, MWDSC for treated surface water and the City for the water distribution system, your drinking water is constantly monitored from source to tap for constituents that are regulated and unregulated.

The State allows us to monitor for some constituents less than once per year because the concentrations of these constituents do not change frequently. Some of our data, though representative of current conditions, are more than one year old.



The Quality of Your Water Is Our Primary Concern

Sources of Supply

The City's water supply is a blend of groundwater from six City wells and one imported water connection originating from Northern California and the Colorado River by the Municipal Water District of Orange County (MWDOC) via MWDSC. Groundwater comes from a natural underground aquifer that is replenished with water from the Santa Ana River, local rainfall, recycled Groundwater Replenishment System (GWRS) water, and imported water. The groundwater basin is 350 square miles and lies beneath north and central Orange County from Irvine to the Los Angeles County border and from Yorba Linda to the Pacific Ocean. More than 20 cities and retail water districts draw from the basin to provide water to homes and businesses.

Orange County's Water Future

For years, Orange County has enjoyed an abundant, seemingly endless supply of high-quality water. However, as water demand continues to increase statewide, we must be even more conscientious about our water supply and maximize the efficient use of this precious natural resource.

OCWD and MWDOC work cooperatively to evaluate new and innovative water management and supply development programs, including water reuse and recycling, wetlands expansion, recharge facility construction, ocean and brackish water desalination, surface storage and water use efficiency programs. These efforts are helping to enhance long-term countywide water reliability and water quality.

A healthy water future for Orange County rests on finding and developing new water supplies, as well as protecting the quality of the water that we have today. Your local and regional water agencies are committed to making the necessary investments today in new water management projects to ensure an abundant and high-quality water supply for our future.



Basic Information About Drinking Water Constituents

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.

Constituents that may be present in source water include:

- **Microbial constituents**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

- **Inorganic constituents**, 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 constituents**, which can be naturally occurring or be the result of oil and gas production or mining activities.
- **Organic chemical constituents**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural application and septic systems.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

In order to ensure that tap water is safe to drink, USEPA and the DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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 USEPA's Safe Drinking Water Hotline at (800) 426-4791.

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 who are undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.



Questions about your water? Contact us for answers.

For information or concerns about this report, or your water quality in general, please contact Sean Low, Water Quality Technician, at (714) 593-4624, or send an e-mail to sean.low@fountainvalley.org.

You may also address your concerns at the regularly scheduled City Council Meetings held at City Hall at 10200 Slater Avenue in Fountain Valley on the first and third Tuesdays of each month at 6:00 pm in the City Hall Council Chambers. Please feel free to participate in these meetings. The City firmly believes in the public's right to know as much as possible about the quality of their drinking water and the health of their watershed.

Your input and concerns are very important to us.

For more information about the health effects of the listed constituents in the following tables, call the USEPA hotline at (800) 426-4791.

Federal and State Water Quality Regulations

— Water Quality Issues that Could Affect Your Health —



Drinking Water Fluoridation

Fluoride occurs naturally in the City's water supplies. In addition to the natural levels, the City's water system adds a small concentration of sodium fluoride to the water to promote dental benefits per a majority vote of the community. Fluoridating the water especially helps to prevent tooth decay in children. Because of the dramatic health benefits of fluoridating drinking water, a 1997 assembly bill of the state of California has mandated all large system water suppliers to begin fluoridating their systems. In 2007 MWSDSC began fluoridation of their water supply. The City's water is fluoridated to the DDW optimal range between 0.6 to 1.2 parts per million.

There are many places to go for additional information about the fluoridation of drinking water.

U.S. Centers for Disease Control and Prevention:

1-800-232-4636 • www.cdc.gov/fluoridation/

State Water Resources Control Board, Division of Drinking Water:

www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html

For more information about MWSDSC's fluoridation program, please contact Edgar G. Dymally at (213) 217-5709 or at edymally@mwdh2o.com.

What are Water Quality Standards?

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

- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Secondary MCLs:** 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, USEPA and DDW have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes 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 USEPA.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

2017 City of Fountain Valley Drinking Water Quality Local Groundwater and Metropolitan Water District Treated Surface Water

Chemical	MCL	PHG (MCLG)	Avg. Groundwater Amount	Avg. Imported MWD Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Radiologicals – Tested in 2013, 2015, and 2017							
Beta Radiation (pCi/L)	50	(0)	< 4	ND	ND – 4.62	No	Decay of Man-made or Natural Deposits
Uranium (pCi/L)	20	0.43	2.48	ND	ND – 5.34	No	Erosion of Natural Deposits
Inorganic Chemicals – Tested in 2016 and 2017							
Aluminum (ppm)	1	0.6	ND	0.16	ND – 0.13	No	Treatment Process Residue, Natural Deposits
Fluoride (ppm) naturally-occurring	2	1	0.38	NR	0.31 – 0.41	No	Erosion of Natural Deposits
Fluoride (ppm) treatment-related	Control Range 0.6 – 1.2 ppm Optimal Level 0.7 ppm		See Footnote 1	0.7	0.6 – 0.9	No	Water Additive for Dental Health
Nitrate as N (ppm)	10	10	1.3	ND	ND – 2.19	No	Agriculture Runoff and Sewage
Nitrate and Nitrite as N (ppm)	10	10	1.3	ND	ND – 2.19	No	Agriculture runoff and sewage
Secondary Standards* – Tested in 2016 and 2017							
Aluminum (ppb)	200*	600	ND	160	ND – 130	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	43.7	50	26.7 – 66	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	ND	1	ND – 1	No	Naturally-occurring Organic Materials
Odor (threshold odor number)	3*	n/a	ND	2	ND – 2	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	667	490	351 – 829	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	88.8	96	58.9 – 127	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	393	294	213 – 488	No	Runoff or Leaching from Natural Deposits
Turbidity (NTU)	5*	n/a	0.12	ND	ND – 0.4	No	Runoff or Leaching from Natural Deposits
Unregulated Chemicals – Tested in 2016 and 2017							
Alkalinity, total as CaCO ₃ (ppm)	Not Regulated	n/a	184	61	48 – 196	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL = 1	n/a	< 0.1	0.1	ND – 0.14	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	74.6	28	20 – 96.3	n/a	Runoff or Leaching from Natural Deposits
Chromium, Hexavalent (ppb)	Not Regulated	0.02**	< 1	ND	ND – 2.4	No	Erosion of Natural Deposits; Industrial Discharge
Hardness, total as CaCO ₃ (ppm)	Not Regulated	n/a	242	119	82 – 310	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gallon)	Not Regulated	n/a	14	7	4.8 – 18	n/a	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	13.5	12	8.1 – 17	n/a	Runoff or Leaching from Natural Deposits
pH (pH units)	Not Regulated	n/a	7.9	8.4	7.7 – 8.6	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	2.6	2.8	1.5 – 4	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	41.5	51	34.6 – 63	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	ND	2.4	ND – 3.0	n/a	Various Natural and Man-made Sources

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; NTU = nephelometric turbidity units; µmho/cm = micromhos per centimeter; ND = not detected; NR = Not Required to be analyzed; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; n/a = not applicable; PHG = California Public Health Goal; NL = Notification Level *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color)

(1) The Fountain Valley water system treats your water by adding fluoride to the naturally occurring level in order to help prevent dental caries in consumers. The fluoride levels in the treated water are maintained by the City within a control range of 0.6 ppm to 1.2 ppm.

Turbidity – combined filter effluent Metropolitan Water District Diemer Filtration Plant	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.3 NTU	0.08	No	Soil Runoff
2) Percentage of samples less than 0.3 NTU	95%	100%	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. NTU = nephelometric turbidity units
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.

Unregulated Chemicals Requiring Monitoring

Chemical	Notification Level	PHG	Average Groundwater	Average Imported MWD Water	Range of Detections	Most Recent Sampling
1,4-Dioxane (ppb)	1	n/a	1.9	ND	ND – 4.1	2013
Chlorate (ppb)	800	n/a	< 20	53	ND – 95	2013
Chromium, Hexavalent (ppb)	n/a	0.02**	1.2	0.07	0.03 – 2.8	2013
Chromium, Total (ppb)***	MCL = 50	MCLG = 100	0.93	< 0.2	ND – 2.4	2014
Molybdenum, Total (ppb)	n/a	n/a	4.4	4.7	3.1 – 5.9	2014
Strontium, Total (ppb)	n/a	n/a	660	930	490 – 1,100	2014
Vanadium, Total (ppb)	50	n/a	3.2	2.8	2.3 – 3.5	2014

**There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

***Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb. Total chromium was included as part of the unregulated chemicals requiring monitoring.

Chloramines

The City imports water from MWDSC which produces water using chloramines, a combination of chlorine and ammonia, as its drinking water disinfectant. Chloramines are effective killers of bacteria and other microorganisms that may cause disease. Chloramines form fewer disinfection by-products and have no odor when used properly. People who use kidney dialysis machines may want to take special precautions and consult their physician for the appropriate type of water treatment.

Customers who maintain fish ponds, tanks or aquaria should also make necessary adjustments in water quality treatment, as these disinfectants are toxic to fish. For further information or if you have any questions about chloramines please call (714) 593-4624.



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.

The City is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead



exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline, (800) 426-4791, or at www.epa.gov/safewater/lead.

Total Coliform Rule

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems are required to comply with the state Total Coliform Rule. Effective April 1, 2016, all water systems are also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and *E. coli* bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.



Want Additional Information?

There's a wealth of information on the internet about Drinking Water Quality and water issues in general. A good place to begin your own research is the

City of Fountain Valley website: www.FountainValley.org

In addition to information about your local water and the support and services we offer, you'll find links for many other local, statewide, and national resources.

2017 City of Fountain Valley Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	35	ND – 44	No	Byproducts of chlorine disinfection
Haloacetic Acids (ppb)	60	11	ND – 14	No	Byproducts of chlorine disinfection
Chlorine Residual (ppm)	(4 / 4)	0.82	0.1 – 2.54	No	Disinfectant added for treatment
Aesthetic Quality					
Odor (threshold odor number)	3*	1	1.0 – 2.0	No	Erosion of natural deposits
Turbidity (NTU)	5*	<1	ND – 1.2	No	Erosion of natural deposits

Eight locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; thirty are tested monthly for color, odor and turbidity. Color was not detected in 2017.

MRDL = Maximum Residual Disinfectant Level; MRDLG = Maximum Residual Disinfectant Level Goal; NTU = nephelometric turbidity units; ND = not detected.

*Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color)

Bacterial Quality	MCL	MCLG	Highest Monthly Positive Samples	MCL Violation?	Typical Source of Contaminant
Total Coliform Bacteria	5.0%	0	0.8%	No	Naturally present in the environment

No more than 5% of the monthly samples may be positive for total coliform bacteria.

The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/*E. coli*, constitutes an acute MCL violation.

Lead and Copper Action Levels at Residential Taps

	Action Level (AL)	Health Goal	90 th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source of Contaminant
Copper (ppm)	1.3	0.3	0.215	0 / 32	No	Corrosion of household plumbing
Lead (ppb)	15	0.2	ND	0 / 32	No	Corrosion of household plumbing

For the sampling event, 32 residences were tested for lead and copper at-the-tap. The most recent set of samples was collected in August 2015.

Lead was detected in two homes, none of which exceeded the Action Level (AL). Copper was detected in 28 samples, none of which exceeded the AL.

A regulatory AL is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

In 2017, two schools submitted requests and were sampled for lead.

Unregulated Chemicals Requiring Monitoring in the Distribution System

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Dates
Chlorate (ppb)	800	n/a	39	ND – 57	2013
Chromium, Hexavalent (ppb)	n/a	0.02**	0.19	0.04 – 0.6	2013
Chromium, Total (ppb)***	MCL = 50	MCLG = 100	< 0.2	ND – 0.5	2013
Molybdenum, Total (ppb)	n/a	n/a	4.2	3.6 – 4.6	2013
Strontium, Total (ppb)	n/a	n/a	890	740 – 1,100	2013
Vanadium, Total (ppb)	50	n/a	2.9	2.6 – 3.4	2013

**There is currently no MCL for hexavalent chromium.

The previous MCL of 10 ppb was withdrawn on September 11, 2017.

***Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb.

Total chromium was included as part of the unregulated constituents requiring monitoring.

Source Water Assessments

Imported (MWDSC) Water Assessment

Every five years, MWDSC is required by DDW to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters.

The most recent watershed sanitary surveys of its source water supplies from the Colorado River was updated in 2015 and the State Water Project was updated in 2016.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/storm-water runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater.

USEPA also requires MWDSC to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWDSC completed its SWA in December 2002. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed.

A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling MWDSC at (800) CALL-MWD (225-5693).

Groundwater Assessment

An assessment of the drinking water sources for the City was completed in February 2003 and was updated in October 2016 for Wells 6, 9 and 10. The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: dry cleaners, gas stations, historic gas stations, NPDES/WDR permitted discharges, and sewer collection systems.

A copy of the complete assessment is available at State Water Resources Control Board, Division of Drinking Water, Santa Ana District, 605 W. Santa Ana Boulevard, Building 6, Room 325, Santa Ana, California 92701.

Save Money & Water: Learn How to Stop Leaks



Nationwide, more than 1 trillion gallons of water are lost annually due to household leaks. That's equal to the annual water use of more than 11 million homes. The average household can waste more than 10,000 gallons each year due to correctable leaks. That's enough to wash 270 loads of laundry!

Ten percent of homes have leaks that waste 90 gallons or more per day! Common sources include toilets, faucets, showerheads, and landscape irrigation. But you should also consider less obvious sources of leaks: water heaters, ice makers, dishwashers, and filtration systems. Many of these are easily correctable, and fixing them can save about 10 percent on the average water bill.

Be sure to check your toilet for leaks at least once a year. Put food coloring in the tank. If it seeps into the bowl without flushing, there's a leak. And if your toilet flapper doesn't close properly after flushing, replace it. Remember, one drip a second adds up to five gallons lost per day! So regularly check your faucets and showerheads, as well as all hoses and connectors.

Many household leaks can be solved with simple tools and a little education — and fortunately, Do-It-Yourselfers have access to multiple resources. But even if you must pay for repairs, you will still save money in the long run. For more information on water conservation, visit www.ocwatersmart.com.

This report contains important information about your drinking water.

Translate it, or speak with someone who understands it.

Este informe contiene información importante sobre su agua potable.

Traducir, o hable con alguien que entienda.

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.



City of Fountain Valley

Field Services ~ Water Department

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