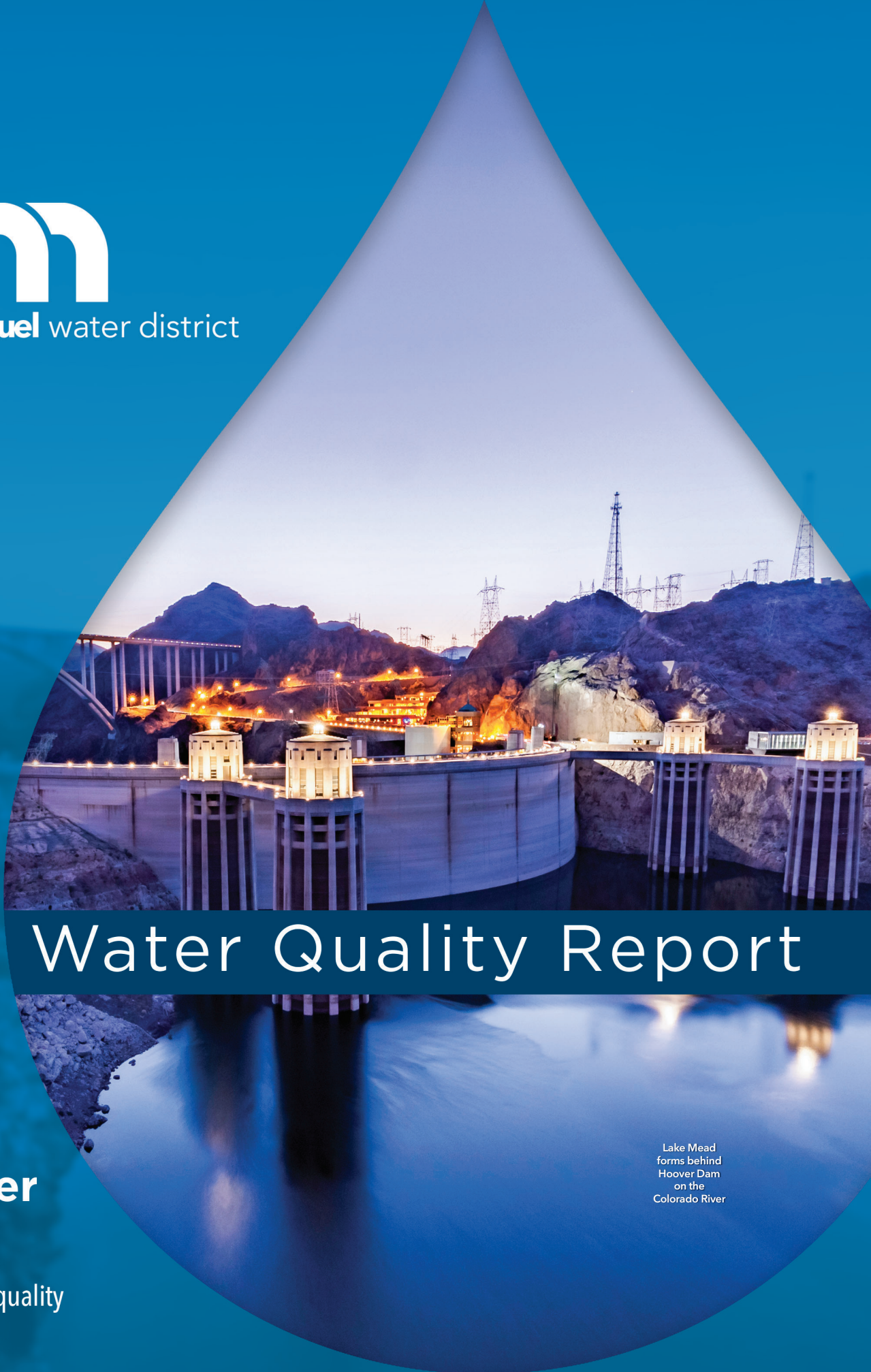




**moulton niguel** water district



# 2018 Water Quality Report

**It's better  
on tap.**

Delivering high-quality  
drinking water  
since 1960.

Lake Mead  
forms behind  
Hoover Dam  
on the  
Colorado River

# MOULTON NIGUEL WATER DISTRICT

## 2018 WATER QUALITY REPORT

### Letter from the General Manager

Moulton Niguel Water District is committed to testing, protecting, and delivering high-quality water to our 170,000 customers. Our Consumer Confidence Reports (CCR), also known as our water quality reports, are developed and published yearly in accordance with drinking water quality standards set by the United States Environmental Protection Agency and the State Water Resources Control Board, Division of Drinking Water. In line with past years, we are pleased to report that the drinking water provided to your homes, schools, and businesses meets or exceeds the standards required by state and federal regulatory agencies.

This year's report covers calendar year 2018 drinking water quality testing and reporting and provides a comprehensive summary of all you need to know about your water. Our report provides details on the results of water quality tests conducted at each stage of treatment and delivery and information about the required safety regulations for drinking water provided by public water systems.

We are proud to provide you reliable, high-quality drinking water while offering you the lowest water rates in South Orange County. If you have any questions or would like more information about the District's water quality testing or other programs, please visit [www.mnwd.com/ccr](http://www.mnwd.com/ccr) or contact our Customer Service Department at [customerservice@mnwd.com](mailto:customerservice@mnwd.com) or (949) 831-2500.

Sincerely,



Joone Lopez, General Manager

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

此份有关你的食水报告,内有重要资料和讯息,请找他人替你翻译及解释清楚。

“هذا التقرير يحتوي على معلومات مهمة تتعلق بمياه الشفة (أو الشرب).  
ترجم التقرير, أو تكلم مع شخص يستطيع أن يفهم التقرير.”

### Federal and State Water Quality Regulations



The United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board, Division of Drinking Water (DDW) are the agencies responsible for establishing drinking water quality standards. The Metropolitan Water District of Southern California (MWD), which supplies imported water to Moulton Niguel, tests for unregulated chemicals in our water supply. Whenever possible, MWD goes beyond what is required by testing for unregulated chemicals that do not have drinking water standards. Unregulated chemical monitoring helps USEPA and DDW determine where certain chemicals may be present and whether new standards need to be established to protect public health.

Through drinking water quality testing programs carried out by MWD for imported water and Moulton Niguel for our local distribution system, your drinking water is constantly monitored from source to tap for regulated and unregulated constituents.

The State allows monitoring for some contaminants less than once per year because concentrations of these contaminants do not change frequently. Some data, though representative, is more than one year old.



# The Quality of Your Water

## *is Our Primary Concern*

### Sources of Water Supply

Moulton Niguel relies on imported water from MWD, which sources its water supply from the Colorado River and the State Water Project.

MWD provides drinking water to nearly 19 million people in parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino, and Ventura counties, and delivers an average of 1.7 billion gallons of water per day to a 5,200-square-mile service area.

Your water is treated at the Diemer Filtration Plant in Yorba Linda and the Baker Water Treatment Plant in Lake Forest, which is then delivered to Moulton Niguel Water District. Your water is a blend of both treatment plants. Moulton Niguel's pipelines, pump stations, and reservoirs are used to deliver this water to you when and where it is needed.



### Basic Information about Your Drinking Water

Drinking water, both tap and bottled, may reasonably be expected to contain trace amounts of some contaminants. The presence of trace contaminants does not indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline at (800) 426-4791 or visiting [www.epa.gov/your-drinking-water](http://www.epa.gov/your-drinking-water).

The sources of both tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it can dissolve naturally-occurring minerals and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses, protozoa, and bacteria that may come from wastewater 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 stormwater 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 stormwater runoff, and residential uses
- **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, urban stormwater runoff, agricultural application, and septic systems
- **Radioactive contaminants** that can be naturally-occurring or be the result of oil and gas production and mining activities

In order to ensure that tap water is safe to drink, the USEPA and DDW prescribe regulations that limit the amounts of certain contaminants in water provided by public water systems. DDW and U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that provide similar protection for public health.



State  
Water  
Project



# Water Quality Issues

*that Could Affect Your Health . . .*

## Drinking Water Fluoridation

Fluoride has been added to drinking water supplies in the United States since 1945. Of the 50 largest cities in the United States, 43 fluoridate their drinking water. In

December 2007, MWD joined a majority of the nation's public water suppliers in adding fluoride to drinking water in order to prevent tooth decay.

In line with recommendations from the DDW, as well as the U.S. Centers for Disease Control and Prevention, MWD adjusted the national fluoride level in imported treated water from the Colorado River and State Water Project to

the optimal range for dental health of 0.6 to 1.2 parts per million. Fluoride levels in drinking water are limited under California State regulations at a maximum dosage of two (2) parts per million.

There are many places to go for additional information about the fluoridation of drinking water, including:

**U.S. Centers for Disease Control and Prevention**

(800) 232-4636 • [www.cdc.gov/fluoridation/](http://www.cdc.gov/fluoridation/)

**State Water Resources Control Board,  
Division of Drinking Water**

[www.waterboards.ca.gov/drinking\\_water/certlic/  
drinkingwater/Fluoridation.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml)

**American Water Works Association** • [www.awwa.org](http://www.awwa.org)

For more information about MWD's fluoridation program, please contact Edgar G. Dymally at (213) 217-5709 or email him at [edymally@mw2h2o.com](mailto:edymally@mw2h2o.com).

## Cryptosporidium

*Cryptosporidium* is a microbial pathogen that originates from animal or human waste and is found in surface waters throughout the United States. When ingested, it can cause diarrhea, fever, and other gastrointestinal symptoms.

MWD tested but did not detect *cryptosporidium* in the source and treated surface waters during 2018. If detected, *cryptosporidium* is eliminated by an effective treatment combination including sedimentation, filtration, and disinfection.

The USEPA and Federal Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline at (800) 426-4791 between 7 a.m. to 1 p.m. Pacific Time.

## Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, or have HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These individuals should seek advice about drinking water from their health care providers.

## Chloramines

All of Moulton Niguel's drinking water is imported from MWD and is disinfected at Diemer Water Treatment Plant and Baker Water Treatment Plant with chloramines, which is a combination of chlorine and ammonia. In addition, Moulton Niguel maintains disinfection levels in stored water through the addition of chloramines, as needed. Chloramines are effective killers of bacteria and other microorganisms that may cause disease. Compared to chlorine alone, chloramines last longer in the distribution system, minimize byproduct formation, and have minimal odor.

Individuals who use kidney dialysis machines may want to take special precautions and consult their health care providers for the appropriate type of supplementary water treatment, if required. Customers who maintain fish ponds, tanks, or aquariums should also make necessary adjustments in water quality treatment, as these disinfectants may be toxic to fish. For further information, or if you have any questions about chloramines, please call Moulton Niguel at (949) 425-3562.





# Water Quality Issues

## *You Should be Knowledgeable About . . .*

### Lead in Tap Water

Moulton Niguel meets all required standards for lead in the USEPA Lead and Copper Rule. 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 home plumbing.

Moulton Niguel is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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 two minutes before using water for drinking or cooking. However, please follow this practice carefully to reduce any potential water waste.

Moulton Niguel participates in the State Water Resources Control Board's Lead Testing in Schools Program. In 2018, 12 schools submitted requests to be sampled for lead. Samples were collected at each school



and all samples met drinking water standards set by the State and Federal regulatory agencies.

Should you have any questions about your water quality, you may contact Moulton Niguel Water District at (949) 831-2500.

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/lead](http://www.epa.gov/lead)**.

### Water Hardness

Levels of calcium and magnesium, which occur naturally in water, are the primary substances that determine whether water is hard or soft. Water from the Colorado River, one of Moulton Niguel's sources of water, contains fairly high levels of these minerals and is considered "hard." Water hardness does not negatively affect your health; however, hard water does require more soap than soft water and will leave mineral deposits on plumbing fixtures over time. Water hardness is measured in grains per gallon. In 2018, the hardness found in your water had an average of 16.35 grains per gallon.



**Questions  
About  
Your  
Water?  
Contact  
Us  
for  
Answers.**



### Contact us for answers.

For information or questions about this report, please call **(949) 425-3562**.

To reach Moulton Niguel Customer Service and for other information, please call **(949) 831-2500** or visit **[www.mnwd.com](http://www.mnwd.com)**.

A copy of this report is also available on our website: **[www.mnwd.com/CCR](http://www.mnwd.com/CCR)**.

For more information about the health effects of the listed contaminants in this report, call the **USEPA Safe Drinking Water Hotline** at **(800) 426-4791**.

### Community Participation

The Moulton Niguel Board of Directors typically meet the second and fourth Thursday of the month at 6pm at the District office at 27500 La Paz Road, Laguna Niguel, California 92677. More information about regular meetings and events is available at **[www.mnwd.com/events](http://www.mnwd.com/events)**.

# Water Quality Charts Legend

## 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 tables in the report show 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 are 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.

**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.

## What is a Water Quality Goal?

In addition to mandatory water quality standards, the USEPA and the 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 guidelines and direction for water management practices. The tables in this report include 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 the 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.

## 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)

## Source Water Assessment

### Metropolitan Water District

Every five years, MWD 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 for MWD's source waters are the Colorado River Watershed Sanitary Survey – 2015 Update, and the State Water Project Watershed Sanitary Survey – 2011 Update.

Both source waters are exposed to stormwater runoff, recreational activities, wastewater discharges, wildlife, fires, and other watershed-related factors that could affect water quality.

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

USEPA also requires MWD to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWD 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 MWD at (213) 217-6850.



### Baker Water Treatment Plant

The Baker Treatment Plant receives untreated surface water from MWD (see MWD water assessment left) and untreated surface water from Irvine Lake (Santiago Reservoir). The surface water assessment of Santiago Reservoir is provided by Serrano Water District, which also uses source water from Santiago Reservoir.

The most recent watershed sanitary survey for Santiago Reservoir was updated in 2014. Water supplies from Santiago Reservoir are most vulnerable to septic tank, landfill and dump activities. The Source Water Assessment (SWA) for Santiago Reservoir was completed in April 2001. The assessment was conducted for the Serrano Water District by Boyle Engineering Corporation (Boyle) with assistance from the District's staff and management.

A copy of the complete assessment may be viewed at the IRWD Water Quality Department, 3512 Michelson Drive, Irvine. You may request a summary of the assessment by writing to District Secretary, Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California 92618.



Santiago Reservoir



## Metropolitan Water District of Southern California Treated Surface Water Quality Results for 2018

| Chemical                                     | MCL                                                  | PHG, or (MCLG) | Average Amount | Range of Detections | MCL Violation? | Typical Source of Chemical                                     |
|----------------------------------------------|------------------------------------------------------|----------------|----------------|---------------------|----------------|----------------------------------------------------------------|
| Disinfection Byproducts                      |                                                      |                |                |                     |                |                                                                |
| Bromate (ppb)                                | 10                                                   | .1             | 2              | ND-4.7              | No             | Byproduct of Drinking Water Ozonation                          |
| Inorganic Chemicals                          |                                                      |                |                |                     |                |                                                                |
| Aluminum (ppb)                               | 1,000                                                | 600            | 124            | ND – 310            | No             | Treatment Process Residue, Natural Deposits                    |
| Barium (ppb)                                 | 1,000                                                | 2000           | 117            | 117                 | No             | Refinery Discharge, Erosion of Natural Deposits                |
| Fluoride (ppm treatment-related)             | Control Range 0.6 – 1.2 ppm<br>Optimal Level 0.7 ppm |                | 0.7            | 0.6 – 0.9           | No             | Water Additive for Dental Health                               |
| Secondary Standards*                         |                                                      |                |                |                     |                |                                                                |
| Aluminum (ppb)                               | 200*                                                 | 600            | 124            | ND – 310            | No             | Treatment Process Residue, Natural Deposits                    |
| Chloride (ppm)                               | 500*                                                 | n/a            | 94             | 92 – 95             | No             | Runoff or Leaching from Natural Deposits                       |
| Color (color units)                          | 15*                                                  | n/a            | ND             | ND – 1              | No             | Naturally-occurring Organic Materials                          |
| Odor (threshold odor number)                 | 3*                                                   | n/a            | 2              | 1-4                 | No             | Naturally-occurring Organic Materials                          |
| Specific Conductance (µmho/cm)               | 1,600*                                               | n/a            | 906            | 852 – 961           | No             | Substances that Form Ions in Water                             |
| Sulfate (ppm)                                | 500*                                                 | n/a            | 199            | 178 – 220           | No             | Runoff or Leaching from Natural Deposits                       |
| Total Dissolved Solids (ppm)                 | 1,000*                                               | n/a            | 565            | 523 – 607           | No             | Runoff or Leaching from Natural Deposits                       |
| Unregulated Chemicals                        |                                                      |                |                |                     |                |                                                                |
| Alkalinity, total as CaCO <sub>3</sub> (ppm) | Not Regulated                                        | n/a            | 106            | 99 – 114            | n/a            | Runoff or Leaching from Natural Deposits                       |
| Boron (ppb)                                  | NL=1,000                                             | n/a            | 130            | 130                 | n/a            | Runoff or Leaching from Natural Deposits                       |
| Calcium (ppm)                                | Not Regulated                                        | n/a            | 58             | 52 – 65             | n/a            | Runoff or Leaching from Natural Deposits                       |
| Chlorate (ppb)                               | NL = 800                                             | n/a            | 30             | 30                  | n/a            | Byproduct of Drinking Water Chlorination, Industrial Processes |
| Hardness, total as CaCO <sub>3</sub> (ppm)   | Not Regulated                                        | n/a            | 240            | 219 – 262           | n/a            | Runoff or Leaching from Natural Deposits                       |
| Hardness, total (grains/gallon)              | Not Regulated                                        | n/a            | 14             | 12.8 – 15.3         | n/a            | Runoff or Leaching from Natural Deposits                       |
| Magnesium (ppm)                              | Not Regulated                                        | n/a            | 23             | 21 – 25             | n/a            | Runoff or Leaching from Natural Deposits                       |
| pH (pH units)                                | Not Regulated                                        | n/a            | 8.1            | 8.1                 | n/a            | Hydrogen Ion Concentration                                     |
| Potassium (ppm)                              | Not Regulated                                        | n/a            | 4.4            | 4.0 – 4.8           | n/a            | Runoff or Leaching from Natural Deposits                       |
| Sodium (ppm)                                 | Not Regulated                                        | n/a            | 92             | 86 – 98             | n/a            | Runoff or Leaching from Natural Deposits                       |
| Total Organic Carbon (ppm)                   | TT                                                   | n/a            | 2.4            | 2.1-2.7             | n/a            | Various Natural and Man-made Sources                           |

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; µmho/cm = micromhos per centimeter; ND = not detected; NL = Notification Level; n/a = not applicable; TT = treatment technique

MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal \* Chemical is regulated by a secondary standard.

| Clarity - combined filter effluent<br>Metropolitan Water District Diemer Filtration Plant | Treatment Technique | Turbidity Measurements | TT Violation? | Typical Source of Contaminant |
|-------------------------------------------------------------------------------------------|---------------------|------------------------|---------------|-------------------------------|
| 1) Highest single turbidity measurement                                                   | 0.3 NTU             | 0.07                   | 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 chemicals in drinking water that are difficult and sometimes impossible to measure directly.

## 2018 Moulton Niguel Water District Distribution System

| Disinfection Byproducts                    | MCL (MRDL/MRDLG) | Average Amount | Range of Detections | MCL Violation? | Typical Source of Contaminant       |
|--------------------------------------------|------------------|----------------|---------------------|----------------|-------------------------------------|
| Total Trihalomethanes (ppb)                | 80               | 27.5           | 22.7 - 46.8         | No             | Byproducts of Chlorine Disinfection |
| Haloacetic Acids (ppb)                     | 60               | 21.7           | 14.6 - 24.3         | No             | Byproducts of Chlorine Disinfection |
| Disinfectant Residual (chloramines) (mg/L) | 4                | 2.08           | 0.4 - 3.0           | No             | Disinfectant Added for Treatment    |

MRDL = Maximum Residual Disinfectant Level; MRDLG = Maximum Residual Disinfectant Level Goal

| Bacterial Quality             | MCL  | MCLG | Highest Monthly Positive Samples | MCL Violation? | Typical Source of Contaminant        |
|-------------------------------|------|------|----------------------------------|----------------|--------------------------------------|
| Total Coliform Bacteria (cfu) | 5.0% | 0.0% | 0.79%                            | No             | Naturally Present in the Environment |

No more than 5.0% 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 <sup>th</sup> Percentile Value | Sites Exceeding AL / Number of Sites | AL Violation? | Typical Source of Contaminant   |
|--------------|-------------------|-------------|-----------------------------------|--------------------------------------|---------------|---------------------------------|
| Lead (ppb)   | 15                | 0.2         | 2.34                              | 0/51                                 | No            | Corrosion of Household Plumbing |
| Copper (ppm) | 1.3               | 0.3         | 0.20                              | 0/51                                 | 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 2018.

In 2018, 12 schools submitted a request to be sampled for lead.

Zero samples exceeded the Regulatory Action Level (AL) for Lead or Copper.

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

## Baker Water Treatment Plant Treated Surface Water Quality Results for 2018

| Chemical                                     | MCL           | PHG, or (MCLG) | Average Amount | Range of Detections | MCL Violation? | Typical Source of Chemical                                    |
|----------------------------------------------|---------------|----------------|----------------|---------------------|----------------|---------------------------------------------------------------|
| <b>Radiologicals</b>                         |               |                |                |                     |                |                                                               |
| Gross Alpha Particle Activity (pCi/L)        | 15            | (0)            | 4.52           | 4.50 - 4.54         | No             | Erosion of Natural Deposits                                   |
| Uranium (pCi/L)                              | 20            | 0.43           | 2.4            | 2.0 - 2.8           | No             | Erosion of Natural Deposits                                   |
| <b>Disinfection Byproducts</b>               |               |                |                |                     |                |                                                               |
| Chlorite (BWTP Product Water) (ppm)          | 1             | 0.05           | 0.16           | 0.04 - 0.23         | No             | Byproduct of drinking water chlorination                      |
| Chlorite (Dist System) (ppm)                 | 1             | 0.05           | 0.18           | 0.12 - 0.26         | No             | Byproduct of drinking water chlorination                      |
| Chlorine Dioxide (ppb)                       | MRDL = 800    | MRDLG = 800    | 100            | ND - 730            | No             | Drinking water disinfectant added for treatment               |
| <b>Inorganic Chemicals</b>                   |               |                |                |                     |                |                                                               |
| Barium (ppb)                                 | 1,000         | 2000           | 123            | 117 - 129           | No             | Refinery Discharge, Erosion of Natural Deposits               |
| Fluoride (ppm) treatment-related             | 2             | 1              | 0.31           | 0.30 - 0.32         | No             | Water Additive for Dental Health; Erosion of natural deposits |
| <b>Secondary Standards*</b>                  |               |                |                |                     |                |                                                               |
| Turbidity                                    | 5             | n/a            | 0.22           | .20 - .25           | No             | Soil Runoff                                                   |
| Chloride (ppm)                               | 500*          | n/a            | 91.6           | 83.3 - 100          | No             | Runoff or Leaching from Natural Deposits                      |
| Odor (threshold odor number)                 | 3*            | n/a            | 1              | 1                   | No             | Naturally-occurring Organic Materials                         |
| Specific Conductance (µmho/cm)               | 1,600*        | n/a            | 1,056          | 1003 - 1110         | No             | Substances that Form Ions in Water                            |
| Sulfate (ppm)                                | 500*          | n/a            | 256            | 235 - 278           | No             | Runoff or Leaching from Natural Deposits                      |
| Total Dissolved Solids (ppm)                 | 1,000*        | n/a            | 682            | 638 - 726           | No             | Runoff or Leaching from Natural Deposits                      |
| <b>Unregulated Chemicals</b>                 |               |                |                |                     |                |                                                               |
| Alkalinity, total as CaCO <sub>3</sub> (ppm) | Not Regulated | n/a            | 150            | 124 - 175           | n/a            | Runoff or Leaching from Natural Deposits                      |
| Bicarbonate (ppb)                            | Not Regulated | n/a            | 180            | 150 - 211           | n/a            | Runoff or Leaching from Natural Deposits                      |
| Boron (ppb)                                  | NL=1,000      | n/a            | 135            | 127 - 143           | n/a            | Runoff or Leaching from Natural Deposits                      |
| Calcium (ppm)                                | Not Regulated | n/a            | 77.4           | 67.6 - 87.1         | n/a            | Runoff or Leaching from Natural Deposits                      |
| Hardness, total as CaCO <sub>3</sub> (ppm)   | Not Regulated | n/a            | 320            | 275 - 364           | n/a            | Runoff or Leaching from Natural Deposits                      |
| Hardness as Grains per Gallon                | Not Regulated | n/a            | 18.7           | 16.1 - 21.3         | n/a            | Runoff or Leaching from Natural Deposits                      |
| Magnesium (ppm)                              | Not Regulated | n/a            | 30.8           | 25.9 - 35.6         | n/a            | Runoff or Leaching from Natural Deposits                      |
| pH (pH units)                                | Not Regulated | n/a            | 8.0            | 7.9 - 8.1           | n/a            | Hydrogen Ion Concentration                                    |
| Potassium (ppm)                              | Not Regulated | n/a            | 5              | 4.8 - 5.2           | n/a            | Runoff or Leaching from Natural Deposits                      |
| Sodium (ppm)                                 | Not Regulated | n/a            | 91.6           | 84.7 - 98.5         | n/a            | Runoff or Leaching from Natural Deposits                      |
| Total Organic Carbon (ppm)                   | TT            | n/a            | 3              | 2.2 - 3.9           | n/a            | Various Natural and Man-made Sources                          |

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; µmho/cm = micromhos per centimeter; ND = not detected;

MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal;

NL = Notification Level; n/a = not applicable; TT = treatment technique \*Chemical is regulated by a secondary standard.

| Clarity - combined filter effluent<br>Baker Water Treatment Plant | Treatment Technique | Turbidity Measurements | TT Violation? | Typical Source of Contaminant |
|-------------------------------------------------------------------|---------------------|------------------------|---------------|-------------------------------|
| 1) Highest single turbidity measurement                           | 0.3 NTU             | 0.06                   | 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.

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 chemicals in drinking water that are difficult and sometimes impossible to measure directly.

NTU = nephelometric turbidity units

### Unregulated Chemicals Requiring Monitoring for 2013

| Chemical                               | Average Amount | Range of Detections |
|----------------------------------------|----------------|---------------------|
| Chromium (ppb)                         | 0.25           | 0.24 - 0.26         |
| Molybdenum (ppb)                       | 4.4            | 4.1 - 4.7           |
| Strontium (ppb)                        | 864            | 750 - 960           |
| Vanadium (ppb)                         | 3.2            | 2.5 - 4.2           |
| Chromium-6 (Hexavalent Chromium) (ppb) | 0.075          | 0.041 - 0.1         |
| Chlorate (ppb)                         | 116            | 40 - 310            |

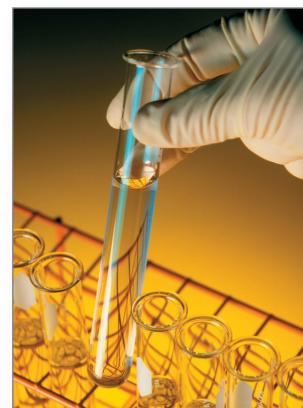
In 2012, the EPA revised the Unregulated Contaminant Monitoring Rule to establish a new set of unregulated contaminants.

Unregulated contaminants are those that don't yet have a drinking water standard set by the USEPA.

The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard.

As drinking water standards are reviewed and updated, Moulton Niguel will continue to ensure that all drinking water meets those defined water quality standards.

For more information, please visit the EPA's website at <http://water.epa.gov/lawsregs/sdwa/ucmr/ucmr3/basicinformation.cfm>.



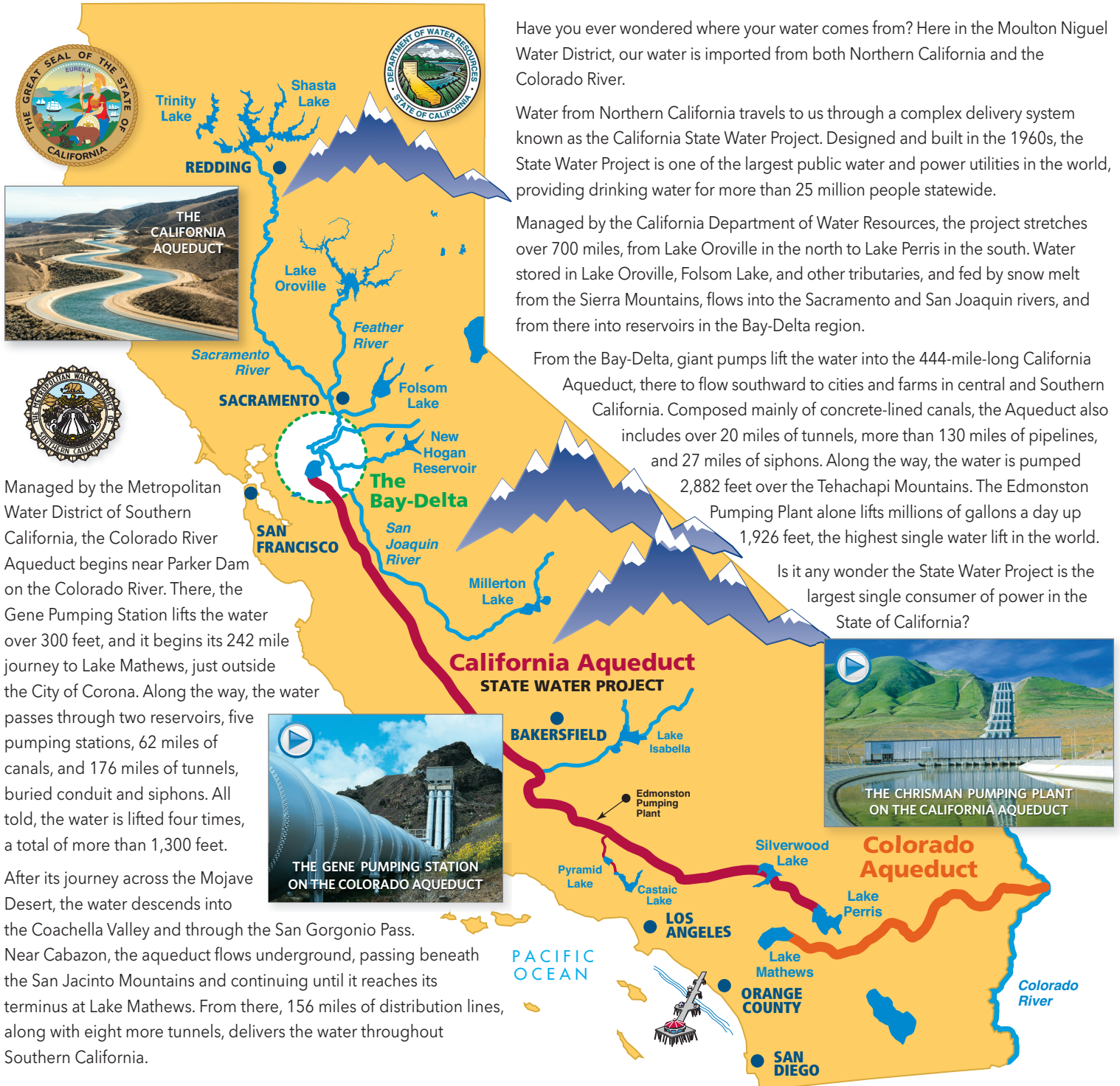




moulton niguel water district

# Where Does Our Water Come From?

*...and How Does It Get to Us?*

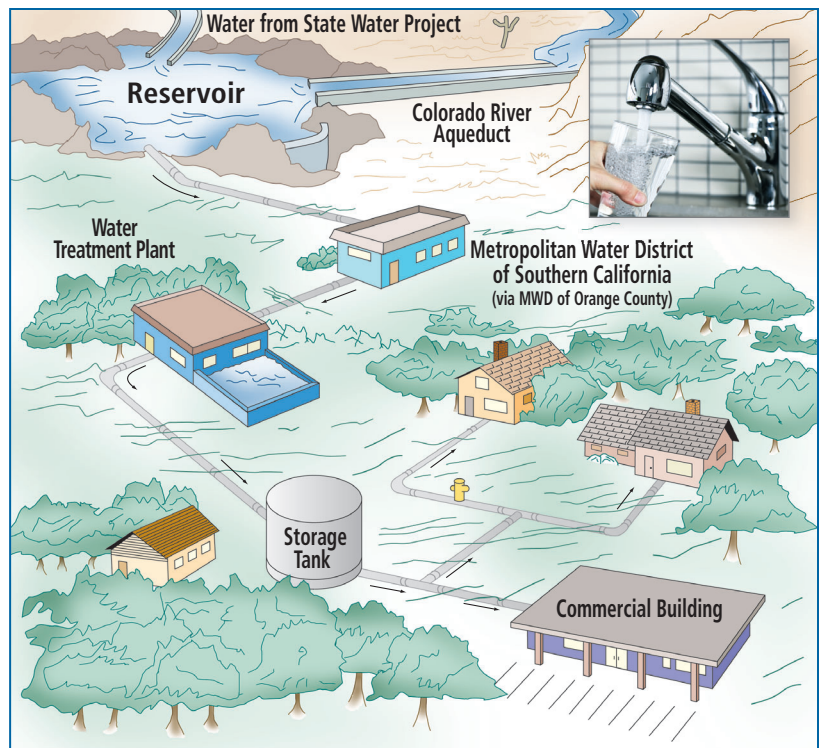


# How Is Our Water Distributed to Us?

Importing water from hundreds of miles away is only the start to providing you clean, fresh water. Once the water is in the southland, the Metropolitan Water District of Southern California pumps the water to individual cities throughout Orange County.

This water meets – or exceeds – all state and federal regulations. And it is kept safe from the treatment plant to your tap by constant testing throughout the distribution network.

The Moulton Niguel Water District monitors the water quality at all sources, reservoirs, and various points in the distribution system. All told, between the many agencies responsible for providing your water, it is tested more times, and for more compounds, than is required by state and federal laws and regulations. This constant surveillance ensures your drinking water stays within the requirements mandated by the federal Safe Drinking Water Act.



## You Can Depend on Us to Deliver Quality Water

Turn the tap and the water flows, as if by magic. Or so it seems. The reality is considerably different, however. Delivering high-quality drinking water to our customers is a scientific and engineering feat that requires considerable effort and talent to ensure the water is always there, always safe to drink.

Because tap water is highly regulated by state and federal laws, water treatment and distribution operators must be licensed and are required to complete on-the-job training and technical education before becoming a state certified operator.

Our licensed water professionals have an understanding of a wide range of subjects, including mathematics, biology, chemistry, physics, and engineering. Some of the tasks they complete on a regular basis include:

- ◆ Operating and maintaining equipment to purify and clarify water;
- ◆ Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- ◆ Conducting tests and inspections on water and evaluating the results;
- ◆ Documenting and reporting test results and system operations to regulatory agencies; and
- ◆ Serving our community through customer support, education, and outreach.

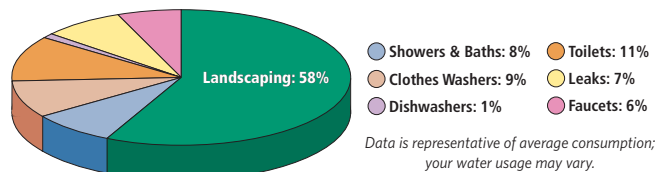
So, the next time you turn on your faucet, think of the skilled professionals who stand behind every drop.



## Where Do We Use Water the Most?

Outdoor watering of lawns and gardens makes up approximately 60% of home water use. By reducing your outdoor water use – by either cutting back on irrigation or planting more drought tolerant landscaping – you can dramatically reduce your overall water use.

*Save the most where you use the most: Make your outdoor use efficient.*



## Where Can You Learn More?

There's a wealth of information on the internet about Drinking Water Quality and water issues in general. Some good sites to begin your own research are:

**Metropolitan Water District of So. California:** [www.mwdh2o.com](http://www.mwdh2o.com)

**California Department of Water Resources:** [www.water.ca.gov](http://www.water.ca.gov)

**The Water Education Foundation:** [www.watereducation.org](http://www.watereducation.org)

To learn more about **Water Conservation & Rebate Information:**  
[www.mnwd.com/rebates](http://www.mnwd.com/rebates)

And to see the Aqueducts in action, checkout these two videos:

**Wings Over the State Water Project:** [youtu.be/8A1v1Rr2neU](https://youtu.be/8A1v1Rr2neU)

**Wings Over the Colorado Aqueduct:** [youtu.be/KipMQh5t0f4](https://youtu.be/KipMQh5t0f4)



27500 La Paz Road • Laguna Niguel, California 92677  
[www.mnwd.com](http://www.mnwd.com)