2016 Water Quality Report

City of Tustin Water Services
Since 1990, California public water utilities have been providing an annual Water Quality Report to their customers. This year’s report covers calendar year 2015 drinking water quality testing and reporting.

The City of Tustin Water Services Division (City) vigilantly safeguards its water supply and, as in years past, the water delivered to your home meets 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.

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. For example, the Orange County Water District (OCWD), which manages the groundwater basin, and the Metropolitan Water District of Southern California (MWDSC), which supplies imported treated surface water to the City, test for unregulated chemicals in our water supply. Unregulated chemical monitoring helps USEPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals.

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

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Some of our data, though representative, are more than one year old.
Sources of Supply

Orange County’s water supplies are a blend of groundwater provided by OCWD and water imported from Northern California and the Colorado River by the Municipal Water District of Orange County (MWDOC) via MWDS. Groundwater comes from a natural underground aquifer that is replenished with water from the Santa Ana River, local rainfall 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 and improving 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 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.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production or mining activities.
- **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.
- **Pesticides and herbicides**, which 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, 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.

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. DDW 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 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.

The USEPA and the federal Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from USEPA’s Safe Drinking Water hotline at (800) 426-4791 between 10 a.m. and 4 p.m. Eastern Time (7 a.m. to 1 p.m. in California).

Conservation Tips for Inside Your Home

Install aerators on the kitchen faucet
*Reduces flow to less than 1 gallon per minute*

Cook food in as little water as possible
*Saves water and helps retain food nutrients*

Keep a pitcher of drinking water in the refrigerator
*Saves gallons of water and it’s always cold*

Wash only full loads of laundry and dishes
*Saves up to 50 gallons per week*

Soak pots and pans instead of letting water run while you scrub them clean
*Saves water and makes the job easier*

Buy water-saving devices like high-efficiency toilets and clothes washers. You’ll save many gallons of water per day, and many of them are eligible for rebates.

To learn more, visit: [www.ocwatersmart.com](http://www.ocwatersmart.com).

Questions about your water? Contact us for answers.

For information about this report, or your water quality in general, please contact Joe Lozano at (714) 573-3178.

The Tustin City Council meets the first and third Tuesdays of every month at 7:00 pm in the City Council Chambers, 300 Centennial Way, Tustin, California. Please feel free to participate in these meetings.

For more information about the health effects of the listed contaminants in the following tables, call the USEPA hotline at (800) 426-4791.
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 at (800) 426-4791, or on the web at www.epa.gov/safewater/lead.

Drinking Water Fluoridation

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 43 fluoridate their drinking water. In December 2007, MWSD 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, MWSD adjusted the natural 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. Our local water is not supplemented with fluoride. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 parts per million. Additional information about the fluoridation of drinking water is available on these websites: 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/drinkwater/ certific/drinkwater/Fluoridation.shtml

For more information about MWSD’s fluoridation program, please call Edgar G. Dyamally at (213) 217-5709 or email him at edymally@mwah2o.com.
Nitrate Advisory

At times, nitrate in your tap water may have exceeded one-half the MCL, but it was never greater than the MCL of 10 milligrams per liter (mg/L). Nitrate in your drinking water in 2015 ranged from non-detect to 795 mg/L. The following advisory is issued because in 2015 we recorded nitrate measurements in the drinking water supply which exceeded one-half the nitrate MCL.

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant’s blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Entrained Air

If your tap water has a slightly “milky” appearance, you’re probably experiencing an interesting but harmless phenomenon known as “entrained air.”

The milky color in the water caused by tiny air bubbles is harmless and is related to the operation of City wells. The air is dissolved under pressure in the groundwater, much like carbon dioxide in a bottle of soda. If your tap water is milky-colored and you want to confirm you are experiencing entrained air, rinse out a clear glass twice and then fill it with cold tap water. After a few moments, the water should begin to clear from the bottom of the glass to the top as the bubbles rise to the surface. If the water does not clear, please contact us.

Check your sprinkler system and correct for overspray
**Saves 12-15 gallons each time you water**

Choose drip irrigation for your trees and shrubs
**Saves up to 15 gallons each time you water**

Use a broom instead of a hose
**It takes very little time to sweep and the water savings add up**

Plant drought-resistant trees and plants
**Saves about 30-60 gallons per 1,000 sq. ft. each time you water**

Water plants in the early morning
**Reduces evaporation and ensures deeper watering**

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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.

In 2012, MWDSC submitted to DDW its updated Watershed Sanitary Surveys for the Colorado River and State Water Project, which include suggestions for how to better protect these source waters. 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/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/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 December 2002. The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: confirmed leaking underground storage tanks, dry cleaners, and gas stations. The groundwater sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: known contaminant plumes, historic agricultural activities and application of fertilizers, and sewer collection systems.

A copy of the complete assessment is available at State Water Resources Control Board, Division of Drinking Water, 605 W. Santa Ana Blvd., Building 28, Room 325, Santa Ana, California 92701.

You may request a summary of the assessment by contacting the City of Tustin Water Services at (714) 573-3178.

### 2015 City of Tustin Distribution System Water Quality

<table>
<thead>
<tr>
<th>Disinfection Byproducts</th>
<th>MCL (MRDL/MRDLG)</th>
<th>Average Amount</th>
<th>Range of Detections</th>
<th>MCL Violation?</th>
<th>Typical Source of Contaminant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Trihalomethanes (ppb)</td>
<td>80 (4)</td>
<td>36</td>
<td>ND – 44.4</td>
<td>No</td>
<td>Byproducts of Chlorine Disinfection</td>
</tr>
<tr>
<td>Haloacetic Acids (ppb)</td>
<td>60 (4)</td>
<td>12</td>
<td>ND – 15.5</td>
<td>No</td>
<td>Byproducts of Chlorine Disinfection</td>
</tr>
<tr>
<td>Chlorine Residual (ppm)</td>
<td>(4/7)</td>
<td>4</td>
<td>ND – 2.2</td>
<td>No</td>
<td>Disinfectant Added for Treatment</td>
</tr>
</tbody>
</table>

### Aesthetic Quality

**Turbidity (NTU)** | 5 | 0.1 | ND – 0.38 | No | Erosion of Natural Deposits |

Eight locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; twenty locations are tested monthly for color, odor and turbidity.

### Bacterial Quality

**Total Coliform Bacteria** | 5.0 | 0 % | 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 coliforms, constitutes an acute MCL violation.

### Lead and Copper Action Levels at Residential Taps

<table>
<thead>
<tr>
<th>Action Level (AL)</th>
<th>Health Goal</th>
<th>90th Percentile Value</th>
<th>Sites Exceeding AL / Number of Sites</th>
<th>AL Violation?</th>
<th>Typical Source of Contaminant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (ppb)</td>
<td>15</td>
<td>0.2</td>
<td>5 / 4</td>
<td>No</td>
<td>Corrosion of Household Plumbing</td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>1.3</td>
<td>0.3</td>
<td>0 / 1</td>
<td>No</td>
<td>Corrosion of Household Plumbing</td>
</tr>
</tbody>
</table>

During 2015, 44 residences were tested for lead and copper at the tap. Lead was detected in five samples; three exceeded the regulatory action level. Copper was detected in 41 homes; none exceeded the regulatory action level.

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

### Unregulated Chemicals Requiring Monitoring in the Distribution System

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Notification Level</th>
<th>PHG</th>
<th>Average Amount</th>
<th>Range of Detections</th>
<th>Most Recent Sampling Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride (ppm)</td>
<td>800</td>
<td>n/a</td>
<td>49</td>
<td>37 – 57</td>
<td>2013</td>
</tr>
<tr>
<td>Chromium, Hexavalent (ppb)**</td>
<td>MCL = 10</td>
<td>0.02</td>
<td>0.085</td>
<td>ND – 0.15</td>
<td>2013</td>
</tr>
<tr>
<td>Molybdenum, Total (ppb)</td>
<td>n/a</td>
<td>n/a</td>
<td>4.9</td>
<td>4.6 – 5.4</td>
<td>2013</td>
</tr>
<tr>
<td>Strontium, Total (ppb)</td>
<td>n/a</td>
<td>n/a</td>
<td>970</td>
<td>920 – 1,100</td>
<td>2013</td>
</tr>
<tr>
<td>Vanadium, Total (ppb)</td>
<td>50</td>
<td>n/a</td>
<td>2.9</td>
<td>2.4 – 3.1</td>
<td>2013</td>
</tr>
</tbody>
</table>

**Hexavalent chromium is regulated with an MCL of 10 ppb but was not detected, based on the detection limit for purposes of reporting of 1 ppb. Hexavalent chromium was included as part of the unregulated chemicals requiring monitoring.

#### Useful Water Conservation Tips for Outside Your Home

- Check your sprinkler system and correct for overspray
  **Saves 12-15 gallons each time you water**
- Choose drip irrigation for your trees and shrubs
  **Saves up to 15 gallons each time you water**
- Use a broom instead of a hose
  **It takes very little time to sweep and the water savings add up**
- Plant drought-resistant trees and plants
  **Saves about 30-60 gallons per 1,000 sq. ft. each time you water**
- Water plants in the early morning
  **Reduces evaporation and ensures deeper watering**

#### 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 Tustin website: www.TustinCA.org.

In addition to extensive information about your local water and the support and services we offer, you’ll find links for many other local, statewide, and national resources.
Winter storms this year boosted California’s largest reservoirs to their historically average levels, but other key reservoirs remain critically low as our historic drought keeps its grip on the state. One average season does not overcome the effects of four dry years, and rain and snowfall were well below average in Southern California. To learn more about the drought, or to find useful tips for how to conserve water, click the logos to visit:

bewaterwise.com® or Save Our WATER

To learn about programs and devices that can help save water, along with information on rebates for these water saving resources, visit:

www.OCWaterSmart.com

To view a short YouTube video on multiple ways to conserve water, click here.

Conservation Tips for Inside Your Home . . .

Install aerators on the kitchen faucet
Reduces flow to less than 1 gallon per minute
Soak pots and pans instead of letting water run while you scrub them clean
Saves water and makes the job easier
Collect water used to wash fruits and vegetables
Use it to water your houseplants
Cook food in as little water as possible
Saves water and helps retain food nutrients

Keep a pitcher of drinking water in the refrigerator
Saves gallons of water and it’s always cold
Wash only full loads of laundry and dishes
Saves up to 50 gallons per week
Plug the sink instead of running water to rinse your razor
Saves up to 300 gallons a month
Don’t run water to thaw food:
Defrost in the refrigerator

The Colorado Aqueduct
Imported water from the Colorado River travels over 240 miles to get to Orange County. Along the way, it is lifted over 1,600 feet by a series of five pumping plants. Shown here, the Gene Pumping Station near the Colorado River boosts the water over 300 feet. From there, it flows through a series of canals, pipes, tunnels, and siphons, across the Mojave Desert and beneath the San Jacinto Mountains, on its way to meet the needs of the people of Southern California. To view a short YouTube video on the construction and history of the Colorado Aqueduct, click here.

The California State Water Project
The State Water Project, one of the largest water systems in the world, collects water from rivers in Northern California and transports it, through a network of canals, pipelines, and tunnels, over many hundreds of miles to Southern California, where it is distributed throughout the region. Along the way, it is lifted almost 3,800 feet, with the highest single lift of 1,926 feet over the Tehachapi Mountains, which separate the San Joaquin Valley from Southern California. To view a short YouTube video that shows the length and complexity of the State Water Project, click here.

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Don’t run water to thaw food:
Defrost in the refrigerator

We All Need to Be Water Wise All Year Long

One Average Rainy Season Does Not Overcome the Effects of Four Dry Years
We Use the Most Water in Our Homes on the Outside

Save the Most Where You Use the Most: Make Your Outdoor Use Efficient!

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.

For rebates on water saving devices, visit: www.OCWaterSmart.com

Tips for Conserving Water Outside Your Home...

Use a broom instead of a hose

*It takes very little time to sweep and the water savings add up*

Water plants in the early morning

*Reduces evaporation and ensures deeper watering*

Plant drought-resistant trees and plants

*Saves about 30-60 gallons per 1,000 sq. ft. each time you water*

Remove the turf from your yard:

*Saves about 42 gallons per square foot/per year*

Check your sprinkler system for leaks, overspray and broken sprinkler heads and repair promptly:

*Saves 12-15 gallons each time you water*

Use organic mulch around trees and plants to reduce evaporation and improve the soil

*Saves about 20-30 gallons per 1,000 sq. ft. each time you water*

Additional water saving steps and devices are also available, and some are eligible for substantial rebates. You should consider a cover for your swimming pool or hot tub to reduce evaporation. And water your garden deeply to promote healthier, stronger plants. Regular pruning will help your plants use water more efficiently. You won’t need to water as often, either.

For complete rebate information for these water saving resources, visit: www.ocwatersmart.com

Talk to your family and friends about saving water.

*If everyone does a little, we all benefit a lot.*
This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Arabic

يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك. يرجى ترجمته، أو ابحث التقرير مع صديق لك يفهم هذه المعلومات جيدًا.

Chinese

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。

Japanese

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

Korean

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

Spanish

Este informe contiene información muy importante sobre su agua potable. Para más información ó traducción, favor de contactar a Customer Service Representative. Telefono: (714) 573-3382.

Vietnamese

Bản báo cáo có ghi những chỉ 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.