Since 1990, California public water utilities have been providing an annual Water Quality Report to their customers. This year’s report covers calendar year 2019 drinking water quality testing and reporting. Laguna Beach County Water District (LBCWD) vigilantly safeguards its water supply and, as in years past, the water delivered 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, LBCWD 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, your drinking water is constantly monitored from source to tap for constituents that are both regulated and unregulated.

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

Your drinking water is groundwater from the Santa Ana Basin and surface water imported by Metropolitan Water District of Southern California (MWD).

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 groundwater basin to provide water to homes and businesses. MWD’s imported water sources are the Colorado River and the State Water Project, which draws water from the Sacramento-San Joaquin River Delta.

Basic Information About Drinking Water Contaminants

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

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural application, and septic systems.
- **Disinfection Byproducts**, which may pose health risks. A major challenge is how to balance the risks from microbial pathogens and DBPs. It is important to provide protection from these microbial pathogens while simultaneously ensuring decreasing health risks from disinfection byproducts. The Safe Drinking Water Act requires the USEPA to develop rules to achieve these goals.

Basic Information About Drinking Water Contaminants

Disinfection of drinking water was one of the major public health advances in the 20th century. Disinfection was a major factor in reducing waterborne disease epidemics caused by pathogenic bacteria and viruses, and it remains an essential part of drinking water treatment today.

Chlorine disinfection has almost completely eliminated from our waters the risks of microbial waterborne diseases. Chlorine is added to your drinking water at the source of supply (surface water treatment plant). Enough chlorine is added so that it does not completely dissipate through the distribution system pipes. This “residual” chlorine helps to prevent the growth of bacteria in the pipes that carry drinking water from the source into your home.

However, chlorine can react with naturally-occurring materials in the water to form unintended chemical byproducts, called disinfection byproducts (DBPs), which may pose health risks. A major challenge is how to balance the risks from microbial pathogens and DBPs. It is important to provide protection from these microbial pathogens while simultaneously ensuring decreasing health risks from disinfection byproducts. The Safe Drinking Water Act requires the USEPA to develop rules to achieve these goals.

Trihalomethanes (THMs) and Haloacetic Acids (HAAs) are the most common and most studied DBPs found in drinking water treated with chlorine. In 1979, the USEPA set the maximum amount of total THMs allowed in drinking water at 100 parts per billion as an annual running average. Effective in January 2002, the Stage 1 Disinfectants/Disinfection Byproducts Rule lowered the total THM maximum annual average level to 80 parts per billion and added HAAs to the list of regulated chemicals in drinking water. Your drinking water complies with the Stage 1 Disinfectants/Disinfection Byproducts Rule.

Stage 2 of the regulation was finalized by USEPA in 2006, which further controls allowable levels of DBPs in drinking water without compromising disinfection itself. A required distribution system evaluation was completed in 2008, and a Stage 2 monitoring plan has been approved by DDW. Full Stage 2 compliance began in 2012.
Federal and State Water Quality Regulations

Water Quality Issues that Could Affect Your Health

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 LBCWD 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. The LBCWD can provide a list of approved testing facilities, but the cost for testing is your responsibility.

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.

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 set limits for substances that may affect consumer health or aesthetic qualities of drinking water. 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.

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, MWD joined a majority of the nation’s public water suppliers in adding fluoride to drinking water in order to prevent tooth decay. MWD was in compliance with all provisions of the State’s fluoridation system requirements. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 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: www.cdc.gov/fluoridation/

State Water Resources Control Board, Division of Drinking Water: www.waterboards.ca.gov/drinking_water/certlic/dinkingWater/Fluoridation.html

For more information about MWD’s fluoridation program, please contact Edgar G. Dymanly at edynamly@mwdh2o.com or call him at (213) 217-5709.

### 2019 Metropolitan Water District of Southern California Treated Surface Water

<table>
<thead>
<tr>
<th>Chemical</th>
<th>2019 Metropolitan Water District of Southern California Treated Surface Water</th>
<th>PHG</th>
<th>Average Amount</th>
<th>Range of Detactions</th>
<th>MCL Violation?</th>
<th>Typical Source of Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inorganic Chemicals – Tested in 2019</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum (ppm)</td>
<td>1</td>
<td>0.6</td>
<td>0.124</td>
<td>ND – 0.065</td>
<td>No</td>
<td>Treatment Process Residue, Natural Deposits</td>
</tr>
<tr>
<td>Bromate (ppb)</td>
<td>10</td>
<td>0.1</td>
<td>2</td>
<td>ND – 0.5</td>
<td>No</td>
<td>Byproduct of Drinking Water Ozonation</td>
</tr>
<tr>
<td>Fluoride (ppm)</td>
<td>2</td>
<td>1</td>
<td>0.7</td>
<td>0.1 – 0.9</td>
<td>No</td>
<td>Water Additive for Dental Health</td>
</tr>
<tr>
<td>Nitrate as N (ppm)</td>
<td>10</td>
<td>10</td>
<td>0.5</td>
<td>0.5</td>
<td>No</td>
<td>Fertilizers, Septic Tanks, Natural Deposits</td>
</tr>
<tr>
<td><strong>Secondary Standards</strong> – Tested in 2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum (ppb)</td>
<td>200</td>
<td>600</td>
<td>124</td>
<td>ND – 65</td>
<td>No</td>
<td>Treatment Process Residue, Natural Deposits</td>
</tr>
<tr>
<td>Chloride (ppm)</td>
<td>500*</td>
<td>n/a</td>
<td>56</td>
<td>53 – 58</td>
<td>No</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Color (color units)</td>
<td>15*</td>
<td>n/a</td>
<td>ND</td>
<td>ND – 1</td>
<td>No</td>
<td>Naturally-occurring Organic Materials</td>
</tr>
<tr>
<td>Odor (threshold odor number)</td>
<td>3</td>
<td>n/a</td>
<td>ND</td>
<td>ND – 1</td>
<td>No</td>
<td>Naturally-occurring Organic Materials</td>
</tr>
<tr>
<td>Specific Conductance (µmhos/cm)</td>
<td>1,600</td>
<td>n/a</td>
<td>514</td>
<td>508 – 521</td>
<td>No</td>
<td>Substances that Form Ions in Water</td>
</tr>
<tr>
<td>Sulfate (ppm)</td>
<td>500*</td>
<td>n/a</td>
<td>91</td>
<td>89 – 93</td>
<td>No</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td><strong>Unregulated Chemicals – Tested in 2019</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alkalinity, total as CaCO₃ (ppm)</td>
<td>Not Regulated</td>
<td>n/a</td>
<td>72</td>
<td>69 – 74</td>
<td>n/a</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Boron (ppm)</td>
<td>NL = 1</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>No</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Calcium (ppm)</td>
<td>Not Regulated</td>
<td>30</td>
<td>29 – 30</td>
<td>29 – 30</td>
<td>n/a</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Hardness, total as CaCO₃ (ppm)</td>
<td>Not Regulated</td>
<td>127</td>
<td>124 – 130</td>
<td>123 – 130</td>
<td>No</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Hardness, total (grains/gallon)</td>
<td>Not Regulated</td>
<td>7.4</td>
<td>7.3 – 7.6</td>
<td>7.3 – 7.6</td>
<td>No</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Magnesium (ppm)</td>
<td>Not Regulated</td>
<td>14</td>
<td>13 – 14</td>
<td>13 – 14</td>
<td>n/a</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Perfluorooxycetic Acid (ppt)</td>
<td>Not Regulated</td>
<td>2.3</td>
<td>2.2 – 2.3</td>
<td>2.2 – 2.3</td>
<td>n/a</td>
<td>Industrial Discharge</td>
</tr>
<tr>
<td>pH (pH units)</td>
<td>Not Regulated</td>
<td>8.4</td>
<td>8.4 – 8.5</td>
<td>8.4 – 8.5</td>
<td>n/a</td>
<td>Hydrogen Ion Concentration</td>
</tr>
<tr>
<td>Potassium (ppm)</td>
<td>Not Regulated</td>
<td>2.8</td>
<td>2.6 – 2.9</td>
<td>2.6 – 2.9</td>
<td>No</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>Not Regulated</td>
<td>56</td>
<td>54 – 57</td>
<td>54 – 57</td>
<td>No</td>
<td>Runoff or Leaching from Natural Deposits</td>
</tr>
<tr>
<td>Total Organic Carbon (ppm)</td>
<td>T T</td>
<td>2.4</td>
<td>1.8 – 2.6</td>
<td>1.8 – 2.6</td>
<td>n/a</td>
<td>Various Natural and Man-made Sources</td>
</tr>
</tbody>
</table>

### Unregulated Chemicals Requiring Monitoring

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Notification Level</th>
<th>PHG</th>
<th>Average Amount</th>
<th>Range of Detactions</th>
<th>Most Recent Sampling Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese (ppb)**</td>
<td>SMCL = 50</td>
<td>n/a</td>
<td>2.75</td>
<td>1.4 – 4.1</td>
<td>2019</td>
</tr>
</tbody>
</table>

**SMCL = Secondary MCL**

**Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated chemicals requiring monitoring.**

### Definitions

- **MCL** = Maximum Contaminant Level

- **MCLG** = Maximum Contaminant Level Goal

- **PHG** = Public Health Goal

- **AL** = Regulatory Action Level

- **NTU** = Turbidity Units

- **SMCL** = Secondary MCL

- **ppb** = parts per billion

- **ppm** = parts per million

- **µg/L** = micrograms per liter

- **mg/L** = milligrams per liter

- **ppt** = parts per trillion

- **ng/L** = nanograms per liter

- **milhoes/cm** = microhers per centimeter
Cryptosporidium

Cryptosporidium is a microscopic organism that, when ingested, can cause diarrhea, fever, and other gastrointestinal symptoms. The organism comes from animal and/or human wastes and may be in surface water. The MWD tested their source water and treated surface water for Cryptosporidium in 2019 but did not detect it.

If it ever is detected, Cryptosporidium is eliminated by an effective treatment combination including sedimentation, filtration, and disinfection.

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, or on the web at www.epa.gov/safewater.

Arsenic Advisory

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Source Water Assessments

Imported (MWD) Water Assessment

Every five years, MWD is required by DOW 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/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 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 (800) CALL-MWD (225-5693).

Groundwater Assessment

An assessment of our groundwater sources from the Santa Ana Basin was completed in December 2002 and is updated on a continuing basis. The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: dry cleaners, gas stations, and known contaminant plumes.

A copy of the complete assessment is available at State Water Resources Control Board, Division of Drinking Water, Santa Ana District, 2 MacArthur Place, Suite 150, Santa Ana, CA 92707. You may request a summary of the assessment by contacting Mr. Van Kayarath at (949) 464-3117.
Your Water: Always Available, Always Assured

The Diemer Water Treatment Plant, located in the hills above Yorba Linda, processes up to 520 million gallons of clean water per day — enough to fill the Rose Bowl every 4 hours. The water is a blend from both the Colorado River Aqueduct and the State Water Project. At 212 acres, it's one of the largest water treatment plants in the U.S. It provides nearly half of Orange County's total water supply.

Water flowing from Diemer 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 Laguna Beach County Water District monitors the water quality at all sources, reservoirs, and various points on the distribution system. This constant surveillance ensures your drinking water stays within the requirements mandated by the federal Safe Drinking Water Act.

Este informe contiene información muy importante sobre su aguapotable. Para mas información ó traducción, favor de contactar a Customer Service Representative.

Telefono: (949) 464-3117.

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