2017 Water Quality

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Carmichael Water District
2017 Annual Water Quality Report

This report contains important information about your drinking water.

Public Meetings
The Carmichael Water District Board of Directors typically meets at 7:00 pm on the third Monday of each month at the Carmichael Water District office. Meeting dates are posted at our website. The public is welcome to attend.

Water Efficiency
Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Our website, www.carmichaelwd.org, is the best place for information regarding tips and our free water efficiency programs. If you prefer you can call our office at (916) 483-2452.

2017 Annual Water Quality Report

About This Report
In 2017, as in years past, Carmichael Water District (District) met all U.S. Environmental Protection Agency (USEPA) and State Water Resources Control Board (State Board) drinking water health standards. The District routinely tests for over 138 contaminants to ensure safe and healthy drinking water for our customers. Once again, we are proud to report that our system has not violated any maximum contaminant level (mcl) or any other water quality standards. This brochure is a snapshot of the District’s 2017 water quality. Also included are details about where your water comes from, what it contains, and how it compares to State standards.

While the District is required to list only those contaminate detected at a threshold level as determined by state and federal regulations in this report, a complete listing of all tested contaminate is available in the District’s Annual Water Quality Report. The 2017 Annual Water Quality Report is available on our website, www.carmichaelwd.org or at our main office.

High Quality Drinking Water is Carmichael Water District’s Top Priority
Demonstrating its commitment to public health protection and the public’s right-to-know about local environmental information, the USEPA and the State Board require water suppliers to provide annual drinking water quality reports to its customers. This publication summarizes the most recent testing and includes a comparison of detectable contaminate in your drinking water against established federal and state standards. This year’s report concludes that, once again, your drinking water meets or exceeds all federal and state drinking water standards.

Groundwater and Surface Water Assessment
To meet the State Board requirements and provide our customers with information about our water supply the District completed the American River Watershed Sanitary Survey in 2013. The results indicate that our surface water source, the American River, is considered most vulnerable to contamination from sewer system spills, body contact, recreation, urban runoff and discharge of regulated and unregulated contaminants. The contaminants to which the surface water sources are considered most vulnerable include the following: perchlorate, nitromethane (NDMA) and volatile organic chemicals discharged into the American River by the Aerojet Rocketdyne (Aerojet). Aerojet is under the joint regulatory oversight of the USEPA, California Department of Toxic Substance Control and the California Regional Water Quality Control Board.

The groundwater sources are considered most vulnerable to contamination from illegal activities and unauthorized dumping, sewer collection systems, dry cleaners, automobile repair shops, chemical/petroleum pipelines, electrical/electronic manufacturing, underground storage tanks and gas stations. The contaminants to which groundwater sources are considered most vulnerable include the following: liquid rocket fuel (NDMA), rocket fuel propellant (perchlorate), dry cleaning solvent (PCE), and gasoline additive (MTBE).

Source Water Protection Tips
Protection of drinking water is everyone’s responsibility. You can help protect your community’s drinking water source in several ways:
- Eliminate excess use of lawn and garden fertilizers and pesticides.
- Pick up after your pets.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Dispose of medications properly; take use of medicine take-back programs.

Where Does Our Water Come From?
The District’s approximately 37,897 customers receive on average 84 percent of their water from the American River (surface water) and 16 percent from District groundwater wells. Since the expansion of the water treatment plant in 2008, the District has reduced the number of groundwater sources to 4 primary wells. The wells are operated seasonally, May through September. Our water is tested for more than 138 contaminate on a regular basis. Water samples are subject to the most up-to-date testing methods and then are retested for accuracy. Samples are then measured against state and federal standards to ensure quality.

The State Board requires water providers to conduct a Source Water Assessment to help protect the quality of future water supplies. This assessment describes where a water system’s drinking water comes from, the types of polluting activities that may threaten source water quality and an evaluation of the water’s vulnerability to those threats.
**What's In Our Water?**

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 1-800-426-4791.

The sources of drinking water tap water, include: rivers, lakes, springs, reservoirs, ponds, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. In order to ensure that tap water is safe to drink, the USEPA and State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

**Contaminants that may be present in source water (pre-treated water) include:**
- Microbial contaminants, such as viruses and bacteria, that may come from sewage 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, commercial, or industrial and domestic wastewater discharges, and 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 stormwater discharges, urban stormwaters, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

**Sodium and Hardness:**

Sodium is a naturally occurring chemical element that is present in our source water. The level of sodium measured during 2017 was 7.2 ppm from our surface water source and an average of 8.6 ppm from our groundwater source.

Hardness of the water in our system depends on the seasonal source of supply and your service location within the District. The level of hardness measured during fall and winter of 2017 was 26 ppm which classifies the water in the "soft" category based on water hardness standards and guidelines. During summer and winter 2017 when we supplement with groundwater, the hardness ranges from 7 ppm to 10 ppm depending on your location within the District.

**Special Health Information:**

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, people with HIV/AIDS or other immune system disorders, elderly and infants) can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in water is generally not a problem, but it can be a problem if your water is from a well and you have lead plumbing in your home. 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 in the Safe Drinking Water Hotline (1-800-426-4791) or their website at http://www.epa.gov/lead.

**How to Read the Table:**

1. Identify constituent in the left column.
2. Compare the detection range and averages to the Maximum Contaminant Level Goal (MCL) and the Public Health Goal (MCLG) for each constituent.

**Table Definitions:**

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Primary Drinking Water Standards (PDWS) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

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 established by the USEPA.

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.

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.

Primary Drinking Water Standards (PDWS) – MCLs and MCLGs for contaminants that affect health, along with their monitoring and reporting requirements, and water treatment requirements.

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.

Regulatory Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Secondary Drinking Water Standards (SDWS) – MCLs for contaminants that affect taste, odor or appearance of the drinking water. Contaminants with SDWS do not affect health at the levels.

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.

Not Applicable (N/A)

None Detected (ND) – Analyzed, not detectable at testing limit.

**Water Quality Measurement Units:**

- Microthios: A measure of the ability of water to conduct electricity.

**Detected Primary Drinking Water Contaminants**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Unit of Measure</th>
<th>MCL (MCLG)</th>
<th>Surface Water Average</th>
<th>Groundwater Average</th>
<th>Groundwater Range</th>
<th>Typical Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microthios</td>
<td>ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Detected Secondary Drinking Water Contaminants**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Unit of Measure</th>
<th>AL</th>
<th>PHG</th>
<th>90th Percentile</th>
<th>No of sites exceeding AL</th>
<th>Typical Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>ppm per million</td>
<td>1.3</td>
<td>0.17</td>
<td>0.16</td>
<td>N/A</td>
<td>Internal corrosion of household plumbing systems, erosion of natural deposits</td>
</tr>
</tbody>
</table>

In 2017, eight (8) schools requested lead sampling.

Surface water samples collected in 2017. Groundwater samples collected in 2017. NDMa, Perchlorate, & VOCs are proactively sampled quarterly. 2017 Consumer Confidence Report