Zone 7 Water Agency provides treated drinking water to four major water retailers, along with a small number of direct customers, serving approximately 220,000 people in Pleasanton, Livermore, Dublin and the Dougherty Valley area of San Ramon. We also provide untreated water to local agricultural users and provide flood protection to 425 square miles of eastern Alameda County. All water supplied during 2013 met the regulatory standards set by the state and federal governments and, in almost all cases, the quality was significantly better than required.
None of the primary standards listed below were detected at or above Detection Limits for Purposes of Reporting (DLR) during 2013 monitoring.

### PRIMARY STANDARDS: Contaminants Not Detected in Zone 7 Water Supply

#### Organic Chemicals

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>No. of Samples Collected</th>
<th>90th Percentile Level Detected</th>
<th>Number of Sites Exceeding AL</th>
<th>Action Level (AL)</th>
<th>PHG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (ug/L)</td>
<td>13</td>
<td>ND</td>
<td>None</td>
<td>15</td>
<td>0.2</td>
</tr>
<tr>
<td>Copper (ug/L)</td>
<td>13</td>
<td>160</td>
<td>None</td>
<td>1300</td>
<td>300</td>
</tr>
</tbody>
</table>

ND = Not detected at or above 5 ug/L

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. Zone 7 Water Agency 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 or at [http://www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

### Lead and Copper Rule

This rule is applicable to Zone 7’s direct customers only. Per the CDPH-approval Compliance Monitoring is conducted once every three years. Data from June 14, 2012 monitoring is summarized below:

- Alachlor
- Atrazine
- Bentazon
- Benzo(a)pyrene
- Carbafuran
- Chlorodane
- 2,4-D
- Dalapon
- Dibromochloropropane (DBCP)
- Di(2-ethylhexyl)adipate
- Dicofol
- Diquat
- Endothall
- Endrin
- Ethylene Dibromide (EDB)
- Glyphosate
- Heptachlor
- Heptachlor Epoxide
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Lindane
- Methoxychlor
- Molinate
- Oxamyl
- Pentachlorophenol
- Pizicon
- Polychlorinated Biphenyls
- Simazine
- Thiobencarb
- Toxaphene
- 2,3,7,8-TCDD (Dioxin)
- 2,4,5-TP (Silvex)

* Latest monitoring on SOCs except DBCP & EDB was conducted in 2011.

** Based upon low vulnerability, CDPH granted reduced monitoring for radionuclides for current supply sources on January 25, 2008. Only gross alpha particle activity monitoring is required once every nine years. Latest gross alpha monitoring conducted in 2008. Uranium monitoring is conducted for supplemental information as in-house capabilities are available.
### WATER QUALITY DATA - CONTAMINANTS DETECTED IN 2013 WATER SUPPLY

<table>
<thead>
<tr>
<th>CONTAMINANT</th>
<th>MKL</th>
<th>DLX (MCL)</th>
<th>PHS (MCLG)</th>
<th>ND (MCL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total coliform bacteria</td>
<td>More than 5 % of monthly samples are positive</td>
<td>NA</td>
<td>NA</td>
<td>0.1</td>
</tr>
<tr>
<td>Total inorganic chemicals (TICs), mg/L</td>
<td>IR</td>
<td>1°</td>
<td>NA</td>
<td>Highest Percentage of month positive samples 0.1%</td>
</tr>
<tr>
<td>Halocarbon (as HCL DCL, mg/L)</td>
<td>68</td>
<td>1°</td>
<td>NA</td>
<td>23</td>
</tr>
<tr>
<td>Chloramines as Chlorine, mg/L</td>
<td>Maximum Residual Disinfection Level (MRDL) = 4.0</td>
<td>[4]</td>
<td></td>
<td>2.2</td>
</tr>
</tbody>
</table>

### WATER SUPPLY SOURCES

### REGULATED CONTAMINANTS WITH PRIMARY DRINKING WATER STANDARDS, established by the State of California Department of Public Health

#### REGULATED CONTAMINANTS WITH SECONDARY DRINKING WATER STANDARDS, established by the State of California Department of Public Health

<table>
<thead>
<tr>
<th>CONTAMINANT</th>
<th>DISCUSSION SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbidity</td>
<td>TT = 1 NTU Maximum</td>
</tr>
<tr>
<td>Turbidity</td>
<td>TT = 5 °T of samples ≤ 0.3 NTU</td>
</tr>
<tr>
<td>Barium (µg/L)</td>
<td>Average</td>
</tr>
<tr>
<td>Arsenic (µg/L)</td>
<td>Average</td>
</tr>
<tr>
<td>Selenium (µg/L)</td>
<td>Average</td>
</tr>
<tr>
<td>Fluoride (µg/L)</td>
<td>Average</td>
</tr>
<tr>
<td>Radioactive</td>
<td>Average</td>
</tr>
</tbody>
</table>

### UNITS & EVERYDAY EQUIVALENTS

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Unit</th>
<th>Everyday Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity as calcium carbonate (mg/L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conductivity (µS/cm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen (mg/L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH (US)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silica (mg/L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### WHERE DO CONTAMINANTS COME FROM?

- **Surface-Water Contaminants:**
  - **Biological:** Pathogens such as E. coli, Salmonella, and Cryptosporidium.
  - **Inorganic:** Nutrients (nitrate), metals (arsenic, copper, lead), and disinfection byproducts (THMs).
  - **Organic:** Pesticides and pharmaceuticals.

- **Ground-Water Contaminants:**
  - **Biological:** Pathogens such as E. coli and Cryptosporidium.
  - **Inorganic:** Nutrients (nitrate), metals (arsenic, copper, lead), and disinfection byproducts (THMs).
  - **Organic:** Pesticides and pharmaceuticals.

### WHAT'S IN YOUR WATER?

- **Alkalinity as calcium carbonate (mg/L):** An essential nutrient that is found naturally in drinking water. It is added to water as a pH regulator.

- **Conductivity (µS/cm):** A measure of the water's ability to conduct an electric current. It is affected by the concentration of dissolved minerals.

- **Dissolved Oxygen (mg/L):** Oxygen that is dissolved in water and is essential for aquatic life.

- **pH (US):** A measure of water acidity or alkalinity. A pH of 7 is neutral, values below 7 are acidic, and values above 7 are basic.

- **Silica (mg/L):** Silica is a natural mineral found in water and is beneficial for dental health.

- **Turbidity (NTU):** A measure of water clarity and the presence of suspended particles.

### MAJOR SOURCES OF DETECTED CONTAMINANTS

Major sources of regulated contaminants detected in Zone 7 water supply are listed below:

- **TOXICITY: Turbidity roll-off.
  - Total Organic Carbon Various natural and man-made sources.
  - Barium: Urine, fish, and corn.
  - Chromium: Natural leaching from rocks and minerals.
  - Uranium: Natural leaching from rocks and minerals.
  - Fluoride: Natural leaching from rocks and minerals.

### ADDITIONAL PARAMETERS - Included to assist consumers in making health or economic decisions, i.e. low sodium diet, water softening, etc.

- **Alkalinity as calcium carbonate (mg/L):** Measured in parts per million (ppm) or milligrams per liter (mg/L).

- **Conductivity (µS/cm):** Measured in microsiemens per centimeter (µS/cm).

- **Dissolved Oxygen (mg/L):** Measured in milligrams per liter (mg/L).

- **pH (US):** Measured on a scale of 0 to 14, with 7 being neutral.

- **Silica (mg/L):** Measured in parts per million (ppm) or milligrams per liter (mg/L).

### REMARKS

- **What’s in Your Water?**
  - Table of the right show the average level and range of each detected regulated contaminant. Detected secondary standards, and additional parameters are also listed.

- **The following components may be particularly of interest to our customers:**
  - **TURBIDITY:** Measured as a measure of the cloudiness of the water. It is an important indicator of the effectiveness of the filtration system for surface-water treatment. Note that turbidity does not measure air bubbles, only particles.

- **TDS (Total Dissolved Solids):** Includes all inorganic substances and organic compounds dissolved in water.

- **SDI (Specific Disinfection Index):** A measure of the ability of a water to resist fouling during the disinfection process.

- **DOC (Dissolved Organic Carbon):** A measure of the organic carbon content of water.

- **TOC (Total Organic Carbon):** A measure of the total carbon content of water.

- **THM (Trihalomethane):** A group of chemicals formed when chlorine is used to disinfect drinking water.

- **HAAs (Haloacetic Acids):** A group of chemicals formed when other halogenated disinfectants are used.

- **Taste and Odor:** Often caused by the presence of organic compounds, such as ammonia, nitrates, and nitrites.
Source Water Assessment

Zone 7 drinking water sources include local and imported surface water as well as groundwater. Protecting our source water is an important part of providing safe drinking water to the public.

A source water assessment, also known as a sanitary survey, is conducted on each drinking water source as required by the California Department of Public Health (CDPH). Surface water is most vulnerable to contaminants as it travels through the Sacramento and San Joaquin watersheds and the Delta. The latest sanitary survey for the Delta and the State Water Project (SWP) was completed in June 2012. It identified key vulnerabilities and sources of contaminants as wastewater-treatment plant discharges, urban runoff, recreational activities, and conversions of some agricultural Delta islands to wetlands. The sanitary survey includes an action plan to address these key vulnerabilities and sources of contaminants. In the past, the sanitary survey has been conducted every five years. Moving forward, the sanitary surveys will be produced on an annual basis and will focus on a narrower scope. Every five years these smaller annual surveys will be compiled into a complete survey and updated to reflect current conditions.

After leaving the Delta, water is transported to Zone 7 via the South Bay Aqueduct (SBA). SBA water quality may also be vulnerable to pollution from local cattle grazing, wildlife activities, and recreational activities in the watersheds of the Bethany and Del Valle reservoirs. Zone 7 is proactively participating in a number of activities to improve water supply reliability and water quality of the SBA.

Copies of any public outreach materials, source water assessment reports or sanitary surveys are available by calling Gurpal Deol at 925-447-0533.

Terms Used

MAXIMUM CONTAMINANT LEVEL (MCL)
The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Public Health Goals or Maximum Contaminant Level Goals as is 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.

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’s Office of Environmental Health Hazard Assessment (OEHHA).

PRIMARY DRINKING WATER STANDARD (PDWS)
MCLs and MRDLs for contaminants that affect health, along with their monitoring and reporting requirements, and water-treatment requirements.

TREATMENT TECHNIQUE (TT)
A required process intended to reduce the level of a contaminant in drinking water.

Commitment to Water Quality

Control strategies for seasonal taste- and odor control caused by algal growth in SBA water include periodic copper sulfate applications to source water by the Department of Water Resources and use of Powdered Activated Carbon at both conventional treatment plants. A more advanced and preferred taste- and odor control method is ozonation at all three surface-water treatment plants. The project schedule will be developed based on funding availability.

The Mocho Groundwater Demineralization Plant went into operation in late summer 2009 to reduce the buildup of salts and minerals in our groundwater basin and reduce the hardness of groundwater delivered primarily to the western side of Zone 7’s service area. In 2013, approximately 2,785 acre-feet (more than 0.9 billion gallons) of groundwater was demineralized and approximately 2,798 tons of salt was exported as brine out of the Valley.

Proposed State Regulation for Hexavalent Chromium (CrVI)

Chromium is a heavy metal that occurs throughout the environment. The trivalent form (CrIII) is a required nutrient and has very low toxicity. The hexavalent form (CrVI) is more toxic and has been known to cause cancer. CrVI is currently regulated under the 50 μg/L maximum contaminant level (MCL) for total chromium.

On April 15, 2014, The California Department of Public Health announced the final MCL for CrVI specific of 10 μg/L. The CrVI MCL will become effective July 1, 2014.

CDPH estimated that over 300 drinking water sources in California would be affected at an estimated statewide implementation cost of approximately $156 million per year. Zone 7 has several groundwater wells with naturally-occurring CrVI near the proposed MCL that might require treatment.
State Water Project water conveyed through the Delta, and then through the South Bay Aqueduct (SBA), makes up the bulk of our surface-water supplies. Zone 7 has three facilities for the treatment of surface water: the Patterson Pass Conventional, the Patterson Pass Ultrafiltration, and the Del Valle water treatment plants. Because of the Del Valle plant’s physical location, its water supply source can be from the SBA, Del Valle Reservoir, or a blend of the two. The Patterson Pass plants receive water only from the SBA.

Zone 7 applies a multi-barrier approach to treat and remove pollutants from surface water, and the water is then disinfected using chloramination to minimize microbial risks. Groundwater is simply chloraminated to maintain a consistent residual disinfectant throughout the distribution system.

Our Primary Water Sources:

**Imported Surface Water**
More than three-quarters of our water supply originates as Sierra Nevada snowmelt and is conveyed by the State Water Project via the Delta and the South Bay Aqueduct*.

**Local Surface Water**
This is comprised of local rain runoff stored in Del Valle Reservoir.

**Local Groundwater**
This supply is pumped by Zone 7 from the aquifer that underlies the Livermore-Amador Valley; water in the aquifer comes from local rainfall and from the State Water Project.

* In wet years, we store surplus State Water Project supplies in local and offsite groundwater basins for use when needed, and for reliability during droughts.

About Water Treatment

Educational Information

- 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 U.S. Environmental Protection Agency’s (USEPA’s) Safe Drinking Water Hotline (1-800-426-4791).

- 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, some 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).

Este Informe Contiene Información Muy Importante Sobre Su Agua Potable. Tradúzcalo O Hable Con Alguien Que Lo Entienda Bien. (This Report Contains Important Information About Your Drinking Water. Translate it, or speak with someone who understands it.)