Drinking Water Quality

Since 1990, California water utilities have been providing an annual Water Quality Report to their customers. This year’s report, also known as the “Consumer Confidence Report,” covers calendar year 2009 water quality testing, and has been prepared in compliance with regulations called for in the 1996 reauthorization of the Safe Drinking Water Act (SDWA). The reauthorization charged the United States Environmental Protection Agency (USEPA) with updating and strengthening the tap water regulatory program.

USEPA and the California Department of Public Health (CDPH) are the agencies responsible for establishing drinking water quality standards. To ensure that your tap water is safe to drink, USEPA and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. The federal Food and Drug Administration (FDA) also sets regulations for bottled water.

Irvine Ranch Water District (IRWD) vigilantly safeguards its water supply and, as in years past, the water delivered to your home meets the standards required by the state and federal regulatory agencies. In accordance with the SDWA, IRWD monitors over 100 compounds in your water supply. This report includes only the compounds actually detected in the water.

In some cases, the District goes beyond what is required by monitoring for additional contaminants that may have health risks. Unregulated contaminant monitoring helps USEPA determine where certain contaminants occur and whether it needs to establish regulations for those contaminants.

Water use needs to be our way of life. It’s easy to do more with less water. Visit www.AlwaysWaterSmart.com for water saving tips and ideas for your home and business.

Basic Information About Drinking Water Contaminants

The sources of drinking 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:

- 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.

- 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.

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water 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 storm water runoff, agricultural application and septic systems.

In order to ensure that tap water is safe to drink, USEPA and the CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH 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.

Crypto-sporidium

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. MWD and IRWD tested the source waters and treated surface waters for Cryptosporidium in 2009 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 hotlines at (800) 426-4791 between 9 a.m. and 5 p.m. Eastern Time (6 a.m. to 2 p.m. in California).

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.

For information about this report, or for any questions relating to your drinking water quality, please call Lars Oldewage, IRWD’s Laboratory Manager, at (949) 453-5858. For IRWD’s Customer Service Department and other information, please call (949) 453-5300, or email at customerservice@irwd.com.

Community Participation

The Irvine Ranch Water District (IRWD) Board of Directors meets the second and fourth Monday of each month beginning at 5 p.m. at IRWD Headquarters, 15600 Sand Canyon Avenue, Irvine, California.

A copy of this report is also available on our website: www.irwd.com. For more information about the health effects of the listed contaminants in the following tables, call the U.S. Environmental Protection Agency hotline at (800) 426-4791.
The Quality of Your Water Is Our Primary Concern

Chloramines

IRWD imports water from MWD and produces water using chloramines, a combination of chlorine and ammonia, as its disinfecting water disinfectant. Chloramines are effective killers of bacteria and other microorganisms that may cause disease. Chloramines form less disinfection by-products and have no odor when used properly. People who use kidney dialysis machines may want to take special precautions and consult their physician for the appropriate type of water treatment. Customers who maintain fish ponds, tanks or aquaria should also make necessary adjustments in water quality treatment, as these disinfectants are toxic to fish. For further information or if you have any questions about chloramines please visit www.irwd.com or call (949) 453-5300.

Radon Advisory

Radon is a radioactive gas that you can’t see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Breathing air containing radon can lead to lung cancer. Drinking water containing radon could increase the risk of stomach cancer. Compared to radon entering the home through soil, radon entering the home through your tap water is a small source of radon in indoor air. The USEPA Action Level for radon in indoor air is 4 picocuries per liter. Radon from your tap water contributes no more than 0.1 picocuries per liter in your indoor air. If you are concerned about radon in your home, test the air in your home. Fix your home if the level of radon is 4 picocuries per liter of air or higher. There are simple ways to fix a radon problem that aren’t too costly.

For additional information, call your State radon program (1-800-745-7236), the EPA Safe Drinking Water Hotline (1-800-426-4791), or the National Safety Council Radon Hotline (1-800-SOS-RADON).

Arsenic Advisory

The following advisory is issued because in 2009 we recorded an arsenic measurement in a drinking water source between 5 and 10 micrograms per liter. Arsenic at this level was detected in one of 18 wells IRWD operates in its Dyer Road Well Field. The water produced from these wells is blended together before it is delivered to the drinking water distribution system. The concentration of arsenic in the blended water is at or below the State’s reportable detection limit of 2 parts per billion (ppb).

While your drinking water meets the federal and state standard for arsenic of 10 micrograms per liter,
it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic’s possible health effects against the cost of removing arsenic from drinking water. The USEPA 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.

**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. In line with recommendations from CDPH, as well as the U.S. Centers for Disease Control and Prevention, MWD adjusted the natural fluoride level in imported treated water from the Colorado River and State Project water to the optimal range for dental health of 0.7 to 1.3 parts per million. Our local groundwater contains naturally occurring fluoride but 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.

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/](http://www.cdc.gov/fluoridation/)
- California Department of Public Health [www.cdph.ca.gov/certificldrinkingwater/Pages/Fluoridation.aspx](http://www.cdph.ca.gov/certificldrinkingwater/Pages/Fluoridation.aspx)

For more information about MWD’s fluoridation program, please contact Edgar G. Dyamaly at (213) 217-5709 or at edgally@mwvdm2o.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. The following advisory is issued because in 2009 we recorded nitrate measurements in a drinking water source which exceeded one-half the nitrate MCL.

Nitrate in drinking water at levels above 45 milligrams per liter 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 45 parts-per-million 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.

**About 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. IRWD 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: [www.epa.gov/safewater/](http://www.epa.gov/safewater/).

### 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>Copper (ppm)</td>
<td>1.3</td>
<td>0.17</td>
<td>0.2</td>
<td>0 out of 74</td>
<td>No Corrosion of Household Plumbing</td>
</tr>
<tr>
<td></td>
<td>Lead (ppm)</td>
<td>15</td>
<td>2</td>
<td>&lt;5</td>
<td>No Corrosion of Household Plumbing</td>
</tr>
<tr>
<td>Former Santiago County Water District Service Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>1.3</td>
<td>0.17</td>
<td>0.2</td>
<td>0 out of 13</td>
<td>No Corrosion of Household Plumbing</td>
</tr>
<tr>
<td></td>
<td>Lead (ppm)</td>
<td>15</td>
<td>2</td>
<td>&lt;5</td>
<td>No Corrosion of Household Plumbing</td>
</tr>
<tr>
<td>Former Orange Park Acres Mutual Water Company Service Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>1.3</td>
<td>0.17</td>
<td>0.4</td>
<td>0 out of 15</td>
<td>No Corrosion of Household Plumbing</td>
</tr>
<tr>
<td></td>
<td>Lead (ppm)</td>
<td>15</td>
<td>2</td>
<td>&lt;5</td>
<td>No Corrosion of Household Plumbing</td>
</tr>
</tbody>
</table>

In the Irvine Ranch service area, the most recent lead and copper at-the-tap samples were collected from 74 residences in 2007. Lead was detected in 2 homes and copper was detected in 61 homes, but none of the samples for lead and copper exceeded the respective Action Level. In the Santiago Canyon service area, the most recent lead and copper at-the-tap samples were collected at 15 residences in 2005. Lead was detected in 6 homes and copper was detected in 15 homes, but none of the samples for lead and copper exceeded the respective Action Level. A regulatory Action Level is the concentration of a contaminant which if exceeded triggers treatment or other requirements that a water system must follow.

### Source Water Assessments

**Imported (Metropolitan) Water Assessment**

In December 2002, MWD completed its source water assessment of its Colorado River and State Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/storm water runoff, increasing urbanization in the watershed and wastewater. State Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting MWD by phone at (213) 217-6850.

**Groundwater Assessment**

An assessment of the groundwater sources in the Lake Forest service area of IRWD was completed in December 2002. This ground-water is considered most vulnerable to contamination from dry cleaners and sewer collection systems. An assessment of the groundwater sources in the Dyer Road Well Field was completed in July 2003. This groundwater is considered most vulnerable to contamination from gas stations, historic gas stations, metal plating/finishing/fabrication facilities, military installations and plastics/synthetics producers. An assessment of the groundwater sources in the Irvine Desalter Project was completed in March 2006. This groundwater is considered most vulnerable to contamination from crop irrigation and fertilizers. An assessment of the groundwater source in the Orange Park Acres service area of IRWD was completed in March 2003. This groundwater is considered most vulnerable to contamination from sewer collection systems. An assessment of the groundwater in the Santiago Canyon service area of IRWD was completed in January 2003. There have been no contaminants detected in the water supply, however the source is still considered vulnerable to contamination from historic mining operations. Copies of the complete assessments may be viewed at the IRWD Water Quality Department, 3512 Michelson Drive, Irvine. You may request a summary of the assessments by writing to Lisa Bonkowski, Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California 92618.
This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Irvine Ranch Water District
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Irvine, California 92618-3102