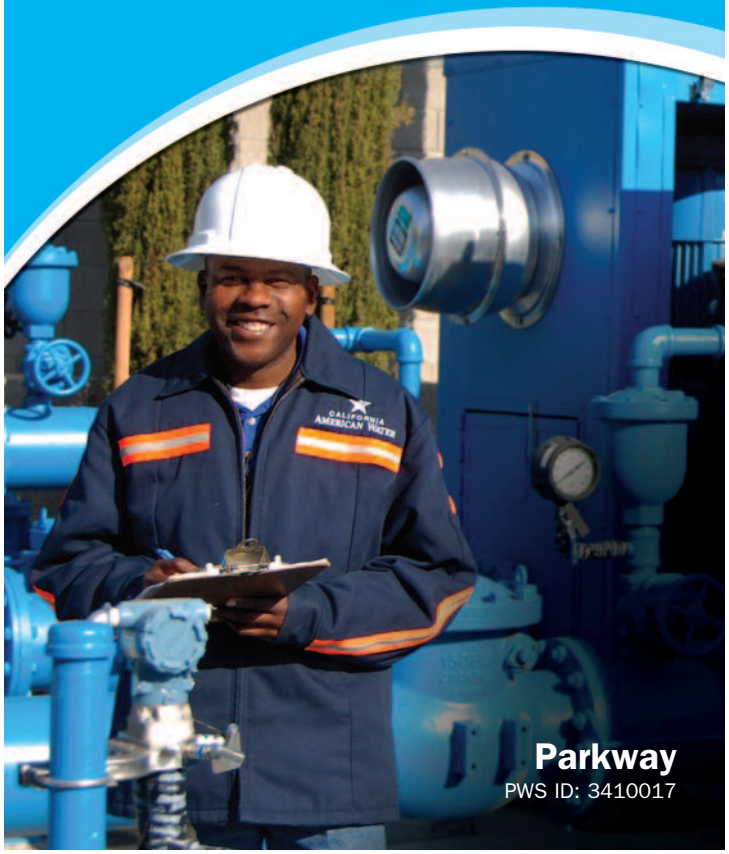
2011 Annual

# Water Quality Report

CALIFORNIA AMERICAN WATER



**Parkway**

PWS ID: 3410017

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

Chi tiết này thật quan trọng.
Xin nhờ người dịch cho quý vị.

## A Message from the California American Water President

*California American Water is proud to be your local water service provider and I am pleased to share with you good news about the quality of your drinking water. Each year, we provide you with our Annual Water Quality Report – and like so many years prior – you'll find that we continue to supply water that meets or surpasses both state and federal water quality regulations.*

*This doesn't happen by chance. It requires having the right team of experts and technologies in place. Delivering high-quality, reliable water service to your tap around the clock also requires significant investment in our water infrastructure. In 2011 alone, we invested more than $54 million in water system improvements statewide. From upgrading our treatment facilities to replacing aging water pipelines, we invest prudently and with purpose. And, because we invest our dollars responsibly, we provide our water at less than a penny per gallon; an exceptional value for a service that is so essential to our daily lives.*

*We hope you agree, it's worth every penny and worth learning more about. Please, take the time to review this report. It provides details about the source and quality of your drinking water using data from water quality testing conducted in your local water system through December 2011. For an electronic copy of this report, visit us online at www.amwater.com/caaw/.*

*At California American Water, our customers are our top priority, and we are committed to providing you with the highest quality drinking water and service possible now and in the years to come.*

*Sincerely,*

*Rob MacLean*
*President, California American Water*

## Continuing our Commitment

Once again, we proudly present our Annual Water Quality Report. This document covers compliance testing completed through December 2011. We are pleased to tell you that our compliance with state and federal drinking water regulations remains exemplary. As in the past, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

California American Water, a wholly owned subsidiary of American Water (NYSE: AWK), provides high-quality and reliable water and/or wastewater services to approximately 600,000 people. California American Water, with the support of American Water, has the technical support of a global network and the local knowledge to provide the highest quality water with personal service.

Founded in 1886, American Water is the largest investor-owned U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs approximately 7,000 dedicated professionals who provide drinking water, wastewater and other related services to approximately 15 million people in more than 30 states, as well as parts of Canada. More information can be found by visiting www.amwater.com.

## What is a Water Quality Report?

To comply with state and U.S. Environmental Protection Agency (USEPA) regulations, California American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect your drinking water sources. Since 2009, we have conducted tests for over 250 contaminants at numerous sampling points in your water system, all of which were below state and federal health-based maximum allowable levels. This report provides an overview of last year's (2011) water quality. It includes details about where your water comes from and what it contains. The data presented in this report is a combination of data from our nationally recognized main water quality lab and commercial laboratories, all certified in drinking water testing by the California Department of Public Health.

If you have any questions about this report or your drinking water, please call our Customer Service Center toll free at (888) 237-1333.

## Share This Report

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not billed customers of California American Water and therefore do not receive this report directly.

## LESS THAN A PENNY

**Did you know that you pay less than a penny for a gallon of tap water?**

We invest millions of dollars each year in our treatment and distribution facilities to ensure that you receive quality, reliable water service around the clock. At the same time, you pay less than a penny per gallon. For most customers, the water bill is the lowest utility bill they pay each month.

**That's an exceptional value.**

**WE CARE ABOUT WATER. IT'S WHAT WE DO.**

## About Your Water

Water in the Parkway system comes from deep wells that pump groundwater from aquifers in the Sacramento Valley. The Parkway system is also supplied with water purchased from the City of Sacramento.

The water from the City of Sacramento originates from the American and Sacramento Rivers. These surface water supplies are treated by conventional treatment technologies: coagulation, sedimentation and filtration (using sand and anthracite filters), lime addition for corrosion control, fluoridation to promote dental health, and chlorination for disinfection.

Drinking water treatment technologies used to treat the groundwater include: granular activated carbon, aeration, iron and manganese removal, chlorination (to ensure that it meets bacteriological quality standards), and fluoridation (to promote dental health). The water supply is distributed for residential and commercial use.

## Notice of Source Water Assessment

An assessment of the drinking water sources in the Parkway system was completed in February 2003. The sources are considered most vulnerable to the following activities (associated with detected chemicals): dry cleaners and sewer collection systems. Although not associated with any detected chemicals, the sources are also vulnerable to automobile gas stations, high-density septic systems, underground storage tanks – confirmed leaking tanks, historic gas stations, metal plating / finishing / fabricating, automobile repair shops, home manufacturing, machine shops, and photo processing / printing. A copy of the completed assessment may be viewed at: California American Water; 4701 Beloit Drive; Sacramento, CA 95838.

Assessments of potential contaminating activities for the City's Sacramento River and American River water sources were completed in December 2000 and April 2001, respectively. These reports indicated that both rivers are most vulnerable to contaminants from recreational activities and that the Sacramento River is also most vulnerable to agricultural contaminants. A copy of the complete assessment is available for review in the City Clerk's office at City Hall or call (916) 808-5011 to request a summary of the assessments.

## Source Water Protection Tips for Consumers

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water sources in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water sources
- Pick up after your pets
- Dispose of chemicals properly, take used motor oil to a recycling center
- Do not dispose of unused medications down the drain
- Use environmentally friendly soaps and detergents when washing your vehicles

## Radon

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the United States. 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. Compared to radon entering the home through soil, radon entering the home through tap water in most cases will be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program (800) 745-7236, the USEPA Safe Drinking Water Act Hotline (800) 426-4791, or call the National Safety Council's Radon Hotline (800) SOS-RADON.

## How to Contact Us

If you have any questions about this report, your drinking water, or service, please call our Customer Service Center at: (888) 237-1333.

## Water Information Sources

**California American Water**
http://www.amwater.com/caaw/

**California Department of Public Health**
http://www.cdph.ca.gov/programs/pages/dwp.aspx

**United States Environmental Protection Agency (USEPA)**
http://water.epa.gov/drink/index.cfm

**Safe Drinking Water Hotline:** (800) 426-4791

**Centers for Disease Control and Prevention**
http://www.cdc.gov/

**American Water Works Association**
http://www.awwa.org/

**Water Quality Association**
http://www.wqa.org/

**National Library of Medicine/National Institute of Health**
http://www.nlm.nih.gov/medlineplus/drinkingwater.html

## What Are the Sources of 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 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 human activity.

In order to ensure that tap water is safe to drink, the USEPA and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department 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 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 may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or 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 that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

**Radioactive Contaminants**, which can be naturally-occurring, or may be the result of oil and gas production and mining activities.

## Educational Information – Special Health 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. You can obtain more information about contaminants and potential health effects by calling the USEPA's Safe Drinking Water Hotline (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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA and the Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (800) 426-4791.

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. California American Water 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/drink/info/lead/index.cfm.

## *Cryptosporidium* Monitoring

*Cryptosporidium* is a microbial pathogen found in surface waters throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100% removal. Monitoring indicates the presence of these organisms in source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water. You can obtain more information on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants by calling the USEPA's Safe Drinking Water Hotline (800) 426-4791.

## How to Read This Table

California American Water conducts extensive monitoring to ensure that your water meets water quality standards. The results of our monitoring are reported in the adjacent tables. While some of the monitoring was conducted in 2011, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting this table, see the "Definition of Terms" section.

Starting with a **Substance**, read across. **Year Sampled** is usually 2011 or the most recent data from a prior year. **MCL** shows the level of the substance (contaminant) allowed. **PHG** (or **MCLG**) is the goal level for that substance (this may be lower than what is allowed). **Average Amount Detected** represents the (calculated) average level of that substance from the drinking water sources that California American Water used in 2011. **Range** tells the highest and lowest amounts measured. A "**No**" under **Violation** indicates that regulatory requirements were met. **Major Sources in Drinking Water** tells where the substance usually originates.

## Definitions of Terms

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

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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 using disinfectants to control microbial contaminants.

**NA:** Not applicable

**ND:** Not detected

**Notification Level:** The concentration of a contaminant which, if exceeded, requires notification to the California Department of Public Health and the consumer. Not an enforceable standard.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of the water.

**pCi/L (picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

**PDWS (Primary Drinking Water Standard):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**pH:** A measurement of acidity, 7.0 being neutral.

**PHG (Public Health Goal):** 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.

**ppb (parts per billion):** One part substance per billion parts water, or micrograms per liter.

**ppm (parts per million):** One part substance per million parts water, or milligrams per liter.

**SMCL (Secondary Maximum Contaminant Level):** SMCLs are set to protect the aesthetic properties of drinking water (odor, taste and appearance).

**TOC:** Total Organic Carbon.

**TON:** Threshold Odor Number

**Total Dissolved Solids:** An overall indicator of the amount of minerals in water.

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

**µmhos/cm (micromhos per centimeter):** A measure of electrical conductance.

## Water Quality Statement

Last year, as in years past, your tap water met USEPA and state drinking water standards. California American Water vigilantly safeguards its water supplies, and once again we are proud to report that our system did not violate any state or federal water quality standards.

## Water Quality Results

## Parkway

| Regulated Substances | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Substance (units) | Year Sampled | MCL | PHG (MCLG) | Parkway | | City of Sacramento | | Violation | Major Sources in Drinking Water |
| | | | | Average Amount Detected | Range Low-High | Average Amount Detected | Range Low-High | | |
| Arsenic (ppb)[1] | 2006 - 2011 | 10 | 0.004 | 3.0 | ND - 8 | ND | ND | No | Erosion of natural deposits; runoff from orchards; glass, and electronics production wastes |
| Barium (ppm) | 2006 - 2009 | 1 | 2 | 0.1 | ND - 0.15 | ND | ND | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Chromium (ppb) | 2006 - 2009 | 50 | (100) | ND | ND - 24 | ND | ND | No | Discharge from steel and pulp mills; erosion of natural deposits |
| Nitrate as $NO_3$ (ppm)[2] | 2011 | 45 | 45 | 5.8 | ND - 21.2 | ND | ND | No | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Gross Alpha Particle Activity (pCi/L) | 2006 | 15 | (0) | ND | ND - 9.1 | ND | ND | No | Erosion of natural deposits |
| Radium 228 (pCi/L) | 2006 - 2007 | 5[3] | 0.019 | ND | ND - 2.0 | ND | ND | No | Erosion of natural deposits |
| Uranium (pCi/L)[4] | 2006 | 20 | 0.43 | 6.99 | 6.99 | ND | ND | No | Erosion of natural deposits |
| Control of Disinfection Byproduct precursors (TOC) (ppm) | 2011 | Treatment requirement if average TOC >2 | NA | NA | NA | 0.93 | 0.67 - 1.56 | No | Various natural and man-made sources |
| **Distribution System Monitoring** | | | | | | | | | |
| Chlorine (ppm) | 2011 | MRDL = 4.0 | MRDLG = 4.0 | 0.56 | 0.51 - 0.58 | NA | NA | No | Treatment chemical used to disinfect drinking water |
| Fluoride (ppm)[5] | 2011 | 0.7 - 1.3[6] | NA | 0.9 | ND - 1.3 | NA | NA | No | Water additive which promotes strong teeth |
| Haloacetic Acids (ppb) | 2011 | 60 | NA | 3.5[7] | ND - 5.4 | NA | NA | No | Byproduct of drinking water disinfection |
| Total Trihalomethanes (TTHM) (ppb) | 2011 | 80 | NA | 7.3[7] | ND - 3.7 | NA | NA | No | Byproduct of drinking water disinfection |

| Secondary Substances | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Substance (units) | Year Sampled | SMCL | Parkway | | City of Sacramento | | Violation | Typical Source |
| | | | Average Amount Detected | Range Low-High | Average Amount Detected | Range Low-High | | |
| Chloride (ppm) | 2009 - 2011 | 500 | 18 | 4 - 84 | 7.4 | 4.6 - 9 | No | Runoff/leaching from natural deposits; seawater influence |
| Color (units) | 2009 - 2011 | 15 | ND | ND | 1 | 1 - 1 | No | Naturally-occurring organic materials |
| Iron (ppb) | 2006 - 2011 | 300 | ND | ND - 140 | ND | ND | No | Leaching from natural deposits; industrial wastes |
| Manganese (ppb) | 2006 - 2011 | 50 | ND | ND - 30 | ND | ND | No | Leaching from natural deposits |
| Odor (TON) | 2009 | 3 | ND | ND - 1 | ND | ND | No | Naturally-occurring organic materials |
| Specific Conductance (µmhos/cm) | 2009 - 2010 | 1,600 | 306 | 200 - 620 | 169 | 99 - 223 | No | Substances that form ions when in water; seawater influence |
| Sulfate (ppm) | 2009 - 2011 | 500 | 3 | ND - 13 | 9.6 | 9.4 - 9.7 | No | Runoff/leaching from natural deposits; industrial wastes |
| Total Dissolved Solids (ppm) | 2009 - 2011 | 1000 | 223 | 160 - 390 | 83 | 68 - 91 | No | Runoff/leaching from natural deposits |
| Turbidity (NTU) | 2009 - 2011 | 5 | 0.17 | ND - 0.46 | ND | ND - 0.10 | No | Soil runoff |

| Turbidity - A Measure of the Clarity of the Water (at the City of Sacramento Treatment Facility) | | | | | | |
|---|---|---|---|---|---|---|
| Plant | Year Sampled | MCL | PHG (MCLG) | Highest Single Measurement | Violation | Typical Source |
| Turbidity (NTU) | 2011 | TT = 1.0 NTU | NA | 0.10 | No | Soil runoff |
| | | TT = percentage of samples < 0.3 NTU | | 100% | | |

| Lead and Copper (tap water samples from the Parkway system only) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Substance (units) | Year Sampled | Action Level | PHG (MCLG) | Number of Samples | Amount Detected at 90th Percentile | Homes Above Action Level | Violation | Typical Source |
| Copper (ppm) | 2010 | 1.3 | 0.3 | 33 | 0.100 | 0 | No | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (ppb) | 2010 | 15 | 0.2 | 33 | 2.0 | 0 | No | Internal corrosion of household plumbing systems; erosion of natural deposits; discharges from industrial manufacturers |

## Additional Water Quality Parameters of Interest

This table shows average levels of additional water quality parameters, which are often of interest to consumers. The averages shown here are calculated from the levels detected at each source used to supply water in 2011. Values may vary from day to day. There are no health-based limits for these substances in drinking water.

| Additional Constituents | | | | | |
|---|---|---|---|---|---|
| Substance (units) | Year Sampled | Parkway | | City of Sacramento | |
| | | Average Amount Detected | Range Low-High | Average Amount Detected | Range Low-High |
| Alkalinity as $CaCO_3$ (ppm) | 2009 | 125 | 91 – 220 | NA | NA |
| Calcium (ppm) | 2009 – 2011 | 22 | 1 – 54 | 20 | 9.2 – 26 |
| Magnesium (ppm) | 2006 – 2009 | 12 | 6 – 32 | 3.4 | 1.4 – 5.4 |
| pH | 2009 | 8.1 | 8.0 – 8.2 | NA | NA |
| Radon (pCi/L) | 2006 | 331 | 178 – 482 | NA | NA |
| Silica (ppm) | 2009 | 64 | 58 – 71 | NA | NA |
| Sodium (ppm) | 2006 – 2009 | 21 | 14 – 40 | 4.5 | 1.8 – 7.1 |
| Total Hardness as $CaCO_3$ (ppm) | 2009 – 2011 | 106 | 38 – 270 | 65 | 42 – 79 |
| Hexavalent Chromium[8] (ppb) | 2003 – 2011 | 3.0 | ND – 10.6 | ND | ND |

[1] While your drinking water meets the current EPA 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.
[2] Nitrate in drinking water at levels above 45 mg/L is a health risk for infants 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 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.
[3] Radium 228 does not have its own MCL. The MCL for total radium (radium 226 & radium 228) is shown. Monitoring for radium 226 was not required.
[4] Uranium sampling was required at only one well in 2006.
[5] California American Water adjusts the natural levels of fluoride in our water supplies to the California Department of Public Health's recommended optimum level.
[6] Fluoride control range, not an MCL.
[7] Highest Running Annual Average
[8] In January 2011, the USEPA asked public water systems to conduct voluntary hexavalent chromium monitoring so that they may gain a better understanding of the nature and occurrence of the element. The data presented here are from the first round of monitoring. Additional monitoring will be conducted in 2012. Both the California Department of Public Health (CDPH) and the USEPA are working toward establishing a regulatory standard for hexavalent chromium in drinking water. For more information on what steps American Water is taking in regard to hexavalent chromium, please visit our website at http://www.amwater.com/caaw/Ensuring-Water-Quality/Chromium-6. For more information on the regulatory process, please follow the link to the CDPH's Hexavalent Chromium web page (www.cdph.ca.gov/certlic/drinkingwater/pages/chromium6.aspx).