



Artesia Water System

Consumer Confidence Report
on Water Quality for 2014



Providing Quality Drinking Water in California Since 1929

Golden State Water Company is pleased to present our Annual Water Quality Report for 2014.

Our team of more than 550 water professionals is committed to ensuring you have reliable, high-quality water service available whenever you need it. Bringing you clean drinking water is serious business.

Golden State Water strictly adheres to federal and state drinking water quality guidelines required by the United States Environmental Protection Agency (USEPA), the State Water Resources Control Board's Division of Drinking Water (DDW) and the California Public Utilities Commission (CPUC). To ensure the quality of your drinking water, we routinely sample to monitor water quality, testing for more than 230 regulated and unregulated elements in our water distribution systems. In 2014 alone, we invested more than half a million dollars on laboratory testing to meet regulatory standards.

If drinking water standards are ever compromised, we are required to take immediate action, notify customers in timely fashion and restore normal service.

We pride ourselves on getting the job done right. Our team of experts is equipped to provide customers with the most efficient and effective service possible. Golden State Water strives to constantly improve our water production and delivery systems and adequately maintain wells, pumps and pipelines. Our philosophy is to invest in comprehensive preventive maintenance programs so our water infrastructure reliably provides you with high-quality drinking water, 24 hours a day, seven days a week.

Our customers are our top priority and we strive to provide the latest news and updates about their water service. Golden State Water's Customer Service Center representatives are available around-the-clock to answer your water quality questions and address your concerns. We encourage customers to visit www.gswater.com to learn more about your customer service area, water quality, conservation rebates and water-use efficiency tips.

Given current drought conditions and the forecast for continued dry conditions, water remains a critical issue and Californians must stay diligent with their efforts to reduce water usage at their homes and businesses. We encourage customers to visit gswater.com/drought to learn more about the state's water-use restrictions and conservation goals, as well as resources to help improve your water-use efficiency.

On behalf of the men and women at Golden State Water who serve you, thank you for providing us the opportunity to be your water provider. Please call our 24-hour Customer Service Center with any questions or feedback about this report at 1-800-999-4033.

Sincerely,



Robert Spowls
President and Chief Executive Officer
Golden State Water Company



Sunil Pillai
General Manager, Central District
Golden State Water Company



About the Company

Golden State Water Company, a subsidiary of American States Water Company (AWR), provides water service to approximately one million Californians located within 75 communities throughout 10 counties in Northern, Coastal and Southern California. The Company also distributes electricity to more than 24,000 customers in the Big Bear recreational area of California. AWR's contracted services subsidiary, American States Utility Services, Inc., provides operations, maintenance and construction management services for water and wastewater systems located on military bases throughout the country.

Drought in California

California recently entered its fourth consecutive dry year, and Golden State Water is asking all customers to use water responsibly. We encourage customers to visit gswater.com/drought to learn more about the state's water-use restrictions and reduction goals, as well as resources to help improve your water-use efficiency.

Thanks to years of proactive planning and continued long-term investments in water infrastructure, Golden State Water (working collaboratively with regional wholesale water suppliers) has maintained a stable water supply for our customers during this unprecedented drought.

Golden State Water Company will continue working closely with the communities we serve to ensure they are making informed water-use decisions to meet all approved reduction goals.

Where Does My Water Come From?

Water delivered to customers in the Artesia System is a blend of groundwater pumped from the Central Groundwater Basin. The Central Groundwater Basin is bounded on the north by the La Brea Uplift; on the east by the Elysian, Repetto, Merced and Puente hills; on the southeast by the Orange County Groundwater Basin; and on the west by the Newport-Inglewood Fault Zone.

Glossary of Terms

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 and maximum contaminant level goals as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

California Notification Level (NL)

Non-regulatory, health-based advisory levels established by the Division of Drinking Water (DDW) for contaminants in drinking water for which an MCL has not been established.

Maximum Contaminant Level Goal (MCLG)

The level of contaminant in drinking water below which there is no known or expected risk to health. Maximum contaminant level goals are set by the United States Environmental Protection Agency (USEPA).

Maximum Residual Disinfectant Level (MRDL)

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the 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 Standard (PDWS)

MCLs and MRDLs 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. Public health goals are set by the California Environmental Protection Agency (CalEPA).

Regulatory Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

For People with Sensitive Immune Systems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those individuals with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly populations, and infants, can be particularly at risk from infections. These people

If You Have Questions – Contact Us

For information about your water quality or to find out about upcoming opportunities to participate in public meetings, please contact our 24-hour Customer Service Center at 1-800-999-4033. Visit us online at www.gswater.com or email us at customerservice@gswater.com.

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

此份有關您飲用水的水質報告，內有重要資料和訊息，請找他人為你翻譯及解釋清楚。

이 안내는 매우 중요합니다.
본인을 위해 번역인을 사용하십시오.

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

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

should seek advice from their health care providers.

The USEPA and Centers for Disease Control issue guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants. To obtain a copy of these guidelines, please call the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

Connect with us to learn more!

Visit www.gswater.com to learn how to:

- ▶ Access the latest Water Quality Report for your area
- ▶ Get the latest updates and news regarding the drought and state/local restrictions
- ▶ Learn more about water-use efficiency, including programs and rebates in your area
- ▶ Understand your water bill and learn about payment options
- ▶ Obtain information about programs for low-income customers (CARW)
- ▶ Sign up to receive email updates about your water service.

For additional information, please contact our 24-hour Customer Service Center at **1-800-999-4033** or email us at customerservice@gswater.com.

Measurements

Water is sampled and tested consistently throughout the year to ensure the best possible quality.

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)
- ▶ Grains per gallon (grains/gal) – A measurement of water hardness often used for sizing household water softeners. One grain per gallon is equal to 17.1 mg/L of hardness.
- ▶ MicroSiemens per centimeter (µS/cm) – A measurement of a solution's ability to conduct electricity
- ▶ Nephelometric Turbidity Units (NTU) – A measurement of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.
- ▶ PicoCuries per liter (pCi/L) – A measurement of radioactivity in water.

If this is difficult to imagine, think about these comparisons:

Parts per million:	Parts per billion:	Parts per trillion:
1 second in 12 days	1 second in 32 years	1 second in 32,000 years
1 inch in 16 miles	1 inch in 16,000 miles	1 inch in 16 million miles
1 drop in 14 gallons	1 drop in 14,000 gallons	10 drops in enough water to fill the Rose Bowl

YOUR WATER MEETS ALL CURRENT FEDERAL AND STATE REQUIREMENTS

Artesia Water System - Source Water Quality

Primary Standards - Health Based (units)	Primary MCL	PHG (MCLG)	Range of Detection	Average Level	Most Recent Sampling Date	Typical Source of Constituent
Inorganic Constituents						
Aluminum (mg/L)	1	0.6	ND - 0.07	ND	2012	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (µg/L)	10	0.004	ND - 11	3.8	2014	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium (mg/L)	1	2	0.10 - 0.19	0.14	2012	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Hexavalent Chromium (µg/L)	10	0.02	ND - 1.2	ND	2014	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Fluoride (mg/L)	2.0	1	0.34 - 0.55	0.46	2012	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [as NO ₃] (mg/L)	45	45	ND - 9.5	2.2	2014	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Volatile Organic Constituents						
1,1-Dichloroethylene (µg/L)	6	10	ND - 0.59	ND	2014	Discharge from industrial chemical factories
Tetrachloroethylene [PCE] (µg/L)	5	0.06	ND - 0.71	ND	2014	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Trichloroethylene [TCE] (µg/L)	5	1.7	ND - 0.53	ND	2014	Discharge from metal greasing sites and other factories
Radioactive Constituents						
Gross Alpha Activity (pCi/L)	15(a)	(0)	ND - 3.7	ND	2012	Erosion of natural deposits
Combined Radium (pCi/L)	5(b)	(0)	ND - 2.0	ND	2012	Erosion of natural deposits
Secondary Standards - Aesthetic (units)	Secondary MCL	PHG (MCLG)	Range of Detection	Average Level	Most Recent Sampling Date	Typical Source of Constituent
Aluminum (µg/L)	200	n/a	ND - 65	ND	2012	Erosion of natural deposits; residue from some surface water treatment processes
Color (units)	15	n/a	ND - 5	2	2012	Naturally-occurring organic materials
Chloride (mg/L)	500	n/a	10 - 45	23	2012	Runoff/leaching from natural deposits; seawater influence
Iron (µg/L)	300	n/a	ND - 230	ND	2014	Leaching from natural deposits; industrial wastes
Manganese (µg/L)	50	n/a	ND - 38	ND	2014	Leaching from natural deposits
Odor-Threshold (units)	3	n/a	ND - 2	1	2012	Naturally-occurring organic materials
Specific Conductance (uS/cm)	1600	n/a	490 - 910	660	2012	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	n/a	25 - 92	52	2012	Runoff/leaching from natural deposits; industrial wastes
Turbidity (units)	5	n/a	ND - 3.8	0.78	2012	Soil runoff
Total Dissolved Solids (mg/L)	1000	n/a	230 - 410	310	2012	Runoff/leaching from natural deposits
Other Parameters (units)	Notification Level	PHG (MCLG)	Range of Detection	Average Level	Most Recent Sampling Date	Typical Source of Constituent
Alkalinity (mg/L)	n/a	n/a	160 - 190	170	2012	
Calcium (mg/L)	n/a	n/a	39 - 81	55	2012	
Hardness [as CaCO ₃] (mg/L)	n/a	n/a	120 - 260	170	2012	The sum of polyvalent cations present in the water, generally magnesium and calcium; the cations are usually naturally occurring
Hardness [as CaCO ₃] (grains/gal)	n/a	n/a	7 - 15	10	2012	
Magnesium (mg/L)	n/a	n/a	4.5 - 14	8.4	2012	
pH (pH units)	n/a	n/a	8.0 - 8.4	8.2	2012	
Potassium (mg/L)	n/a	n/a	2.1 - 3.6	2.7	2012	
Sodium (mg/L)	n/a	n/a	25 - 47	37	2012	Refers to the salt present in the water and is generally naturally occurring
Unregulated Drinking Water Constituents (units)	Notification Level	PHG (MCLG)	Range of Detection	Average Level	Most Recent Sampling Date	Typical Source of Constituent
1,4-Dioxane (µg/L)	1	n/a	ND - 4.5	1.5	2013	
Vanadium (µg/L)	50	n/a	ND - 3.8	ND	2013	
Molybdenum (µg/L)	n/a	n/a	2.7 - 18	10	2013	
Strontium (µg/L)	n/a	n/a	430 - 650	520	2013	
Chlorate (µg/L)	800	n/a	50 - 250	180	2013	

Artesia Water System - Distribution Water Quality

Microbiological Constituents (units)	Primary MCL	PHG (MCLG)	Value		Most Recent Sampling Date	Typical Source of Constituent
Total Coliform Bacteria ≥40 Samples/Month (Present / Absent)	More than 5% of monthly samples are positive	(0)	Highest percent of monthly samples positive was 2.0%		2014	Naturally present in the environment
Disinfection Byproducts and Disinfectant Residuals (units)	Primary MCL (MRDL)	PHG (MRDLG)	Range of Detection	Average Level	Most Recent Sampling Date	Typical Source of Constituent
Chlorine [as Cl ₂] (mg/L)	(4.0)	(4)	ND - 2.7	1.2	2014	Drinking water disinfectant added for treatment
HAA5 [Total of Five Haloacetic Acids] (µg/L)	60	n/a	ND - 14	11	2014	Byproduct of drinking water disinfection
TTHMs [Total of Four Trihalomethanes] (µg/L)	80	n/a	ND - 27	23	2014	Byproduct of drinking water disinfection
Inorganic Constituents (units)	Action Level	PHG (MCLG)	Sample Data	90th % Level	Most Recent Sampling Date	Typical Source of Constituent
Copper (mg/L)	1.3	0.3	None of the 30 samples collected exceeded the action level.	0.26	2013	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

(a) MCL is based on Gross Alpha minus Uranium.
 (b) MCL is based on combined Radium-226 + Radium-228.
 ND = Not Detected CaCO₃ = Calcium Carbonate

Source Water Assessment

GSWC conducted a source water assessment from 2001 through 2004 for each groundwater well serving the customers of its Artesia System.

Groundwater sources in this system are considered most vulnerable to the following activities not associated with detected contaminants: Car washes, cement/concrete plants, construction/demolition staging areas, contractor or government agency equipment storage yards, dry cleaners, gas stations, fleet/truck/bus terminals, hardware/lumber/parts stores, hospitals, known contaminant plumes, motor pools, office buildings, complexes, repair shops, sewer collection systems, and water supply wells.

Groundwater sources in this system are considered most vulnerable to the following activities associated with contaminants detected in the water supply: automobile repair and body shops, chemical/petroleum processing/storage, machine shops, and metal plating/fabricating.

A copy of the assessment may be viewed at:

DDW Los Angeles District Office
500 N. Central Ave., Suite 500, Glendale, CA 91203

or

Golden State Water Company, Santa Fe Springs Office
12035 Burke St., Suite 1, Santa Fe Springs, CA 90670

You may request a summary of the assessment be sent to you by contacting:

DDW Los Angeles District Office at 1-818-551-2004

For more details, contact Lisa Miller, Water Quality Engineer, at 1-800-999-4033.

Laboratory Analyses

Through the years, we have taken thousands of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants in your drinking water. The table we provide shows only detected contaminants in the water.

Even though all the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of these substances were present in your water. Compliance (unless otherwise noted) is based on the average level of concentration below the MCL. The state allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of our data, while representative, is more than a year old.

Lead — 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. Golden State 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 two 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 about lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at www.epa.gov/safewater/lead.

Arsenic — While your drinking water does meet 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 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.

1,4-Dioxane — Notification levels are health-based advisory levels and are not enforceable standards. According to DDW regulations, there is no treatment action needed to be taken to remove 1,4-Dioxane at present. 1,4-Dioxane was found above the Notification

Level in a few water sources that supply water to you. Your local governing bodies were notified.

Unregulated Contaminant Monitoring — Monitoring for unregulated contaminants helps the USEPA and the DDW to determine where certain contaminants occur and whether the contaminants need to be regulated.

Risk to Tap and Bottled Water

Drinking water, including bottled water, may reasonably be expected to contain 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 (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 layers in the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, which can pick up substances resulting from the presence of animal or human activity.

To be certain that tap water is safe to drink, the USEPA and the DDW prescribe regulations limiting the amount of contaminants in water provided by public water systems. United States Food and Drug Administration (USFDA) and DDW regulations also provide the same public health protection by establishing limits for contaminants in bottled water.

Contaminants in Drinking Water Sources May 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and 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, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems
- ▶ Radioactive contaminants that can be naturally occurring or be the result of oil and gas production and mining activities

Cross Connection Control Program

Golden State Water Company's Cross Connection Control Program provides a level of certainty that the water in the company's distribution system is protected from possible backflow of contaminated water from commercial or industrial customers' premises. For additional information, visit <http://www.gswater.com/protecting-our-drinking-water/>.

Hydrant Flushing

Hydrant flushing is an essential maintenance procedure that all water providers must perform periodically ensure the delivery of water that meets state and federal drinking water standards.

Even in drought conditions, flushing is a necessary part of maintaining the water system and the quality of the water within it. Golden State Water has modified procedures, given the current drought in California, to minimize the amount of water released during flushing activities. Water used for flushing represents less than 1 percent of the total water usage in each of our water systems.

For more information about hydrant flushing, visit <http://www.gswater.com/flushing-info/>