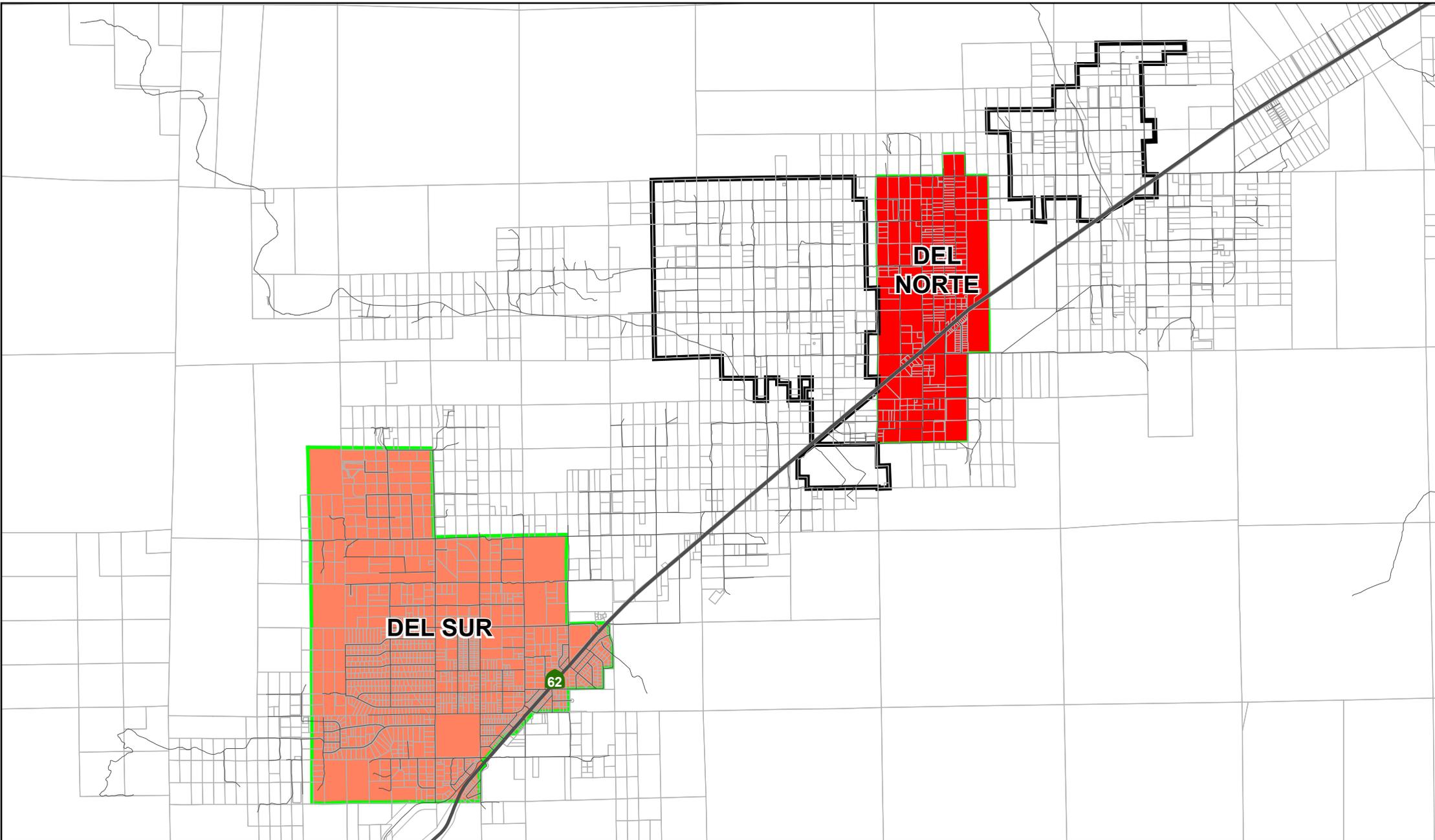


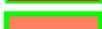
# **Golden State Water Company**

## **Map – Current Boundary**

**Attachment 6a**



**GOLDEN STATE WATER COMPANY (Del Sur and Del Norte Systems)**

-  Morongo Del Norte Water System
-  Morongo Del Sur Water System

**Golden State Water Company**

**Del Norte System 2012  
Water Quality Report**

## 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](http://www.gswater.com) or email us at [customerservice@gswater.com](mailto:customerservice@gswater.com).

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



**Golden State**  
Water Company  
A Subsidiary of American States Water Company

13608 Hitt Rd.  
Apple Valley, CA 92308



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PASADENA, CA  
PERMIT NO. 1132

# Providing Quality Drinking Water in California Since 1929

Golden State Water Company (GSWC) is pleased to present this Annual Water Quality Report, which contains important information about the quality of your drinking water for calendar year 2011.

Bringing you clean drinking water is serious business. We strictly follow the guidelines of the U.S. Environmental Protection Agency (USEPA), the California Department of Public Health, and the California Public Utilities Commission, sampling more than 230 regulated and unregulated elements in our water systems. GSWC's industry professionals regularly take samples to monitor quality at the water source and throughout the distribution system. We spent more than \$550,000 companywide last year on laboratory tests to ensure that we are meeting regulatory standards and providing high-quality water.

If any drinking water standard is compromised, we are required to take immediate action, notify you quickly, and restore normal service. **Last year, the water we provided you met all USEPA and California drinking water standards.**

We pride ourselves on getting the job done right. For more than 80 years, we have successfully built relationships with the industry's best and our team of experts is equipped to provide customers with the most efficient and effective service possible. We are constantly improving our water production and delivery systems, and maintaining wells, pumps and pipelines. Our philosophy is to invest in robust preventive maintenance programs so that our water infrastructure can provide you with high-quality water, 24 hours per day, 7 days per week.

You, our customer, are our number one priority. Our around-the-clock Customer Service Center has representatives to answer your water questions and address your concerns day or night. Our website, [www.gswater.com](http://www.gswater.com), contains a wide range of topics that include water quality, conservation rebates and information about your local customer service area, and water-use efficiency.

With regard to water-use efficiency, conservation remains one of the best and least-cost ways to maintain a reliable source of high-quality water now and for future generations.

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

Sincerely,



Robert Sprows  
President and Chief Executive Officer  
Golden State Water Company



Perry Dahlstrom  
Mountain/Desert District Manager  
Golden State Water Company



# 2012

## Water Quality Report for year 2011



## Morongo del Norte Water System



### Source Water Assessment

GSWC conducted a source water assessment in June 2002 for each groundwater well serving the customers of its Morongo del Norte System.

Both of the groundwater wells are considered most vulnerable to the following activity, which has been associated with contaminants that have been detected in the water supply: low-density septic systems.

A copy of the assessment may be viewed at:

CDPH San Bernardino District Office  
464 West 4th St., Suite 437  
San Bernardino, CA 92401

or

GSWC Apple Valley Office  
13608 Hitt Rd.  
Apple Valley, CA 92308

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

CDPH San Bernardino District Office at 1-909-383-4328

For more details contact:

Jeffrey Long at 1-800-999-4033

### Cross Connection Control Program

GSWC'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 [www.gswater.com/water\\_quality.html](http://www.gswater.com/water_quality.html).

### Where Does My Water Come From?

Water delivered to customers in the Morongo del Norte System is groundwater pumped from the Morongo Valley portion of the Morongo Basin located east and west of the Twenty-Nine Palms Highway between Morongo Valley and Yucca Valley.

### 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, and 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 CDPH prescribe regulations limiting the amount of contaminants in water provided by public water systems. United States Food and Drug Administration (USFDA) and CDPH 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

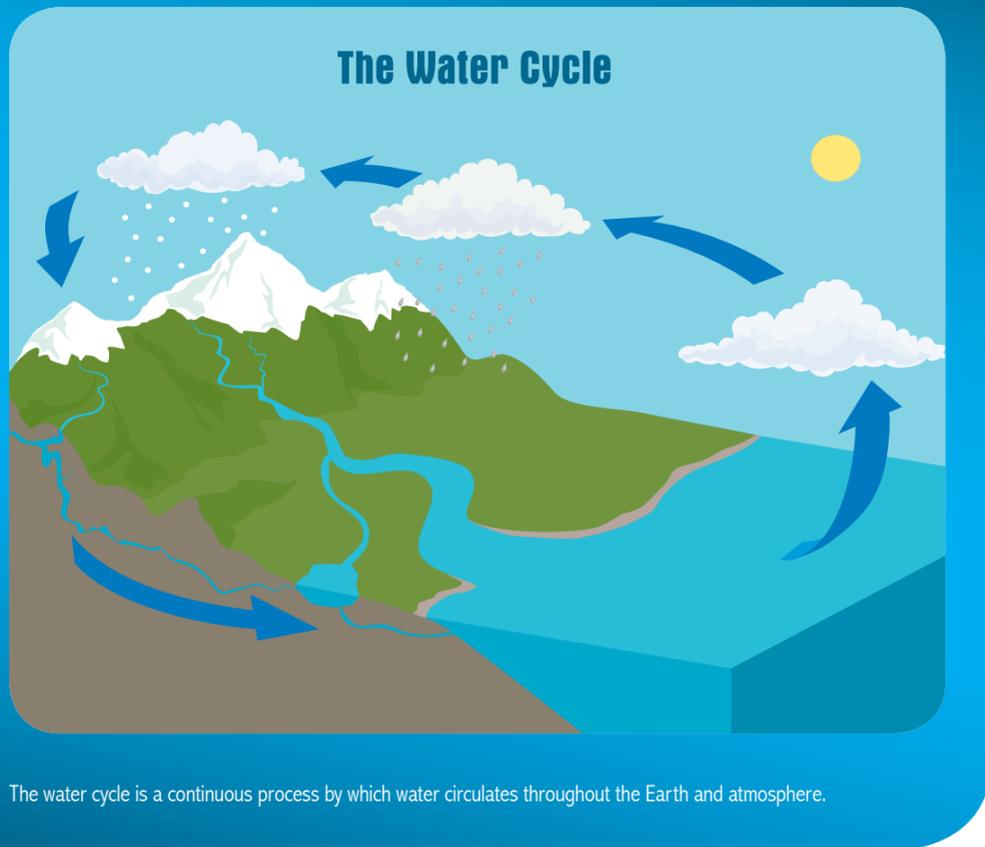
### For People with Sensitive Immune Systems

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 should seek advice from their health care providers.

The U.S. Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

### About the Company

Golden State Water Company, a subsidiary of American States Water Company (AWR), provides water service to approximately 1 out of every 36 Californians located within 75 communities throughout 10 counties in Northern, Coastal and Southern California (approximately 256,000 customers). The Company also distributes electricity to more than 23,000 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.



### 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 the 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, though representative, is more than a year old.

**Gross Alpha Particle Activity** — Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

**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. GSWC 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 <http://www.epa.gov/safewater/lead>.

**Uranium** — Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.

### 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:  
1 drop in 14 gallons  
1 second in 12 days  
1 inch in 16 miles



Parts per billion:  
1 drop in 14,000 gallons  
1 second in 32 years  
1 inch in 16,000 miles



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



### Point...Click...Conserve!



Visit [www.gswater.com](http://www.gswater.com) to learn how to:

- Become a water conservation expert
- Learn more about available conservation rebates and programs
- Get the latest Water Quality Report for your area
- Understand your water bill and get payment options

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

### 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 California Department of Public Health (CDPH) 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 U.S. 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.

#### Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

Morongo del Norte Water System – Source Water Quality							
Primary Standards - Health Based (units)	Primary MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Inorganic Constituents							
Barium (mg/L)	1	2	ND - 0.11	0.1	No	2011	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (mg/L)	2.0	1	0.63 - 0.77	0.71	No	2011	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [as NO3] (mg/L)	45	45	ND - 3.3	2.4	No	2011	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radioactive Constituents							
Gross Alpha Activity (pCi/L)	15	(0)	14.6 - 24.1	19.9(a)	No	2011	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	15 - 28	19	No	2011	Erosion of natural deposits
Secondary Standards - Aesthetic (units)	Secondary MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Chloride (mg/L)	500	n/a	20 - 26	23	No	2011	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (µS/cm)	1600	n/a	640 - 700	660	No	2011	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	n/a	100 - 110	110	No	2011	Runoff/leaching from natural deposits; industrial wastes
Turbidity (units)	5	n/a	ND - 2.0	0.8	No	2011	Soil runoff
Total Dissolved Solids (mg/L)	1000	n/a	420 - 460	440	No	2011	Runoff/leaching from natural deposits
Other Parameters (units)	Notification Level	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Alkalinity (mg/L)	n/a	n/a	200 - 230	210	n/a	2011	The sum of polyvalent cations present in the water, generally magnesium and calcium; the cations are usually naturally occurring
Calcium (mg/L)	n/a	n/a	51 - 63	55	n/a	2011	
Hardness [as CaCO3] (mg/L)	n/a	n/a	170 - 210	180	n/a	2011	
Hardness [as CaCO3] (grains/gal)	n/a	n/a	9.9 - 12.2	10.5	n/a	2011	
Magnesium (mg/L)	n/a	n/a	9.7 - 12	10	n/a	2011	
pH (pH units)	n/a	n/a	7.9 - 8	8	n/a	2011	
Potassium (mg/L)	n/a	n/a	5.9 - 6	6	n/a	2011	
Sodium (mg/L)	n/a	n/a	75 - 83	78	n/a	2011	

Morongo del Norte Water System – Distribution Water Quality							
Disinfection Byproducts and Disinfectant Residuals (units)	Primary MCL (MRDL)	PHG (MRDLG)	Range of Detection	Highest 4-Quarterly Average	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Chlorine [as Cl <sub>2</sub> ] (mg/L)	(4.0)	(4)	1.16 - 2.27	1.45	No	2011	Drinking water disinfectant added for treatment
TTHMs [Total of Four Trihalomethanes] (ug/L)	80	n/a	ND - 5	1	No	2011	Byproduct of drinking water disinfection
Inorganic Constituents (units)	Action Level	PHG (MCLG)	Sample Data	90th % Level	Exceedance?	Most Recent Sampling Date	Typical Source of Constituent
Copper (mg/L)	1.3	0.3	None of the 10 samples collected exceeded the Action Level.	0.3	No	2010	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

(a) Waiver issued by San Bernardino County Dept. of Environmental Health  
ND = Not Detected  
CaCO3 = Calcium Carbonate

### Golden Rules for Water Conservation

- 1 End wasteful outdoor water activities
- 2 Fix water leaks
- 3 Replace older toilets with high-efficiency models
- 4 Be water wise with your clothes washers and dishwashers
- 5 Make your showerheads and faucets water efficient

Visit [www.gswater.com/conservation](http://www.gswater.com/conservation) to see videos of each Golden Rule.



**Golden State Water Company**

**Del Sur System 2012  
Water Quality Report**

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Sincerely,



Robert Sprows  
President and Chief Executive Officer  
Golden State Water Company



Perry Dahlstrom  
Mountain/Desert District Manager  
Golden State Water Company



# 2012

## Water Quality Report for year 2011



## Morongo del Sur Water System



### Source Water Assessment

GSWC conducted a source water assessment in August 2000 for each groundwater well serving the customers of its Morongo del Sur System.

Both of the groundwater wells are considered most vulnerable to the following activities, which have been associated with contaminants that have been detected in the water supply: automotive repair shops and low-density septic systems.

A copy of the assessment may be viewed at:

CDPH San Bernardino District Office  
464 West 4th St., Suite 437  
San Bernardino, CA 92401

or

GSWC Apple Valley Office  
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Water delivered to customers in the Morongo del Sur System is groundwater pumped from the Morongo Valley portion of the Morongo Basin located east and west of the Twenty-Nine Palms Highway between Morongo Valley and Yucca Valley.

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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.

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### Contaminants in Drinking Water Sources May Include:

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- 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

### 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 should seek advice from their health care providers.

The U.S. Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

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## Laboratory Analyses

Over 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 enclosed table shows only those contaminants that were detected in the water. Although all but **ONE** substance 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 the substance is present. This report serves as a reminder that our water temporarily exceeded drinking water standards. For more information, see the section marked **MCL Violation** later in this report. Compliance (unless otherwise noted) is based on the average level of concentration being 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, though representative, is more than a year old.

**MCL Violation** — In September 2011, two out of 26 coliform samples were coliform-present. Notification was made to the California Department of Public Health, and steps were taken to increase the chlorine dosage at all plants to raise the residual level in the system above 2.0 mg/L. All wells supplying the affected area were inspected and tested for any sign of contamination. All investigative samples were coliform-absent. The detection of multiple coliform-present samples in September 2011 exceeded the Maximum Contaminant Level of no more than one coliform-present sample per month for systems taking fewer than 40 samples monthly. Public notification to the residents of our Morongo del Sur System was made by direct mailing and by publication in a general-circulation newspaper on October 3, 2011.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

**Gross Alpha Particle Activity** — Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

**Iron** — The secondary MCL for iron is set for aesthetic reasons and there is no health concern associated with the iron levels detected in this water system.

**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. GSWC 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 <http://www.epa.gov/safewater/lead>.

**Uranium** — Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.

## 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**)
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- 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:  
1 drop in 14 gallons  
1 second in 12 days  
1 inch in 16 miles



Parts per billion:  
1 drop in 14,000 gallons  
1 second in 32 years  
1 inch in 16,000 miles



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



## Point...Click...Conserve!



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- Learn more about available conservation rebates and programs
- Get the latest Water Quality Report for your area
- Understand your water bill and get payment options

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

## 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 California Department of Public Health (CDPH) 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 U.S. Environmental Protection Agency (USEPA).

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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.

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MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

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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.

### Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

## Morongo del Sur Water System – Source Water Quality

Primary Standards - Health Based (units)	Primary MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Inorganic Constituents							
Aluminum (mg/L)	1	0.6	ND - 0.14	0.07	No	2010	Erosion of natural deposits; residue from some surface water treatment processes
Fluoride (mg/L)	2.0	1	0.67 - 0.70	0.68	No	2011	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Radioactive Constituents							
Gross Alpha Activity (pCi/L)	15	(0)	16.5 - 30	23(a)	No	2011	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	13 - 25	18	No	2011	Erosion of natural deposits
Secondary Standards - Aesthetic (units)	Secondary MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Aluminum (ug/L)	200	n/a	ND - 140	70	No	2010	Erosion of natural deposits; residue from some surface water treatment processes
Color (units)	15	n/a	ND - 5	2.5	No	2011	Naturally occurring organic materials
Chloride (mg/L)	500	n/a	15 - 25	20	No	2011	Runoff/leaching from natural deposits; seawater influence
Iron (ug/L)	300	n/a	ND - 490	245	No	2010	Leaching from natural deposits; industrial wastes
Manganese (ug/L)	50	n/a	ND - 21	ND	No	2010	Leaching from natural deposits
Specific Conductance (uS/cm)	1600	n/a	550 - 760	660	No	2011	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	n/a	140 - 210	180	No	2011	Runoff/leaching from natural deposits; industrial wastes
Turbidity (units)	5	n/a	ND - 2.2	1.1	No	2011	Soil runoff
Total Dissolved Solids (mg/L)	1000	n/a	490 - 550	520	No	2011	Runoff/leaching from natural deposits
Other Parameters (units)	Notification Level	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Alkalinity (mg/L)	n/a	n/a	170 - 220	200	n/a	2011	The sum of polyvalent cations present in the water, generally magnesium and calcium; the cations are usually naturally occurring
Calcium (mg/L)	n/a	n/a	73 - 84	79	n/a	2011	
Hardness [as CaCO3] (mg/L)	n/a	n/a	250 - 280	270	n/a	2011	
Hardness [as CaCO3] (grains/gal)	n/a	n/a	14.6 - 16.3	15.8	n/a	2011	
Magnesium (mg/L)	n/a	n/a	17 - 18	18	n/a	2011	
pH (pH units)	n/a	n/a	7.8 - 7.8	7.8	n/a	2011	
Potassium (mg/L)	n/a	n/a	8.1 - 8.5	8.3	n/a	2011	
Sodium (mg/L)	n/a	n/a	55 - 61	58	n/a	2011	Refers to the salt present in the water and is generally naturally occurring

## Morongo del Sur Water System – Distribution Water Quality

Microbiological Constituents (units)	Primary MCL	PHG (MCLG)	Value	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent	
Total Coliform Bacteria <40 Samples/Month (Present / Absent)	No more than 1 positive monthly sample	(0)	Highest number of monthly samples positive was 2	<b>Yes</b>	2011	Naturally present in the environment	
Fecal coliform and E.coli (Present / Absent)	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or E.coli positive	(0)	Highest number of monthly samples positive was 1	No	2011	Human and animal fecal waste	
Disinfection Byproducts and Disinfectant Residuals (units)	Primary MCL (MRDL)	PHG (MRDLG)	Range of Detection	Highest 4-Quarterly Average	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Chlorine [as Cl <sub>2</sub> ] (mg/L)	(4.0)	(4)	0.96 - 2.3	1.7	No	2011	Drinking water disinfectant added for treatment
TTHMs [Total of Four Trihalomethanes] (ug/L)	80	n/a	1-5	3	No	2011	Byproduct of drinking water disinfection
Inorganic Constituents (units)	Action Level	PHG (MCLG)	Sample Data	90th % Level	Exceedance?	Most Recent Sampling Date	Typical Source of Constituent
Copper (mg/L)	1.3	0.3	None of the 11 samples collected exceeded the Action Level.	0.06	No	2010	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

(a) Waiver issued by California Department of Public Health  
ND = Not Detected  
CaCO<sub>3</sub> = Calcium Carbonate

## The Water Cycle



The water cycle is how water moves from the air to the land and to bodies of water like lakes, streams and oceans, then back up to the sky. When the sun causes water to evaporate, even from salty seas, it is purified. The evaporated water forms clouds and condenses into droplets. When it comes back to the Earth in the form of rain, sleet, hail, and snow it is freshwater that rejuvenates the land and refills the water storage areas like ice caps on mountains and groundwater aquifers, as well as bodies of water. Then the cycle begins again as the sun evaporates the water.