

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT 2005 DRINKING WATER CONSUMER CONFIDENCE REPORT



Trusted, Quality Service Since 1905

Investing in your future...



Water Conservation

As stewards of our own valuable local water resource, we all have a responsibility to protect and use wisely. Conserving water also helps save money. The more wisely you use water, the more you get out of each gallon that you pay for. This means you pay less without sacrificing any of the benefits. We have tips to help you save water and money in your home, both indoors and outdoors, in ways that won't impact the way you live.

The first step to save water is to see if you are losing water to hidden leaks by doing a water meter test. Leaks can waste a great deal of water and can increase your water bill. To check for a leak in your home, turn off all of the water fixtures, and then check the water meter. Note the reading on the water meter and wait for 20 to 30 minutes without turning on any faucets or flushing any toilets. After waiting, go back and check the meter again. If the dial or the numbers on your meter have changed, you have a leak.

The second step is to reduce the amount of water you use. On the average, most people use about 245 gallons of water a day in the kitchen, laundry, bath room and outside the home for lawns, gardens and things like pools and car care. Inside the house you can reduce this by installing low-flow showerheads, low-flow toilets, checking the settings on your clothes washer and making sure the dishwasher runs only when it is full. Outside, you can check that sprinklers are working correctly, use nozzles on the end of hoses, and sweep the driveway and sidewalks with a broom instead of washing them down with a hose.

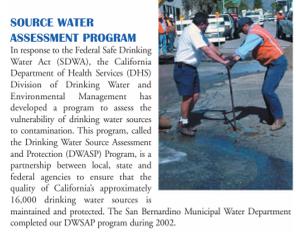
Join us in preserving and using our water resources wisely and efficiently to keep our long-term supply. The quality of water you drink tomorrow will be determined by the quality of your actions today.

REGULATIONS

In order to ensure that tap water is safe to drink, USEPA and the State of California Department of Health Services (DHHS) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that may provide protection to public health. More information can be obtained by calling the FDA's Office of Water and Dairy Foods and Beverages; telephone number (301)436-2023 for additional information.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contamination and potential health effects can be obtained by calling USEPA's Safe Drinking Water Hotline (800)426-4791 or visiting their Web site at www.epa.gov/safewater/bfacs.html.

Rehabilitating aging infrastructure some of which is over 100 years old.



SOURCE WATER ASSESSMENT PROGRAM

In response to the Federal Safe Drinking Water Act (SDWA), the California Department of Health Services (DHHS) Division of Drinking Water and Environmental Management has developed a program to assess the vulnerability of drinking water sources to contamination. This program, called the Drinking Water Source Assessment and Protection (DWSAP) Program, is a partnership between local, state and federal agencies to ensure that the quality of California's water sources is maintained and protected. The San Bernardino Municipal Water Department completed our DWSAP program during 2002.

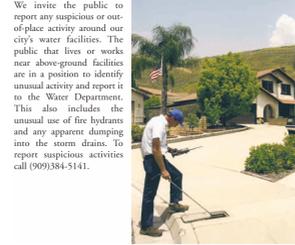
The program has two primary elements: Assessment and Protection. The Assessment element consists of defining protection areas around water resources and conducting an inventory of activities in our service area that might contaminate our drinking water. The Protection element consists of managing these potentially harmful activities to prevent contamination and planning for contingencies. We completed the Assessment element in December of 2002. We began the Protection element of the program during 2003. The Protection Element includes careful land-use planning and zoning techniques, monitoring local industrial practices and public education.

SYSTEM SECURITY

Many people across the country are concerned about the safety and security of their drinking water system. San Bernardino's water system is a low risk from natural or man-made disasters because of the manner in which our system is monitored and the decentralized nature of its structure.

Water Department employees visit wells, reservoirs, and other facilities at least daily and often more frequently. Our system is under frequent scrutiny by employees who are trained to look for things and people that are out of place or suspicious. Each portion of the distribution system is also monitored by an advanced system of sensors and computers called the Supervisory Control and Data Acquisition System, or SCADA that reports from moment to moment on critical water quality factors, such as water pressure and chlorine content, and on the system's integrity.

Our water distribution system is also very safe because of its decentralized structure. Instead of using a few very large reservoirs, the Water Department uses many smaller ones. This means that any natural or man-made disasters will affect only a small portion of the system at one time. We can quickly isolate any problems in the system and take water from other parts of the system to replace what we take off-line.



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Message from your General Manager

This isn't just a slogan for the City of San Bernardino Water Department. It's a statement about the pride that we take in bringing you the highest quality water every day, while keeping the cost of doing business as low as possible. Water supplies face a number of daily challenges: providing prompt, courteous service; maintaining and repairing existing infrastructure; building new infrastructure to keep economic development in the area strong; keeping current on new, ever more complex regulations; training the workforce that we have; retaining employees as they become more valuable; and, finally, managing our water resources as stewards of the environment.



Department has started a new Customer Assistance Program to help qualified customers with the impacts of this proposed rate increase. If you need assistance, please stop by Customer Service on the 5th Floor of City Hall, or call (909) 384-5142 to get an application for this program.

Thank you for taking the time to read about your water quality. This is important information that shows clearly that the residents of San Bernardino continue to enjoy the best quality water at the lowest rates possible. We appreciate your business.

San Bernardino Meets Standards

The employees at the City of San Bernardino Municipal Water Department are proud that the water we served to our customers in 2005 met all water quality standards for domestic drinking water.

About This Report

State and Federal laws require all large water systems that serve domestic drinking water to provide their customers with an annual report that discloses whether or not the agency met all drinking water quality standards during the past year.

This report must disclose, in a manner that is understandable, which State Health Department maximum contaminant levels (MCL) or Federal maximum contaminant level goals (MCLGs) for chemical or mineral constituents were exceeded in the drinking water during the past year. If any MCL or MCLG was exceeded, the serving agency must state what treatment technology can be used to eliminate the contaminant(s). The serving agency is also required to tell their customers how much it will cost to install the treatment equipment, and how much it will increase the cost of their water.

The State of California establishes drinking water Public Health Goals (PHGs). The PHGs are not currently enforceable, however, we have included them in this report for your information.

USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

About Our Groundwater Supply

The water that we serve to our customers comes from a natural underground aquifer called the Bunker Hill Groundwater Basin. This basin was formed by ancient earthquakes that tilted huge portions of the bedrock deep under the surface of the Earth to form the sides and bottoms of the Basin. These bedrock formations prevent the groundwater from flowing away underground to the Pacific Ocean.

Rain and melting snow from the local mountains replace the water we take out of the Basin, replenishing our water supply. Sometimes, we also have to pay for imported water to replenish our basin. This water percolates through the ground to be captured and stored in the Bunker Hill Basin.

It is estimated that there is as much as 1.6 trillion gallons of water in the Basin. This water fills all of the pores and open spaces in between grains of sand and gravel that also fill the Basin. This sand and gravel acts as a giant filter and helps to give us the high-quality water that we enjoy. This valuable natural resource significantly reduces the need to import water from Northern California or from the Colorado River, as many other cities in Southern California must do. This keeps our rates relatively low and helps to ensure our water quality stays high.

We share the water in the Bunker Hill Groundwater Basin with more than 20 other local public and private water suppliers. All of these water suppliers have developed long-term plans to protect the quality of water in the Basin and to protect the watershed. It is now one of our highest priorities to follow and update these plans as the Inland Empire's population and water needs change. We believe that this will be done through the implementation of a comprehensive, enforceable groundwater basin management plan. In all, more than 500,000 residents of the greater Riverside/San Bernardino area depend on the Basin for their water, making our job a tremendous responsibility.

About Your Water Department

The City of San Bernardino Municipal Water Department delivered more than 47,676 acre-feet (15.3 billion gallons) of water to our service area for both commercial and residential use. One acre-foot of water is the amount of water normally used by a family of five for one year and is the equivalent to about 326,700 gallons of water. We serve a population of about 173,000 residents. This means that the city used an average of 245 gallons of water per person for both residential, commercial/industrial, and irrigation needs each day during the year 2005.

The Water Department produces all of our water from 60 wells located throughout our 45-square miles of service area. We have more than 100 million gallons of water storage in 31 covered reservoirs. The reservoirs enable us to meet our peak-hour water demand on hot summer days and to provide water storage for emergencies and for fire protection. We use more than 560 miles of water mains to deliver this water to homes and businesses throughout the city.

In 1990, the City of San Bernardino Municipal Water Department developed a Water System Master Plan of water system and facilities improvements to help us manage the City's water infrastructure. This



Graphic courtesy of San Bernardino Valley Water Conservation District

Bunker Hill Basin contains approximately 3.5 to 4.0 acre-feet of water of which 1.5 million to 1.6 acre-feet is extractable.

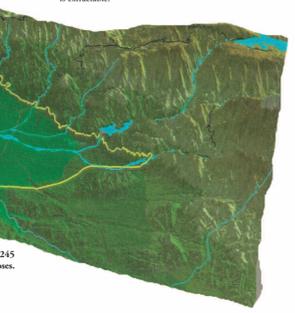
The Department serves about 173,000 people. Our city uses an average of 245 gallons per person per day for residential, commercial and irrigation purposes. Peak day uses climb to an average of 460 gallons.

Water Department employees visit wells, reservoirs, and other facilities at least daily and often more frequently. Our system is under frequent scrutiny by employees who are trained to look for things and people that are out of place or suspicious. Each portion of the distribution system is also monitored by an advanced system of sensors and computers called the Supervisory Control and Data Acquisition System, or SCADA that reports from moment to moment on critical water quality factors, such as water pressure and chlorine content, and on the system's integrity.

Our water distribution system is also very safe because of its decentralized structure. Instead of using a few very large reservoirs, the Water Department uses many smaller ones. This means that any natural or man-made disasters will affect only a small portion of the system at one time. We can quickly isolate any problems in the system and take water from other parts of the system to replace what we take off-line.

Bunker Hill Groundwater Basin

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ADDITIONAL REQUIRED INFORMATION

The Safe Drinking Water Act requires additional health information based on finding contaminants at a certain level within a utility sample. Although we have met all state MCL for nitrate, we are required to report the following information. Nitrate in drinking water at levels above 45 mg/L 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 45mg/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. Nitrate levels may not quickly for short periods of time because of rainfall or agricultural activity.

CHLORINE IN THE WATER

Why do we put chlorine in the water? Chlorine is an oxidizing agent used as a disinfectant that, when added to water, kills microorganisms such as bacteria and viruses. The State of California requires that we maintain a minimum residual of 0.2 parts per million (ppm) of chlorine in our water at all times to kill any potential microorganisms(s).

YOUR COMMENTS ARE WELCOME

The City of San Bernardino Municipal Water Department was formed by City Charter and is governed by an appointed Board of Water Commissioners. The Water Board meets on the first and third Tuesdays of each month. The meetings are held in the Water Department Boardroom, Fifth Floor of City Hall. The public is welcome to attend these meetings. Meeting agendas are posted in the first floor lobby of City Hall, the Fellowship Central Library, and the City's Web site at least 72 hours prior to each meeting. For additional information on the Board meetings, call Robin L. Ohama, Deputy General Manager, at (909) 384-7210.

We invite the public to report any suspicious or out-of-place activity around our city's water facilities. The public that lives or works near above-ground facilities are in a position to identify unusual activity and report it to the Water Department. This also includes the unusual use of fire hydrants and any apparent dumping into the storm drains. To report suspicious activities call (909)384-5141.

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Figure 4: Our average rate increase compared to inflation

EMLOYEE CERTIFICATION

DHS categorizes water systems on a scale of one to five for treatment and distribution. Grade one systems are typically small and not very complex. Grade five systems serve large populations, and are very large and complex systems with multiple types of treatment facilities. Our system has been rated by DHS as a grade 5 treatment and grade 5 distribution system.

To comply with State and Federal Law, Water Production and Treatment Operators must possess and maintain valid State of California Department of Health Services certification in water treatment.

Water Treatment Employees

Our operators and technicians obtain state certification of various grade levels (Levels 1 through 5) through a combination of course work in water science, years of work experience, and successfully passing a state-administered Water Treatment Operator examination. Our certified employees operate, monitor and regulate the wells, reservoirs and treatment plants that make up your water system 24 hours-a-day, 7-days-a-week, to ensure the water you drink meets all state and federal standards for domestic drinking water.

Water Distribution Employees

We require the employees that repair and maintain the water facilities to obtain and maintain California Department of Health Services Water Distribution Operator Certification. Certification is obtained by successfully completing college course work in water science, work experience, and passing a state-administered Water Distribution Operator examination.

Water Quality Employees

Our Water Quality Technicians must also possess and maintain valid State of California Department of Health Services certification in water treatment and

WHO DO I CALL IF I HAVE QUESTIONS ?

If you have questions regarding the information in this report, please contact George H. Canillo, Administrative Services Manager, (909)384-5195 or email your comments or questions to comments@sbcitywater.gov. Please include your name, address, and phone number so that we can respond to you directly.

City of San Bernardino Municipal Water Department
San Bernardino City Hall, Fifth Floor
300 North "D" Street San Bernardino, CA 92418
Voice: (909) 384-5141 Fax: (909)384-5215
Web: <http://www.sb-citywater.gov>
E-mail: ccr_comments@sbcitywater.gov

Board of Water Commissioners

B. Warren Cooke, President
Judith W. Baines, Commissioner
Tom Callion, Commissioner
Norine I. Miller, Commissioner
Dr. Louis A. Fernandez, Commissioner

General Manager

Stacy R. Alsdorf
Deputy General Manager
Robin L. Ohama
Interim Director, Water Utility
John A. Perry, P.E., Commissioner
Director, Water Reclamation
John A. Perry, P.E.
Director, Finance



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distribution. They collect more than 6,000 water quality samples throughout the water system each year. Our contract laboratory conducts about 30,000 water analyses on those samples. We do this to ensure that all the water we serve meets or exceeds State and Federal standards.

PROTECTION OF OUR GROUNDWATER SUPPLY

The source of our drinking water is from groundwater 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 and human activity. The contaminants that may be present in untreated source water include: microbial contaminants, such as viruses and bacteria, which may come from septic systems, agricultural livestock operations, agriculture, and wildlife.

Inorganic contaminants, such as salts and metals, can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. Pesticides and herbicides 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 gas stations, urban storm water runoff, and septic systems. Radioactive substances can be naturally-occurring or can be the result of oil and gas production and mining activities.

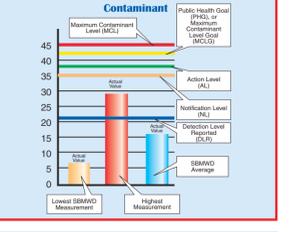
In San Bernardino, the Water Department and other city departments exercise environmental oversight to ensure that industrial and commercial sources of contaminants are minimized or eliminated. The City also sponsors educational programs that help residents understand how their actions can have an impact on our local water quality.

WHAT CAN YOU DO TO PROTECT YOUR WATER SUPPLY?

You can help protect our precious water supply by disposing of household hazardous products and other toxic chemicals in the proper manner. Household hazardous wastes include: paints, solvents, glues, adhesives, aerosols, pesticides, medicines, chemicals, motor oil, and batteries. Never dump these hazardous waste in the trash, or on the ground. Instead, take them to a hazardous waste collection or recycling center. Whenever possible, cut down your use of toxic household products by switching to safer alternatives.

You can take your household hazardous waste to San Bernardino County Fire Department Household Hazardous Waste Program at 2824 East "W" Street, San Bernardino (the former Norton Air Force Base). The Center is open Monday through Friday from 9 a.m. to 4 p.m. (see delivery schedule). For more information on household hazardous waste call (909)382-5401.

How to Read the Charts



The State allows us to monitor for some contaminants that are not on this report because the concentration of these contaminants do not change frequently. Some of our data, though representative, is more than one year old.

Terms to Know

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water.
Primary Drinking Water Standard: California Department of Health Services standards that govern the maximum levels of contaminants allowed in your drinking water to assure no adverse health effects.
Secondary Drinking Water Standard: Secondary Drinking Water Standards shall not be exceeded in the water supplied to the public because these contaminants may affect the taste, odor, or appearance of drinking water.
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs as MCLGs as is commensally and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the United States Environmental Protection Agency.
Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
Maximum Residual Disinfectant Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant added for water treatment below which there is no known or expected health risk. MRDLGs are set by the U.S. Environmental Protection Agency.
Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Notification Level (NL): Notification levels are health-based advisory levels established by CDHS for chemicals in drinking water that lack maximum contaminant levels (MCLs).
Disinfection Level (DL): Disinfection level for purposes of reporting. The designated minimum level at or above which any analytical finding of a contaminant in drinking water resulting from monitoring required by Title 22, Chapter 15, shall be reported to the DOHS.
Important Techniques: A required process intended to reduce the level of a contaminant in drinking water.
Treatment Definitions:

- SBMWD Average System Numerical Average
- NS: No Standard established
- PPH: ppb, parts per million, or micrograms per liter
- PPM: ug/L, parts per billion, or micrograms per liter
- PC/L: picograms per liter (a measure of radon)
- microm: 1/1000th
- where: Btu: unit of conductance
- NTU: Nephelometric Turbidity Units

Note: One part per million is the equivalent of 1/2 of a dissolved aspirin tablet in a full bathtub of water (approximately 50 gallons). One part per billion is equivalent to 1/2 of a dissolved aspirin tablet in 1,000 bathtubs of water (approximately 50,000 gallons).

