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City of Renton  
Planning/Building/Public Works  
1055 South Grady Way  
Renton, WA 98055



## Who Do I Call?

- ◆ Questions about this report?  
Call **Water Utility Engineering** at 425-430-7287
- ◆ Questions about water discoloration, taste, or odor problems?  
Call **Water Quality** at 425-430-7400 (7 a.m. to 3:30 p.m.)  
or 425-430-7500 after hours.
- ◆ To report water pressure problems, a broken water main,  
water leaks in street hydrants or at a meter,  
call **Water Maintenance** at 425-430-7400 (7 a.m. to 3:30 p.m.)  
or 425-430-7500 after normal working hours or on weekends.
- ◆ **Moving?** To arrange a change of water service  
billing, or for general billing questions, call **Utility Billing**  
at 425-430-6852.
- ◆ Emergencies after 3:30 p.m. or on weekends, call **911**.

## Want To Get Involved?

The City of Renton welcomes your interest in its water system. The Renton City Council is the City's decision making body. The Council meets on the first four Mondays of each month at 7:30 p.m. in the Council Chambers on the seventh floor of City Hall. Call the City Clerk's office at 425-430-6510 or visit the city's website at [www.ci.renton.wa.us](http://www.ci.renton.wa.us) for meeting or agenda information. If you are interested in getting involved with our Aquifer Protection Education or Groundwater Guardian Team, you can call 425-430-7287.



## About This Report

The purpose of this report is to let our customers know that the City's water met or exceeded state and federal standards for drinking water quality during the 2001 calendar year. This report is written and distributed in compliance with the federal Safe Drinking Water Act, which requires water utilities to provide annual "consumer confidence" reports which describe where drinking water comes from, what it contains, how it compares to stringent water quality standards and how water supplies are protected.

We hope this Water Quality Report will help our customers to better understand our drinking water and to heighten their awareness of the need to protect our water resources. We would also like to assure our customers *that providing high quality, safe drinking water is Renton's highest priority.*

# Drinking Water Quality Report

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## Water Goes Round and Round

The Earth has been keeping its finite supply of water constantly in motion by recycling the same water over and over since the beginning of time. This process of water reuse is known as the water cycle or the hydrologic cycle.

A starting point in this cycle is when the sun's heat evaporates water from lakes, streams, oceans, and the earth's surface into the atmosphere to form clouds. When the conditions are right, the clouds release this water as rain or snow. Most of the rain falls into the oceans, and the rest falls onto land where it can run off into rivers or lakes or seep (infiltrate) into the soil. This infiltrating water percolates down and fills the cracks between rocks and particles of soil. When all the cracks in a layer are full of water it is said to be saturated. If we can drill a well down into this saturated layer and pump useable amounts of water out, we have an aquifer. All of Renton's drinking water comes from the groundwater found in aquifers or springs.

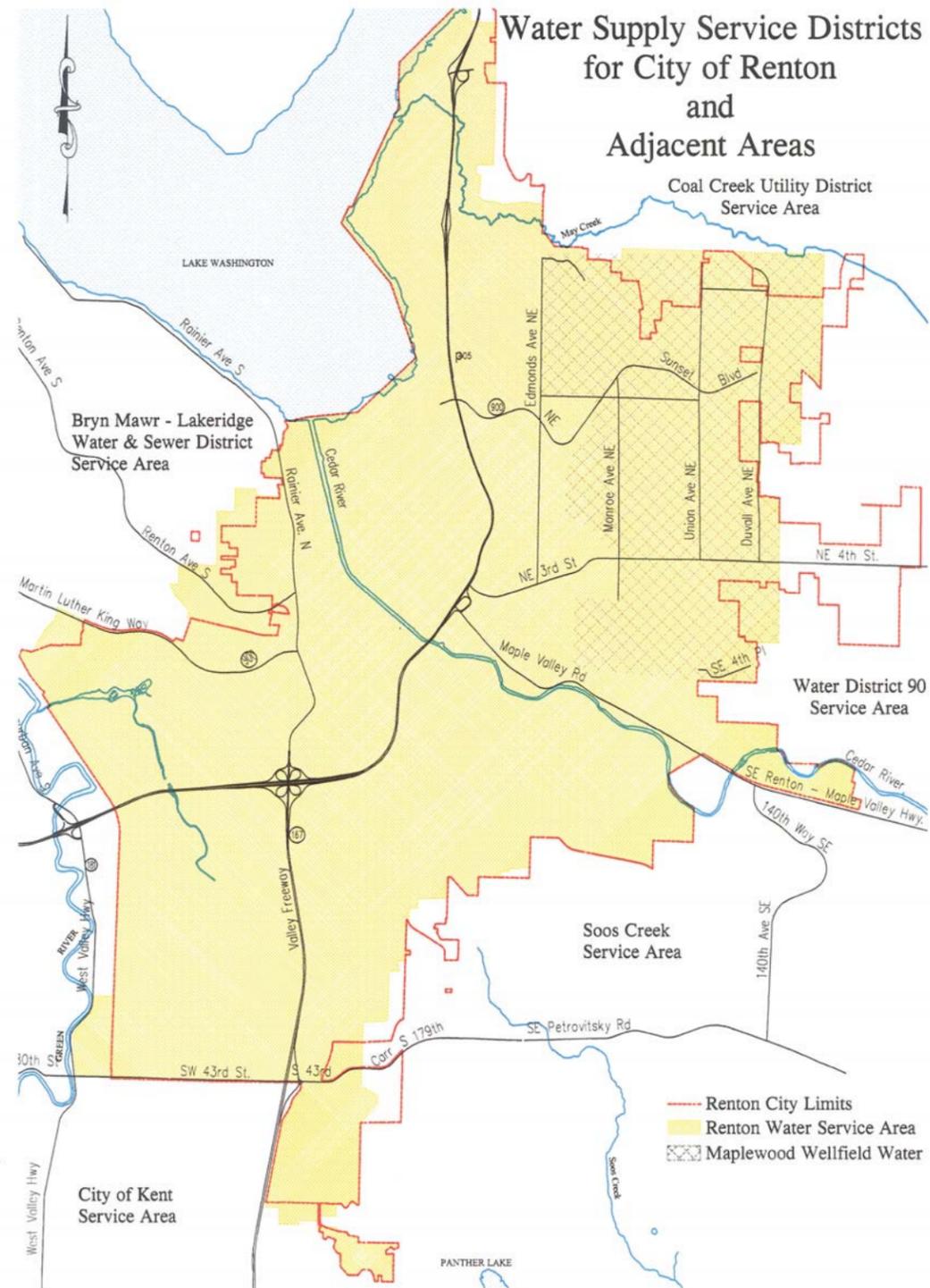
Even though it may seem counterintuitive, ground water is generally a very clean source of water, requiring little or no filtration. This is because the soil and rock that the rain water passes through on its way to the aquifer filters and cleans it. Debris and large particles are filtered out by the small cracks that the water must pass through. Chemicals and pollutants adhere to soil particles or are broken down by friendly microbes. This process is very reliable—unless, of course, it is overloaded.

Groundwater contamination can come from a number of natural and human-made sources. The City of Renton has, through education, regulation, and monitoring, undertaken the task of protecting our water supply from industrial and commercial pollution sources. There are also many ways that citizens can help protect our water. Excess fertilizers and pesticides applied to your lawn and garden overload the natural groundwater cleansing systems. Over-watering can quickly flush even moderate amounts of chemicals deep into the ground. Even washing your car on the lawn can lead to an overload of the soil's cleansing system. Take your car to a commercial car wash where the wash water is recycled or sent to a sanitary sewer. *cont. on page 3*

**Hazards Line**  
**206-296-4692**

**For the disposal of hazardous household products**

**EPA Drinking Water Hotline:**  
**1-800-426-4791**  
**Monday through Friday,**  
**8:30 a.m. to 4:30 p.m. EST**



## Making Progress with Maplewood Water Improvements

From June of 1999 through the end of 2001, the Maplewood Wells supplied water to a portion of the Renton Highlands. The Maplewood Well field was developed to serve as an alternate source of drinking water to the City of Renton in the event that the Downtown Wells become contaminated. Additionally, these wells and the associated booster pump station provide an abundant supply of water for fire fighting and drinking water, as well as provide a supply to help meet future peak summer demands. The Maplewood Wells pump from a deep aquifer that is less vulnerable to natural contamination. However, the water from this aquifer contains dissolved iron, manganese, hydrogen sulfide, and ammonia. While the water, as currently treated, is safe to drink, its taste and odor is objectionable to some people and it can stain dishes, laundry, and plumbing fixtures.

During the summer of 2001, the City conducted a pilot test of candidate treatment methods to deal with the aesthetic problems of the Maplewood Well water. The testing included evaluation of the taste and flavor of the treated water by a panel of Renton citizens and City staff members. Based upon the results of the pilot study, the City chose a treatment scheme that includes using specially coated sand filters, granulated activated carbon filters, and chlorination. A project to modify the existing treatment facility and add additional treatment facilities is currently being designed. Construction of the project is scheduled to begin in 2003 with completion in 2004. The Maplewood Wellfield has been taken out of active service and will remain in stand-by mode until the completion of the construction project.



## Notes from the EPA

### Health Information

Most people give little thought to the water that comes out of their tap. But even in a crystal clear glass of water, there are many other possible ingredients besides H<sub>2</sub>O. Our drinking water comes from wells and springs. As our water travels through the ground to the wells, it can dissolve naturally occurring minerals as well as substances from human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (1-800-426-4791).

### Special Information Available

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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).



## What's in our Drinking Water?

To ensure that the tap water delivered to your home is safe to drink, the EPA adopts regulations setting the water quality standards for public water systems. The data in the following Water Quality Monitoring tables show what is in our water. As you can see, the water

from the Downtown Wells, Springbrook Springs and the Maplewood Wells all met or exceeded federal and state primary drinking water quality standards. In 2001, none of the 67 samples tested exceeded the action level for lead and copper.

### Results of Lead and Copper Sampling at Residential Water Taps

Includes areas served by the Downtown Wells, Springbrook Springs and Maplewood Wells

PARAMETER	ACTION LEVEL	IDEAL GOAL (MCLG)	90TH PERCENTILE VALUES	POSSIBLE SOURCES OF DETECTED COMPOUNDS
Lead	15 ppb	0 ppb	3 ppb * (see note 1)	Corrosion of household plumbing systems.
Copper	1.3 ppm	1.3 ppm	1.03 ppm * (see note 1)	Corrosion of household plumbing systems.

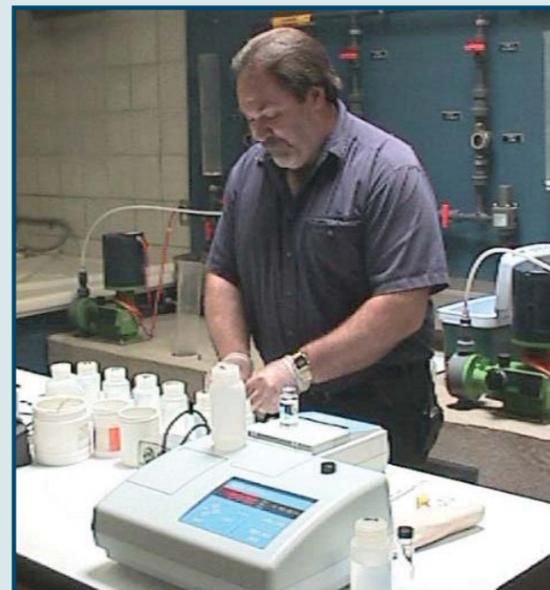
**Notes:**

1. 90 percent of the samples tested had levels at or below this value (10 percent of the samples tested had levels above this value).

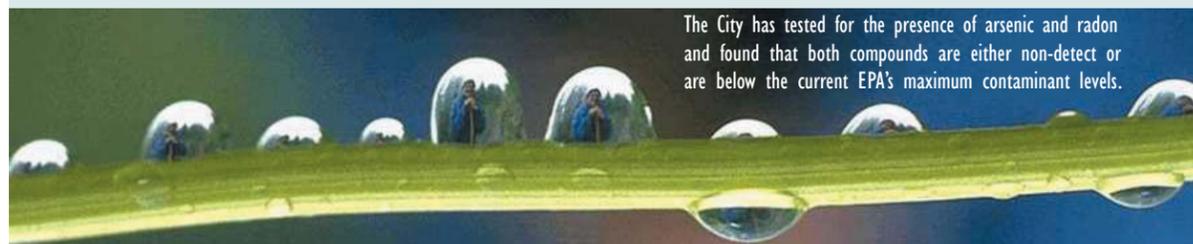
## Lead and Copper Monitoring

The EPA requires monitoring for the presence of lead and copper to minimize human exposure to these substances in drinking water. Neither lead nor copper has been detected in Renton's water sources. However, our water is naturally corrosive which could cause lead and/or copper present in your home plumbing to leach into your drinking water.

To reduce its potential to corrode household plumbing, we treat our water with sodium hydroxide to raise its pH. The City then tests for lead and copper at household taps to make sure that our Corrosion Control Treatment is working.



City staff monitoring pH at the Corrosion Control Facility.



The City has tested for the presence of arsenic and radon and found that both compounds are either non-detect or are below the current EPA's maximum contaminant levels.

## 2001 Water Quality Data for the 2002 Consumer Confidence Report

### Definitions for Reading Water Quality Tables

**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 allow for a margin of safety.

**MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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

**ppb (parts per billion):** One part per billion is equivalent to 1/2 of a dissolved aspirin tablet in 1000 full bathtubs of water (approximately 50,000 gallons of water).

**ppm (parts per million):** One part per million is equivalent to 1/2 of a dissolved aspirin tablet in a full bathtub of water (approx. 50 gallons).

### Year 2001 Water Quality Data For Downtown Wells and Springbrook Springs

DETECTED COMPOUND	MCL	MCLG	HIGHEST AMOUNT AND RANGE DETECTED	POSSIBLE SOURCES OF DETECTED COMPOUNDS
<b>Regulated at the Ground Water Source Before Treatment</b>				
Maximum Total Trihalomethane Potential	No MCL established. AL = 100 ppb	No MCLG Established	29.9 ppb (13.9 - 29.9 ppb, tested 3/29/2000)	By-product of drinking water chlorination
<b>Regulated at the Ground Water Source After Treatment</b>				
Fluoride	4 ppm (see note 2)	4 ppm (see note 2)	1.3 ppm (0.8 - 1.3 ppm)	Water additive which promotes strong teeth
Nitrate	10 ppm	10 ppm	2.3 ppm	Runoff from fertilizer use; Leaching from septic tanks; Erosion of Natural Deposits
Sulfate	No primary MCL, Secondary MCL = 250 ppm	No MCLG established	14 ppm	Erosion of natural deposits
Sodium	No MCL established (see note 3)	No MCLG established (see note 3)	6.9 ppm	Erosion of natural deposits
<b>Unregulated at the Groundwater Source after Treatment</b>				
Fluorotrichloromethane	Not regulated	Not regulated	0.71 ppb (tested 12-6-2000)	Refrigerant, Degreasing agent and propellant

### Year 2001 Water Quality Data For Maplewood Wells

DETECTED COMPOUND	MCL	MCLG	HIGHEST AMOUNT AND RANGE DETECTED	POSSIBLE SOURCES OF DETECTED COMPOUNDS
<b>Regulated at the Ground Water Source Before Treatment</b>				
Maximum Total Trihalomethane Potential	No MCL established. AL = 100 ppb	No MCLG Established	42.5 ppb (tested 8-9-2000)	By-product of drinking water chlorination
<b>Regulated at the Ground Water Source After Treatment</b>				
Fluoride	4 ppm (see note 2)	4 ppm (see note 2)	1.3 ppm (0.8 - 1.3 ppm)	Water additive which promotes strong teeth
Sodium	No MCL established (see note 3)	No MCLG established (see note 3)	14 ppm	Erosion of natural deposits
Manganese	No primary MCL, Secondary MCL = 50 ppb	No MCLG established	89 ppb	Erosion of natural deposits

**Notes:**

2. The primary MCL and MCLG for fluoride is 4 ppm. The secondary MCL for fluoride is 2 ppm.

3. The EPA has established a recommended level of 20 ppm for sodium as a level of concern for those consumers that may be restricted for daily sodium intake in their diets.

## Q&A Frequently Asked Questions

### Does the City add fluoride to the water?

Yes. In 1985, the citizens of Renton voted to have fluoride added to the City's drinking water. Fluoride is added at a rate of one part per million to help prevent tooth decay.

### Is Renton's water soft or hard?

A water's hardness is dependent upon the levels of two naturally occurring soluble minerals - calcium and magnesium. Renton's water falls within the soft range with about 3.0 grains per gallon of hardness. This means that dishwashing and clothes washing require relatively less soap than in other areas where the water is hard.

### Why does my water sometimes smell or taste like chlorine?

Renton's water is very clean when it comes from the ground. Chlorine is added to stop bacteria from growing in the water delivery pipelines. If you are sensitive to the smell or taste of chlorine, you can use one of the following techniques. Keep a pitcher of water in the refrigerator, the chlorine will dissipate within a few hours and you will conserve water by not having to run the tap to get a cool drink. You can speed the chlorine dissipation process up by pouring water back and forth between two pitchers. Many faucet filters will also remove chlorine taste and smell - make sure you maintain the filter, as an improperly maintained filter can actually make water less safe.

### Is bottled water safer than tap water and do I need a home water treatment device?

Not necessarily. The safety of bottled water depends on the source of water and the treatment it receives. Bottled water is regulated by the Food and Drug Administration, which has less rigorous testing and purity standards than the US Environmental Protection Agency, which regulates tap water.

The use of bottled water or a home water treatment device is a personal choice that may be based on taste preferences. If you use a treatment device, be sure to select a unit approved by the National Sanitation Foundation (NSF) and also be sure to properly maintain the device to avoid water quality problems.



## What's New?

### Major Water Utility projects for the 2002 -2003 year:

- ◆ Complete construction of the well house and pump station in Downtown Well field for emergency water source.
- ◆ Construct large piping for additional disinfection contact time in Liberty Park.
- ◆ Repair and construct seismic upgrade to the Rolling Hills and Highlands elevated water storage tanks.



In 2001, Renton Water Utility produced an average of 7.1 million gallons of drinking water per day.

## Where Does Renton's Drinking Water Come From?

In 2001, Renton drew its drinking water from three sources: five downtown wells, which draw water from the Cedar Valley Aquifer; Springbrook Springs, a small springs located at the extreme southern city limits; and two wells, which draw from the Maplewood Aquifer source.

The downtown wells are our major source of water, producing over 64 percent of Renton's water, or an average of 4.6 million gallons a day. Approximately 14 percent, or one million gallons per day, of Renton's drinking water is supplied by Springbrook Springs.

The water pumped from these sources is very clean and needs minimal treatment. We add chlorine for disinfection, which destroys

any bacteria and viruses. Because our water is naturally soft, sodium hydroxide is added to stop corrosion of plumbing. Fluoride is also added to prevent tooth decay. In the areas of Renton Hill, Talbot Hill, and West Hill, ortho polyphosphates are added to reduce corrosion of iron water pipes.

Until recently, our second major source of drinking water was from two wells that tap into the deep Maplewood aquifer and produced 22 percent, or 1.5 million gallons of water per day. This water was used to supply customers in a portion of the Renton Highlands, and also served as a backup water supply to the downtown wells.

The City disinfected Maplewood water with chlorine, which reacts with naturally oc-

curing ammonia to form chloramines. Chloramines act as a secondary disinfectant to destroy any harmful bacteria that may enter the water distribution system. Sodium fluoride was added to prevent tooth decay. Sulfuric acid and sodium hydroxide were used in a process to remove naturally occurring hydrogen sulfide.

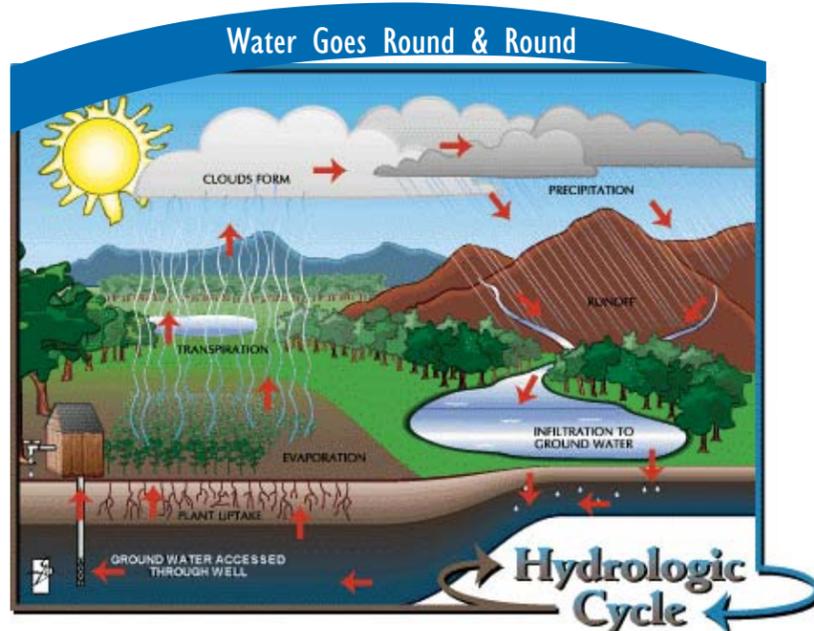
Although the Maplewood water supply meets all health-related water quality standards, it contains low levels of manganese that can stain plumbing fixtures, dishwashers, and sometimes clothing. To reduce manganese precipitation, ortho polyphosphates were added to the water. Starting in February 2002, the city stopped pumping water from the Maplewood wells.

*see related article on page 7*

### Water Goes Round & Round, cont. from page 1

In general, anything that is labeled with the words "DANGER", "WARNING" or "CAUTION", should be considered hazardous and should not be poured out onto the ground. Dispose of hazardous products such as oil-based paints, pesticides, thinners, solvents, antifreeze, and gasoline at the Wastemobile or take them to a fixed collection site. Many auto parts stores and auto repair businesses take used oils. Latex paint can be recycled at the Wastemobile and other locations. Please contact the Hazards Line at (206) 296-4692 or visit the Local Hazardous Waste Management Program Website [www.metrokc.gov/hazwaste](http://www.metrokc.gov/hazwaste) for schedules, maps, and more information.

If each of us does a little bit to help protect our groundwater, we can keep our supply of drinking water clean and safe forever.



## Keeping Your Water Safe and Moving

The City Water Quality and Water Maintenance staff regularly monitors the quality of our water supply. Field and laboratory analyses include tests for bacteria, as well as chemical, physical, and radiological indicators. We test for over 120 compounds to make sure our drinking water is safe.

The Water Distribution Maintenance team routinely monitors and maintains 9 reservoirs, 18 pump stations, 2 water treatment facilities, 278 miles of water mains, 3,000 fire hydrants, and 14,300 water meters. This team is ever ready to repair the more than 263 leaking services and 20 water main breaks that occur each year.



The highest water demand day for 2001 occurred on August 10 when 12 million gallons of water were consumed.