Drinking Water Quality Report 2001

About This Report

We hope that 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 and safe drinking water to our customers is Renton's highest priority.***

Saving For The Future

The City of Renton is very fortunate to have a reliable and adequate supply of high quality water. Even during times of low rainfall, our supply remains stable.

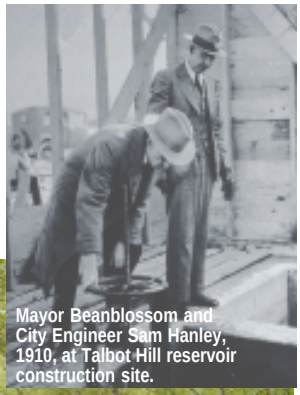
So why conserve?

Renton has a vigorous business economy and growing population, while our water production, pumping capacity and water rights are limited. Just as Renton is growing, so is the rest of the region and, likewise, the demands put on all water supplies.

Saving water doesn't mean sacrifice. We need to use our water resources in a responsible manner, respect the needs of fish, and also the growing demands of our customers.

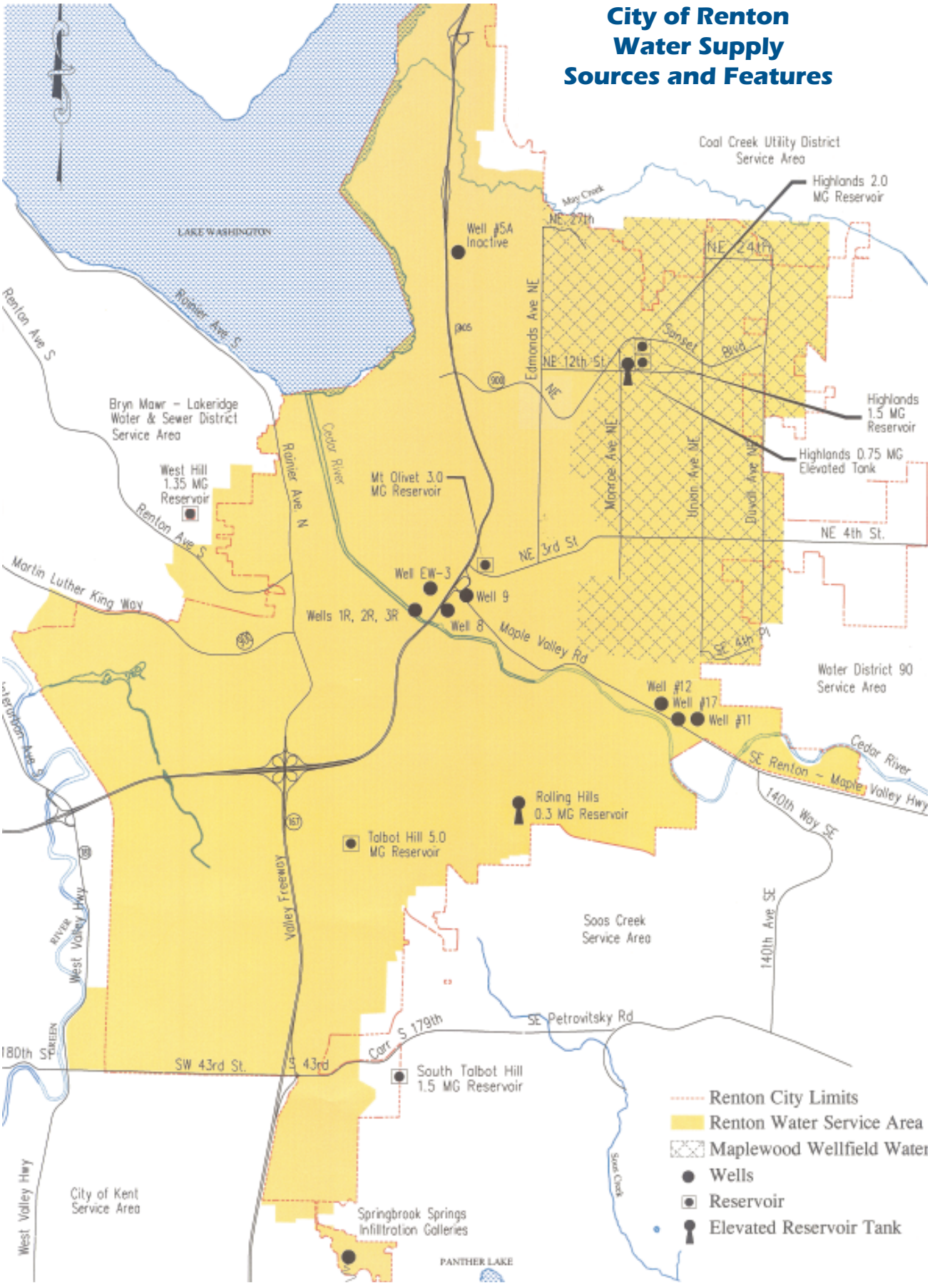
A few small changes in your habits and plumbing can mean big water savings. Here are our **Top Ten Tips for Conserving Water**

1. Install a 1.6 gallon toilet; toilets more than ten years old waste water using 3.5 – 5 gallons per flush.
   One third of all water used indoors is for toilet flushing.
2. Check your toilet for leaks, and repair them. If a little food coloring in the tank shows up in the bowl after 15 minutes – you have a silent leak!
   Studies show 1 out of 5 toilets leak.
3. Reduce shower flow by installing a low flow showerhead. Keep your shower short!
   Twenty five percent of indoor water use is used for showers and baths.
4. Reduce faucet flow by installing faucet aerators in bathroom and kitchen sinks.
   Typical faucets put out 3 gallons per minute – an aerator can cut your water use in half!
5. Repair leaks. You potentially pay twice for every drop wasted. First on your water bill, and if it is hot water dripping, you also pay on your energy bill.
   A moderate drip can waste 20 gallons per day – that's 7,300 gallons a year!
6. Turn off the water while you brush your teeth.
   A running faucet wastes 1.5 to 3 gallons of water per minute.
7. Run dishwashers only when full; scrape dishes rather than hand or machine rinsing; use shortest cycle needed.
   A dishwasher can be more water efficient than washing by hand.
8. Water lawns no more than a total of one inch per week.
   Outdoor watering can increase summer water consumption by 40 percent.
9. Don't water the sidewalk or cause runoff by applying water too fast.The typical lawn sprinkler applies water at a rate of 1½ inches per hour, whereas the typical lawn absorbs water at a rate of 1/3 to 1/2 inch per hour.
10. Wash your car with a bucket rather than a hose, or take it to a professional car wash where they recycle the water.
    Washing your car puts oil, grease and soap into storm sewers, which go directly to streams or onto the ground where it can contaminate groundwater.



Mayor Beanblossom and City Engineer Sam Hanley, 1910, at Talbot Hill reservoir construction site.

City of Renton Water Supply Sources and Features



Where Does Renton's Drinking Water Come From?

Renton draws its water from three sources: five wells located in Liberty and Cedar River Parks (Downtown Wells); Springbrook Springs which is located at the extreme southern city limits; and three wells located on the Maplewood Golf Course (Maplewood Wells).

The Downtown Wells are our major source of water, producing over 60 percent of Renton's water, or an average of 5.25 million gallons a day. They draw groundwater from a shallow aquifer known as the Cedar Valley Aquifer. In much of the downtown area, the top of this aquifer is only 20 feet below the surface. Approximately fifteen percent, or 1.3 million gallons per day of Renton's drinking water, is supplied by Springbrook Springs.

Liberty Park Well House.

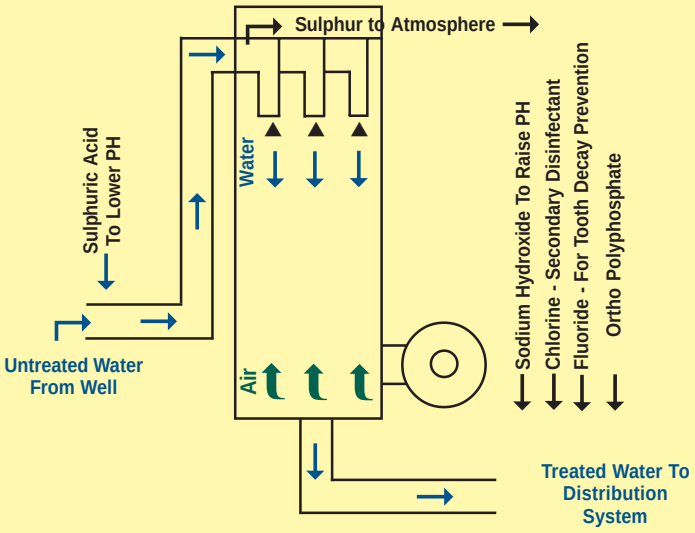
The water pumped from these sources is very clean and needs minimal treatment. We add chlorine for disinfection, which destroys any bacteria and viruses. Because our water is naturally soft, sodium hydroxide is added to stop corrosion of plumbing. Fluoride is also added to prevent tooth decay. In the areas of Renton Hill, Talbot Hill, and West Hill, ortho polyphosphates are added to reduce corrosion of iron water pipes.

Our second major source of drinking water is three wells located on the Maplewood Golf Course. These wells tap into a different and deeper water source, or aquifer, than the Downtown Wells and produce about 23 percent, or 2 million gallons of water per day. This water is used to supply customers in a portion of the Renton Highlands, and would also serve as a backup water supply to the Downtown Wells in the case of an emergency.

The City disinfects Maplewood water with chlorine, which reacts with naturally occurring ammonia to form chloramines. Chloramines act as a secondary disinfectant to destroy any harmful bacteria that may enter the water distribution system. Sodium fluoride is added to prevent tooth decay. Sulfuric acid and sodium hydroxide are also added to remove naturally occurring hydrogen sulfide.

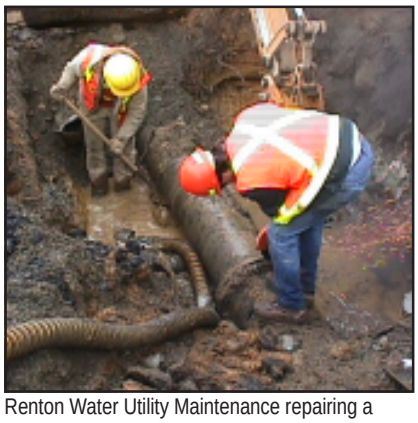
Although the Maplewood water supply meets all health-related water quality standards, it contains low levels of manganese that can stain plumbing fixtures, dishwashers and sometimes clothing. To reduce manganese precipitation, ortho polyphosphates are added to the water.

Maplewood Wells Water Treatment Process



Water Quality And Maintenance Teams

The City Water Quality 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 different compounds to make sure our drinking water is safe. Routine field tests for chlorine residual, fluoride residual, and pH are run on a daily basis. We maintain 8 reservoirs, 17 pump stations, and 2 water treatment facilities.



Renton Water Utility Maintenance repairing a main break.

The Water Distribution Maintenance team maintains 35 pressure reducing valve stations, 278 miles of water mains, 3,000 fire hydrants, and 14,300 water meters. We also repair 300 leaking services and 15 to 20 water main breaks a year. As part of its preventive maintenance program, the Water Utility Maintenance Section tests and operates all fire hydrants twice a year; replaces old galvanized steel services; and locates and operates the water main valves so that the main can be shut down quickly in an emergency.

Year 2000 Lead And Copper Sampling At Residential Water Taps (Covers All Water Sources)

DETECTED COMPOUND	ACTION LEVEL	IDEAL GOAL	90TH PERCENTILE VALUES	POSSIBLE SOURCES OF DETECTED COMPOUND
Lead	15 ppb	0 ppb	3 ppb (see note 1)	Corrosion of household plumbing systems.
Copper	1.3 ppm	1.3 ppm	1.14 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).

Other: At the Maplewood Wells, PW-11 and PW-17, manganese ranges from 60 ppb to100 ppb. Manganese comes from the erosion of natural deposits. The secondary MCL for manganese is 50 ppb.

What's In My Drinking Water?

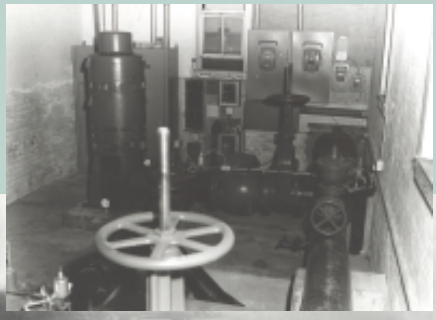
Most people give little thought to the water that comes out of their tap. But even in a crystal clear glass of water, there are many other possible ingredients besides H_2O.

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 (800-426-4791).

Monitoring pH at the Corrosion Control Facility.

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/CDC guidelines on appropriate means to lessen the risk of infection by *Crytosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 meet or exceed federal and state drinking water quality standards.



Liberty Park Well House controls, 1942.

Renton's first water tower (view from Renton Hill, 1911).

Year 2000 Water Quality Data For Maplewood

DETECTED COMPOUND	MCL	MCLG	HIGHEST AMOUNT AND RANGE DETECTED	POSSIBLE SOURCES OF DETECTED COMPOUNDS
Regulated at the Ground Water Source Before Treatment				
Maximum Total Trihalomethane Potential	No MCL established. AL = 100 ppb	No MCLG Established	42.5 ppb	By-product of drinking water chlorination
Regulated at the Ground Water Source After Treatment				
Fluoride	4 ppm (see note 2)	4 ppm (see note 2)	1.54 ppm (range 0.23 ppm - 1.54 ppm)	Water additive which promotes strong teeth
Sodium	No MCL established (see note 3)	No MCLG established (see note 3)	28 ppm (sampled 3/26/98)	Erosion of natural deposits

Year 2000 Water Quality Data For Downtown Wells And Springbrook Springs

DETECTED COMPOUND	MCL	MCLG	HIGHEST AMOUNT AND RANGE DETECTED	POSSIBLE SOURCES OF DETECTED COMPOUNDS
Regulated at the Ground Water Source Before Treatment				
Maximum Total Trihalomethane Potential	No MCLEstablished. AL = 100 ppb	No MCLG Established	29.9 ppb	By-product of drinking water chlorination.
Regulated at the Ground Water Source After Treatment				
Fluoride	4 ppm (see note 2)	4 ppm (see note 2)	1.30 ppm (range: 0.75 - 1.30 ppm)	Water additive which promotes strong teeth.
Nitrate	10 ppm	10 ppm	2.4 ppm (range: 0.5 ppm - 2.4 ppm)	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits.
Sodium	NO MCL established (see note 3)	NO MCL established (see note 3)	7 ppm (sampled 3/26/98)	Erosion of natural deposits
Unregulated at the Ground Water Source After Treatment				
Fluorotrichloro-methane	Not regulated	Not regulated	0.71 ppb	Refrigerant, Degreasing Agent and Propellant

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.

Definitions For Reading Water Quality Tables

MCL (Maximum Contaminate 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.

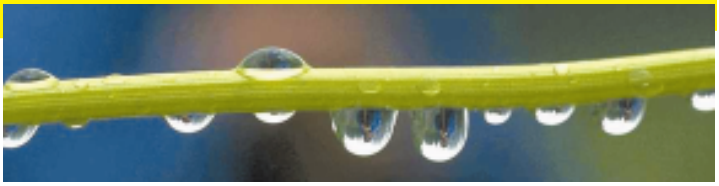
MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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).

Frequently Asked Questions Q&A



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 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 tap water, which is regulated by the US Environmental Protection Agency.

Education is an important part of protecting our aquifer.

The use of bottled water or a home water treatment device is a personal choice, which 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.

Has the City tested the groundwater for Methyl Tertiary Butyl Ether (MTBE)?

Yes. We have tested our groundwater wells and did not detect the presence of MTBE in our water sources. MTBE is an additive used in gasoline and is not currently regulated in drinking water.

Is Renton's water soft or hard?

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 less soap than in other areas where the water is hard.

What about chloramines in my aquarium?

Chloramines can be safely and easily neutralized by using a product that neutralizes both the chlorine and ammonia portions of the chloramines molecules. These products are readily available at any aquarium store.

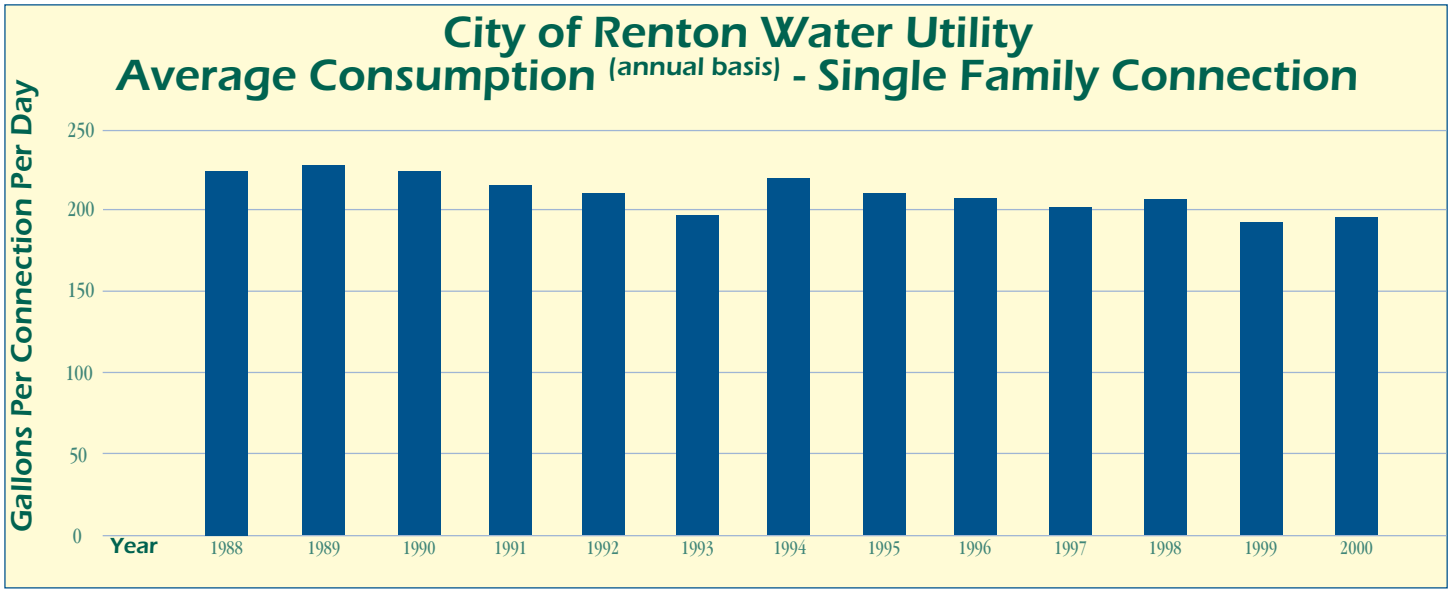
Don't Worry We're Ready

Power

To make sure we have backup power to keep the wells or booster pump stations that make up Renton's water delivery infrastructure running during limited power disruptions, the City is purchasing a trailer mounted 500-kilowatt electrical generator set. This set will be able to provide power to any of the water well houses or booster pump stations in the case of an isolated power outage.

Water

In case of a water emergency, Renton has several connections and agreements, known as interties, with surrounding water systems that could be utilized. In an emergency we could utilize the interties to get water for use in our system.



Update Maplewood Water Treatment Improvements

Residents in the Renton Highlands area (east of Edmonds Avenue NE) are served by water from the Maplewood well field. 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. During 2000, the City pilot-tested various treatment processes to remove the manganese. In 2001 the City, through its consulting engineering firm, is conducting a pre-design study for an expansion of the treatment plant at Maplewood to include manganese removal. The pre-design will select a manganese removal treatment technology as well as identify the cost and space requirements of the selected treatment. Subject to City Council approval, the project will be

Maplewood Wells booster pump station and water treatment facility.

Lead and Copper Are Under Control

The EPA requires monitoring for the presence of lead and copper with the goal to minimize human exposure to lead and copper 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.

Rolling Hills Reservoir and Booster Pump Station Project

In August 2000, construction began on the Rolling Hills Reservoir and Booster Pump Station Project at Puget Drive SE and Edmonds Avenue SE. This project was undertaken to ensure adequate water storage for emergency use and fire protection in the southeastern area of Renton. The project includes a 3,000,000 gallon above-ground steel storage tank and a booster pump station. The scheduled completion of the project is July 2001.

New Rolling Hills storage tank holds 3 million gallons of water.

Water Facts

- In 2000, the Renton Water Utility produced an average of 7.45 million gallons of drinking water per day.
- The highest water demand day for 2000 occurred on August 1 when 13.6 million gallons of water were consumed.
- As of December 2000, there were 14,224 water service connections to the Renton water system.
- The combined water storage capacity of all eight of Renton's reservoirs is 15.5 million gallons.
- Renton Aquifer Protection specialists inspected and issued permits to 84 businesses in the Aquifer Protection Area.
- Aquifer protection educational presentations were made to 24 Renton third grade classrooms.
- 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.

The largest indoor use of water is for flushing toilets. The greatest use of water outdoors is for watering lawns - this can account for a quarter of a home's total water consumption.

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Who Do I Call?

- Questions about this report?
  Call: Water Utility Engineering at 425-430-7210.
- Questions about discoloration, taste or odor problems?
  Call: Water Quality at 425-430-7400 (7:00 a.m. to 3:00 p.m.) or 425-430-7500 after hours (Renton Police Department).
- To report water pressure problems, a broken water main, hydrant, water leaks in streets or at a meter,
  Call: Water Maintenance at 425-430-7400 (7:00 a.m. to 3:00 p.m.) or 425-430-7500 after hours (Renton Police Department).
- Moving? To arrange a change of water service billing, or for general billing questions,
  Call: Utility Billing at 425-430-6852.
- Emergencies after 5:00 p.m. or on weekends,
  Call the Renton Police Department at 425-430-7500.

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 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.