Drinking Water Quality Report 2000

About This Report

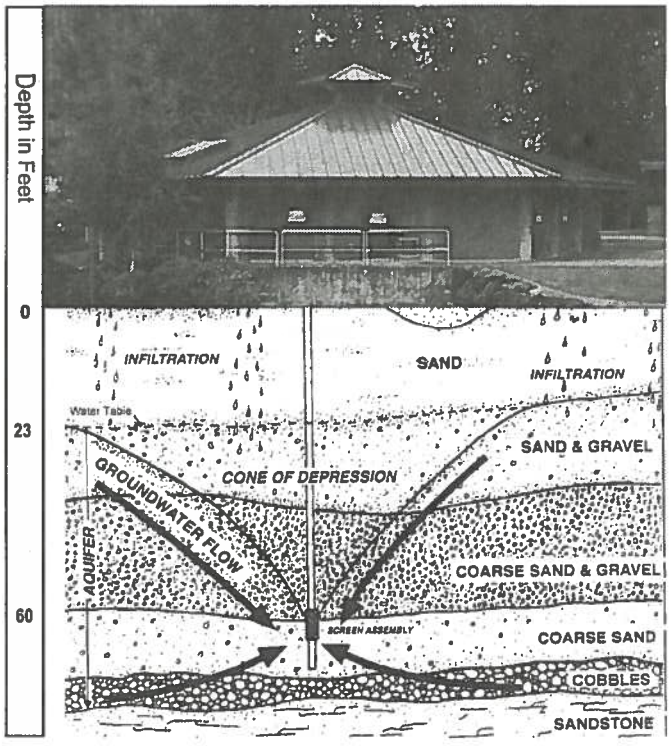
The purpose of this report is to let our customers know that the City's water met or exceeded state and federal standards for drinking water quality during the 1999 calendar year. This report is written and distributed in compliance with the federal Safe Drinking Water Act, which requires water utilities to provide annual "consumer confidence" reports which describe where our drinking water comes from, what it contains, how it compares to stringent water quality standards and what we are doing to protect our water supply.

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".***

Where Does Renton's Drinking Water Come From?

Most of Renton's drinking water is pumped from five wells that 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. These wells, located in Liberty and Cedar River Parks, produce, on average, 5.2 million gallons of drinking water a day. Fifteen percent, or approximately 1.3 million gallons per day, of Renton's drinking water is supplied by Springbrook Springs, which is located at the extreme southern city limits.

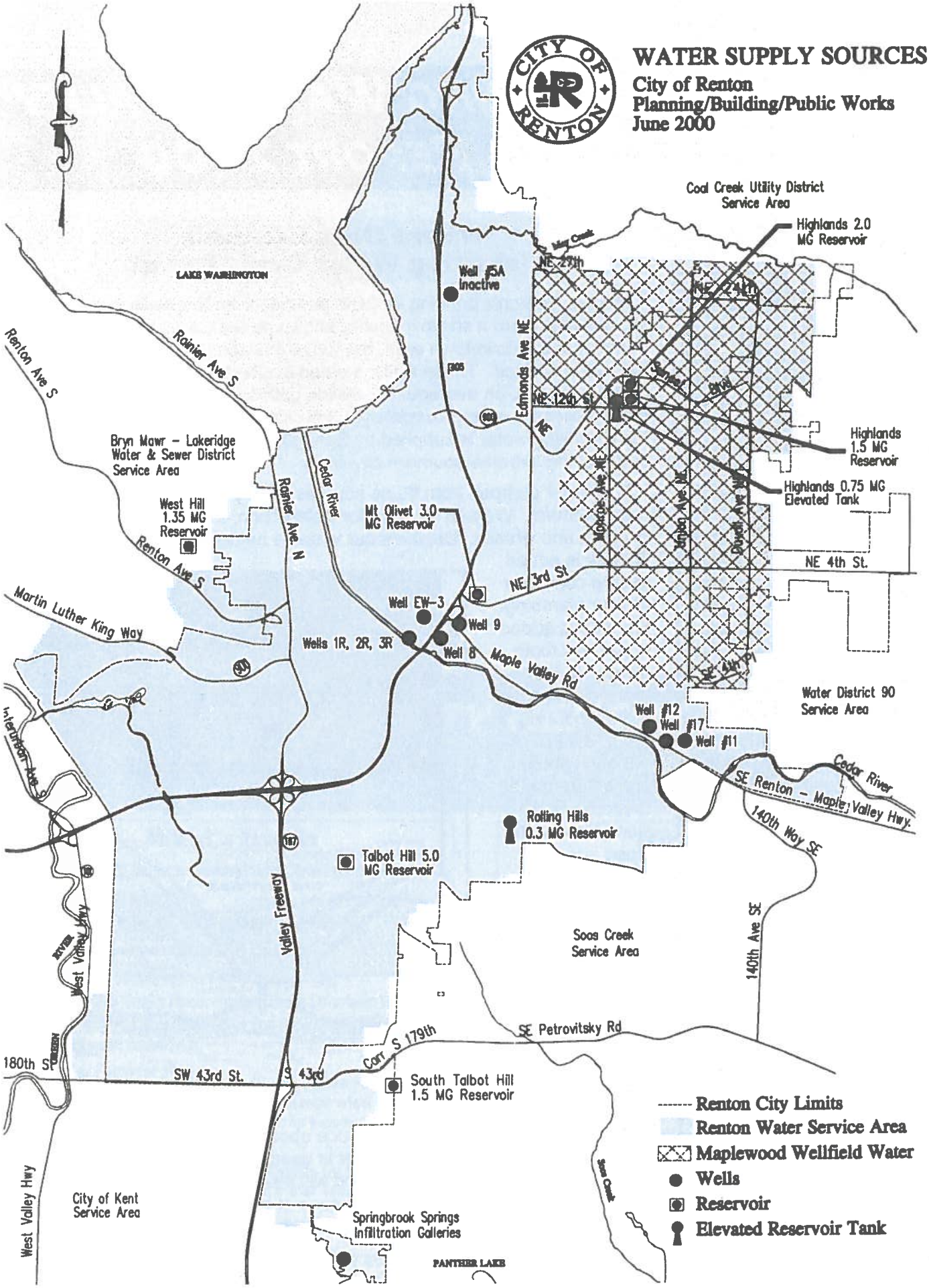
The water pumped from these sources is very clean and needs minimal treatment. We add chlorine for disinfection, which destroys any bacteria and viruses. Because our water is naturally soft, sodium hydroxide is added to stop corrosion of your plumbing. Fluoride is added to prevent tooth decay. In the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



Liberty Park well house with schematic of well drawing water from the Cedar Valley Aquifer

Our second major source of drinking water is two 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 will also serve as a backup water supply to the downtown wells in the case of an emergency. Additional information on the Maplewood Wells is included in this report.

The map on the next page shows the location of these water sources.


WATER SUPPLY SOURCES
City of Renton
Planning/Building/Public Works
June 2000
CITY OF RENTON
Coal Creek Utility District
Service Area
Highlands 2.0
MG Reservoir
Well #5A
Inactive
LAKE WASHINGTON
Renton Ave S
Rainier Ave S
Edmonds Ave NE
NE 27th
NE 24th
NE 12th St
Bryn Mawr - Lakeridge
Water & Sewer District
Service Area
Highlands
1.5 MG
Reservoir
Highlands 0.75 MG
Elevated Tank
West Hill
1.35 MG
Reservoir
Cedar River
Mt Olivet 3.0
MG Reservoir
Renton Ave S
Rainier Ave N
NE 4th St.
NE 3rd St
Martin Luther King Way
Well EW-3
Well 9
Wells 1R, 2R, 3R
Well 8
Maple Valley Rd
Water District 90
Service Area
Well #12
Well #17
Well #11
Interurban Ave
Cedar River
SE Renton - Maple Valley Hwy
Rolling Hills
0.3 MG Reservoir
140th Way SE
Talbot Hill 5.0
MG Reservoir
Valley Freeway
West Valley Hwy
Soos Creek
Service Area
140th Ave SE
SE Petrovitsky Rd
180th St
SW 43rd St.
S 43rd
Corr S 179th
South Talbot Hill
1.5 MG Reservoir
City of Kent
Service Area
Springbrook Springs
Infiltration Galleries
PANTHER LAKE
Renton City Limits
Renton Water Service Area
Maplewood Wellfield Water
Wells
Reservoir
Elevated Reservoir Tank

Protection is the Key to Keeping Our Water Clean

Renton's water supply is naturally clean, but keeping it that way requires a lot of work. Because of the shallowness and urban location of the Cedar Valley Aquifer, the five downtown wells and Springbrook Springs have been rated by the Washington State Department of Health as having a moderate to high susceptibility to contamination. The much deeper Maplewood wells have been given a low susceptibility rating.

Preventing pollution is the first line of defense in protecting our groundwater supply. In 1992, the City Council passed the Aquifer Protection Ordinance to regulate the storage and handling of hazardous chemicals in the area of the well field designated as the Aquifer Protection Area (APA). The Aquifer Protection Area encompasses the area within the City limits from which groundwater moves toward the downtown wells. The City regularly inspects businesses located in the APA to ensure that they are in compliance with the ordinance, and are practicing safe handling, storage and disposal of hazardous materials.

The Renton Fire Department's HAZMAT Unit is always ready to provide first response to any hazardous material spill within the City limits. To report a hazardous material spill, call 911.

Aquifer Protection Specialist demonstrating to Cascade Elementary third graders how they can help "Protect Our Aquifer"

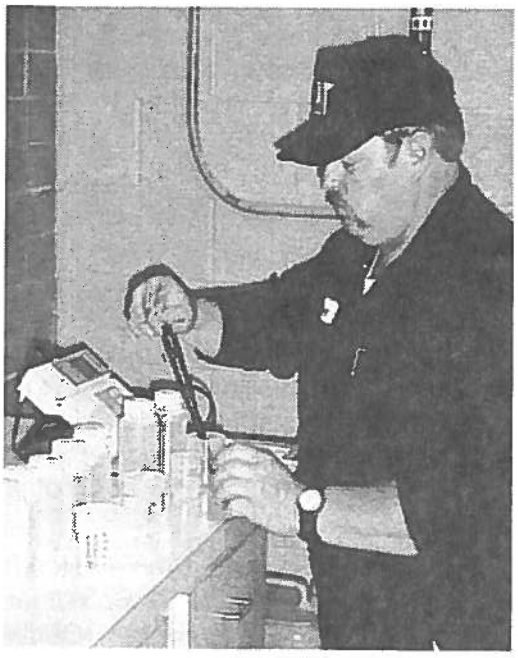
Our Aquifer Awareness Program strives to educate adults, children and businesses about how they can help keep our drinking water clean. We work with the Renton School District's third grade Community Studies unit to provide classroom presentations and well house tours. Renton has been recognized as a Groundwater Guardian Community by the National Groundwater Foundation for the last four years.

Water Quality and Maintenance Teams

Water Maintenance crew repairing a broken water main.

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.

The Water Distribution Maintenance team routinely monitors and maintains 8 reservoirs, 17 pump stations, 2 water treatment facilities, 270 miles of water mains, 3,000 fire hydrants and 14,300 water meters. We test for over 120 compounds to make sure our drinking water is safe.



Greg Durbin, Water Treatment Plant Operator, measuring pH at the Corrosion Control Facility.

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).

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.

How We Keep the Lead and Copper Out

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 and may cause lead and/or copper present in your home plumbing to leach into your drinking water.

In 1993, the City of Renton tested for the presence of lead and copper in water drawn from 75 household taps. None of these taps tested for lead exceeded the EPA's action level of 15 parts per billion. However, 63 of the 75 tap samples tested for copper exceeded the EPA's action level of 1.3 parts per million. To comply with EPA regulations, the City of Renton constructed Corrosion Control Treatment Facilities in 1998 and started the operation of the facilities in the spring of 1999. The treatment process entails adding sodium hydroxide to our water to raise the pH from below 7.0 to above 7.3. At this higher pH, the water is less corrosive to household plumbing, which reduces leaching of lead or copper from your home plumbing.

In the fall of 1999, the City retested for lead and copper in 72 of the previous 75 household taps. None of these taps tested exceeded the EPA's action levels for lead or copper. Our water now meets the EPA's regulations for lead and copper.

Definitions and Notes 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).

Note 1: The primary MCL and MCLG for fluoride is 4 ppm. The secondary MCL for fluoride is 2 ppm.

Note 2: The EPA has established a recommended level of 20 ppm for sodium as a level of concern for those consumers who need to restrict the daily sodium intake.

Note 3: The secondary MCL for sulfate is 250 ppm.

Note 4: One (1) of the 72 samples tested exceeded the action level for lead. The site was retested and the retest was below the action level. One (1) of the 72 samples tested exceeded the action level for copper.

Note 5: The secondary MCL for manganese is 50 ppb.

Note 6: The secondary MCL for iron is 300 ppb

1999 Water Quality Monitoring Results
Downtown Wells and Springbrook Springs

Detected Compounds	Highest Amount Allowed (MCL)	Ideal Goal (MCLG)	Highest Amount and Range of Detected Amounts	Possible Sources of Detected Compound
	Regulated at the Groundwater Source before Treatment			
Maximum Total Trihalomethane Potential	No MCL Established AL = 100 ppb	No MCLG Established	23.4 ppb (range N/A - one sample only)	By-product of drinking water chlorination.
	Regulated at the Groundwater Source after Treatment			
Tetrachloroethyl-ene	5 ppb	0	0.21 ppb (non detect - 0.21 ppb)	Discharge from factories and dry cleaners.
Nitrate	10 ppm	10 ppm	2.4 ppm (non detect - 2.4 ppm)	Runoff from fertil-izer use, leaching from septic tanks, erosion of natural deposits.
Fluoride	4 ppm (see note 1)	4 ppm (see note 1)	1.26 ppm (0.85 ppm - 1.26 ppm)	Water additive which promotes strong teeth.
Sodium	No MCL established (see note 2)	No MCLG established (see note 2)	7 ppm (non detect - 7 ppm) (sampled 3/26/98)	Erosion of natural deposits.
Sulfate	No primary MCL (see note 3)	No primary MCLG (see note 3)	14 ppm (non detect - 14 ppm) (sampled 3/26/98)	Erosion of natural deposits.
	Unregulated at the Groundwater Source after Treatment			
Chloroform	Not regulated	Not regulated	0.42 ppb (non detect - 0.42ppb)	By-product of drinking water chlorination.
Chloromethane	Not regulated	Not regulated	0.2 ppb (non detect - 0.2ppb)	By-product of drinking water chlorination.

1999 Water Quality Monitoring Results
Lead and Copper Sampling at Residential Water Taps
(Includes all Water Sources)

Detected Compound	Action Level (AL)	Ideal Goal (MCLG)	90th Percentile Values	Possible Sources of Detected Compound
Lead	15 ppb	0 ppb	3 ppb (see note 4)	Corrosion of household plumbing systems.
Copper	1.3 ppm	1.3 ppm	1.1 ppm (see note 4)	Corrosion of household plumbing systems.

NOTE: All definitions and notes for these tables are listed on previous page.

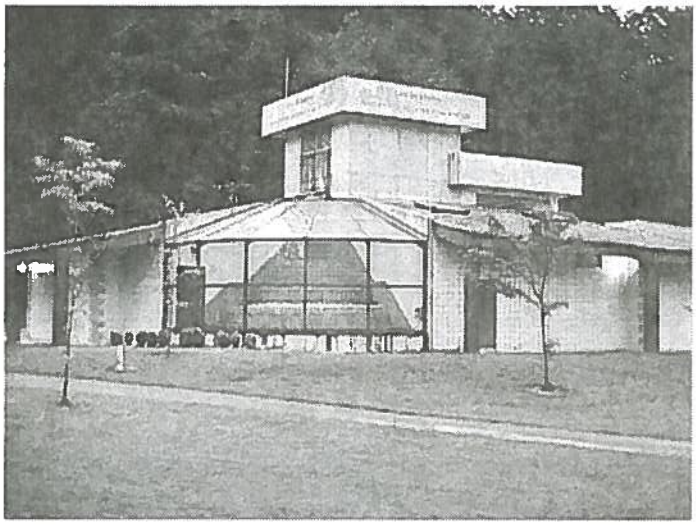
Maplewood Wells Water

Starting June 1999, the City began to provide a portion of the Renton Highlands with drinking water from the Maplewood wells located on the Maplewood Golf Course. The Maplewood wells tap a different and deeper water source, or aquifer, than the Downtown wells (location map on page 2).

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 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.

The City has recently completed a study and field testing to determine options for additional treatment methods to improve the aesthetic quality of the Maplewood water.



Maplewood Booster Pump Station and Water Treatment Facility at Maplewood Golf Course

We are planning for the construction of an additional treatment facility within the next several years subject to the availability of funding.

Please contact the City's Water Maintenance Department at 425-430-7400 and report any water quality problems encountered at your residence or to find out about temporary methods to remove stains from your fixtures and dishwashers.

Water Facts

- The Renton Water Utility produced an average of 7.4 million gallons of drinking water per day.
- The highest water demand day for 1999 occurred on September 19 when 11.5 million gallons of water were consumed.
- As of December 1999, there were 13,893 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.
- There are 270 miles of distribution lines in Renton's water system, ranging in size from 2 inches to 24 inches in diameter.
- Renton Aquifer Protection specialists inspected and issued permits to 95 businesses in the Aquifer Protection Area.
- Aquifer protection educational presentations were made to 28 Renton third grade classrooms.
- The average, daily, indoor per capita water use in the typical, single family Renton area home is approximately 57 gallons per day.
- 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.

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 and outreach, you can call 425-430-7287.

1999 Water Quality Monitoring Results Maplewood Wells				
Detected Compounds	**Highest Amount Allowed (MCL)**	**Ideal Goal (MCLG)**	**Highest Amount and Range of Detected Amounts**	**Possible Sources of Detected Compound**
	Regulated at the Groundwater Source before Treatment			
Maximum Total Trihalomethane Potential	No MCL Established. AL = 100 ppb	No MCLG Established	50.8 ppb (42.0 ppb - 50.8 ppb) (sampled 12/15/98)	By-product of drinking water chlorination.
	Regulated at the Groundwater Source after Treatment			
Fluoride	4 ppm (see note 1)	4 ppm (see note 1)	1.52 ppm (0.17 ppm - 1.52 ppm)	Water additive which promotes strong teeth.
Sodium	No MCL established (see note 2)	No MCLG established (see note 2)	28 ppm (21 ppm - 28 ppm) (sampled 3/26/98)	Erosion of natural deposits.
Manganese	No primary MCL (see note 5)	No primary MCLG (see note 5)	71 ppb (68 ppb - 71 ppb) (sampled 3/26/98)	Erosion of natural deposits.
Iron	No primary MCL (see note 6)	No primary MCLG (see note 6)	80 ppb (sampled 2/13/96) (not detected in 1997 & 1998)	Erosion of natural deposits.

NOTE: All definitions and notes for this table are listed on page 4 .

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 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.

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?

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

ECRWSS
Postal Customer

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

BULK RATE
U.S. POSTAGE PAID
RENTON, WA
PERMIT NO. 137

WATER QUALITY REPORT 2000

City of Renton Water Utility

What's Inside

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 am to 3:30) or 430-7500 after hours (Renton Police Department)

To report water pressure problems, a broken water main, hydrant, water leak in streets or at a meter Call:
Water Maintenance: at 425-430-7400 (7 am to 3:30) or 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 p.m. or on weekends, **call the Renton Police Department at 425-430-7500**