

# DRINKING WATER QUALITY REPORT

## Maplewood Water Treatment Improvements

After 19 years (1988-2006) of continuous progress on the development of the Maplewood well-field, the City of Renton plans to start operation of the Maplewood Drinking Water Treatment Facility in June 2006. The water treatment facility, along with three well buildings, a booster pump station, and several miles of pipelines are

located within the City's Maplewood golf course. The wells can produce a total of 5,600 gallons per minute, or about 8 million gallons per day. The treatment process consists of the removal of manganese, hydrogen sulfide, and ammonia from the raw water in order to eliminate taste and odor problems and staining of laundry and plumbing fixtures, caused by those naturally occurring compounds. Chlorine is added for secondary disinfection and fluoride is also added to prevent tooth decay.

The new facility will provide the City with the flexibility to supply water to Renton's residents and businesses from both the Downtown wells and from the Maplewood wells. The project also added 58 new parking spaces, and new protective netting at the Maplewood golf course and driving range. The City was successful in obtaining a low-interest Public Works Trust Fund to cover half of the construction cost of the new facility.

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*On cover: New Maplewood drinking water treatment facility building on right; old facility building on left.*

## About This Report



We are sending you this report to let you know that Renton's water met or exceeded State and Federal standards for drinking water quality during the 2005 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 to their customers. You will find in this report where our drinking water comes from; what minerals or chemicals it contains; how it compares to stringent water quality standards; and what Renton is doing to protect our water supply.

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

**Aquifer**  
**wet, rocky**  
**moving, pumping, cleaning**  
**very important place**  
**ground water**

Written by the students  
in Mrs. McLaughlin's 3rd grade class  
at Sierra Heights Elementary

## **SUMMERSCAPING:** Preparing your landscape for Summer

1. Adjust watering schedules—water needs increase as temperatures rise.
2. Check irrigation systems—replace clogged drip emitters and repair leaks.
3. Mulch plant roots—it improves soil, reduces moisture loss and keeps roots cool during summer months.
4. Remove weeds—they compete with plants for water.
5. Replace leaking hose washers.
6. Fertilize non-native plants—follow product label recommendations.
7. Prune sparingly—branches keep plants shaded and cooler in summer.

Check out some Pacific Northwest Water Wise gardens at the H2O House: <http://www.h2ouse.org/>

from: [www.wateruseitwisely.com](http://www.wateruseitwisely.com)

# Where Does Renton's Drinking Water Come From?

During the year 2005, Renton obtained its drinking water from two sources: five downtown wells, located in Liberty and Cedar River Parks, which draw water from the Cedar Valley Aquifer; and Springbrook Springs, a small springs located at the southern city limit.

In 2005, our combined water sources produced 2.67 billion gallons of water.

The downtown wells are our primary source of water. In 2005, these wells produced approximately 87% percent of Renton's water, while approximately 13% percent of Renton's drinking water was supplied by Springbrook Springs.

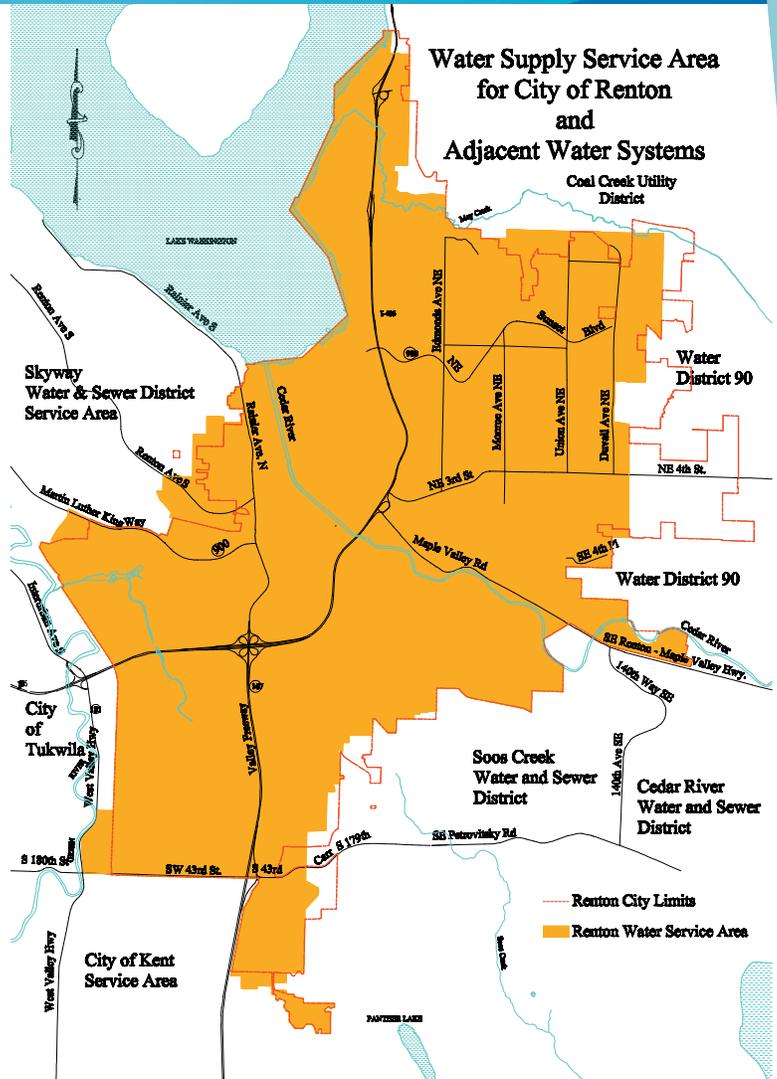


*Liberty Park wellhouse.*

The water pumped from these sources is very clean and needs minimal treatment. Chlorine, which destroys bacteria and viruses, is added to make sure the water stays clean on its way to customers.

Because our water is naturally corrosive, 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 the water to reduce corrosion of the iron water pipes found in these neighborhoods.

The Maplewood wells, located at the Maplewood golf course, were not utilized for water supply during 2005.



## Notes from the EPA

### 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/CDC 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).



**The results of our 2005 water quality monitoring are shown in the following tables.**

These data are for parameters regulated by federal and state agencies. The Water Quality staff

regularly monitors for over 100 compounds, to make sure our drinking water is safe. The substances listed in the tables below are the only ones that were detected above the Washington

Department of Health reporting levels. As you can see, the water from the Downtown wells and Springbrook Springs meets or exceeds federal and state drinking water quality standards.

**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 (approximately 50 gallons).

**PCi/L** (picocuries per liter): A measure of radioactivity

**City of Renton 2005 Water Quality Data**

**Year 2005 Water Quality Data for Downtown Wells and Springbrook Springs**

Detected Compound	MCL	MCLG	Highest Amount And Range Detected	Possible Sources of Detected Compound
<b>REGULATED AT THE GROUNDWATER SOURCE BEFORE TREATMENT</b>				
Maximum Total Trihalomethane Potential	No MCL established. AL=100 ppb	No MCLG established.	57.0 ppb (19.0 - 57.0 ppb)	By-product of drinking water chlorination.
<b>REGULATED AT THE GROUNDWATER 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 (0.3 - 2.3 ppm)	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits.
Sodium	No MCL established (see note 3)	No MCLG established (see note 3)	16 ppm	Erosion of natural deposits.
Radon	No MCL established (see note 4)	No MCLG established.	305 pCi/L (165 - 305 pCi/L, Sampled 11/08/2000)	Decay of natural deposits
Coliform Bacteria	5% of samples positive	0%	1.5% of samples positive. (0% - 1.5 %)	Naturally present in the environment

**NOTES:**

- Sixty (60) samples were tested. Ninety (90) percent of the samples tested had levels at or below this value. Ten (10) percent of the samples tested (6-samples) had levels above this value.
- The primary MCL and MCLG for fluoride is 4 ppm. The secondary MCL for fluoride is 2 ppm.
- The Environmental Protection Agency (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.
- The United States EPA has proposed regulating radon. The proposed MCL is 300 pCi/L.

# Year 2005 Water Facts

In 2005, Renton's wells produced an average of 7.3 million gallons of water per day.

The highest water demand day in 2005, occurred on August 12th, when 13 million gallons of water were consumed.

The lowest water demand day in 2005, occurred on February 24th, when 4.6 million gallons of water were consumed.

The total water produced by Renton Water Utility from all sources for 2005 was 2.67 billion gallons.

## For the 2006 Consumer Confidence Report

### Year 2004 Lead and Copper Sampling at Residential Water Taps *(Sampling was not required in year 2005)*

Detected Compound	Action Level	Ideal Goal	90th Percentile Value	Possible Sources of Detected Compound
Lead	15 ppb	0 ppb	2 ppb (see note 1)	Corrosion of household plumbing systems
Copper	1.3 ppm	1.3 ppm	0.73 ppm (see note 1)	Corrosion of household plumbing systems



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 the pH. The City then tests for lead and copper at household taps to make sure that our Corrosion Control Treatment is working.

*The results of these tests are shown in the table above.*



#### Did You Know

- Two-thirds of the water use in an average home is used in the bathroom.
- A leaking faucet can waste as much as 100 gallons of water a day.

Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead pipes, fixtures and solder.

However, new homes are also at risk: even legally "lead-free" plumbing may contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

#### WANT MORE INFO ABOUT LEAD?

**The EPA Office of Groundwater and Drinking Water**

[www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)

## Water In The News



For decades, disinfectants have played an important role in the treatment and protection of drinking water against microbial pathogens that can transmit disease. Disinfectants such as chlorine, chloramines, ozone and chlorine dioxide are all used for this purpose. However, these disinfectants can react with natural organic material in the water to form certain unwanted byproducts (Disinfection By Products, DBP), which have raised health concerns.

To help strike a balance between the need for protecting drinking

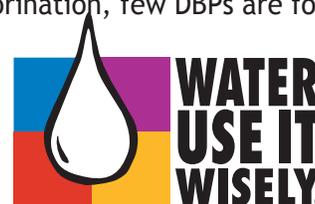
water against disease agents while avoiding being the agent of other health problems, the Safe Drinking Water Act has mandated the Disinfection By Products Rules (DBPR), Stages 1 and 2. These rules provide consumer protection from disinfection by products (DBP) in drinking water by establishing standards that will reduce consumers' exposure.

Stage 1 of the DBPR, promulgated in December 1998, was the first phase and established seven new standards and a treatment technique intended to reduce allowable levels of DBPs in drinking water. Stage 2 DBPR and the Long Term 2 Enhanced Surface Water Treatment Rule, went into effect on March 6, 2006.

The Stage 2 rules strengthen public health protection by tightening

compliance monitoring requirements for two groups of DBPs: trihalomethanes (TTHM) and haloacetic acids (HAA5). You can learn more about this rule at the EPA Safewater website: <http://www.epa.gov/safewater/disinfection/stage2> or at the Washington Department of Health Office of Drinking Water website: [http://www.doh.wa.gov/ehp/dw/Publications/disinfection\\_byproducts.htm](http://www.doh.wa.gov/ehp/dw/Publications/disinfection_byproducts.htm)

The good news is that groundwater, which is the source of Renton's drinking water, tends to contain few organic substances, and consequently, even after chlorination, few DBPs are formed.



## Drinking Water in A Disaster

Many kinds of emergencies can affect the safety of your drinking water. Natural disasters such as floods, tornadoes, hurricanes, ice storms, earthquakes and other

emergencies may cut off your drinking water supply with no warning. Planning for this possibility in advance will assure you have safe drinking water in such an emergency.

To be prepared for a drinking water emergency, the American Red

Cross recommends storing one gallon of water per person per day (two quarts for drinking, two quarts for each person for food preparation/sanitation). Store at least three days worth and if possible, store a two week supply for each member of your family.

Store water in food grade water storage containers or you can reuse plastic soft-drink bottles. Do not use plastic jugs or cartons that have had milk or juice in them as they cannot be adequately cleaned to prevent bacteria growth. Also, avoid glass as it can break in a disaster. Store the water in a cool place that will hopefully be safe from disaster and discard and replace the stored water every two to six months.

In a disaster, if a safe supply of water is not available, any suspect water should be treated by either

*Cont. on page 7*

### Treating Water with a 5-6% Liquid Chlorine Bleach



(Allow treated CLEAR water to stand 30 minutes before using; Treated CLOUDY water should stand for 60 minutes)

Volume of Water To be Treated	Treating Clear Water Bleach Solution to Add	Treating Cloudy, Very Cold or Surface Water Bleach Solution to Add
1 quart/1 liter	3 drops	5 drops
1/2 gallon/2 quarts/2 liters	5 drops	10 drops of 1/8 tsp
1 gallon	10 drops of 1/8 tsp	20 drops or 1/4 tsp
5 gallons	50 drops or 2.5 mL or 1/2 tsp	5 mL or 1 tsp
10 gallons	5 mL or 1 tsp	10 mL or 2 tsp

## Notes from the EPA

### Health Information



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).

*Cont. from page 6*

adding bleach. If the water is cloudy, it should be filtered before boiling or adding bleach. This can be done with camping filters made for this purpose or by running the water through coffee filters, paper or cotton towels, or cheesecloth.

Boiling is the best way to purify water that is unsafe because of the presence of protozoan parasites or bacteria. Heat water to a full boil in a clean metal pan for at least three minutes. Keep it covered while it cools than store in clean containers.

If boiling is not possible, water can be made safe for drinking by treating with liquid household bleach. Read the bleach bottle label and make sure it does not contain perfumes, dyes or other additives. Household bleach is typically 5% to 6% chlorine, add bleach according to the table below.

# Q & A

## Frequently Asked Questions

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

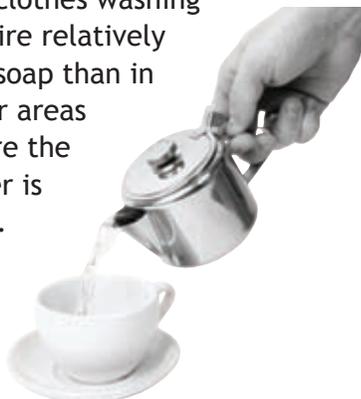
Yes. In 1985, the citizens of Renton voted to have fluoride added to the City's drinking water. Fluoride is added at a rate of one part per million to help prevent tooth decay.

### ***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 is my water sometimes cloudy?***

Cloudy water is usually caused by tiny air bubbles in the water similar to gas bubbles in carbonated beverages. These air bubbles are either from dissolved oxygen being released or trapped air in the plumbing. Usually, this cloudiness occurs in the winter, when the drinking water is cold and can hold more oxygen.

### ***What is a drinking water standard?***

Under the authority of the Safe Drinking Water Act (SDWA), EPA sets standards for approximately 90 contaminants in drinking water. For each of these contaminants, EPA sets a legal limit, called a maximum contaminant level (MCL), or requires a certain treatment. Water suppliers may not provide water that doesn't meet these standards. Water that meets these standards is safe to drink, although people with severely compromised immune systems and children may have special needs.

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ECRWSS

Planning/Building/Public Works  
City of Renton  
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Renton, WA 98055



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## 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 am to 3:30 pm) or 425-430-7500 after hours.

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 pm) 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 pm 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 7:00 pm 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 or check the City Council info at Renton's website, [www.ci.renton.wa.us](http://www.ci.renton.wa.us).

If you are interested in getting involved with our Aquifer Protection education or Groundwater Guardian team, please call: 425-430-7287.

