Sammamish Plateau Water and Sewer District

WATER QUALITY REPORT

for the year 2005

Spring 2006

For More Information on Water Quality Issues:

If you would like more information on water quality issues, please feel free to contact one of the following agencies:

Sammamish Plateau Water and Sewer District

1510 - 228th Ave. SE
Sammamish, WA 98075

(425) 392-6256

www.sammplat.wa.org

Ron Little, General Manager

John Anderson, Water Operations Team Leader

Janet Sailer, Conservation and Public Information Specialist

Washington State Department of Health
Division of Drinking Water

(360) 236-3100

www.doh.wa.gov/ehp/dw

United States Environmental Protection Agency (EPA)

Safe Drinking Water Hotline: 1-800-426-4791

www.epa.gov/safewater

The Sammamish Plateau Water and Sewer District is pleased to provide you with our annual Water Quality Report. In this report, we will provide you with information about your water sources, the results of our water quality testing from 2005, and where we stand with federal and state drinking water regulations. We will be sending this report annually to update you on your drinking water quality.

During 2005, the District utilized water supply from Seattle Public Utilities to supplement water drawn from our groundwater wells. Arrangements to purchase Seattle water are conducted through the Cascade Water Alliance. The Cascade Water Alliance (CWA) is a consortium of eight eastside municipalities and districts that have joined together to provide water supply for current and future demands. The members of CWA include the Cities of Bellevue, Kirkland, Redmond, Issaquah and Tukwila, Covington Water District, Skyway Water and Sewer District, and the Sammamish Plateau Water and Sewer District.

The District's north connection to the regional water supply comes through Redmond Ridge to the Cascade View Zone; and the south connection is located at the Issaquah Regional Pipeline. The District is currently using the north connection to recharge our groundwater supply in the winter through our aquifer storage and recovery program. The Issaquah connection is expected to be operational in 2006. The District has installed water treatment facilities to add chlorine to the water system in areas that will be receiving blended water supplies. This treatment addition will also meet the District's policy of chlorinating the water to provide a higher level of public health protection. In addition to chlorine, the regional water supply also contains fluoride. The District began fluoridating its water supply in December 2004 in the Cascade View Zone to levels that match the fluoride levels in the supply from the regional sources. The only area that does not receive fluoride is the area served by the District that shares a joint tank with the Northeast Sammamish Sewer and Water District.

The District is also making improvements in the Cascade View Zone to ensure a more reliable water supply in the summer. We are re-drilling Well 13 into a deeper section of the aquifer and installing a new pump for more consistent service. The District will continue to inform customers on the progress of the regional water connection and water treatment facilities. Please check our website at

www.sammplat.wa.org for the most current information about your water supply. We encourage public interest and participation in our community's decisions regarding drinking water. Regular meetings of the Board of Commissioners occur on the first three Mondays of each month at 3:00 p.m. in the Commissioner's Room at the District office.

Key to Terms and Definitions

In accordance with federal and state regulations, the water in each of our wells throughout the distribution system is tested once every three years. Over 700 samples are taken annually. In 2005, we detected levels of the regulated contaminants listed on these pages. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our test results, though representative, are more than one year old.

Maximum Contaminant Level (MCL): 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.
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 allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
NTU: Nephalometric Turbidity Unit. A measurement of water clarity. High turbidity can interfere with disinfection processes.
TT: Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.
ppm: Parts per million, or milligrams per liter (mg/l) . Compare with one cent in $10,000.
ppb: Parts per billion, or micrograms per liter (µg/l). Compare with one cent in $10 million.
NA: Not Applicable.

2006 WATER QUALITY TEST RESULTS - NATIONAL PRIMARY DRINKING WATER STANDARDS - TOLT RESERVOIR (SURFACE WATER SUPPLY)

This is what's in your tap water:				**This much is allowed**	**This level or less is ideal**	**Where did this substance come from?**
DETECTED SUBSTANCE	**UNIT**	**AVERAGE LEVELS**	**RANGE OF DETECTIONS**	**MCL**	**MCLG**	**LIKELY SOURCES**
Turbidity	NTU	0.05	0.02 - 0.14	TT	NA	Soil runoff
Fluoride	ppm	1.0	0.8 - 1.1	4	4	Water additive which promotes strong teeth

LEAD AND COPPER SAMPLING

DETECTED SUBSTANCE	**SAMPLE DATE**	**UNIT**	**MCLG**	**ACTION LEVEL (AL)**	**DETECTED LEVEL**	**RANGE OF DETECTIONS**	**LIKELY SOURCES**
Lead	7/16/05	ppb	0	15	0.9	0.3 - 0.9	Corrosion of household plumbing systems
Copper	7/16/05	ppm	1.3	1.3	0.39	0.04 - 0.39	Corrosion of household plumbing systems

Lead and Copper: There are no detectable levels of lead or copper in our source water. However, lead and copper can occasionally leach into residential water from home plumbing systems. Running the cold water tap for 30 seconds in the morning flushes most of the lead and copper from the tap water. The District conducted residential lead and copper monitoring in January and July 2005 from a pool of targeted home sampling sites selected through a tiered structure. No lead was detected in 39 out of 52 homes during the July testing. The lead action level is exceeded if the concentration of lead in more than 10 percent of the tap water samples is greater than the lead action level of 15 parts per billion (ppb). No homes exceeded the action level for lead. Although copper was detected in 34 out of 51 homes during the July testing, the level for all homes was below the action level for copper. The copper action level is exceeded if the concentration of copper in more than 10 percent of the tap water samples is greater than 1.3 parts per million (ppm). No homes exceeded the copper action level. The District has installed corrosion control facilities on a number of its wells to comply with the requirements of the Lead and Copper Rule. This treatment approach has successfully reduced corrosion in the distribution system and the District is now in compliance with the action levels of the Lead and Copper Rule. The EPA has set an ***action level*** instead of a maximum contaminant level for lead and copper. The action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

2006 WATER QUALITY TEST RESULTS - NATIONAL PRIMARY DRINKING WATER STANDARDS - DISTRICT GROUNDWATER WELLS						
This is what's in your tap water:				**This much is allowed**	**This level or less is ideal**	**Where did this substance come from?**
DETECTED SUBSTANCE	**UNIT**	**AVERAGE LEVELS**	**RANGE OF DETECTIONS**	**MCL**	**MCLG**	**LIKELY SOURCES**
Nitrate	ppm	1	0.7 - 2	10	10	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
Fluoride	ppm	1	0.5 - 1.2	4	4	Water additive which promotes strong teeth
Total Trihalomethanes	ppb	20	1.8 - 79	80	NA	By-products of drinking water disinfection
Haloacetic Acids	ppb	9.4	0.6 - 36.5	60	NA	By-products of drinking water disinfection
Chlorine	ppm	0.10	0.07 - 0.12	MRDL = 4 ppm	MRDLG = 4 ppm	By-product of drinking water disinfection
Arsenic	ppb	7.5 (2004 data)	6 - 12	10	0	Erosion of natural deposits
Ethylbenzene	ppb	1.1 (in well 12 only, 2004 data)	0 - 1.1	700	700	Use of petroleum products
Total Xylenes	ppb	3.1 (in well 12 only, 2004 data)	1.2 - 4.9	10	10	Use of petroleum products

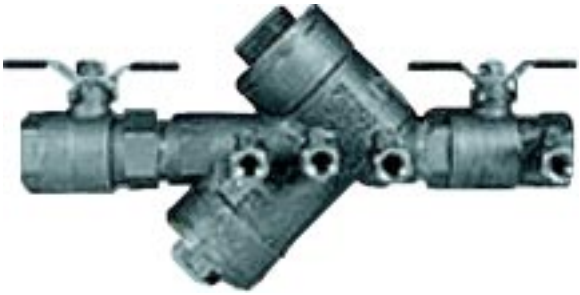
Arsenic: The United States Environmental Protection Agency published the final Arsenic Rule in the Federal Register on January 22, 2001, following over 10 years of development. The rule lowered the maximum contaminant level from 50 parts per billion (ppb) to 10 ppb. The final rule also established a maximum contaminant level goal of zero for arsenic. The rule became effective February 22, 2002. Water systems have until January 23, 2006 to meet the new standard of 10 ppb. The District is already undertaking steps in order to assure compliance with the new arsenic rule. The District has increased testing for arsenic in all wells from once every three years, as currently required by state law, to once every two years. Water from wells with higher arsenic levels is being blended with other water and is successfully reducing arsenic levels overall and keeping them within the maximum contaminant level. The District is currently investigating available treatment technologies such as filtration for arsenic removal. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

2006 WATER QUALITY TEST RESULTS - NATIONAL SECONDARY DRINKING WATER STANDARDS - DISTRICT GROUNDWATER WELLS					
This is what's in your tap water:				**This much is allowed**	**Where did this substance come from?**
DETECTED SUBSTANCE	**UNIT**	**HIGHEST DETECTED LEVEL**	**RANGE OF DETECTIONS**	**MCL**	**LIKELY SOURCES**
Manganese	ppm	0.06	0.029 - 0.06	0.05	Erosion of natural deposits

Manganese: Manganese, which is a naturally occurring substance found in groundwater, can cause taste and odor problems in your water. In addition, it can cause discoloration of plumbing facilities and may stain laundry. Water produced from Well 12 in the Cascade View Zone has a high manganese content, and the District has installed a filtration system to remove it from the water. The filtration system consists of injecting sodium hypochlorite (NaOCl, a form of chlorine) into the well water to oxidize the manganese, which is then removed through a series of filters. It is necessary to maintain certain levels of chlorine in the water to keep the filters operating efficiently. National secondary drinking water standards are based on aesthetic rather than health-related considerations.

Cross Connections and Water Quality

A cross connection is a point in a plumbing system where the potable water supply is connected to a non-potable source. Water is called "potable" when it is considered safe to drink. Some examples of cross connections include irrigation systems, fire sprinkler systems and swimming pools. For example, irrigation systems are considered to be a cross connection hazard because bacterial and chemical contaminants found on lawns could make their way into the public water system during a cross connection incident. Water normally flows in one direction, from the public water system into your home. In certain instances, such as a loss of pressure due to a water main break or withdrawal of water for fire protection, a vacuum is created and the non-potable water is pulled back into the public water system where it causes contamination.



A backflow prevention assembly is installed at points in a plumbing system where a cross connection could occur. These assemblies are required by state law to be tested upon installation and annually thereafter in order to ensure that they are functioning properly. The backflow prevention assemblies must be tested by a Washington State Certified Backflow Assembly Tester. Without proper backflow protection, your irrigation or fire sprinkler system could endanger the health of your family, neighbors and others in the community who are using the public water system. If you have a backflow prevention assembly on your property, please make arrangements to have it tested as soon as possible and send a copy of the test results to the District.

For more information on cross connection, please visit the Sammamish Plateau Water and Sewer District's cross connection page at http://www.sammplat.wa.org/crossconn.html. You may also call the District's Cross Connection Control Specialist, Chic Nessly, at 425-392-4931 ext. 213 or email him at chic@sammplat.wa.org for further information.

Ways to Protect Our Water Quality

We can all make a difference when it comes to water quality. The United States Environmental Protection Agency has developed a list of "Ten Simple Steps You Can Take to Prevent Nonpoint Source Pollution (NPS)." Also known as "people pollution," NPS pollution is generated by individuals, rather than by factories. Here are some things you can do to protect our water quality:

1. If you have a septic tank, have the system inspected annually and pumped every three to five years. Faulty septic systems can contaminate groundwater resources.
2. Minimize the use of lawn fertilizers. One or two applications each year should be sufficient. Avoid blanket applications of weed and feed! Consider using organic or slow-release fertilizers.
3. Minimize pesticide use. Identify the problem before you spray and use the least toxic solution available. Learn about natural methods of weed and pest management.
4. Never dump anything down storm drains! Storm drains empty directly into local streams and rivers. In addition, you may be violating local ordinances.
5. Revegetate or mulch disturbed soil as soon as possible to prevent soil from washing into lakes, rivers and streams.
6. Clean up spills of vehicle fluids or household chemicals immediately and properly dispose of all cleanup materials.
7. Direct roof drains away from bare soil to control erosion.
8. Take your car to the car wash instead of washing it in the driveway to help prevent soapy water from washing into the storm drains. Most car washes recycle and reuse their water.
9. Check your car for leaks and repair any problems with seals or gaskets. If you change your own oil, collect and recycle it at your local auto repair shop. Never pour used oil on the ground where it can work its way into your groundwater supply!
10. Pick up after your pets and livestock and properly dispose of all animal waste.

WATER CONSERVATION IS IMPORTANT! Using water efficiently will help ensure that safe drinking water is available for future generations. In addition, you'll help protect our fish and wildlife resources. Here are five simple ways to conserve water:

1. Fix all leaks in faucets and toilet fixtures.
2. Purchase a water efficient clothes washing machine. The District provides washer rebates through the Cascade Water Alliance for water efficient models. Rebates range from $50 to $100 depending on model efficiency.
3. Water your lawn in the morning or evening to reduce water losses through evaporation.
4. Shorten your shower by a minute or two and save 150 gallons per month.
5. Run clothes washer and dishwasher only when they are full and save up to 1,000 gallons per month.

Your drinking water comes from groundwater... and surface water.

The primary source of your drinking water is groundwater pumped from wells. The two hydrologic zones within the District are the Plateau Zone and the Cascade View Zone. These two zones are not connected to each other by pipelines and most likely do not share the same groundwater aquifer sources.

The Plateau Zone is supplied by groundwater pumped from wells in two separate aquifer systems, the Plateau Aquifer and the Issaquah Valley Aquifer. Five of the wells draw from the Plateau Aquifer, and three wells draw from the Issaquah Valley Aquifer. The Plateau Zone shares a joint tank with the Northeast Sammamish Sewer and Water District. As a result, some customers in the Plateau Zone who live north of NE 8th Street may receive water from Northeast Sammamish Sewer and Water District's sources. Please contact Northeast Sammamish at (425) 868-1144 for a copy of their water quality report.

The Cascade View Zone is supplied by water pumped from three wells in three different aquifer zones. Space for water treatment facilities has also been provided at the Well 12 area.The District protects its water by establishing wellhead protection areas, which are surface and subsurface areas surrounding wells and wellfields that supply public water. Protection areas reduce the possibility that contaminants are able to reach the aquifers and wells and affect water quality. Water from the groundwater wells is medium hard.

Prior to 2005, the District's water supply came exclusively from our groundwater resources. The District has experienced considerable growth since the 1980's, and has had to obtain additional water supply to meet the existing and future needs of our customers. The least expensive and most readily available supply option was to utilize the surface water supply from the Tolt and Cedar River Watersheds, which are managed by Seattle Public Utilities. The surface water supply, which is chlorinated and fluoridated, will be blended with the existing groundwater supply in most areas of the District.

In 2005, the Tolt River Watershed provided additional supply to the Cascade View Zone of the District. The Tolt River Watershed is located in the foothills of the Cascades east of Carnation, WA. It supplies about 30% of the drinking water for 1.3 million people in and around Seattle. The Watershed is 13,000 acres in size, and can provide up to 100 million gallons of drinking water a day. The reservoir can store up to 18.3 billion gallons of water.

The Tolt Treatment Facility processes water from the South Fork Tolt River. Opened at the end of 2000, the facility permits continuous operation of Seattle's Tolt source through periods of high turbidity that occur during heavy rain events or low reservoir levels due to drought conditions. Historically, the Tolt has provided very high quality water that meets all current drinking water regulations and requires minimal treatment and disinfection.

The District plans to begin utilizing water from the south connection to the Issaquah regional pipeline in 2006. Water from this connection will primarily serve the Plateau Zone of the District. Water from the surface water system is soft.

Please visit the Seattle Public Utilities website at http://www.seattle.gov/util/ to learn more about the Seattle supply system.

Health Related Issues and More Information...

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 persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The Environmental Protection Agency and Center for Disease Control's guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). The guidelines are also on the EPA's website.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the land surface or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include:

- *Microbial contaminants,* such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants,* such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges,oil and gas production, mining or farming.
- *Pesticides and herbicides,* which may come from a variety of sources such as agriculture 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 stormwater runoff, and septic systems.

All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791). To ensure that tap water is safe to drink, the United States Environmental Protection Agency adopts regulations setting the water quality standards for public water systems. The federal Food and Drug Administration regulates contaminants in bottled water and is responsible for providing the same level of public health protection.

此報告包含有關您的飲用水的重要資訊。請人幫您翻譯出來，或請能看懂此報告的人將內容說給您聽。

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

यह रीपोरट में आपके पीने वाले पानी के बारे में जरुरी जानकारी है। किसी से जिसे इसका अनुवाद करना आता हो उस से बात करें।

Translation: "This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it."

ANNUAL WATER QUALITY REPORT INSIDE!

PRSRT STD
U.S. POSTAGE
PAID
PERMIT NO. 106
BLAINE WA

SAMMAMISH PLATEAU
WATER AND SEWER DISTRICT
1510 - 228th Ave. S.E. • Sammamish, Washington 98075
(425) 392-6256 • Fax (425) 391-5289 • www.sammamish.wa.org