Northshore Utility District
Annual Water Quality Report
May 2000

Dear Customer:

Northshore Utility District is pleased to submit our second annual Water Quality Report to you, our valuable customer.

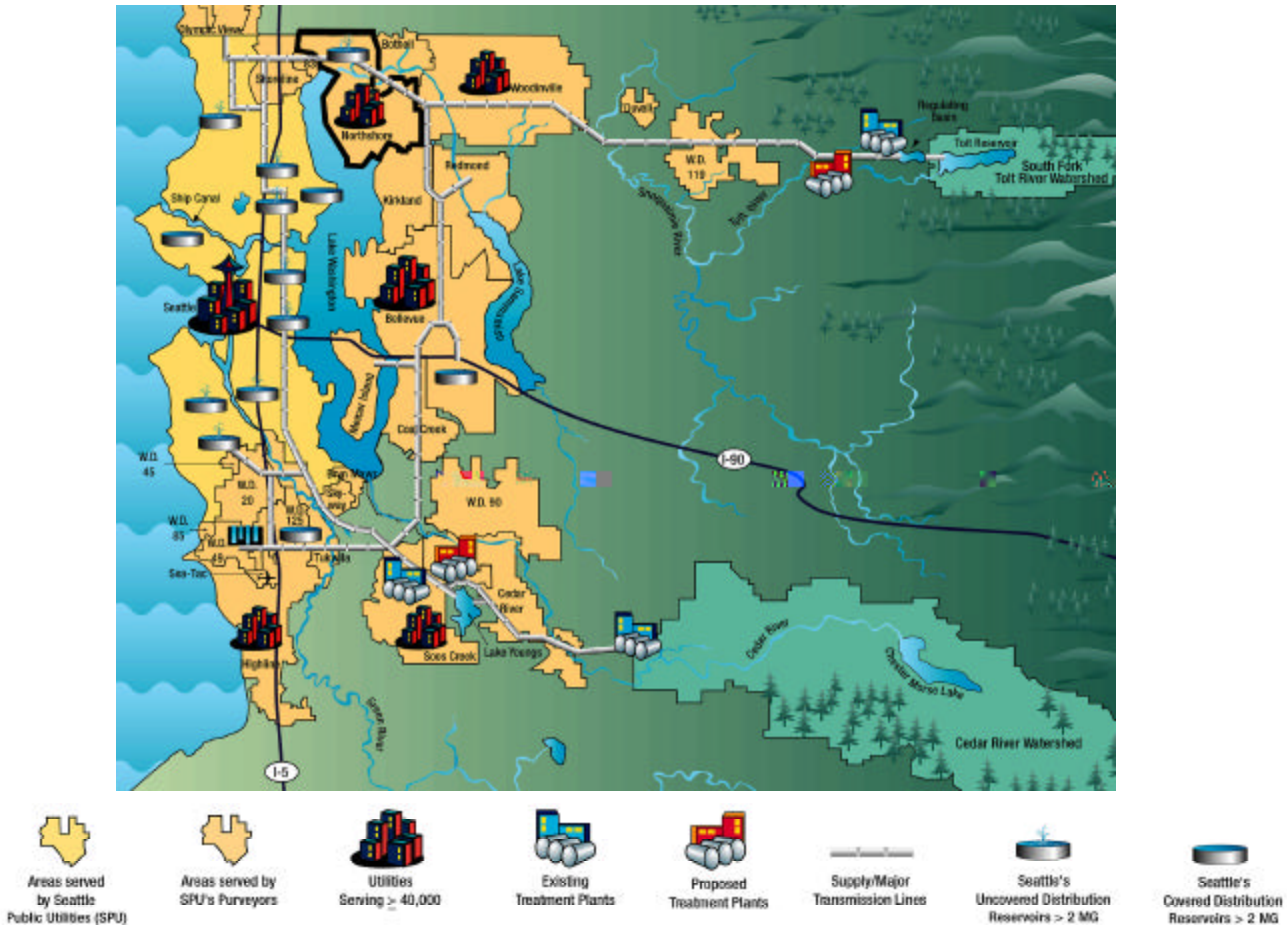
This report contains information about the overall condition of your drinking water. We hope you find this data helpful and informative. We encourage you to take a few minutes to review it.

Northshore Utility District remains committed to providing you with high quality drinking water. This report reflects our commitment. If you have any questions, comments or suggestions about the Water Quality Report, please contact our Water Quality / Safety Coordinator, Mick Holte at (425) 398-4417.

Sincerely,

Don Ellis, President
Board of Commissioners
Northshore Utility District

Northshore Utility District – Water Source



Seattle Public Utility (SPU) provides drinking water to approximately 1.3 million people in the Seattle metropolitan area. The Cedar River Reservoir and the South Fork Tolt River Reservoir supply almost all of Seattle Public Utilities water. These two surface water sources are located in remote, uninhabited areas of the Cascade Mountains. An aggressive watershed protection program is strictly enforced; no agricultural, industrial or recreational activities are allowed.

Northshore Utility District receives water primarily from the South Fork Tolt River Reservoir source. Occasionally, Cedar River water is used, depending on snow pack accumulations, drought conditions and the availability of water transmission lines. Both water sources receive treatment consisting of chlorine disinfection, fluoride addition, and pH adjustment.

SPU provides high quality drinking water. However, to meet new water quality requirements and improve the overall reliability of the water system, significant capital improvements will be made in the future.

New capital improvement projects include:

- Tolt Filtration Plant – should be coming on line in late 2000;
- Cedar Treatment Project – will include the installation of ozonation facilities by 2004.

More information on these projects can be found on SPU's web site at **www.ci.seattle.wa.us/util/.**

Northshore Utility District – Water Quality Maintenance Programs

Northshore customers enjoy water of very high quality. After the water reaches our District, Northshore takes the following measures to insure that it remains clean and pure:

- Each year all of our water main lines are flushed to remove any sediment build-up.
- All new water lines are disinfected, flushed and sampled before they are brought into service.
- All of our reservoirs (water storage units) are routinely sampled for chlorine residuals.
- All reservoirs are cleaned, disinfected and painted on a regular schedule.
- A water quality coordinator on staff monitors water quality.
- Older steel main have been replaced with ductile iron pipe, which is more resistant to rusting and leaking.
- Each month, a total of at least 49 samples are collected from eight separate locations throughout our District. The samples are tested by Seattle Public Utilities laboratory for coliform bacteria as well as water temperature, pH, and chlorine residual.

FAQ's – Frequently Asked Questions

- How can I get more involved in decisions affecting my drinking water?
  There are Board of Commissioner meetings each month – on the 1st and 3rd Monday at 6:00 p.m. in the Northshore Room at Northshore Utility District in Kenmore. We welcome you to attend these meetings.

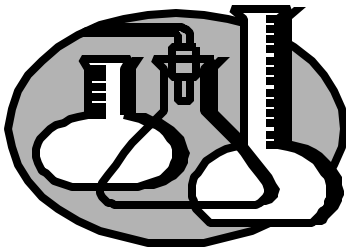
- Why does my water occasionally appear white or cloudy?
  Air in the water can cause a milky appearance. Water that contains dissolved air is delivered to our homes under pressure. Turning on the faucet releases the pressure, causing air bubbles to appear. Like the carbon dioxide in soft drinks, the tiny bubbles rise to the surface. Clearing begins at the bottom of the container and within a couple of minutes the water is clear.

- Is bottled water safer than tap water?
  No. Like tap water, the safety of bottled water depends on both the source of the water and the treatment it undergoes. Bottled water is regulated by the Food and Drug Administration, not the EPA as tap water is. If you are using bottled water for health purposes, you should research the product you are using to make sure it provides the benefits you want.

- Why does my water taste or smell like chlorine?
  Chlorine is used by water utilities throughout the world to prevent disease-causing microorganisms from growing inside water lines. Chlorination of surface water supplies is required by the Washington State Department of Health. There may be an odor of chlorine when you first turn on your tap, especially in the morning. However, that odor should rapidly dissipate and you should not be able to taste it. If your water has an objectionable taste or odor, please call the District's Water Quality / Safety Coordinator at (425) 398-4417.

- Is Fluoride added to our drinking water?
  Yes. One part per million is added to reduce tooth decay. A 1968 Seattle referendum requires the addition of fluoride.

Northshore Utility District – Health Issues



The Washington State Department of Health (WDOH) is responsible for conducting source water assessments for all water supplies in the state by 2003. WDOH has not yet conducted these for Seattle's sources, but they have completed vulnerability assessments. Seattle's surface water and groundwater sources have been given the designation of "low vulnerability" for organic and inorganic contamination.

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

In the Tolt and Cedar water supplies these potential contaminants may include:

- Microbial contaminants, such as viruses and bacteria, from wildlife;
- Inorganic contaminants, such as salts and metals, which are naturally occurring;
- Organic contaminants that are by-products of disinfection processes; and
- Radioactive contaminants that can be naturally occurring.

The presence of contaminants does not necessarily indicate that water poses a health risk.

(Cryptosporidium parvum) "Crypto" is a disease-causing organism commonly found in the natural environment. Most rivers and streams across the country have detectable concentrations. *Cryptosporidium* sources include deer, elk and voles in the watersheds. There have been no disease outbreaks associated with Seattle's drinking water. Chlorination is ineffective against *Cryptosporidium*; however, Seattle plans to use ozonation to disinfect water in the future. Ozonation is very effective at destroying *Cryptosporidium* and other microbes.

Source water *Cryptosporidium* monitoring was conducted for the first ten months of 1999. *Cryptosporidium* was detected in two of the ten samples from each source. The maximum concentration of *Cryptosporidium* detected on the Cedar was 25 organisms per 100 liters, and the maximum concentration detected on the Tolt was nine organisms per 100 liters. These levels are relatively low compared to typical rivers and streams throughout the country.

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. To ensure that tap water is safe to drink, EPA adopts regulations setting the water quality standards for public water systems.

Information on *Cryptosporidium* and other microbial contaminants are available from the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Northshore Utility District – 1999 Water Quality

Seattle Public Utilities 1999 water quality monitoring results, listed in the table below, confirmed that there were no contaminants at or above established levels of concern for the general public. Turbidity is also monitored and is a measure of clarity in the water. It has no direct health effects, however, it is an overall indicator of water quality. Both the Cedar River and the South Fork Tolt River generally have low turbidity levels.

TABLE DEFINITIONS

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

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.

Nephelometric Turbidity Unit – NTU
The unit of measurement for turbidity.

Treatment Technique – TT
A required process intended to reduce the level of a contaminant in drinking water.

1999 Water Quality Monitoring Results

For water samples:
1 mg/l = 1000 µg/l
ppm = parts per million, or milligrams per liter – mg/l
ppb = parts per billion, or micrograms per liter – µg/l

			Cedar Water		*Tolt Water*		
Detected Parameter & Units	**MCLG**	**MCL**	**AVG**	**Range**	**AVG**	**Range**	**Typical Sources**
CLARITY – Measured Before Treatment							
Turbidity, NTU	NA	TT(5)	0.7	0.2 - 3.7	0.5	0.2 - 1.9	*Soil runoff*
INORGANIC AND ORGANIC PARAMETERS – Measured After Treatment							
Fluoride, ppm	4	4	1.0	0.9 - 1.0	1.0	0.7 - 1.2	*Water additive that promotes strong teeth. SPU target is 1 mg/L.*
Nitrate, ppm – one sample	10	10	0.01		0.1		*Erosion from natural deposits*
Chloroform, ppb ∇	unregulated		6.30		11		*By-product of drinking water disinfection*
Bromodichloromethane, ppb ∇	unregulated		1.0		1.0		*By-product of drinking water disinfection*
MICROBIAL PARAMETERS – Measured in the Distribution System							
Total Coliform, % positive samples - Combined distribution system	0	5%	Highest month = 1.92% Annual = 0.16%				*Naturally present in the environment*
DISINFECTION BY-PRODUCTS – Measured in the Distribution System							
Total Trihalomethanes, ppb	NA	100	0	0 - 0	74	55 - 86	*By-product of drinking water chlorination*

TT Treatment technique
∇ Test results 2/17/97 – based on one sample; not required again until 1999-2001 monitoring period. Only one sample for nitrate, chloroform, bromodichloromethane was collected.

NA – not applicable
ND – not detected
AVG – average

If you would like a copy of the list for the undetected contaminants, please call (425) 398-4417. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. With the completion of the Tolt Filtration in 2000, the TTHM's should be reduced.

Northshore Utility District – Residential Lead, Copper & Radon Monitoring

The Tolt and Cedar source waters **do not** contain lead or copper. However, lead and copper can leach into residential water from building plumbing systems. Lead and copper monitoring is conducted at homes categorized as high risk, most recently in 1997. Compliance is determined on a regional basis.

As part of regional monitoring conducted in 1992 and 1997, the drinking water in "high risk" homes was tested for lead and copper under "worst case" conditions. Fourteen percent of these regional homes exceeded the allowable level for lead. Because of this, Northshore Utility District sends out annual public education materials regarding lead and your drinking water.

Homes or buildings that were built or replumbed with copper pipes and lead-based solder prior to 1984 are considered, "high risk." Lead solder was banned in King County during 1985. "Worst case"conditions are defined as when water has not been used and has been sitting stagnant in the pipes for 6 hours or longer – such as first thing in the morning. The risk decreases as the plumbing ages. If you do not have copper plumbing, you are at low risk.

If your home is considered "high risk," you may want to flush out any water that has been sitting for 6 hours or longer prior to using for cooking or drinking. You can run the water for approximately 30 seconds in order to flush out the plumbing lines. The flushed water should not be consumed as it may contain dissolved metals. However, this water can be used for watering plants or washing dishes. If your home is not "high risk," you may still be at some risk from lead being leached from brass faucets. In this case, you only need to run 6-8 ounces of water in order to flush out any contaminants.

Infants and children who drink water containing lead in excess of the Action Level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

The 90th percentile means that 90 percent of the homes had concentrations below the reported value, and 10 percent of the homes had concentrations above the reported value. Seattle's planned treatment improvements should further reduce the corrosiveness of the water to your plumbing materials, which we expect to meet the Action Levels in the future.

LEAD AND COPPER

			Combined Regional Monitoring Program Results	
Parameter & Units	**MCLG**	**Action Level**	**90th percentile**	**# of homes exceeding action level**
Lead, ppb	0	15	19.3	53 of 390
Copper, ppm	1.3	1.3	0.6	0 of 390

Sources of Contamination: Corrosion of household plumbing systems.

Lead & copper data from 1997 sampling at customer's taps. Next sampling will be in 2003-2004.

Although we are not required to test for radon, we have tested each of our sources to determine its occurrence. Monitoring shows that radon is not present in either the Cedar or Tolt water supplies.

Northshore Utility District – Water Conservation

Water conservation helps to stretch our existing supplies, saves you money, and keeps water in the streams for salmon. Most homes can conserve water without any significant change in lifestyle. Here are some tips that will help you make a difference:

- Take shorter showers or shallow baths.
- Turn off the water while brushing your teeth.
- Wash only full loads of clothes and dishes.
- Repair all leaks promptly.
- Don't use the toilet as a wastebasket.
- If it's time to replace your clothes washer, purchase a high-efficiency model.
- Water your lawn early in the morning or consider letting your lawn go dormant in the summer.

Additional Water Quality Information

Northshore Utility District 6830 NE 185th ST Kenmore, WA 98028-2701	Phone #: 425-398-4400 Website: www.nud.net e-mail: mholte@nud.net
Seattle Public Utilities	Website: www.ci.seattle.wa.us/util/
Washington State Department of Health	Website: www.doh.wa.gov/ehp/dw/
Environmental Protection Agency Safe Drinking Water Hotline	Website: www.epa.gov/safewater Phone #: 1-800-426-4791 e-mail: hotline-sdwa@epamail.epa.gov

Northshore Utility District Facility

Northshore Utility District – Fast Facts

- Northshore Utility District has very soft water at less than 1 grain of hardness per gallon
- Combined storage capacity of the District's reservoirs-29 million gallons
- Number of water connections-18,748
- Number of residents served by the District-62,000
- Miles of water pipeline-Approximately 245
- Miles of sewer pipeline-Approximately 230
- Service area - 17 square miles
- Daily peak water usage- 12 mgd or million gallons per day
- Average daily water usage- 5.5 mgd