



# ANNUAL WATER QUALITY REPORT

Water Testing Performed in 2006

Proudly Presented By:  
Arlington Water Department



PWS ID# 02950K

## Continuing Our Commitment

The City of Arlington is pleased to report that your drinking water is high quality and compliant with all state and federal drinking water laws. We are committed to delivering the best quality drinking water, and to that end, we make more than 16,000 water quality observations and tests every year. This edition of our annual water quality report summarizes only the key findings of testing completed from January through December 2006. We intend to maintain these exemplary results, and will rise to meet the challenges of source water protection, water treatment, and pre-



vention of cross-connections, while continuing to serve the needs of all of our water users. For more information about this report, or for any questions relating to your drinking water, please call Michael Wolanek, Water Resource Planner, at (360) 403-3541.

## Where Does Our Water Come From?

Three primary sources supply water to the Arlington service area. Arlington produces most of its water from wells at two locations. The Haller well field naturally filters Stillaguamish River water by drawing it through the riverbank. The Arlington Airport well draws groundwater from a deep aquifer. The origin of both these sources is precipitation that falls across the Stillaguamish Basin, and either runs off infiltrates the ground surface.

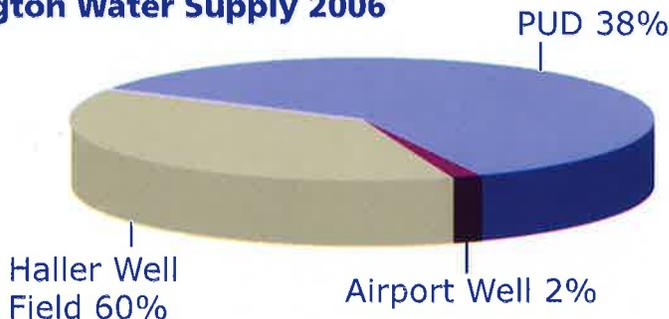
The water we produce is blended with the water the City purchases from its third source—Public Utility District No. 1 of Snohomish County (PUD). The source of our purchased volume



is surface water that collects within the City of Everett's Spada Reservoir near the headwaters of the Sultan river.

The graph below shows the proportion that each source is of our total water production of 3,581 acre-feet in 2006.

**Arlington Water Supply 2006**



## How is My Water Treated and Purified?

Groundwater drawn from our well field located near the Stillaguamish River is treated in several steps at Arlington's water treatment facility. First, raw (untreated) water is pumped from the well field to the treatment plant, where a primary treatment chemical is added that causes small particles to stick together and form bigger particles called floc. Next, polymer is added to aid the filtering process and the water is passed through a clarifying filter where 60% to 70% of the floc is removed. The water then passes through a finishing filter where most of the remaining floc is taken out, and chlorine is added for disinfection. Finally, we add sodium hydroxide to adjust the pH level, making the water less corrosive to your pipes and plumbing fixtures. Water drawn from our well near the Arlington Airport does not require filtration, but we do add chlorine for disinfection. Drinking water purchased from Snohomish County PUD is treated at the City of Everett water treatment plant using a treatment process similar to the process used by Arlington. Everett adds fluoride to the water for enhanced dental protection.

## Working Hard to Bring You the Best Water in the State



Under the Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (EPA) established national limits for hundreds of substances in drinking water, and also specifies various treatments that water systems must use to remove these substances. Arlington Water Department continually monitors for these substances and reports our findings to the Washington Department of Health (DOH). DOH and EPA use the data to ensure that you are receiving clean water. DOH indicated in a 2006 survey City's treatment plant is one of the top two municipal producers of high quality water in the entire state! No filtration system makes water of greater clarity! See [www.doh.wa.gov/ehp/dw/programs/surface\\_water\\_2.htm](http://www.doh.wa.gov/ehp/dw/programs/surface_water_2.htm) for more information.

This publication conforms to the regulation under SDWA requiring water utilities to provide detailed water quality information to each of their customers annually. We are committed to providing you with this information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

### Community Participation

You are invited to participate in our public city council meetings and voice your concerns about your drinking water. Arlington City Council meets the first and third Monday of each month beginning at 7 p.m. at the Council Chambers, 110 E. Third Street, Arlington, WA (enter off of Olympic Avenue near City Hall). For meeting information, call City Hall at (360) 403- 3421, or visit our Web site at [www.ci.arlington.wa.us](http://www.ci.arlington.wa.us).

## Substances That May Be in Your Drinking Water

To ensure that tap water is safe to drink, DOH and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Likewise, the Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health. 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.



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 surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

### Contaminants That May Be Present In Source Water

- *Microbes* — viruses, parasites and bacteria, from sewage treatment plants, septic systems, pets, livestock and wildlife
- *Inorganic materials* — salts and metals, naturally occurring or from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming
- *Pesticides and herbicides* — from agriculture, urban stormwater runoff, and residential uses
- *Organic Compounds* — synthetic and volatile organic compounds from industrial processes, petroleum production, gas stations, urban stormwater runoff, and septic systems
- *Radioactive contaminants* — naturally-occurring or the result of oil and gas production and mining activities

# Sampling Results

In 2006, the City collected hundreds of water samples and made thousands of measurements in order to determine whether biological, inorganic, and radioactive contaminants were present in your drinking water. **The table below lists only those contaminants that were detected.** This does not necessarily indicate that the water poses a health risk. All of the results shown here are less than the Maximum Contaminant Level Goal, which is the safety margin for the protection of consumer health.

Since we purchase some of our water from the PUD, whose source is the City of Everett's Spada Reservoir, the table also includes data for the City of Everett. This information is particularly useful to those in our service area that receive PUD water before it is blended with water pumped from our wells. This includes the area southeast of Kent Prairie Elementary School as far as 172nd Street.

Except for some of the copper and lead data, the data in this table is from testing performed in 2006. The State requires the City to monitor for lead and copper less than once per year because the concentrations of these contaminants do not change frequently. Lead and copper data for the City was collected in 2005.

Regulated Substances								
Samples were collected in finished water at our sources and/or throughout the distribution system				Arlington Water Department		PUD No 1 of Snohomish County		Compliant?
Substance (units)	Year sampled	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	Range Low-High	Amount Detected	Range Low-High	
Arsenic (ppb)	2006	10	0	2	ND-2	ND	NA	Yes
Chlorine (ppm)	2006	(4)	(4)	0.85	0.28 – 1.61	0.98	0.5 – 1.53	Yes
Fluoride (ppm)	2006	4	4	0.38	ND – 1.04	0.75	0.11 – 1.04	Yes
HAAs [Haloacetic Acids] (ppb)	2006	60	NA	18.8	1.4 – 43.9	27.5	17.3 – 38.8	Yes
Nitrate (ppm)	2006	10	10	ND	NA	0.099	0.044 – 0.166	Yes
TTHMs [Total Trihalomethanes] (ppb)	2006	80	NA	20.4	3.0 – 41.0	33.5	26.3 – 39.3	Yes
Turbidity (NTU) <sup>1</sup>	2006	TT	NA	0.047	0.023 – 0.047	0.08	ND – 0.08	Yes

Lead and Copper								
Tap water samples were collected for lead and copper analyses from homes throughout the service areas				Arlington Water Department		PUD No 1 of Snohomish County		Compliant?
Substance (units)	Year sampled	AL	MCLG	90th Percentile	Homes Above AL/ Total Homes Sampled	90th Percentile	Homes Above AL/ Total Homes Sampled	
Copper (ppm)	2005 <sup>2</sup>	1.3	1.3	1.0	0 / 30	0.072	0 / 134	Yes
Lead (ppb)	2005 <sup>2</sup>	15	0	6	0 / 30	3	3 / 134	Yes

**Footnotes**

<sup>1</sup> Turbidity, a measure of the cloudiness of water, is monitored because it is a good indicator of the effectiveness of the filtration system. During 2006, all sampling met or exceeded quality standards.

<sup>2</sup> Lead and copper samples for PUD were collected in 2006, not 2005. Samples in the Arlington service area will be collected again in 2007.

ic, volatile organic, synthetic organic or  
e presence of contaminants in the water  
s (MCLGs) which are established with a

ty of Everett water supply. This informa-  
s any service connections along Burn Rd

or lead, copper, and other contaminants  
ted in 2005.

### Typical Sources

Erosion of natural  
deposits

Water additive used to control  
microbes

Water additive which promotes  
strong teeth, erosion of natural  
deposits

By-product of drinking water  
disinfection

Runoff from fertilizer use;  
Leaching from septic tanks,  
sewage, animal wastes; Erosion

By-product of drinking water  
disinfection

Soil runoff sediment

### Typical Sources

Corrosion of household plumbing,  
Erosion of natural deposits,  
Leaching from wood  
preservatives

Corrosion of household plumbing  
Erosion of natural deposits

taken to measure turbidity met water

## Table Definitions

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**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.

**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.

**MRDL (Maximum Residual Disinfectant Level):** 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 (e.g. chlorine, chloramines, chlorine dioxide).

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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 contaminants.

**NA:** Not applicable.

**ND:** Not detected.

**NTU (Nephelometric Turbidity Units):** A measure of the clarity, cloudiness, or turbidity, of water.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

**90th Percentile:** Out of every 10 homes sampled, 9 had lead and copper concentrations at or below this level.

## Important Health Information

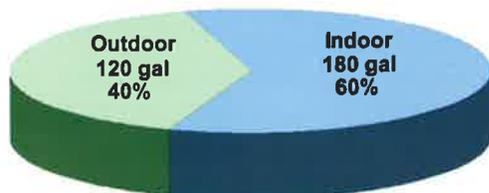
Some people may be more **vulnerable** to contaminants in drinking water than the general population. Immuno-**compromised** persons such as persons with **cancer** undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

# Annual Water Report 2007

## Where Does All the Water Go?

Residential consumption accounts for about 2/3 of the total consumption in the city; commercial, industrial, and other uses such as parks compose the rest. On an annual basis, the average single family residence (SFR) will use about 196 gallons for outdoor and indoor uses each day. Indoor use at each SFR ranges seasonally from about 160 to 180 gallons each day. During summer months with their intensive outdoor uses, SFRs can use 300 gallons each day. The greatest residential uses, then, are summer activities such as lawn and garden watering, car washing, and water-based recreation, which can average 120 gallons per day. Indoors, the five biggest water users in a SFR are, in order: toilets, washing machines, showers, sinks, and leaks.

**Peak (Summer) Day Consumption**  
Average Single Family Residence = 300 gal/day



**Average Daily Consumption**  
Single Family Residence = 163 gal/day



## News You Can Use!

### Outdoor Water Conservation Tips

- Follow the City's lawn watering calendar as a guide. A calendar was included in your recent utility bill.
- Water deeply but infrequently to encourage deep roots.
- Make sure your sprinkler is placed so it only waters the lawn, not the pavement. Minimize irrigation runoff.
- Water in the early morning or evening to reduce evaporation. Up to 30% of water can be evaporated by watering midday.
- Adjust the timer on automatic sprinklers according to seasonal water demands.
- Collect rainwater in a barrel and use it to water non-edible plants.
- Use a broom to clean walkways and driveways, not the hose.
- Use a hose with a shut-off nozzle when washing the car or watering.
- Improve your soil by adding compost, aerating, and dethatching. Mulch around plants to reduce evaporation.
- Cover your spa or pool to reduce evaporation.
- Water only when needed. One inch of water a week, including rainfall, is all your lawn needs. To determine if your lawn needs to be watered, simply walk across the grass. If you leave footprints, it's time to water.

### Indoor Water Conservation Tips

- Install water efficient toilets that use only 1.6 gallons per flush. Older toilets use 3.5 to 7 gallons per flush.
- Retrofit an older toilet by placing a "toilet tummy" or jug of water in the tank.
- Check toilets for leaks. An average of 20% of toilets leak. Place a few drops of food coloring or a "leak detection tablet" in the toilet tank. If after 15 minutes the dye shows up in the bowl (without flushing), the toilet has a leak.
- Wash only full loads of laundry. If you must wash a small load, adjust the water level to match the size of the load.
- Purchase a new water efficient washing machine, which can use an average of 30% less water.
- Install water efficient showerheads that only use 2.5 gallons per minute.
- Try shortening your shower by one minute.
- Install water efficient faucet aerators that only use 1.0 gallon per minute.
- Repair dripping faucets by replacing the rubber washer or valve stem.
- Don't let the faucet run while brushing your teeth, shaving, or washing dishes.
- Use your water meter to check for leaks. Turn off all faucets and water using appliances. Then read your water meter. Wait for 15 minutes. Then read your water meter again. If the dial moved, you have a leak. Call a plumber to help find and fix your leak.

## Tap Water vs. Bottled Water?



A recent Gallop survey indicated most consumers drink bottled water because they think it is safer and purer than tap water. The second leading reason was taste. The convenience of bottled water was also a factor.

Tap water is regulated by the U.S. Environmental Protection Agency (EPA). EPA regulates public water suppliers under the Safe Drinking Water Act (SDWA), ensuring they have state-certified operators who monitor for numerous contaminants, utilize certified testing labs, and issue annual Consumer Confidence Reports to customers listing the sources and components of their water.



Bottled water is considered a food, and is thus regulated by Food and Drug Administration (FDA). FDA regulations are less stringent than EPA standards, but some bottlers may voluntarily exceed the standards required of them. Nevertheless, estimates that bottled water is actually repackaged tap water range from 25% to 40% of the bottled water market.

Consequently, although bottled water is perceived as a healthier, safer choice over tap water, that is not necessarily always true. While bottled water and tap water are both subject to testing for contaminants, independent tests by groups such as the National Resources Defense Council have found:

- *Sixty to 70 percent of all bottled water in the United States is packaged and sold within the same state, which exempts it from FDA regulation. One in five states do not regulate that bottled water.*
- *While most cities meet the standards for tap water, some tap water in the 19 U.S. cities tested was found to contain arsenic, lead, and pesticides.*
- *In 1,000 bottles of 103 different brands of bottled water, 22 percent contained synthetic chemicals, bacteria and arsenic.*

While there are beneficial uses for carefully selected bottled water, including for those persons with health-related concerns, these studies indicate the benefits often do not outweigh the costs. The manufacturing, transportation, and disposal costs associated with bottled water are enormous. The San Francisco Chronicle, referencing a recycling authority, indicates, "Just supplying Americans with plastic water bottles for one year consumes more than 47 million gallons of oil, enough to take 100,000 cars off the road and 1 billion pounds of carbon dioxide out of the atmosphere."

Finally, there's the bottom line as each of us makes our living. Perhaps the table of comparative costs below, showing tap water at less than 1 penny per gallon, is enough to make you request "Arlington water, please" to quench your thirst.

### What are you paying per gallon?

Arlington water (average SFR)	\$ 0.005
Bottled water (low end)	\$ 0.87
Unleaded gasoline	\$ 3.26
Milk	\$ 3.79
Bottled water (high end)	\$21.19

### Additional Fluoride Information Available

The City of Arlington's water is obtained from sources with very different fluoride levels that mix within the city's water mains. Consequently, the distribution of fluoride to individual service connections varies throughout the city. In some places, fluoride concentrations will be adequate for dental protection, and in others supplemental fluoride prescriptions may be needed. We have recently updated our brochure that provides fluoride information specific to your neighborhood. This brochure helps you and your dental or medical provider know what the fluoride levels mean to you, and your children in particular. Pick up a copy when you pay your water bill at City Hall, or contact the Water Department by calling (360) 403-3541 or (360) 403-3526.

## Questions and Answers

### **I don't have any water.**

If your **water bill has not been paid**: call Utility Billing at 360-403-3421. Otherwise, call Utilities Administration at 360-403-3526. We'll need to know your name, phone number, address, how long have you been without water. A water service specialist will contact you to solve the problem.

### **I need my water shut off.**

If you are **stopping service**: call Utility Billing at 360-403-3421.

If you are **doing repairs**: call Utilities Administration at 360-403-3526. We'll need your name, phone number, address and when you want the water shut off. A water service specialist will shut the water off, or call you to arrange a time to do so.

### **I need my water turned on.**

If you are **moving in**: call Utility Billing at 360-403-3421.

If you are **doing repairs**: call Utilities Administration at 360-403-3526. We'll need your name, phone number, address, and when you want the water turned on. A water service specialist will turn the water on, or will call you to arrange a time to do so.

### **I need to report a leak.**

Call Utilities Administration at 360-403-3526, or the emergency pager at 425-258-0919. Tell us your name, phone number, and the address of the leak.

If the leak is located:

**In the house**: you will need to call a plumber, but we will send a water service specialist to turn the water off if needed.

**At the meter box**: we will send a water service specialist out to investigate and repair the leak. They will call you with the results.

**In the street**: we will send a water service specialist out to investigate immediately. Let us know if it is gushing or trickling down the street, gushing up in the air, and/or associated with a hydrant break or construction accident.

### **Is there fluoride in my water?**

Yes, but levels vary throughout our service area. Water we produce from groundwater has low natural concentration of fluoride, while water we purchase is "fully fluoridated" for dental protection by the City of Everett. All water sources blend within the distribution system, diluting fluoride to lower levels. The City's fluoride brochure compares this range of fluoride levels to the dental needs for children promoted by the ADA. Copies are available at Utilities Administration or where utility bills are paid at City Hall.



**City of Arlington**

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