

DID YOU KNOW?

Think about water.

It is yours for the taking, 24 hours a day. All you have to do is turn on a faucet. But where does it come from?

The water you use does not appear magically. It is carefully processed to be clean, safe, and piped directly into your home, a valuable resource that should not be wasted. The high-quality water that we need and expect in our homes is not an infinite resource. Conserving water benefits you and all those around you.

Besides, you are paying for every drop, whether it is used or wasted. So conservation can benefit your pocketbook, too.



Value of conservation.

For 2011, Skagit PUD's commissioners elected not to raise water rates. By using water wisely, customers can also play a significant role in keeping potential future rate increases low.

Conservation efforts help us keep the cost of supplying water down because over the long term, conservation is a cheaper supply option than building new reservoirs and water treatment plants. Most of Skagit PUD's costs are fixed and do not fluctuate when customers use a little or a lot of water.

The pipes and tanks still need to be maintained and main breaks still need to be fixed, regardless of changes in water use.

If customers did not conserve, rates could increase even more.



As part of Skagit PUD's ongoing capital improvement program, crews recently replaced 1,420 feet of six-inch asbestos-cement pipe with 12-inch ductile iron along Blackburn Road in Mount Vernon.

YOUR WATER RATES AT WORK

LAYING PIPE

Ensuring safe water every time you turn on the tap

In Skagit PUD's distribution system, we maintain over 600 miles of water pipelines within Skagit County. Our service area stretches from Fidalgo Island at the west end of the county to as far east as Marblemount. From north to south, the PUD's service area starts in Alger/Lake Samish and extends south to Conway. We even manage a water system on Guemes Island.

Approximately 45 percent of our water mains are iron pipe, about 30 percent are plastic, and 25 percent are asbestos-cement. Most of the lines three-inch and under are

plastic, and over 84 percent of the mains pre-date 1995.

Drinking water safety

We recognize that when people hear the word "asbestos" it can raise health concerns.

Asbestos-cement pipes are made from cement with asbestos fibers added to make the pipes strong. Most drinking water passes through these pipes without becoming contaminated with asbestos fibers, and so they are safe.

According to the American Water Works Association, the use of asbestos-cement pipes dates back to the early

1900s and is used in virtually every country in the world.

The use of asbestos-cement pipes increased following World War II, when iron and steel were diverted to the war effort.

Although asbestos has been banned for many uses by the US government because of health risks caused by breathing asbestos fibers, asbestos-cement pipes are exempted. Cement-lined iron pipe is the most common pipe used these days.

A few types of drinking water—water that is slightly acid or contains few minerals—tend to dissolve the

Pipes > [SEE BACK PAGE](#)

Simple winter water-saving tips

Every drop counts! Save water this winter with these conservation tips:

1. Winter is the perfect time for making plans to add or modify your landscape to use less water. Consider low-water gardens that attract wildlife, such as butterflies or birds. Or work around themes such as fragrance, edible, ornamental or native plants.
2. Check indoor fixtures for leaks and fix right away. A small leak left unattended can account for hundreds of gallons of good, clean water lost.
3. Consider replacing an existing toilet with a high-efficiency model, which uses 1.28 gallons per flush or less. Save water and protect the environment by choosing WaterSense labeled products in your home and business.
4. Insulate your water heater and water pipes. Doing so will save energy and also will cut down on the amount of water that goes down the drain while waiting for hot water to flow.
5. Install a low-flow showerhead.



Many washing machines use 40 or more gallons of water a load, whether the washer's stuffed full or loaded with only a couple of socks. Save up for a full load and make your water work efficiently. Or remember to set your machine for a lesser load, if it can be adjusted.

Water Pipes

> CONTINUED FROM FRONT

cement in asbestos-cement pipes, softening the pipe and releasing fibers into the water. However, Skagit PUD's water is low in acidity.

Because of the US Environmental Protection Agency's lead and copper regulation, water quality must be adjusted to make sure that the water is not corrosive, thus helping prevent fiber release. If the pipe stays solid, the fibers are so tightly bound in the pipe material that they will not be released and the pipe is safe.



Research has found that the greatest risk with asbestos comes from inhaling the fibers, not from ingesting it. Cutting into an asbestos-cement pipe could release asbestos fibers into the air. Skagit PUD crews are trained and have safety gear while working with asbestos-cement pipes.

Skagit PUD has a pipe replacement program that addresses aging pipes in our distribution system. The program calls for replacing one percent of our total pipe in the ground per year.

In 2011, the PUD plans to replace 15,000 feet of pipeline at a cost of \$3.2 million.

Making your water safe to drink

Why do we treat your water? Water treatment is the process of cleaning water. Treatment makes the water safe for people to drink. Because it is a good solvent, water picks up all sorts of natural pollutants. In nature, water is not always clean enough for people to drink.



Water Treatment Plant Operator Dale Wardell opens a tank valve at the treatment plant near Judy Reservoir.

How it works

Throughout the year, rainwater and melted snow are collected from streams in the area surrounding Judy Reservoir and from the Skagit River, and then stored in the reservoir for use by customers. The stored water is pumped to the water treatment plant where impurities are removed, thus ensuring that the water delivered to customers is clean and safe.

Chemicals are added to the water to

remove particles and provide disinfection. The water is then gently mixed in two open basins that provide for the chemicals to react with the water. The water then passes through one of four filters. The filter media consists of a layer of sand and coal supported on gravel. Impurities are trapped in the filter and removed periodically by pumping water through the

filter in the reverse direction. The filter wash water is temporarily stored in two lagoons before being returned to Judy Reservoir.

After filtration, the water is disinfected once again and then flows by gravity to two steel storage reservoirs, called clear wells, near the treatment plant. The clean water then flows into the distribution system and eventually arrives at your home safe to drink.

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