

# A Word About Water

It is important to think about water when we think about energy use. We need energy to purify or treat our water for safe drinking and use. We also need water to generate electricity.

When water is removed from a river or reservoir, it must be pumped to the water treatment plant. Pumps are used to pull and move the water to the treatment facility, and each pump uses energy to run.

At the treatment facility, pumps and other machinery are used to filter and clean the water so it is safe to drink. When water leaves the treatment facility, it is pushed to your home or school under **pressure**. Pumps run to keep the water pressure elevated so you can always take a shower or wash your hands when you'd like.

As we use water, we have water softeners that further condition the water, filters that remove unpleasant tastes and odors from the water, heaters that heat the water, and pumps that move it in and out of the machines that use it. All of these devices use energy, too.

Finally, after you've finished a water-related task, it has to go somewhere. The drain in your school does not empty into a big hole in the ground. In most areas, water is sent through sewer pipes to a wastewater treatment facility, where pumps and other machinery clean and filter it before releasing it back into the natural environment.

If you reduce the amount of water you use, you will also be reducing the amount of energy you use, saving your school money on the water bill and reducing your energy needs.

Here are some great ways you can reduce the amount of water you use:

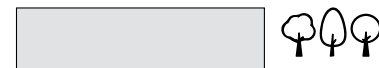
- Don't let the water run in the restroom or classroom. If you need hot water, consider heating it in a hot pot or on a hot plate instead of allowing the water to run for several minutes.
- Inform a teacher or other staff member if a faucet or drinking fountain does not turn off properly.
- Stomp or scrape your boots or shoes before entering the school to avoid extra cleaning of the floors.

## Water Use in Schools

Domestic/ Restroom 45%



Landscaping 28%



Cooling & Heating 11%



Kitchen/ Dishwashing 7%



Other 5%



Laundry 3%



Pools 1%



Data: EPA

# Water Heating

You don't think too much about the hot water you need at school, but it is definitely needed. At home you probably have a water heater that is fueled by natural gas or electricity. When you turn the hot water on in the kitchen or bathroom, you might have to let the water run a bit before it's warm.

In a school, having water heater would mean you might need to let the water run for a very long time before water could reach faucets far away from the heater. Most schools have more than one large water heater, and the hot water is constantly moving through the school with a pump, so hot water can get to the sinks quickly.

The temperature of the water at school is important. At home, you probably have your hot water heater set at 120-140 °F, and rarely any higher because of the danger of a serious burn injury. This is true for the hot water at school except in the kitchen. Cafeteria workers must wash all dishes and serving equipment in water that is at least 160 °F. But at this temperature, you can burn your skin.

This is why many schools have more than one water heater. They can have one for the cafeteria and the other for the rest of the school. The cafeteria water is kept very hot while the rest of the school is kept at a safer temperature that is much lower.



**Water Heater for the Home**



**Tankless Water Heater for the School**