



ORANGE WATER AND SEWER AUTHORITY

*A public, non-profit agency providing water, sewer and reclaimed water services
to the Carrboro-Chapel Hill community.*

Efficient Clothes Washers save water, energy and dollars

There are three main designs for clothes washers: the vertical axis top-loading washer; the horizontal-axis front-loading washer; and the horizontal axis top-loading washer. The vertical axis top-loading washer is the most common washer, and it cleans by agitating clothes back and forth in a tub full of water.

The horizontal-axis washers save water by tumbling clothes in a small amount of water, lifting them up and dropping them down like a dryer. Horizontal axis clothes washers also require less detergent. They have faster spin cycle speeds that remove more moisture from clothes than vertical axis machines; therefore, less time and energy is required for clothes drying.

High efficiency (HE) clothes washers usually have smaller tubs than typical washing machines (2.0 cubic feet vs. 2.7 cubic feet). Studies have shown that users do not see a significant effect on load capacity; however, the typical household may need to do an average of one more load a week with an HE clothes washer.

Research has also shown that HE washers get clothes just as clean or cleaner than standard washing machines, and they are gentler on fabrics. One study concluded that residents were actually more satisfied with the cleaning performance of HE machines than their old standard models.

Water use by washers of different ages:

Washer type/age	Gallons per laundry load
Standard clothes washers made between 1980 and 1990	51
Standard washers built since 1990	35 to 44
Water efficient horizontal axis machines*	7 to 30

* which meet Federal standards for energy and water efficiency

A typical family washes about 400 laundry loads per year. Assuming savings of 15 to 25 gallons per load from replacing an old, inefficient washer with an HE model, the annual water savings would be 6,000 to 10,000 gallons.

For a typical residential OWASA customer who pays increasing block rates, the current incremental cost of 1,000 gallons of water and sewer service is \$12.61 (based on the block 2 water rate of \$6.26 and the sewer rate of \$6.35 per 1,000 gallons as of October,

2010). Therefore, the annual savings in water/sewer bills would be \$76 to \$126 from reducing water use by 6,000 to 10,000 gallons per year.

Estimated cost of buying an efficient washer Top-loading washing machines typically range in price from about \$250 to \$1,300. Efficient (horizontal-axis) clothes washers cost about \$600 to \$1,500. The assumed incremental difference is about \$350. Clothes washers have a useful life of about 15 years.

More information about high efficiency clothes washers can be viewed at

- The US Environmental Protection Agency's Energy Star webpage on clothes washers at http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CW (includes information on energy efficiency as well)
- The Consortium for Energy Efficiency Website at <http://www.cee1.org/home.html>.