Household Water Conservation Suggestions

Average indoor water usage from a survey of 1,188 American homes

1. Choose efficient plumbing fixtures and appliances

a) High Efficiency Toilets

Toilet flushing is the #1 use of water indoors. Replacing an old 3.5-gallon per flush toilet with a new High Efficiency Toilet (HET) that uses less than 1.3 gallons per flush saves over 2.2 gallons (63%) every time you flush the toilet. Modern HETs are often more powerful than old toilets that use far more water. Next time you replace a toilet in your home, choose one with the EPA WaterSense label (see: www.epa.gov/watersense/products/toilets.html).

b) Front-load washing machines

The typical American household averages slightly more than one load of laundry every day. Front-load washing machines typically use up to 20 gallons per load (50%) less than top-load models. If you use warm water to wash your clothes you'll save energy too! Next time you replace your washing machine, choose a model with an Energy Star Water Factor of 6.0 or less. You can look up the Water Factor for most available washing machine models at: http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CW.

c) Low-flow shower heads

Typical showerheads use 2.5 gallons per minute (gpm). Low-flow showerheads use 1.75 gpm or less, a savings of 30%. Low-flow showerheads save energy too, and typically pay for themselves in a matter of just a few months.

d) Low flow faucet aerators

Typical faucets deliver 2.2 gallons per minute. Replace bathroom aerators with 0.5 or 1.0 gpm aerators saving at least 55%, and kitchen faucet aerators with 1.5 gpm aerators, saving 32%. Low flow aerators save energy too.

e) Fix leaks

Leaks account for 13% of average household water usage. Check your water meter to see if it advances while no water is being used, and check your toilets for leaks by putting food coloring in the tank, waiting a few minutes without flushing, and seeing if the dye reaches the bowl.

2. Cut down on lawn irrigation

Applying just ½" of water to a 1/3-acre lawn uses about 9,000 gallons of water, costing over $70. Cultivate a "waterless" lawn instead. Help your soil hold on to the moisture provided by natural rainfall by adding organic fertilizer once or twice a year, and leaving grass clippings on the lawn. Avoid pesticides that kill beneficial worms that aerate and fertilize the soil. Get your soil tested, and apply lime if it's too acidic. Cut your grass tall (3") to shade the roots and crowd out weeds, and keep the mower blade sharp to slice rather than tear the grass. Fix bare spots and/or over-seed with drought-tolerant deep-rooted native grass varieties that are adapted to the New England climate. For more information on cultivating an attractive, healthy lawn with little or no irrigation, and the reasons why that is important in Georgetown, see Conservation through Waterless Lawn Care at the Parker River Clean Water Association web site, http://www.businessevision.info/parker_river/MakeADiff.html.

Attractive irrigation-free lawn

3. Water-saving tips

a) Turn off the water while brushing your teeth.

b) Only flush the toilet when necessary.

c) Run only full loads in the washing machine and dishwasher.

d) Take shorter showers. Just one minute less in the shower every day saves over 600 gallons per year of heated water!

e) Don't let the hose run while washing the car.

f) Clean driveways and sidewalks with a broom, not a hose.

g) Capture roof runoff with a rain barrel for watering flowers and shrubs.

h) Defrost frozen food overnight in the refrigerator instead of using warm water.

i) Search the internet. Use your imagination. There are many ways to save water!

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Daily Water Usage Worksheet

The following steps will help you compute the average number of gallons of water used daily in your household. You will need your water bill to complete this exercise.

Cubic feet of water used (from the water bill): _____

Gallons used (multiply cubic feet by 7.5): _____

Number of days on the water bill: _____

Gallons used daily by household (divide gallons by days): _____

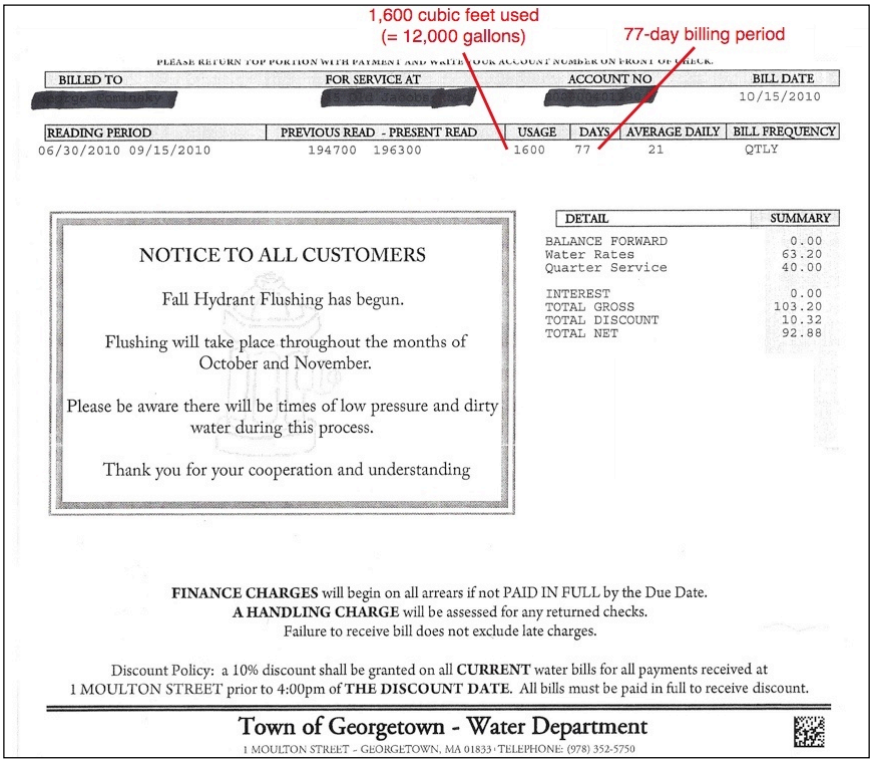
Number of household occupants: _____

Average number of gallons used daily per person
(divide gallons used daily by number of household occupants): _____

Please bring this sheet back to class to share your results!

The Massachusetts water conservation standard is 65 gallons per person per day on an annual basis. Typically, water usage increases significantly in summer, mainly due to outdoor water usage. You can get a more representative estimate of the average annual per capita water usage in your household by repeating this exercise for each of your past four quarterly water bills and averaging the results.

SAMPLE WATER BILL:



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Bathroom Faucet Aerator Worksheet

The following steps will help you compute the average number of gallons of water saved by installing a low-flow faucet aerator in your bathroom.

1. Measure existing faucet flow

Use the graduated plastic bag provided to measure the flow rate of your existing bathroom faucet in gallons per minute: _____

Gallons used daily (multiply flow rate by 5 minutes*): _____

Gallons used per year (multiply by 365 days): _____

2. Install 0.5 gpm aerator provided.

See http://www.youtube.com/watch?v=xNQ1auGtSyY&NR=1 for an excellent YouTube video on how to change a faucet aerator. A thin washer and a thick washer are provided with the new aerator. If one leaks, try the other. The aerator provided is a standard 15/16" diameter. Some faucets have a smaller 13/16" diameter. In that case, try a different faucet. For more information, see: http://www.conservationwarehouse.com/faucet-aerator-faqs.html

3. Measure flow with new low-flow aerator

Use graduated plastic bag provided to measure new flow rate in gallons per minute: _____

Gallons used daily (multiply flow rate by 5 minutes*): _____

Gallons used per year (multiply by 365 days): _____

4. Estimate savings

Subtract the amount of water used annually with the new aerator from the amount used annually with the old aerator, and enter the amount saved here: _____

*Bathroom faucets typically run for approximately five minutes daily.

Reducing the amount of heated water used at the bathroom sink will also save energy. You may also extend the life expectancy of your septic system by running less water through it. And you will help the environment by saving water and energy!

Please note that you can also use the graduated plastic bag to measure the flow of your showerhead. A low-flow shower head (1.5 gallons per minute) can pay for itself in a matter of months when you consider the savings in both water and energy costs.

Please bring this worksheet back to class to share your results!

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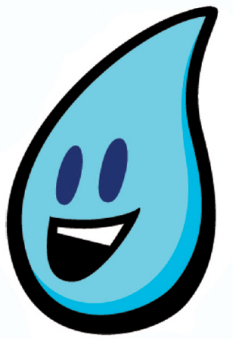
Family Pledge to Conserve Water

Sit down with your family and share what you have learned about water conservation. Look at the tips below for ideas on how to use water more efficiently, and check each one that you are willing to pledge to do. Thank you for helping to conserve water!



INDOORS

- ☐ Don't leave the faucet running while you brush your teeth.
- ☐ Take shorter showers or use less water in the bathtub.
- ☐ Only run the washing machine and dishwasher when fully loaded.
- ☐ Don't let the water run when washing dishes by hand.
- ☐ Install low-flow faucet aerators and showerheads.
- ☐ Choose water-efficient models when buying new toilets and washing machines.
- ☐ Retrofit the toilet with a dual-flush conversion kit.
- ☐ Check the water meter when water is not in use to detect leaks. Fix them promptly.
- ☐ Fix toilet leaks. To check if a toilet is leaking, remove the cover from the tank and add a few drops of food coloring. Wait 5 minutes (don't flush). If dye appears in the bowl, your toilet is leaking.

OUTDOORS

- ☐ Minimize lawn watering. See Conservation through Waterless Lawn Care at the Parker River Clean Water Association web site, http://www.businessevision.info/parker_river/MakeADiff.html.
- ☐ If you have a swimming pool, keep it covered when not in use.
- ☐ Install a rain barrel. Use the rain water for watering plants and washing cars.
- ☐ Mulch around shrubs and plants to reduce evaporation.
- ☐ Use a broom to clean your driveway instead of a hose.

. . . . . .

☐ **Our family pledges to do our best to reduce our water use by 10%. We have _____ family members in our household.**

Please bring your pledge sheet back to class to share your commitments!

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