

Water conservation

By **Rebecca Scibek and Margaret Van Deusen**/ Special To The Tab
Wednesday, July 5, 2006

Although it may seem like there is always plenty of rain in Massachusetts, especially this past May and June, water is a finite resource. Between 70 and 75 percent of the Earth's surface is covered with water, but only 1 percent of that is available for human use. Despite recent heavy rains, groundwater levels will soon begin to drop as trees and plants take up water and higher temperatures increase evaporation rates.

During the summer, the water in the Charles River is made up almost entirely of baseflow, meaning water that flows into the river from groundwater. Little recharge of aquifers occurs in the summer and, consequently, there is less groundwater available to feed the Charles and its tributaries.

This relative lack of groundwater is mainly due to man-made changes to the water cycle, which prevent water from infiltrating into the ground and recharging aquifers. Buildings, parking lots and roads all prevent rainwater from getting back into the ground to replenish groundwater stores. Newton's municipal storm drain system, which collects stormwater in a centralized drain system and discharges it through outfalls to the river, also short-circuits the natural hydrological cycle and prevents recharge.

Fortunately, small measures add up to big water savings, and each of us can help protect our water resources. Water conservation helps to lower utility costs, protect our rivers, and preserve our water supply for future generations.

Knowledge of water conservation techniques has grown dramatically during the past decade. The U.S. Environmental Protection Agency recently created WaterSense, a program working with water suppliers, product manufacturers and retailers to promote water-efficient products and practices. The products, from front-loading washers to weather-based irrigation systems, are now widely available.

Using water wisely is becoming increasingly important in Massachusetts. The MA Department of Conservation and Recreation has been working to update the state's Water Conservation Standards, first developed in 1992. In September the Water Resources Commission is expected to adopt the Standards, which set water conservation targets for water managers and users.

These Standards, designed to help citizens and water suppliers use water efficiently, are central to the state's efforts to ensure the long-term health and sustainability of our water resources. Water conservation will help Newton residents to control burgeoning water bills.

More than 60 percent of the public water supply in Massachusetts is used for domestic purposes, so improvements in residential water efficiency will have dramatic results. Here are some recommendations included in the Standards:

- Work toward using no more than 65 gallons of water per person per day, indoor and outdoor water use combined
- Check pipes, toilets, and fixtures regularly for leaks, which are costly for you and the environment- a faucet dripping once per second wastes 2,700 gallons per year!
- Sweep driveways, walks, and decks rather than hosing them off
- Wash cars with a bucket and sponge (with biodegradable soap), not a hose
- Install water-efficient plumbing fixtures, such as low-flow showerheads and toilets, and faucet aerators
- Minimize use of garbage disposals, and compost instead, to save water and provide organic material for gardens
- Cover swimming pools when not in use to prevent evaporation.
- Water use can double in the summertime, mostly due to lawn watering. Here are some simple tips:
 - Water lawns once a week and only before 8 a.m. or after 6 p.m, when the sun is low and winds are light. Watering too often and too much encourages grass to produce shallow roots
 - Plantdrought-tolerant grasses and native species, avoiding water-hungry ornamentals
 - Recognize that a healthy lawn naturally becomes dormant during times of drought -grass will turn yellow or brown, but will become green again when the rains return
 - Redirect gutter downspouts away from pavement and onto grass and gardens where water can infiltrate into the ground. Use rain barrels or cisterns to collect water for irrigation
 - For automatic irrigation systems, use the best available moisture sensing technology to ensure systems operate only when necessary, and keep them properly maintained.

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