

Water Conservation Pilot Campaign: Lawn Watering Reduction

The Project Team: Massachusetts Department of Environmental Protection (MassDEP), Department of Conservation and Recreation (DCR), Division of Ecological Restoration (DER), Action Research, UMASS Donahue Institute

MassDEP implemented a pilot water conservation campaign in the summer of 2018 with the water systems of Concord, West Springfield, and Hingham (Aquarion Water Company) to reduce summer lawn watering. The campaign used proven strategies to change outdoor watering behavior by providing customers targeted education and feedback to motivate changes in water use behavior.

Pilot Project Design

Households were selected based on a comparison of their winter use to their summer use in 2017. Increased summer use was considered an indicator of lawn watering.

Using the difference between summer and winter use, households within each water system were assigned to a low, medium-low, medium-high, or high group. Within each group, except low, 100 households were randomly selected to receive water conservation materials and another 100 were identified as the control group who would not receive materials but would be used for comparison purposes.

Project Materials and Timeline

The selected households received materials originally developed in a 2017 pilot project that were further adapted using interviews conducted with customers in the three participating water systems. Materials included:

1. A postcard in the early spring, designed to catch the households' attention and prompt them to watch their mail
2. Outreach materials delivered once in late May/early June, and again in early August, including:
 - a. A cover letter
 - b. An educational flyer
 - c. A chart comparing the households' water use to others

The educational flyer corrected misperceptions about watering (e.g., grass will die without irrigation, watering lawns doesn't use much water) and provided tips on how to keep a lawn healthy with applying less or no water. In the water use comparison chart, the households' summer use was compared to efficient and average neighbors in their own community, based on the prior summer's use. The sheet displayed whether they used more, less, or the same as their neighbors, providing motivation to reduce water use. For the second mailing, the cover letter was updated but the flyer and water use comparison chart were unchanged from the first mailing.

Download the full report:

<https://www.mass.gov/service-details/water-conservation-pilot>

Results

The project was evaluated using water use data collected by the water supplier in each community and a household survey. Water use data from the households that received the materials were compared to those that did not in several ways – overall, by water system, and by water use group. The control group helped account for weather fluctuations and other variables impacting water use. A summary of results is below:

Comparison	Average Savings per Household	Estimated gal saved per summer per household*
Campaign vs. No Campaign	39 gal/day (savings rate of 14%)**	3,510 gallons
Campaign vs. No Campaign by Water Use Group	Highest 72 gal/day (savings rate of 15%)**	6,480 gallons
	Medium High 41 gal/day (savings rate of 12%)**	3,690 gallons
	Medium Low 17 gal/day (savings rate of 11%)	1,530 gallons
Campaign vs. No Campaign by Water System	Concord 8 gal/day (savings rate of 3%)	720 gallons
	Hingham (Aquarion) 42 gal/day (savings rate of 14%)**	3,780 gallons
	West Springfield 66 gal/day (savings rate of 22%)**	5,940 gallons
Campaign vs. No Campaign by Water System AND Water Use Group	Concord, Highest 22 gal/day (savings rate of 6%)	1,980 gallons
	Hingham (Aquarion), Highest 62 gal/day (savings rate of 12%)**	5,580 gallons
	West Springfield, Highest 128 gal/day (savings rate of 25%)**	11,520 gallons

*Assumes persistent savings over 3 summer months (90 days)

**Statistically significant

The most significant water use reductions occurred in the highest summer water use households, or those who likely do more lawn watering. These results are promising, as this group offers the greatest potential for actual gallons saved.

By water system, the greatest reductions were seen by residents in West Springfield, followed by residents in Hingham (Aquarion). Concord residents trended toward a reduction, meaning the selected households used less water than households that did not receive conservation materials, but the difference was not statistically significant. The project team hypothesized several potential reasons for the varying results by water system including differences in prior outreach, demographics, and socioeconomic factors.

Next Steps

MassDEP is planning to implement an additional round of campaign testing in summer 2019 for the water systems serving Concord, West Springfield, and Hingham (Aquarion) as well as in three other water systems.

A toolbox will also be developed to assist water systems with campaign implementation.

HEALTHY

LAWN

HAPPY SUMMER!

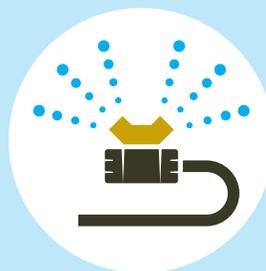
Each of us makes *a big impact* in Concord.

Reduce Lawn Watering

Eliminating or reducing summer lawn watering makes a big difference. Concord households that water their lawns in the summer use an average of 1,900 gallons a week. That's like running your shower for 12 hours!

The fact is, *a Concord lawn doesn't need much water to stay healthy*. Overwatering your lawn can cause shallow roots and make it susceptible to pests, disease, and drought.

LAWN WATERING



1,900 Gallons

SHOWERING



12 Hours!

Water Only With Rain

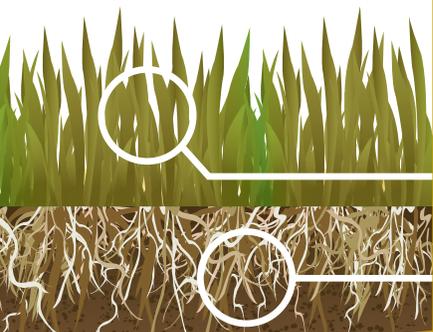
OR

Water Wisely

In most years, we get enough rain to maintain a healthy summer lawn. *Healthy grass can go dormant (turn golden) during dry periods but it is not dead* and will green up with the return of rain. Going dormant creates

more drought resistance and deeper roots, making a healthier, less sensitive lawn.

Dormant Grass



HEALTHY GRASS

DEEPER ROOTS

Half of Concord homes already let their lawn go dormant each summer. *Join them by letting your lawn be healthy and natural while saving water, money, and time.*

A healthy established lawn will likely not need irrigation. However, if you do water your lawn, follow the tips below to water wisely.

- 1 Water before 9 am to avoid evaporation.
- 2 Water infrequently and deeply to encourage deep roots.
- 3 Keep grass long to stay healthy (at least 2.5 to 3 inches).
- 4 Leave grass clippings on your lawn to keep soil moist.
- 5 Use a WaterSense-labeled controller on automatic irrigation systems.
- 6 Tell your lawn care crew to follow these guidelines.



Save water for your community and the Environment by watering your lawn wisely or not at all.

Please visit this Concord's website for more information:

www.concordma.gov/conservation

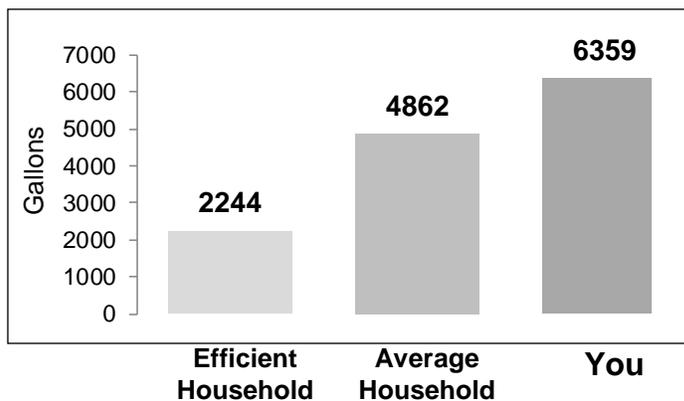
Join Concord Neighbors In Summer Water Savings!

How do you compare?



More than half of Concord residents don't water their lawns in the summer. These residents are not only saving money, but also doing their part to save water. To prepare for this summer, we wanted to let you know where you stand based on your water usage last summer.

Average Water Use Per Month (Summer 2017)



During the summer of 2017, your household used **more water** than the average Concord household.

Your household has room to improve your water usage. Check out the **Healthy Lawn, Happy Summer** flyer for tips to reduce your water use.

Together, we can conserve Concord's water resources while keeping our lawns healthy all summer.



*Thank you for
helping your community!*

Please visit this Concord's website for more information: www.concordma.gov/conservation