



# WATER CONSERVATION PILOT CAMPAIGN: LAWN WATERING REDUCTION

**WRC Meeting  
5/9/2019**

**Michelle Craddock, MA Division of Ecological Restoration  
Duane LeVangie, Mass Department of Environmental Protection**

# Presentation Overview

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- Project background
- Town Selection
- Pilot Design and materials
- Results
- Next steps

Project team: MassDEP, DER, DCR, UMASS Donahue Institute, Action Research, Towns of Concord and West Springfield, Aquarion Water Company (Hingham)

# Project Background

DER worked with Action Research and several towns in the Ipswich watershed in 2016 and 2017 to conduct benefit and barrier research and develop and test behavior change campaigns to reduce lawn watering

Barriers	Benefits
Grass will die if not watered	Helping community reduce water usage
Eliminating lawn watering would not save much water	Personal water savings
	Personal financial savings

# Project Background

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- Designed educational flyer and campaign to change outdoor watering behavior
- Two campaigns tested in Wenham and Middleton; feedback and commitment
- Feedback was most effective at reducing water use
- Lessons learned incorporated into DEP project

# Town Selection – 2018 Pilot

<b>Town</b>	<b>2017 Average MGD</b>	<b>Summer/Winter water use ratio</b>
Hingham (Aquarion)	3.16	1.5
Concord	1.84	1.6
West Springfield	3.33	1.4

# Pilot Design

- Households assigned to a water use group based on difference between summer and winter use
- 100 households randomly selected in each water use group (except low) to receive campaign materials, 100 randomly assigned to control (no campaign)

Water use group (Quartile)	# of campaign households	# of control households
Highest	100	100
Medium High	100	100
Medium Low	100	100
Low	0	0

# Materials

Selected households received campaign materials adapted from 2017 pilot project, including:

1. Pre-notification postcard (delivered mid-May)
2. Outreach materials (delivered in late May/early June and again in early August)
  - a. Cover letter
  - b. Educational flyer
  - c. Chart comparing the households' water use to others

## Introducing *Healthy Lawn, Happy Summer*

Dear Resident,

Within the next week, you will receive an envelope with materials on the new *Healthy Lawn, Happy Summer* campaign developed by Concord Public Works and MassDEP. It will include tips on how to conserve water in the summer months and information on how your water use compares to your neighbors.

*Healthy Lawn, Happy Summer* encourages those who live in Concord to save water and protect the environment while keeping their lawns healthy all summer.

Be on the lookout for the envelope. Together, we can make a big difference.

Sincerely,

Alan H Cathcart  
*Water and Sewer Division Superintendent*



For questions contact: Melissa Simoncini  
*Sr Environmental and Regulatory Coordinator - (978) 318-3250*



**CONCORD PUBLIC WORKS**  
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SUPERINTENDENT

TEL. : 978-318-3250  
FAX. : 978-318-3204

[REDACTED]

MAY 10, 2018

Dear Resident,

As summer approaches, the Town of Concord is working with the Massachusetts Department of Environmental Protection (DEP) to assist our residents in saving water and protecting the environment while keeping their lawns healthy. As a community, we have a finite amount of water, even in years when we receive average rainfall. It is important we conserve our water resources to make sure there is enough for all. Residents can still maintain a healthy lawn while watering more efficiently, or not at all.

We thank our residents who are already taking action to conserve water. More than half of residents have reported watering their lawn in the summer minimally or not at all. However, our community still has room to improve in saving water during the summer. In conjunction with DEP, we developed the enclosed "Healthy Lawn, Happy Summer" to help inform residents on ways to keep their lawns healthy in summer while saving water at the same time.

If you have any questions, please contact Melissa Simoncini, Senior Environmental and Regulatory Coordinator, at (978) 318-3250.

Sincerely,

Alan H. Cathcart  
*Water and Sewer Division Superintendent*



# 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 Concord's website for more information:  
[www.concordma.gov/conservation](http://www.concordma.gov/conservation)

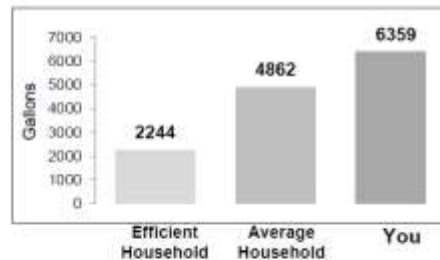
# Join Concord Neighbors In Summer Water Savings!

## 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.

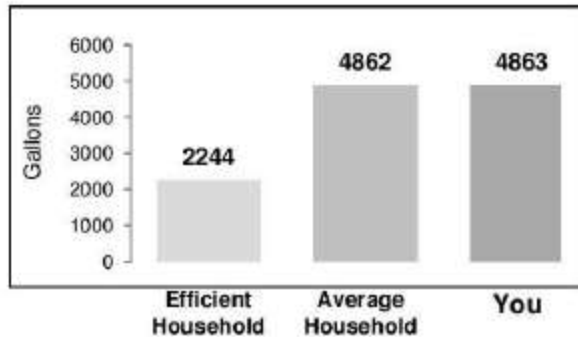
*Together, we can conserve Concord's  
water resources while keeping our  
lawns healthy all summer.*



**Thank you for  
helping your community!**

Please visit this Concord's website for more information: [www.concordma.gov/conservation](http://www.concordma.gov/conservation)

### Average Water Use Per Month (Summer 2017)



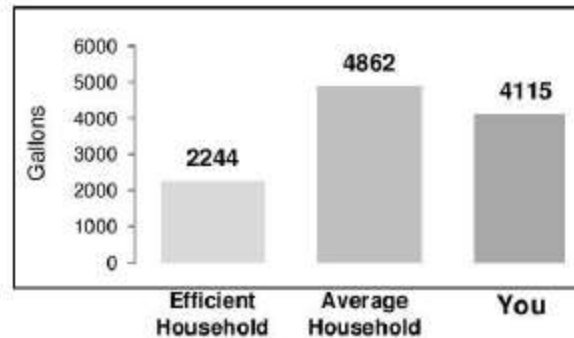
During the summer of 2017,  
your household used about  
**the same**

as the average Concord  
household.

**Your household is doing great but can save more water.**

Check out the **Healthy Lawn, Happy Summer flyer** for tips to reduce your water use.

### Average Water Use Per Month (Summer 2017)



During the summer of 2017,  
your household used  
**less water**

than the average Concord  
household.

**Your household is doing a great job on your water usage.**

Check out the **Healthy Lawn, Happy Summer flyer** for tips to reduce your water use.

# 2018 Results

Comparison	Average Savings Per treatment
Campaign vs. No Campaign	39 gal/day (savings of 14%) *
Campaign vs. No Campaign by Water Use Group	<b>Highest</b> 72 gal/day (savings of 15%) *
	<b>Medium High</b> 41 gal/day (savings of 12%) *
	<b>Medium Low</b> 17 gal/day (savings of 11%)
* Statistically significant	

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Campaign vs. No Campaign by Water System	<b>Concord</b> 8 gal/day (savings of 3%)
	<b>Hingham</b> 42 gal/day (savings of 14%) *
	<b>West Springfield</b> 66 gal/day (savings of 22%) *

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Campaign vs. No Campaign by Water System AND Water Use Group	<b>Concord, Highest</b> 22 gal/day (savings of 6%)
	<b>Hingham, Highest</b> 62 gal/day (savings of 12%) *
	<b>West Springfield, Highest</b> 128 gal/day (savings of 25%) *

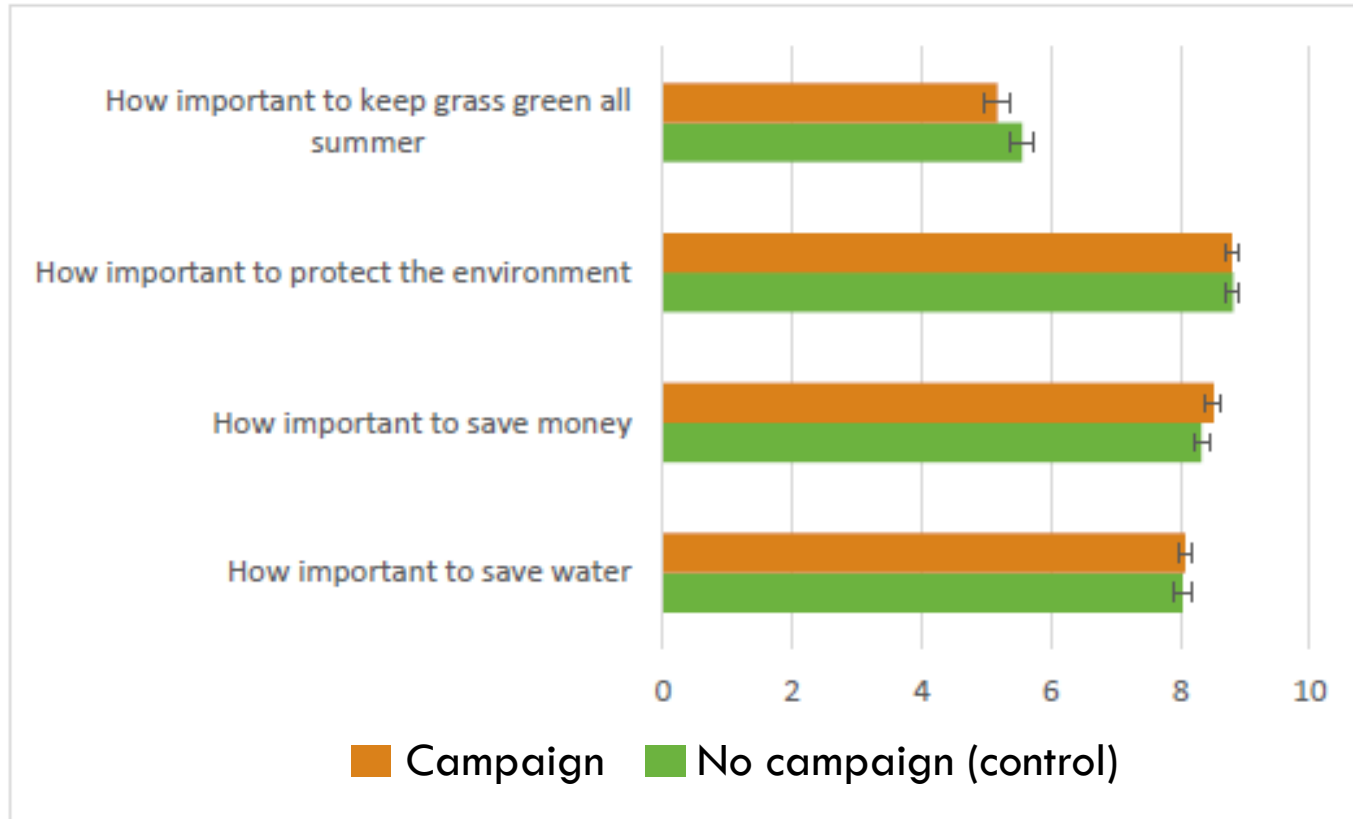
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# 2018 Survey Results

- Six question postcard survey sent to campaign and control households
- 30.5% response rate
- Survey results mirror water data

1. Using the scale, how important is it for your household to...												
	Not at all					Extremely						
a. save water?	0	1	2	3	4	5	6	7	8	9	10	
b. save money?	0	1	2	3	4	5	6	7	8	9	10	
c. protect the environment?	0	1	2	3	4	5	6	7	8	9	10	
d. keep your grass green all summer?	N/A	0	1	2	3	4	5	6	7	8	9	10
2. During this summer, how often did your household water your grass?												
<input type="checkbox"/> Every day			<input type="checkbox"/> Every other week			<input type="checkbox"/> Never						
<input type="checkbox"/> A few days/week			<input type="checkbox"/> Once/month			<input type="checkbox"/> N/A (No grass)						
<input type="checkbox"/> Once/week			<input type="checkbox"/> Once or twice/summer									
3. Did you receive mailed materials about the <i>Healthy Lawn, Happy Summer</i> Campaign this summer?												
<input type="checkbox"/> Yes → CONTINUE												
<input type="checkbox"/> No → SKIP TO #6												
4. Using the scale, how much did the program materials help you to...												
	Not at all					Extremely						
a. keep your lawn healthy?	0	1	2	3	4	5	6	7	8	9	10	
b. reduce your lawn watering?	0	1	2	3	4	5	6	7	8	9	10	
c. be aware of your water use?	0	1	2	3	4	5	6	7	8	9	10	
5. Using the scale, were the program materials...												
	Not at all					Extremely						
a. easy to understand?	0	1	2	3	4	5	6	7	8	9	10	
b. appealing to you?	0	1	2	3	4	5	6	7	8	9	10	
6. Please let us know if you have comments about summer water use:												

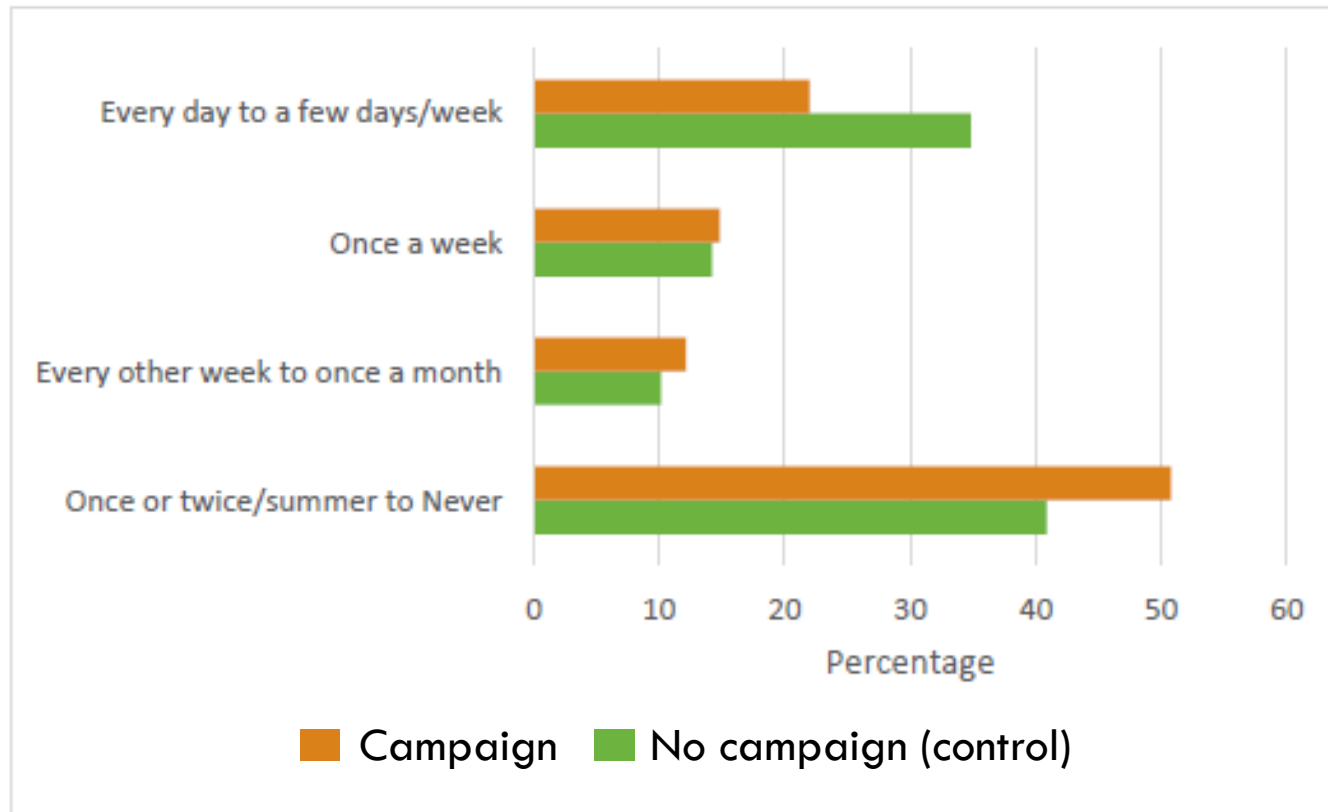
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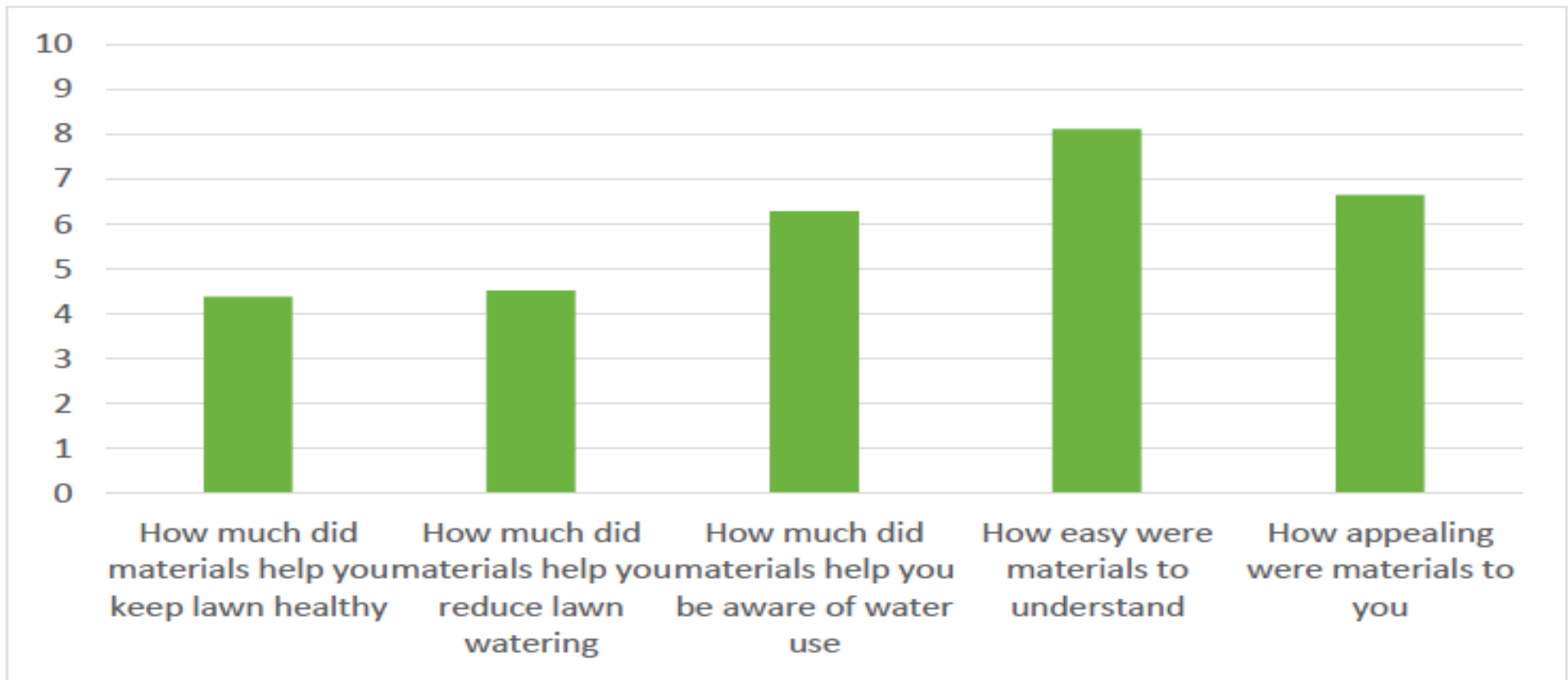


# 2018 Survey Results

Q. During this summer, how often did your household water your grass?



# 2018 Survey Results – Material Ratings



# Next Steps

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- Continued implementation in West Springfield, Hingham, and Concord
- Implementation in 3 additional towns (Hanover, Westford, Easton)
- Focus on medium-high and high users
- Develop and test toolkit

# Additional Info

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Full report available at:

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

Questions?

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