

Watering by Time per Zone Instead of Overall Length of Time

**A Subset to the
Recommendations
to address Lawn Watering
during Drought Conditions**

A Position Paper Presented by
Lawn Watering Work Group
February 9, 2003

Background

The length of time to irrigate turf is determined by, but not limited to a number of variables: soil type, sprinkler head type, weather conditions, physical site conditions, site use, and type of turf. Any combination of these variables can be present at each property, which could translate into thousands of individual watering needs. The challenge is identifying the most appropriate irrigation recommendations that will positively impact the largest number of customers in spite of the variables.

On December 10, 2002 water managers from the Front Range met to discuss 3 recommendations for a uniform lawn-watering schedule as presented by the Lawn Watering Work Group. As a result of the meeting, the managers asked the work group to address the length of time to water turf within the recommended schedule. The Work Group evaluated the merits of assigned watering times, and this paper presents three elements associated with zone watering and the steps necessary to educate the public about this practice. Because of the many variables linked to zone watering, the work group was not able to reach consensus on recommending how long to water per zone, as discussed later in this paper.

Recommendations and Rationale for Zone Watering

The Lawn Watering Work Group recommends the following elements of turf specific zone watering:

- a. Limit watering by time per sprinkler zone.
- b. Based on natural precipitation and available supply, begin watering as soon as necessary in spring and continue throughout the season.
- c. Educate the public about sprinkler heads, controllers, zones, cycle irrigation, etc., with information provided by CSU, GreenCO, and other experts.

Rationale:

- a. Limit watering by time per sprinkler zone.

Assigning a set length of time to water turf no matter the property size has created a number of issues. Small-lot property owners tend to maximize this time allotment and over-water the turf. Large-lot property owners find that they cannot apply enough water in the allotted time, and as a result seek permits to water longer than what is allowed.

Watering by time per sprinkler zone addresses equity issues between small and large properties. Whether a property has 4 or 44 zones, each property owner would be able to irrigate all turf areas. Zone watering could dramatically cut water use by small properties, and by adjusting the time per zone, different levels of water savings can be achieved. Zone watering reduces and could eliminate the need for a special permit process for large properties.

- b. Based on natural precipitation and available supply, begin watering as soon as necessary in spring and continue throughout the season.

Spring moisture is important for turf survival, especially after extremely dry fall and winter conditions. With proper spring care, the Green Industry has proposed eliminating turf watering for a 60-day period during the heat of the summer during extreme conditions. This proposal acknowledges the risk to turf survival.

In any case, the Work Group suggests minimizing changes to restrictions. This will reduce public confusion and increase compliance.

- c. Educate the public about sprinkler heads, controllers, zones, cycle irrigation, etc., with information provided by CSU, GreenCO, and other experts.

It is important to accept that many customers may not understand how irrigation systems work. Many do not know the difference between pop-up spray heads and rotors and the fact that each applies different amounts of water. Many have never uttered the word ‘zone’ despite the fact that they have an irrigation controller in the garage. Many do not understand cycle irrigation, which is the practice of running a irrigation system for very short periods of time, adding up to a prescribed length of time. This practice is best for soil types that have slow filtration or other conditions where runoff could be a problem. The Work Group recommends that water agencies conduct the following educational activities:

- i) Define zone watering
- ii) Illustrate differences between pop-up spray heads and rotors
- iii) Educate customers on how to program controllers to comply with restrictions
- iv) Educate customers about cycle irrigation
- v) Educate hose-draggers and show how they can comply with zone watering

Non-consensus

The Work Group was not able to reach consensus on recommending how long to water per zone. Despite multiple day-long workshops and numerous presentations by experts, the group could not find a ‘one size fits all’ scenario. Variables such as unique issues specific to individual water agencies, economic impacts, soil type, weather conditions, physical site conditions, site use, and type of turf made it difficult to find zone watering times that would work for everyone.

Implementation

Implementation and enforcement of these or any other recommendations will be the responsibility of each participating water agency. The Work Group strongly urges water agencies to experiment with zone water times and meet again in the fall to evaluate outcomes.

Lawn Watering Work Group

The Lawn Watering Work Group is a project-oriented assembly of water conservation, water resources, water treatment and delivery professionals from most of the water agencies from Denver to Fort Collins, as well as landscaping specialists that operate in the region. Many of the representatives from this group are members of the pre-existing Colorado WaterWise Council. This Work Group has collaborated to develop a set of recommendations for a consistent, mandatory lawn-watering schedule for communities in the northern Front Range region. The goals of these recommendations are to 1) lower water demand through wise and efficient water usage; 2) maintain as much existing turf as possible; 3) create a product that is easy for the public to understand; and 4) create a product that is easy for water agencies to administer.

The Work Group began in February 2002 when representatives from the Rocky Mountain Chapter AWWA Conservation Committee and Colorado WaterWise Council Members met to 1) discuss the possibility of collaborating on a unified media campaign to promote water conservation because all meeting participants were served by the same media sources and 2) to discuss updating the 20-year-old circle, diamond, square watering schedule. While developing a new outdoor watering strategy, the work group acknowledged the importance of defining watering times throughout the decision-making process. The group consulted with turf experts, growers, and irrigation experts to make a final decision. The Work Group's recommendations have been developed in cooperation with GreenCO, an organization that represents Colorado's professional landscaping industry. All recommendations have considered impacts on water treatment and delivery as well as likely public acceptance.

Work Group members include:

(in alphabetical order)

Natalie Brower-Kirton, City of Aurora
Cris Call, Denver Water
Laurie D'Audney, City of Fort Collins
Cliff Deeds, City of Arvada
Monte Edwardson, Consolidated Mutual Water Co
Stu Feinglas, City of Westminster
Elizabeth Gardener, Denver Water
John Gibson, Swingle Tree & Lawn, GreenCO
Elaine Hassinger, City of Thornton
Paul Lander, City of Boulder

Loretta Lohman, CSU-Cooperative Extension
Rick McLoud, Centennial Water & San. Dist.
Dan Mikesell, City of Aurora
Debra Mills, S. Adams Co. Water & San. Dist.
Fran Phillips, City of Golden
Ruth Quade, City of Greeley
Amy Stecyk, City of Northglenn
Lynne Wegley, City of Longmont
Pamela Packer, Group Coordinator/Facilitator