RECLAMATION
Managing Water in the West
U.S. Department of the Interior
Bureau of Reclamation

Western Water and Power Solution Bulletin

Bulletin No. 13
Research and Development Office — Denver, Colorado **June 2008**

Conserving Urban Water Using Landscape Irrigation Guides and Tools

Create public awareness to reduce urban landscape irrigation water waste

What Is The Problem?

About one-third of U.S. household water use is for landscape irrigation. Much of this water gets wasted because of over-watering, evaporation, and poor irrigation system design and maintenance. Over-watering can cause surface and ground water pollution by increasing the runoff of pesticides, fertilizers and other contaminants. As water demand continues to rise, educating the public and promoting water conservation tools becomes increasingly important. Many homeowners and landscape professionals are not aware of the amount of water wasted from over watering lawns and the costs and pollution associated with that waste. Many also do not know how to reduce the amount of waste.

What Is The Solution?

Reclamation has developed simple watering guides and tools to analyze how much water is applied by landscape irrigation systems and determine adjustments needed to reduce over watering. Reclamation has also published its research findings on new innovative lawn irrigation water saving devices.

Reclamation's Upper Colorado Regional (UCR) Office in Salt Lake City, Utah has developed a simple watering guide, *Landscape Irrigation Simplified*, associated one-page pamphlet and video, and inexpensive, easy-to-use catch cups to help homeowners and landscape professionals conserve water. The catch cups measure the amount of water collected across an irrigated area. Water measurements are used to evaluate sprinkler performance so that sprinkler systems may be adjusted to apply the optimal amount of water. Along with the catch cups, the watering guide and video can be used by the homeowners to irrigate their lawns correctly and reduce over watering. The Reclamation catch cups are superior to similar products and are easier to use than everyday cans or containers.

Reclamation's Southern California Area Office (SCAO) has published a series of technical reports on "smart" irrigation controllers. These devices are designed to function similar to a thermostat and control irrigation systems to apply the correct amount of water at appropriate times. The current report, *Weather and Soil Moisture Based Landscape Irrigation Scheduling Devices*, was published in August 2007. This report is available at http://www.usbr.gov/waterconservation/docs/SmartController.pdf. It includes detailed descriptions of currently available smart controllers, controller features and comparison criteria. SCAO has also conducted a literature review of publicly available reports on water savings studies associated with smart controllers and published a report summarizing the literature review findings http://www.usbr.gov/waterconservation/docs/WaterSavingsRpt.pdf.

Who Can Benefit?

Everyone benefits collectively by conserving water. Improved irrigation efficiency results in lower water bills, improved landscape health, reduced water pollution and reduced fertilizer use. The catch cups, landscape watering guide and instructional video are available from Kelly Kope with Utah State University at 435-797-1523, kellyk@ext.usu.edu. The watering guide is also available at http://www.usbr.gov/research/science-and-tech/research/results/LandscapeIrrigationSimplified.pdf .

Professional and Residential Sprinkler Catch Cup Models

Where Have We Applied This Solution?

The catch cups have been supplied to numerous users throughout the U.S. The *Weather and Soil Moisture Based Landscape Irrigation Scheduling Devices* report has been provided to water agencies, landscape professionals and homeowners to promote water conservation. The Irrigation Association and others are using the report to train homeowners and irrigation professionals.

Future Development Plans

Ongoing related research projects include evaluations of water savings resulting from smart controllers and the amount of water consumed by different species and varieties of turf grass.

Contact Information

William Steele, Reclamation's SCAO Manager
wsteele@lc.usbr.gov , 951-695-5310
Fred Liljegren, Reclamation's UCR
fliljegren@uc.usbr.gov , 801-524-3765

Collaborators

Reclamation's Science and Technology Program, Technical Service Center, SCAO and UCR, Utah State University and the Environmental Protection Agency.