Dealing with Drought

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Challenges and rewards of water managment

Controversy over water use has come to a head in Georgia where commercial Landscaping Contractor Rick Upchurch sums up the situation as “the perfect storm.”

The conduit for major water systems that ultimately feed Alabama and Florida, Atlanta is in the eye of the storm with concentrated population growth, the misuse of lake water and a major drought.

“I’m an optimist,” says Upchurch of Nature Scapes in Lilburn, Ga., which provides landscape maintenance for multifamily and commercial properties and new installations for existing customers. “This is not the first drought I can remember, but it is the icing on the cake.”

The continuing drought in Atlanta leaves little hope this dock on Lake Allatoona north of Atlanta will be afloat as spring approaches.

Millions in revenue dollars have already been lost to dry conditions for turf companies, subsequent watering restrictions and reduced business from customers. Nature Scapes’ fall color installations dropped by half, which would have normally created $200,000 in revenue. Additionally, he had to let 25 employees go. Normally, his workforce peaks at 125.

Rick Upchurch of Nature Scapes in Lilburn, Ga.

“We went back to our customers and those who didn’t plant flowers. We encouraged them to plant bulbs for the spring because they only require a little water initially,” he says. “We’ve done retention pond cleanup, and some have used their flower money to revamp their irrigation systems so that when the water does return, they use it more wisely. Some wanted drought-tolerant perennials to get them through the summer.”

Turf professionals have been targeted with criticism about watering, but they all seem to agree that this is an opportunity to show the general public that landscape professionals understand the importance of water stewardship, and already practice it.

“We’ve been very positive through this whole thing. In a down market, you diversify. This past summer we pulled out our budget, and I do think next year will be a slow year, and we will have to catch up. We’ll continue to look at what else we can do,” Upchurch says.

Declarations and restrictions

On September 28, 2007, Georgia’s Environmental Protection Division declared a Level 4 drought response, which prohibits most types of outdoor water use, although the state offers some exemptions for commercial uses. However, local governments and water utilities may impose more stringent watering schedules.

Meanwhile, governors from Georgia, Alabama and Florida have met in Washington, D.C., to try to settle a tristate water dispute and develop a plan with federal officials.

In Atlanta, 11 of the state’s 14 watersheds originate in Georgia. Alabama and Florida are concerned about their share of that water flow.

“So, there’s no other water,” says Clint Waltz, associate professor and turfgrass specialist at the University of Georgia’s College of Agricultural and Environmental Sciences. “You are taxing a static system. Rain is variable and finite. Then you add more people… it’s much easier to plan without emotion. Even if it started raining tomorrow, we need to stay the course and focus on water management.”

Mary Kay Woodworth, executive director of the Metro Atlanta Landscape and Turf Association and point person for the Urban Ag Council, says that for landscapers with business in different counties and cities, “it’s a nightmare.”

The Environmental Protection Agency’s drought management plan has exemptions for companies that need to continue operating. For example, professionally installed landscapes get 30 days to water after an installation. There are also exemptions for nurseries, sod companies, golf courses and car washes. Local governments have the option to limit watering further, either by percentage or shutting down water use altogether.

As of December 1, 2007, a MALTA (Metro Atlanta Landscape and Turf Association) survey found that there has been $1.9 billion in lost revenue, and 30,000 people were expected to be laid off by December 31, 2007. That is

a significant increase from the 13,800 job losses as of October. The statistics include all of Georgia, with the majority in north Georgia.

“What landscapers can do is educate their customers,” Woodworth says. “Teach them about water conservation, so when restrictions are eased, they are irrigating properly. Even though it is difficult short term, the benefit is we’ll have a greater educated consumer and profession.”

Large-scale management

Dexter Adams, grounds director for the University of Georgia campus in Athens, Ga., says that, like many other turf managers, much of his time has been spent watching his grass go dormant. His department makes its own compost, so the emphasis has been on improving the soil. He is investigating cisterns, water capture and the possibility of water reuse.

Adams has not asked for any exemptions. “We have historical and teaching gardens and we just had to bite the bullet,” Adams says. “We have always prioritized all of our turf areas.”

Adams installs irrigation systems that will last about three years, and doing so weans turf off of irrigation and onto rainfall.

Georgia’s Sanford Stadium was hit especially hard when restrictions came into play during the football season. An on-site retention pond helped to weather the drought, but levels were unusable, and the school received shipments of water for the football field. Practice fields were not watered.

Adams’ advice to others managing large properties: “Don’t try to be an exemption and don’t consider yourself something special. I’m a landscape architect and we’ve tried to use appropriate natives.”

Putting it on paper

One group that has been singled out for watering by public perception, as well as restrictions, is the golf course industry. Courses are currently unable to water 96 percent of their grounds, including fairways and tees, under Level 4 restrictions.

A private source of gas for boats sets on the dry lake bed on Lake Allatoona, north of Atlanta.

Richard Staughton, immediate past president of the Georgia Golf Course Superintendents Association and general manager and superintendent for the Towne Lake Hills Golf Club in Woodstock, says that courses have become aggressive about conserving water in recent years. Most courses already get their irrigation from ponds and lakes on-site, but that water is still considered water of the state, even though it is part of the golf course.

Several courses have been moving to reclaimed water for irrigation, says

Staughton, whose organization has been recognized by Georgia Governor Sonny Perdue for their water conservation efforts.

Georgia's last major drought ended in 2002, and that prompted many in the golf industry to ponder better water management practices. The state was also beginning to develop a plan for outdoor watering, which included restrictions for golf courses. Mark Esoda, certified golf superintendent for the Atlanta Country Club, along with GGCSA members, Waltz and other professionals from UGA, developed a plan for best management practices for water conservation on golf courses. He worked with the Department for Environmental Protection to develop a memorandum of agreement in 2004 between GGCSA and the Department of Natural Resources for adopting best management practices in golf.

Esoda's goal was to show the department he could garner 75 percent course participation by 2007. That goal was exceeded and boasts 92 percent participation to date.

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Best Management Practices

Here are 10 best management practices developed by the Georgia Golf Course Superintendents Association in Conjunction with the University of Georgia's College of Agricultural and Environmental Services and other concerned associations and government agencies:

• Use of non-potable water sources for irrigation

• Efficient irrigation system design and monitoring devices for implementing water conservation

• Efficient irrigation system scheduling/operation

• Development and selection of turfgrass

• Landscape design for water conservation

• Altering practices to enhance water use efficiency

• Indoor water conservation measures in buildings, air conditioning units, pools and other facilities associated with a landscape site

• Education for landscape managers, support crew, facility officials with direct communication to state, regional and local water regulatory officials

• Development of formal conservation and contingency plans

• Monitor and revise plans