Audubon International recognizes STMA member

WITH MY BACKGROUND IN MANICURING GOLF COURSES, I am used to the environment being a consideration. Protecting it is expected of you and your maintenance program. Once I accepted the position for superintendent of grounds at St. Mary's College of Maryland, with responsibility for overseeing the college's roadways, grounds, beds and seven sports fields, I thought it would be an easy transition. I quickly realized, however, that there is a difference between golf course maintenance and maintaining sports fields—a very big difference. I not only have the turf to worry about, but also the soil chemistry and moisture for the baseball field skin area, field conditions for playability, learning about titanium oxide and calcium carbonate from sports field paints, and, most important, the safeness of the fields for athletic play.

The St. Mary's College of Maryland grounds crew and I have met these challenges. We were recently rewarded for our environmentally sound grounds plan by Audubon International with certification in Environmental Planning from the Audubon Cooperative Sanctuary Program (ACSP). The college is the first in Maryland to receive this certification. The international program is designed to help preserve and enhance the environmental quality of properties.

Once I got my sports turf management program in place, I thought about how I could make a difference by using more environmentally friendly maintenance practices on the athletic fields and campus grounds. At first this was a bit tough since I had no program to guide me. I wanted to come up with a plan that would be good for the environment and our athletic field program as well.

I first talked to my direct supervisor, Derek Thornton, who is assistant vice president of campus operations. He was 100 percent behind my efforts. I then talked to the assistant athletic director and head soccer coach, Herb Gainey, who helped me by setting up a plan and setting an example for the other coaches to follow by rotating his goal area to all four sides of the fields when teams were practicing on them. He also had every team member do warm-up exercises off the playing surface. He had his team walk the stadium field and practice fields after games to repair damaged areas and pick up any litter. This was the start of my program.

Environmentally sound sport fields are often rare. We have several sports fields located near or on a historic site that is part of the campus. To put an environmental plan into action with these considerations was challenging but rewarding. My first step was to take a hard look at the natural landscape within our sports field complexes. Our baseball field was designed by Paul Zwaska, formerly with the Baltimore Orioles and now the general manager at Beacon Athletics. The Hawk's Nest, which opened in 2001, has the nostalgic feel of a ball park in the early 1900s. The dugout is built of timber, and native plantings surround most of the backdrop and sides of the park. We have transplanted 17 Crape Myrtle trees and 67 Abelias from areas under construction to the ball field to add color and shade for fans watching games. We are in the final phase this year of planting a buffer zone of native Black Eyed Susan's for a distinctive look behind the outfield fence in a grassy meadow that captures nutrients from the water that drains from the ball field and parking lots.

We have in place a good integrated pest management program for the sports fields as well as water management programs that we check daily. We also topdress some of the sports fields and events lawns with compost from organic material waste that we collect from the campus and sports fields. We apply it about an inch deep. This helps nourish nutrients and soil moisture. We use wetting agents to keep irrigation efficient. Regular checks are made for broken heads, leaks, and to ensure that irrigation heads are running efficiently and watering only the turf and not the skin area or warning track of baseball or running track of the stadium fields. We also use turf growth regulators to help cover areas with lateral turf growth movement and reduce mowing, which in turn helps reduce our carbon footprint.

The baseball field is planted primarily in bluegrass and ryegrass,

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Left: Part of St. Mary's wildlife habitat, part of the buffer management program for the storm water pond. **Middle:** From left: George Lancaster, James Dyson, Steve Gregory, Kevin Duffy, Eric Reed, Cheryl Krumke, Chris McKay, Rick Thompson and Superintendent of Grounds Kevin Mercer. **Right:** Campus green space called Admissions Field features recycled sports field turf and is used for Frisbee golf, recreation, and intramurals.



Left: St. Mary's College Hawk's Nest baseball field. **Middle:** Transplanted Crape Myrtle trees. **Right:** Natural area with native plantings and Red Chewing fescue that water drains to from the sports fields.

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but will be converted to a warm season turf in the near future to reduce the need for fungicide applications. The rest of the college's sports fields, practice fields and the stadium field are planted with Riviera bermudagrass. This is the perfect choice for us because of the tightness of the plant. The playability is right on the mark. The plant responds well to early green-up from cold winters.

For sustainability, Riviera holds up extremely well to drought and excessive play, which our multi-use stadium field gets, having five sports teams on it throughout the year. Other bermudagrasses may offer the same toughness, but Riviera takes very little water usage for establishment. Bermuda sprigs, for example, take a lot of water for growth, which isn't water efficient if water conservation is a consideration in your organization.

The college has two practice fields that grew in completely on native soil in a 6-week period. The athletic department was holding practices three times a day on them by the seventh week. The water used was only to dampen the soil. Watering was done twice a day, early in the morning and early in the evening for 3 minutes a zone. We increased the watering after germination to 5 minutes a zone until grow-in was completed. Sprigging the field was too expensive and not cost-effective. Watering also wasn't as efficient as we would have liked.

Another idea for sustainability occurred to me in the construction phase of two practice fields. We had the drainage for both of the fields run into a natural area filled with native trees and red chewing fescue to collect any nutrient runoff that might occur. This acts not only as a buffer zone, but waters our native plantings and allows water to eventually seep back into the groundwater table.

The renovation of the college's stadium field included resurfacing the field with Riviera. I didn't want to blast the field with herbicides, so I specified that the contractors strip off the old Vamont Bermuda sod. We installed 16 quick couplers to irrigate the field from a storm water pond to recycle nutrients back into the newly laid sod or green space. We then incorporated a buffer zone of wild flowers and red chewing fescue around the perimeter of the storm water pond. This also acts as a natural habitat for wildlife.

As mentioned earlier, these efforts are required for Audubon certification. Each environmental assessment plan can and may be different from another sports turf manager's, but this is how we learn from each other and create a networking plan with our STMA local or national associations. Have fun and share your opinions. We all want to know and learn from each other. Together, and as a team, we can make a difference. Remember, we can only lead tomorrow if we show by example today. ■

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Sustainability ideas for sports fields

The following is a checklist of sustainability ideas for sports field complexes. All are required for Audubon ACSP certification:

Wildlife Habitat

Note wildlife habitat around your sports field and keep it protected, free of pesticides and maintenance. Put up signage to identify wildlife or add bird houses, milkweed plants and butterfly bushes to attract wildlife. Make sure you manage all your buffer areas correctly.

Turfgrass Management

Take simple steps to make your sports field more sustainable. Have soil tested yearly. Use organic fertilizers. Get your field on an aerification and verti-cutting program to allow water and nutrients for plant uptake. Check your fields dally for damage, stress, disease pressure and nutrient needs. Rotate goal areas when practice sessions are heavy.

Resource Management

Ensure that your shop uses federal- or state-approved fire lockers with secondary containment for pesticides, paints, oil, aerosols, gasoline and storage for used oil, antifreeze and florescent light bulbs. Use waste oil heaters to burn waste oil to heat your shop. Make sure your crew knows how to respond to any spills safely and correctly. Use energy performance-enhancing light bulbs, sensors, LED exits signs and so on. Use water-saving technology for the interior and exterior of your sports field complex. Use signs to direct people to recycling receptacles placed throughout the sports field complex and have recycling dumpsters in place. Use electric utility vehicles and mowers. Use Hybrid model vehicles for road use. Start a compost pile and get it tested for its carbon and nitrogen ratio. Use pervious surfaces for sidewalks and parking lots to allow water to seep back into the water table. Use mulch around trees and shrubs to help water efficiently.

Outreach and Education

Get your local Boy or Girl Scout Club and community involved with planting native wildflowers, plants or trees in locations where wildlife habitats are desired and where energy performance for buildings can be increased by shading sunlight and blocking wind. Have Scouts pick up trash within your complex as part of their service project.

Water Management

Make sure you check soil moisture regularly. Ensure that you aren't wasting water from sprinkler heads that throw water on skin areas of baseball or softball fields or warning tracks. Update your control box with evapotranspiration equipment to reduce over watering. Use wetting agents in localized dry spots to help keep these areas efficient with hand watering. Check your system for leaks, broken heads and uniformity on a regular schedule.