

LOWERING THE CHEMICAL BOOM

How aquatic dyes are helping superintendents to better manage and manicure their water.



By William Olmstead

Dan Cremins knows what's wrong with his water. A few years ago, during the middle of the playing season, the superintendent at Sterling Mountain in Woodland Creek, Colo. watched helplessly as three of his water hazards began to stagnate and overgrow with weeds and algae.

"There was really no way to solve the problem. We got such a late jump on the season that even herbicides and algacides weren't doing the trick," he says.

Since then, Cremins has taken the time to properly plan for his hazards, using some chemical assistance to save hard work and money throughout the year.

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WATER DUTY. Properly caring for lakes, ponds, and streams adds to both a course's beauty and its playing difficulty. A well placed lateral hazard can create a stunning fairway view for players while simultaneously demanding meticulous approach shots. As a result, understanding these hazards is important to establishing and enhancing course value. Without proper planning and execution they can become a nightmare for superintendents.

THE PROBLEM. From the Barry Burn at Carnoustie to Ike's Pond at Augusta, hazards have always been a huge part of courses and course management. Not surprisingly, superintendents are constantly seeking unique and cost-effective ways to understand and manage them.

"It can be intimidating for many managers who are, naturally, mostly focused on turf," says Shaun Hyde, water quality and technology leader at SePro Corp. "Sometimes, they fail to establish a proper water treatment program, or they get behind and the problem worsens. The solutions don't immediately present themselves."

Submerged aquatic weeds and algae, like all plants, require nutrients to grow and flourish. In untreated water, ultraviolet light reaches the pond floor, allowing these plants to photosynthesize, growing larger and taller as a result. The area in which this occurs is called the photic zone. If unmitigated, this plant growth can overrun the surface and become unsightly, detracting from course beauty and giving off unpleasant odors as the natural result of biochemical breakdown. Understandably, no golfer wants to play on a course dotted with stagnant ponds and silt-laden lateral hazards. Simultaneously, beautifully managed ponds are an indicator of a well-kept course and a capable staff.

THE SOLUTION. Aquatic dyes allow superintendents to control plant growth and establish consistent water coloration through the year. These dark dyes, properly diluted throughout the water, filter out ultraviolet light and prevent plants and weeds from accessing the energy they need to grow. The dye also allows

start on the season."

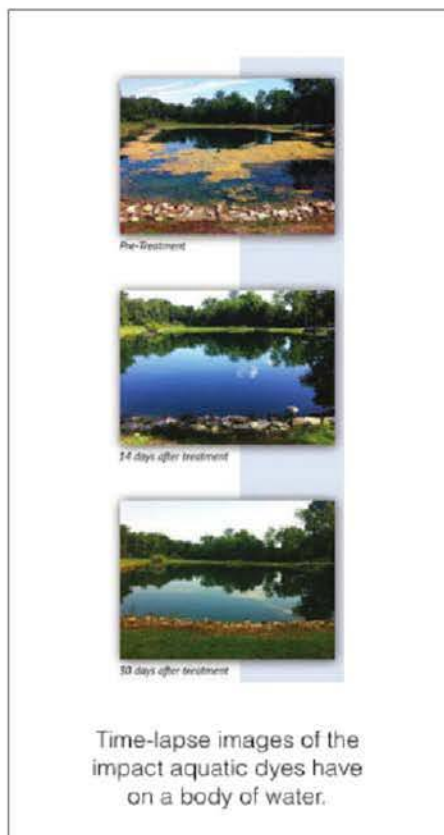
But, he notes, when the plants break through, you need to bring in other tools, like an algaecide or an herbicide.

The dyes are easy to use but require some advanced planning. A recent study at the Ohio State University found them to be most effective when applied in March or early April, depending on regional climate. If the dye is applied late in the season, plants will have already grown to the surface, making the dye ineffective.

"Dyes can be proactive or reactive, depending on the time of year when they are applied" says Troy Bettner, turf and ornamental director at SePro.

Once applied, the dye will naturally dilute in just a few hours. No spray application is needed. The Ohio State study recommends measuring the dye dilution within 48 hours of the initial application. To do so, take a white, weighted object (such as a painted 5-pound free weight) on a length of twine or string and carefully lower it into the water, measuring the exact depth at which the object is no longer visible. Use the initial depth measurement as your baseline level to maintain throughout the season. Every two or three weeks, continue to measure the visibility depth. The study recommends that once the measurement increases by 25 percent (i.e. the baseline measurement was 24 inches, the visibility depth is now 30 inches,) more dye should be applied. To eliminate variables, it's best to conduct the visibility test in the same area of the pond at the same time of day throughout the season. Maintain dye levels through the end of August, or until temperatures drop and growth slows. **GCI**

William Olmstead is GCI's assistant editor.



superintendents to color their ponds to their specific preference. Dark black dyes are the most popular, giving ponds a shiny, mirror-like surface.

"It gives a sense that the water is naturally colored, and that's the key," says Joe Lara, chief product manager at BASF. "It's also a great foundational product to start a management program at the beginning of the year, a nice soft tool to get a jump

More online

For more information on aquatic dyes, check out an Ohio State University Extension Factsheet by entering bit.ly/1fWwpMR into your browser.

