

## Preserving Lake & Pond Water

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oxygen-rich water throughout the pond. These conditions favor aerobic bacteria and algae species. As these beneficial organisms feed on nutrients, they help prevent algae blooms.

The angle of the propeller and size of the motor will determine how deeply the aerator will circulate water. As a general rule, the larger the motor, the more water the propeller will move. Horizontal aerators also are available with decorative covers, such as rock-like structures. The covers make the aerators more aesthetically pleasing and discourage vandalism.

The pond or lake size will determine how many aerators are necessary to provide adequate aeration. Few lakes are perfect circles or ovals. For maximum benefit, you need to plan enough aeration for the entire area.

**Diffused Air Injection.** Diffused air systems work through a series of tubing placed at the bottom of the lake or pond. A series of emitters along the tubing break up the air stream into different bubble sizes. The larger the bubbles, the more surface disturbance will occur.

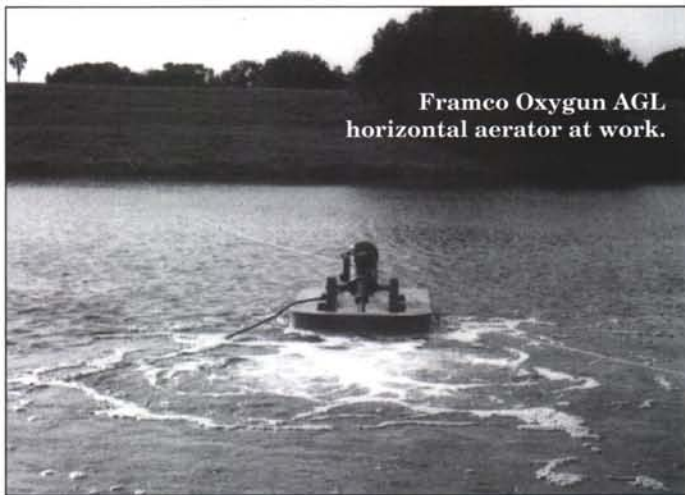
An air compressor located on shore generates an air flow that circulates through the tubing. As bubbles escape through the emitters, they oxygenate the water as they rise to the surface. The rising air also helps circulate the water, breaking down stratification.

For uniform aeration, the length and spacing of the tubing and the size of the compressor must be designed specifically for the pond you are treating. The cost of operating this type of system will depend on the size and depth of the pond. The deeper the pond, the more power it will take to send air upward.

Ozonation is a variation on diffused air injection. Instead of just injecting air through underground tubing, the system adds ozone. Ozone is an unstable gas that acts as a powerful oxidant. Its O<sub>3</sub> configuration readily breaks down into O<sub>2</sub>, which we know as the oxygen we breathe, and the oxygen radical, which easily with other ions. This means ozone is capa-

ble of oxidizing many organic and inorganic components.

"Algae are funny little creatures," says Owen Stone, superintendent of the San Joaquin Country Club, an 18-hole, 7,900-yard course in Fresno, CA.



"You never know where they're going to pop up. It used to be that the only thing we used to control algae was copper sulfate. We used to have to rake the algae out of the lake to keep it from getting into the irrigation system—we had a great filtration system but it was working overtime. But three years ago, we installed an ozone aeration system from EP Aeration in our upper lake, which is about 3-1/2 acres, and two years ago we put one in another smaller lake.

"For the first year in the upper lake, I went with just the system and didn't use any chemicals—and it went really well," he continues. "I would say it controls at least 80 percent of the algae. Now, I help it along with copper sulfate and Aquashade dye."

### Making Choices

When you determine which system to use, evaluate not only how much you want to spend initially, but also how much you can afford for ongoing treatment. Then, prioritize your needs. Do you want a water display or a natural-looking pond? Do you need to maintain a fish population? Will golfers tolerate some level of floating algae?

Weigh these considerations when you shop for a system. Know the surface area, water depth, and design of your pond when talking to distributors about your options. If possible, bring a sketch of the pond with you when you talk to distributors. Addressing water quality today will save you serious headaches tomorrow. □

## DONALD ROSS AWARD PRESENTED AT ASGCA ANNUAL MEETING

The American Society of Golf Course Architects presented the Donald Ross Award to its Executive Secretary, Paul Fullmer, during their annual meeting at the Maidstone Club, East Hampton, Long Island, NY on May 3-7. The award is bestowed annually to an individual who has made significant contributions to golf, specifically in golf course architecture.

Other highlights of the four-day meeting included: Past President Rees Jones, who moderated a panel on the "Historical Impact of Long Island Golf Courses;" President Tom Clark, who moderated a panel on "What's Next With Environmental Permitting?"; Former president Dr. Mike Hurdzan, who led a panel on the "Audubon Cooperative Sanctuary Program for Golf Courses;" Financial sources committee chairman Brian Silva, who moderated "Where Will We Get Financing In The 90s?"; Alice and Pete Dye, who presented a professional development seminar on "The Ocean Course at Kiawah Island...The Ultimate Challenge;" and Mike Klemme of Golfoto, who presented a seminar on "Marketing—The Key To Growth."

## PAGE COMPLETES CERTIFICATION PROGRAM

Donald Page, who is landscape manager of Harbour Ridge in Stuart, FL, has completed the Professional Grounds Management Society Grounds Manager Certification Program. He is the 29th person to do so since the beginning of the program.

The PGMS began this program to upgrade professionals and bring recognition of professionalism in the field. Applicants must be approved by a certification committee, pass an exam and complete a series of booklets on the various phases of grounds management.

## MILLER APPOINTED MANAGER FOR SMITHCO

Emil Miller has been appointed marketing manager for Smithco. He will be responsible for all phases of marketing for the company distributors and end-users throughout 13 Southeastern states and the Caribbean area. He will also provide sales support services for distributors and participate in corporate new product development and introduction.