

The lake that almost wasn't

BY ANGELA SPIVEY



PHOTO BY NICOLE FIGERE CALLAHAN

PHOTO BY DAVE HORNE

Today, people in the North Carolina Piedmont think of Jordan Lake (almost 14,000 acres of water in Chatham County, 25 miles southwest of Raleigh) as a good place to boat, fish or swim. But in the 1960s and into the '70s, the idea of creating a man-made lake in that spot was a topic of heated debate for the growing Chapel Hill community, and even within the UNC School of Public Health. »

The sun sets over Jordan Lake (right). Located 25 miles southwest of Raleigh, N.C., the lake draws people from miles away to boat, fish and swim its 14,000 acres of water. Ospreys and colonies of nesting bald eagles have made the lake their home.

The lake was intended to prevent another flood like the one that caused \$4.7 million worth of damage in Fayetteville, N.C., in 1945. The Army Corps of Engineers proposed to dam the Haw River, creating a reservoir that would come to be named after U.S. Senator B. Everett Jordan.

Predictions about the results varied widely, even among scientists. Some thought the water would be okay for boating and swimming, but not for drinking. Others thought the lake would become a “cesspool” of stagnant water, unfit even for recreational use. That prediction was driven by the fact that the upper parts of the Haw and New Hope rivers, which would feed the lake, received discharges from wastewater treatment plants in Greensboro, Graham, Chapel Hill and other communities.

Dr. Charles Weiss, now emeritus professor of environmental sciences and engineering at the UNC School of Public Health, says he was drawn into the debate because at that time, he and his students had been studying water quality of the major feeder streams to the proposed lake as well as the quality of other existing man-made lakes in the North Carolina Piedmont. Weiss joined the faculty in 1956 and was the first limnologist (scientist who studies lakes, rivers, and streams) in UNC’s Department of Environmental Sciences and Engineering.

Weiss believed that most of the predictions about Jordan Lake were too dire. He had been using water of the Haw and New Hope rivers as natural labs to teach his students sampling and analytical methods to assess water quality. His studies over several years indicated that these rivers and Jordan Lake would have the ability to as-

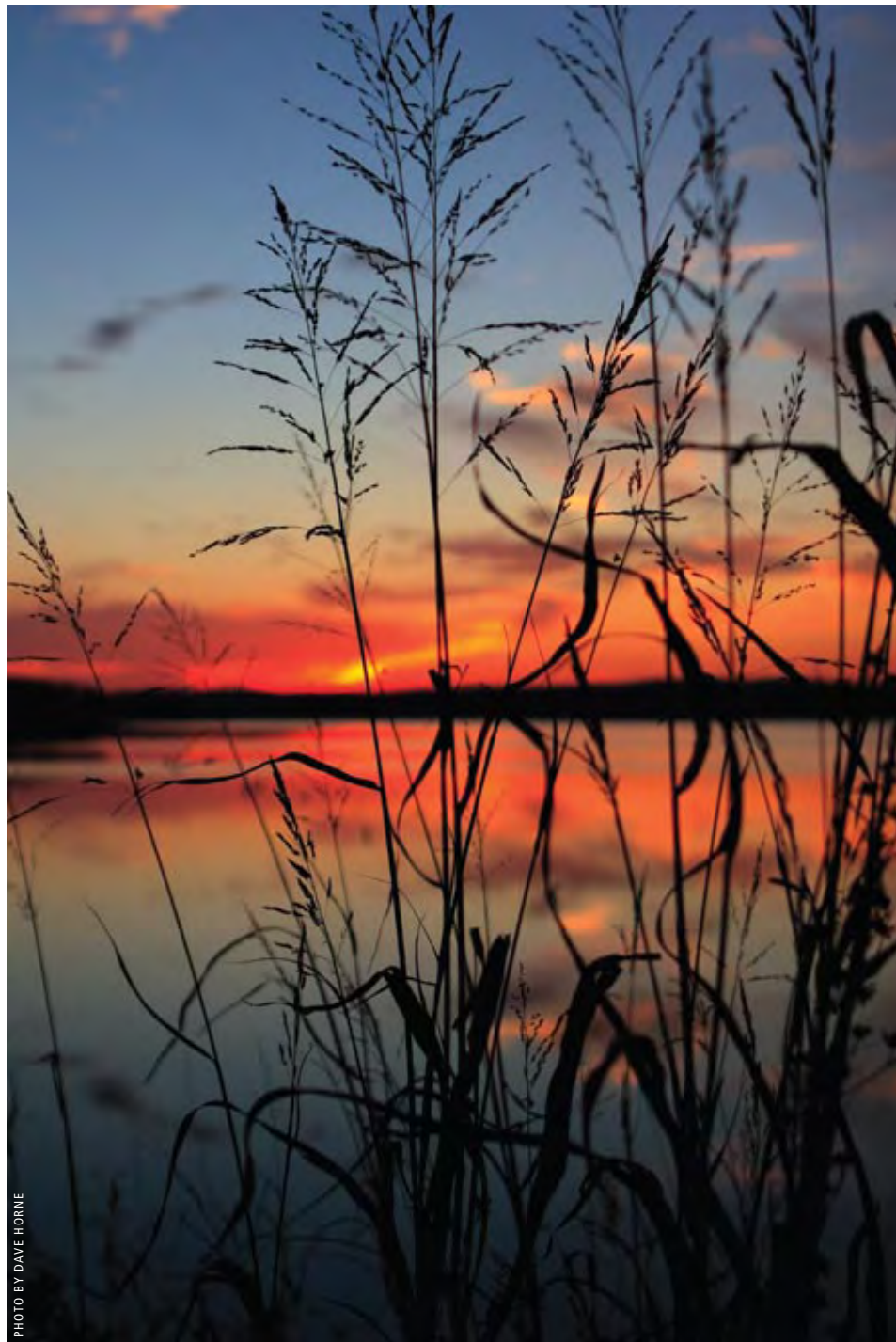


PHOTO BY DAVE HORNE

similate nutrients in the treated wastewater discharges from the upstream communities. “The proposed reservoir’s size and other characteristics were no different than any other man-made lake in the (North Carolina) Piedmont,” Weiss says.

Congress authorized the dam in 1963, and construction started in 1970. But the controversy over the projected water quality of Jordan Lake, including a 1971 lawsuit by

environmental groups, held up completion of the dam for years. As litigation continued, Weiss was funded by the Army Corps of Engineers and the Water Resources Research Institute to study the reservoir and identify wastewater treatment practices needed upstream to avoid problems that might lead to excess algal growth. He conducted additional studies after the lake was completely filled in 1983, confirming that the lake’s



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levels of heavy metals and phytoplankton were at or below state standards.

Today, the lake is certainly not a cesspool. It meets North Carolina water quality standards for supply and recreation and was recently described in the New Hope Audubon Society Newsletter as a North Carolina treasure. Although it's best known for recreational uses, Weiss points out that in 2003, the National Audubon Society named Jordan Lake among the top 10 near-city birding areas. "It has colonies of nesting bald eagles and ospreys hovering over the lake fishing," he says. "Its recreational value has exceeded predictions—in 2006, approximately 12.6 million people visited the lake."

Even Triangle-area environmental groups acknowledge the benefits of the lake that almost wasn't. But they are concerned about keeping it clean for all its uses. In January 2007, three groups—the Haw River Assembly, the Southern Environmental Law Center and Environment North Carolina—called Jordan Lake a "vital resource," and asked the state's Environmental Management Commission to do more to protect

it from pollution that has come with ever-increasing development. The groups asked the commission to step up a deadline for

otherwise form disinfection byproducts (see page 34). "If you're looking at current-day regulations and modern treatment

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wastewater treatment plants to reduce nitrogen discharges into the lake and also called for specific requirements to protect the lake from polluted storm-water runoff.

The lake does have its problems. As a source of drinking water, "it's challenging to treat," says Dr. Francis DiGiano, professor of

technology, Jordan Lake has the potential to produce acceptable water quality that meets regulations, which is the case for the town of Cary, although tighter regulatory control of contaminants could make it more challenging to treat the water in the future," DiGiano says.

Northern Chatham County, on the other hand, gets its water from the same location in Jordan Lake but has reported several incidents of unacceptable levels of contaminants. The Chatham plant uses conventional chlorine-treatment technology, which is less costly than ozonation. They may be paying the price in quality. "When you're encouraging urbanization in an area where there is no ample water supply, you are sometimes forced into lesser quality water. This means far more attention needs to be given to high-quality water treatment technologies to protect customers," DiGiano says. ■



TIP: Rather than wash your car in your driveway, on the street or in your yard, take it to a commercial car wash that recycles water to save water and eliminate the runoff of harmful pollutants. 💧

environmental sciences and engineering at the School. Even so, the town of Cary and northern Chatham County get their drinking water from the lake. Chapel Hill and Durham are also considering using their allotment of the lake's water if necessary to meet projected long-term demand (see page 22).