

# Algae treatment kills thousands of fish in lake

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About 5,000 fish have died because of algaecides applied to Hartwell Lake in an effort to improve the region's drinking water, state investigators said Wednesday.

The South Carolina Department of Natural Resources and the state's public-health agency are investigating the fish kill, which affects the area around the Anderson Joint Regional Water System's intake on the lake.

Officials from the regional water system and researchers from Clemson University and environmental-engineering company SynTerra Corp. announced last week that they would treat up to 160 acres of the lake with algaecides to try to improve the taste and smell of customers' drinking water. At the time of the announcement, officials said the copper- and hydrogen peroxide-based algaecides would be applied in granular form, in concentrations low enough not to harm fish or people.

But in a statement issued this week, the lead researchers on the project said the algaecides had killed shad and other small fish.

The statement was posted on the regional water system's website, and was signed by Matt Huddleston, a consultant from Greenville-based SynTerra Corp. who has expertise in biology and environmental toxicology, and by John Rodgers, a Clemson University professor who is considered a national expert on environ-

mentally sound ways to control nuisance vegetation in water. Rodgers is overseeing the algae-treatment project for the regional water system.

Capt. Robert McCullough, a spokesman for the state Department of Natural Resources, told the *Independent Mail* on Wednesday that an estimated 4,000 to 6,000 fish, mostly shad and some small herring, had been killed by the algaecide.

"Everything the Anderson water system and their consultants used was completely within code," McCullough said. "But it's not uncommon for baitfish to be vulnerable to algaecides. ... This fish kill was not a natural occurrence."

Scott Willett, the executive director of the regional water system, referred questions about the fish kill to the researchers behind the algae-killing project.

"I'm not the one to talk to," Willett said Wednesday. "Until the analysis is done by the experts, I have no comment."

The prepared statement from Huddleston and Rodgers says they began

**See ALGAE, 4A**

investigating the fish kill Monday, three to four days after applying algaecide to the lake. Neither Huddleston nor Rodgers returned calls from the *Independent Mail* on Wednesday.

According to their prepared statement, researchers walked along lake shorelines and observed the algae-treatment areas by boat. They saw small fish dead on the banks or floating near the shores of two residential coves near

the regional water system's intake on Hartwell Lake.

"Both coves contained several boat docks, where fish such as shad sometimes seek cover from predators," Huddleston and Rodgers said in their prepared statement. "It is evident that some of these fish came into contact with the algaecides during treatment."

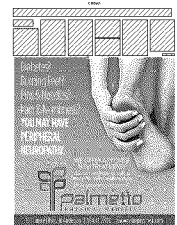
"Fish are typically safe during algaecide treatments and are generally not as sensitive as the targeted algae," the researchers said. "Extreme care was taken to apply the algaecides directly to the algae on the lake bottom and to avoid contacting fish."

The researchers said the algaecide was applied in accordance with regulations approved by the U.S. Environmental Protection Agency. The project was also properly permitted by the South Carolina Department of Health and Environmental Control and the Army Corps of Engineers, officials said.

The researchers said that the fish kill "is likely a one-time event" and that the water is "safe for human and wildlife exposure."

Billy Birdwell, a spokesman for the Corps, said officials with his agency were not surprised by the fish kill. "We knew this was a possibility when the regional water system announced it was going to use algaecides," Birdwell said. "Small fish are susceptible to dying when they come in contact with algaecides."

Birdwell said the kill appeared Wednesday to be minor, adding there are "tens of millions, if not hundreds of millions," of shad in the lake.



Birdwell initially estimated Wednesday that only "100 or so" fish had died, but McCullough, the spokesman for the state Department of Natural Resources, said later in the day that estimates in thousands were "more accurate."

McCullough said his agency is working along with the state Department of Health and Environmental Control, and the public-health agency is compiling data on the chemicals applied to the lake.

A spokesman for DHEC said the data were unavailable Wednesday.

The fish kill is the latest in a series of problems the regional water system has had recently.

The system supplies nearly 200,000 customers in the Upstate, using Hartwell Lake as its main source to provide up to 48 million gallons of water daily to more than a dozen utilities in Anderson and Pickens counties.

Officials have been battling the odor-causing algae in the lake for months. Soon after they thought they had properly treated the algae in late June, an unrelated pipe break cause a historic water outage for thousands of Upstate customers.

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