

## Jordan Lake fish kill leads to investigation

By Joseph Pardington, *The Chatham News/Record*, 20 April 06

Two separate fish kills were investigated in March at Jordan Lake, according to a report by Division of Water Quality (DWQ) of the North Carolina Department of Environment and Natural Resources.

The first investigation occurred March 20 and found 50 dead fish in the New Hope Creek arm of Jordan Lake. Forty-nine catfish and one shad were found dead in the water.

The suspected cause was a bloom of algae, according to the DWQ fish kill summary.

Another investigation occurred March 25 at Farrington Point, Jordan Lake.

During the second investigation, 60 dead catfish were found. The suspected cause was again a bloom.

Judy Garrett of DWQ investigated the first fish kill site and sent an email to Doug Wakeman, and the email was forwarded to **The Chatham News/Record**. Garrett sent water samples to Mark Vander Borgh, an environmental biologist with DWQ.

"I believe the fish kill is caused by algae bloom," Garrett said in an April 10 email. "The dissolved oxygen and pH were high. Also the water had a brownish green tint. An algae sample taken at the time of a fish kill revealed an algae bloom. The algae produce oxygen during the day due to photosynthesis. At night there is no photosynthesis and algae's respiration can use up all the oxygen, killing the fish."

Vander Borgh on April 5 cautioned that Garrett was still gathering data for a subsequent report.

Vander Borgh's job is to count the algae in the water samples, he said.

Excessive algae is one indicator of a problem in a lake, he said, but so too is a lack of algae, or algae that is decomposing.

It all has to do with the amount of dissolved oxygen available for organisms other than algae. The initial findings seemed within normal limits, he said.

"The density of algae found in the New Hope Creek arm of Jordan Lake was not unusual for this part of the lake," Vander Borgh said. "The conditions (of algae blooms)

seemed to be about normal for Jordan.”

Finding the cause of a fish kill is not that easy, Vander Borgh continued, because conditions could change between the time of the report and the time of the investigation.

For example, in the case of the March 20 investigation, the dead fish could have drifted to another location, he said.

And weather conditions need to be considered. If a hard rain fell, the samples could differ somewhat from the conditions at the time of the fish kill. It is hard to go back and recreate the conditions during a fish kill, he said.

Wakeman also unofficially investigated the fish kill as a concerned citizen. Wakeman recalled that he misunderstood the location of the fish kill and therefore took his boat in the other direction -- up Morgan Creek and into Cub Creek.

“I saw maybe a dozen dead catfish,” her recalled, noting the fish were widely scattered. “That’s a lot more than you usually see. It was kind of a surprise.”

Wakeman said he also spotted three dead crappies in Cub Creek. They ranged in size from 10 inches to 13 inches. “They had some sort of growth on their fins.”

The comments by DWQ for the March 25 investigation were as follows: “Surface water readings taken at Ferrington Point boat ramp showed high dissolved oxygen and pH. Fishermen stated seeing (about) 200 other fish washed up on rip rap area that was not accessible by foot. They stated they were primarily catfish with a few crappie. Water quality appeared to have greenish-brown color and very thick.”

The March 20 report described the situation as a severe bloom.

“The assemblage was diverse and comprised of blue greens, diatoms and cryptomonads.” Both investigations occurred early in the afternoon.

“I don’t know what this means for the future,” Garrett said. “We’ve known the lake is eutrophic for years.” Eutrophic means a body of water whose oxygen is being depleted by organic nutrients, according to the Encarta World English Dictionary. Garrett added, “I’m sure the drought isn’t helping matters.”

The number to report a fish kill are 1-888-823-6915, Harmful Algal Bloom hotline; 1-800-858-0368, Emergency Operations Center (off hours). For more information visit [www.esb.enr.state.nc.us](http://www.esb.enr.state.nc.us)