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Georgia Southern University

Polluter-funded research on the health of the Ogeechee River continues

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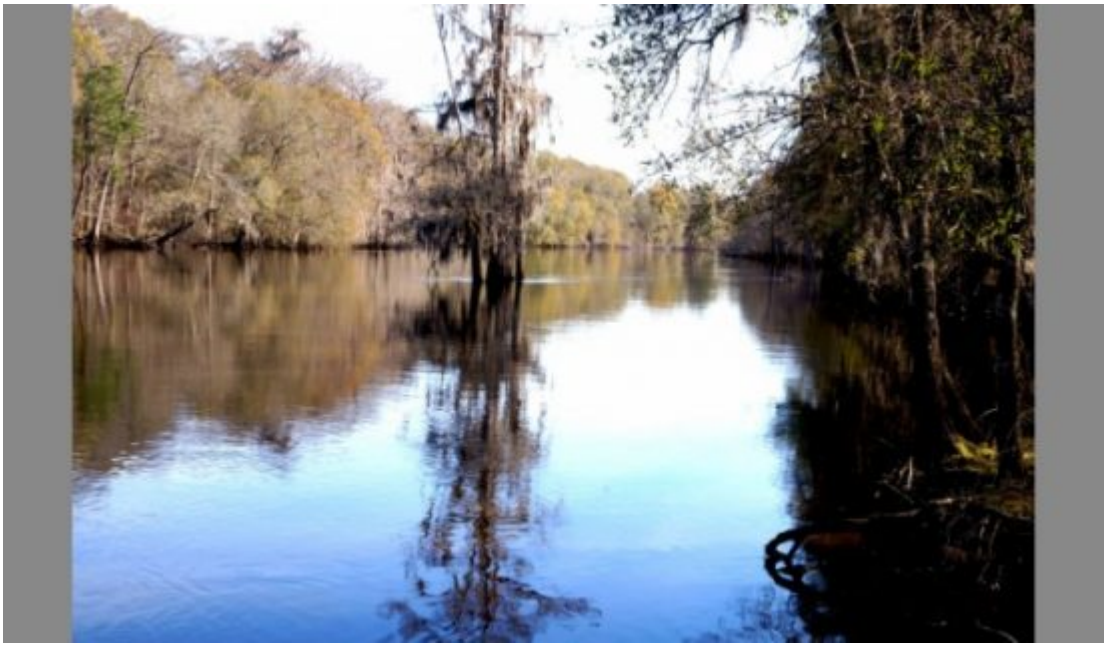

Researchers at Georgia Southern University are painting what they hope will be a comprehensive picture of the Ogeechee River and the animals that live in it.

The $1 million, more than three-years-long study is being funded by the owners of a textile finishing factory as part of a settlement brokered by state regulators after a fish kill investigation showed King America Finishing had been discharging its flame retardant line into the river without a permit.

GSU researchers from the departments of biology and geology/geography as well as collaborators at the Augusta-based Phinizy Center for Water Sciences are collecting baseline information about weather, climate, water chemistry, groundwater flows and fish and invertebrate populations in the river basin. They expect to continue through December 2017.

The researchers record parameters including river flow, temperature, pH, saltiness and oxygen levels every 15 minutes at a half dozen sites from the Highway 88 crossing to Morgan's Bridge. Those are supplemented with quarterly samples of fish and invertebrates at the same sites to show conditions during wet and dry times. Some of this data has been collected before, but more haphazardly, said Oscar Flite III, CEO and senior scientist at Phinizy Center for Water Sciences.

"Coordinating the sampling of organisms with water quality, climate and flow, that is what was missing," he said.

The studies won't necessarily prevent another fish kill, but could put the state in a better position to respond to one, said Steve Vives, professor and chair of the biology department at GSU.

“Certainly the response time to better study a fish kill would be shorter and the number of scientists involved would be larger,” Vives said.

The 245-mile black water Ogeechee was the site of one of the largest fish kills in state history just before Memorial Day in 2011. State regulators blamed a bacterial infection for the death of some 38,000 fish, but during the investigation the Georgia Environmental Protection Division also determined King America Finishing had been illegally discharging waste from its fire retardant processing operation for five years. The state eventually issued what it termed its “most stringent” permit and fined the textile processor $1.3 million, directing in a consent order that it fund this environmental research and several other projects along the river.

The textile plant was sold in May 2014 to Spartanburg, S.C.-based Milliken & Company but operates as a separate legal entity from Milliken and remains responsible for fulfilling the terms of the consent order.

Researchers at a public update on the project Tuesday at GSU stressed the studies were about using very basic science to create baselines. They made it through two hours of presentations without mentioning the 2011 fish kill or the presence of Milliken’s textile processing plant on the river.

That disappointed Don Stack, a board member and attorney for the Ogeechee Riverkeeper, which pushed for the more stringent permit and consent order and settled its own Clean Water Act citizen suit with King America Finishing for $2.5 million in early 2014.

“As acknowledged by all the presenters and everybody in attendance there’s a long way to go before we can make informed decisions about the sources of pollution and contributions to the health of the river,” said Stack, who attended the update but did not speak publicly. “I understand that it’s very much supposed to be a baseline but when you have a known source or stressor in the river there should’ve been a very targeted analysis of the contributions of that source.”

Researchers didn’t dwell on it Tuesday, but several projects are looking at the effects of THPC, a flame retardant. Vinoth Sittaramane, assistant professor of biology, is studying the chemical’s toxicity and pinpointing a measure known as the lethal dose 50 for the developmental effects in zebra fish, a non-native subject typically used for this purpose.

“We treat embryos with different concentrations of THPC to see at which concentration they are lethal to at least 50 percent of the embryos,” he said.

He doesn’t yet have results. Similarly, a collaborative effort in the biology department is using 16 artificial streams to examine the effects of varied levels of THPC on river organisms including snails and crayfish. The work was conducted over the summer but no analysis is available yet.

This article was originally written by Mary Landers of Savannah Morning News, it can be found here:http://savannahnow.com/bryan-county-now/2016-09-25/polluter-funded-research-health-ogeechee-river-continues.

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