



American Rivers

Thriving By Nature

America's Most Endangered Rivers of 2009

#6 Saluda River

South Carolina

Threat: Sewage pollution

SUMMARY

The drinking water source for more than 500,000 people and a hot spot for boaters and anglers, the Saluda River is choking from phosphorous pollution found in human waste. Wastewater treatment plants are dumping excessive amounts of phosphorous into the river, which is threatening property values, fish and wildlife, and popular recreational activities. The South Carolina Department of Health and Environmental Control must impose meaningful phosphorous limits on all wastewater treatment plant permits to protect the health of the Saluda River and communities that depend on it.

THE RIVER

The Saluda River originates in the Blue Ridge Mountains of South Carolina and flows 200 miles southeast before joining with the Broad River to form the Congaree. The upper half of the river runs through the rolling hills of South Carolina's Piedmont region and comprises 1,400 miles of streams and 14,000 acres of lakes. The seven counties and eighteen towns in this section of the Saluda watershed are home to more than 350,000 residents. Named one of the five most-sprawling regions nationwide, population here is expected to grow 30 percent by 2030.

The watershed supplies drinking water for more than 500,000 people and outstanding boating and fishing opportunities in a variety of urban and rural landscapes. The Saluda River and its tributaries once powered textile mills, which drove the economy of northwest South Carolina, and recent declines have left a significant economic gap that many hope can be overcome by recreation and heritage tourism opportunities. The river is a popular destination for paddlers, canoeists and rafters.

The mountainous headwater region of the Saluda River is home to a variety of fish and wildlife, including rainbow and brown trout, and the native eastern brook trout, the bog turtle and green salamander, and rare flowers like the bunched arrowhead, painted trillium, and the Oconee bell.

THE THREAT

Human waste is high in phosphorous, which, in excess quantities, can choke a river and destroy its clean water and fish and wildlife. Too much phosphorous can cause algae to grow unchecked, making a river unsuitable for swimming and other recreational uses. Decomposition of the algae depletes dissolved oxygen levels, suffocating fish, mollusks and other aquatic animals.

Lake Greenwood, a reservoir located approximately at the Saluda River's halfway point, serves as an indicator for the overall health of the Saluda watershed. It is the first major impoundment downstream of eight wastewater treatment plant discharge sites whose phosphorous limits are up for review and re-permitting in 2009 and 2010. Catastrophic algae blooms in Lake Greenwood have resulted in significant fish kills and the decline of millions of dollars in area property values in the last decade. As a result, taxpayers have had to pay annually for unsustainable and expensive chemical herbicide programs to keep the algae in check.

The Saluda River was found to contribute 55 percent of total phosphorus inflow into Lake Greenwood from 2002 to 2006. A five-year study released in mid-2008 by the Saluda-Reedy Watershed Consortium points to unregulated phosphorus from the upstream wastewater treatment plants as a major culprit, and recommends reductions in phosphorous inputs to the lake of 25 to 50 percent.

In Lake Greenwood, phosphorus-fueled algae growth limits summer habitat for striped bass and depletes oxygen levels. Unless lake phosphorous levels decline significantly, widespread loss of recreational opportunities, increased water treatment costs, continued declines in lakeshore and riverfront property values, and increased occurrences of fish kills can be expected.

With predicted average increases in surface water temperatures nationwide of 2 to 5 degrees Fahrenheit in the coming years due to global warming and an expected increase in droughts, the possibility of future algae blooms in Lake Greenwood will dramatically increase. Reductions in phosphorus pollution will become even more critical in the face of these challenges.

WHAT CAN BE DONE

The South Carolina Department of Health and Environmental Control (DHEC) has limited phosphorous from area wastewater treatment plants before. Two plants on the Reedy River, a major tributary to the Saluda, have limits on phosphorus, and treat phosphorous to a higher standard than the eight Saluda plants whose effluent permits are up for review in the coming year.

This year, the DHEC has a critical opportunity to reduce phosphorus concentrations in Lake Greenwood. Although the agency is in the process of developing a phosphorus standard for rivers, it already has a water quality standard for lakes, making this standard the only way to protect the Saluda River today. Five of eight major wastewater treatment plants plus three of four smaller plants north of Lake Greenwood (representing more than two-thirds of all wastewater discharges to the upper Saluda) must renew their five-year discharge permits between May 31, 2009 and June 30, 2010. DHEC should limit phosphorous concentrations in the effluent of each plant to approximately 50 percent of 2004-2005 discharge levels to ensure a healthy Lake Greenwood and Saluda River.

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