

# LAKE LANIER WATER QUALITY

Val Perry

---

AUTHOR: Valentine M. Perry, Lake Lanier Association, 615 F Oak Street, Suite 100, Gainesville, GA 30501

REFERENCE: *Proceedings of the 2005 Georgia Water Resources Conference*, held April 25-27, 2005, at The University of Georgia. Kathryn J. Hatcher, editor, Institute Ecology, The University of Georgia, Athens, Georgia.

---

**Abstract.** Lake Lanier is a multi-purpose lake in Northeast Georgia which provides for flood protection, power generation, water supply, navigation, recreation, and fish and wildlife management. Additionally, it supports a \$5.5 billion economy. Lake Lanier's waters are currently degraded from non point source pollution as well as point source pollution from forty seven existing sewage treatment plants. Twenty one years ago, the Georgia Environmental Protection Division enforced a moratorium on additional discharges in Lake Lanier. In November 2000 Gwinnett County requested and was granted by EPD a NPDES permit to discharge forty million gallons a day (MGD) of treated sewage into Lake Lanier. The Lake Lanier Association and others challenged this permit in December 2000 because the discharge would degrade the Lanier's high quality waters. After four years in the courts, the Georgia Supreme Court denied the permit as illegal in November 2004. The issuance of this permit would nullify the moratorium and open the doors for additional NPDES permits from the other six counties surrounding Lake Lanier. The association is a proponent of alternative solutions to lake discharges to include diverse re-use strategies.

## INTRODUCTION

Lake Lanier was impounded by the Buford Dam in 1958 and extends up the Chattahoochee and Chestatee Rivers. It encompasses 39,000 surface acres and 692 miles of shoreline and has over 100 islands. Lake Lanier is a multi-purpose lake that provides for flood protection, power production, water supply, navigation, recreation and fish and wildlife management. The Corps of Engineers manages Lake Lanier, and 8 million visitors visit it annually, making it the most visited Corps lake in the country. The visitors enjoy boating, sailing, fishing, swimming and water ski-ing. The Corps of Engineers maintains 46 parks, campgrounds and launch ramps. In addition, ten marinas, hotels and sailing clubs line its shores as do 9,000 permitted docks. Lake Lanier is known as metro Atlanta's "playground" attracting 90% of its visitors from the immediate area. The remaining visitors come from neighboring states.

Lake Lanier provides drinking water to 55% of Georgia and 75% of Atlanta and North Georgia. It supports a \$5.5 billion economy. The Lake Lanier Association was founded in 1960. It is a non profit association, whose members include recreational users, local businesses, and property owners. The association's mission is to protect the quality and quantity of Lake Lanier through its programs of education, action and advocacy.

## POLLUTION TO LAKE LANIER

Forms of pollution that threaten Lake Lanier and its watershed come from non point sources and point sources. Non point source pollution includes runoff from soil erosion from construction sites, fertilizer runoff from both rural and urban areas, waste from farmlands and chicken plants and toxic substances which end up in storm drains. Forty seven treatment plants, including thirteen with National Pollutant Discharge Elimination System (NPDES) permits, currently discharge 18 million gallons a day of treated effluent into Lake Lanier.

County	NPDES/ Permitted Flow (MGD)
Habersham	4.45
Hall	10.832
White	0.72

## GWINNETT COUNTY DISCHARGE PERMIT

In November 2000 Gwinnett County applied to the EPD, and was granted by them, a permit to discharge 40 MGD of treated sewage into Lake Lanier from the F. Wayne Hill Treatment plant in Buford. In December 2000, the Lake Lanier Association and others legally challenged the EPD permit on the basis that the discharge would degrade Lake Lanier's water quality. After four years in the courts, the Georgia Supreme Court ruled in the Lake Lanier Association's favor. The court ruled in November 2004 that the permit was illegal because it violates the state and federal antidegradation regulations by failing to require the highest and best level of wastewater treatment available under existing technology. The permit authorized discharges of fecal coliform that threatens

public health and safety, does not limit mercury that will impair fishing in Lake Lanier and permits pollutants at higher levels that are technically possible. Last month the Georgia EPD reissued a modified draft permit to Gwinnett County which still does not use the highest and best level of technology available to treat the effluent prior to discharge into Lake Lanier.

#### POLLUTION EFFECTS ON LAKE LANIER

Discharge of excessive phosphorous into Lake Lanier from the Gwinnett treatment plant will cause algae growth followed by an ecological domino effect leading to 'dead water.' Additional pollutants, dissolved oxygen, mercury and fecal coliform will compromise the lake's health. This resulting pollution will over time cause an economic downturn and a negative impact on wildlife and ecosystems.

#### ALTERNATIVES TO SEWAGE DISCHARGES

The Lake Lanier Association believes that its legal challenge to the EPD and Gwinnett County is part of a broader issue and that the state should establish the need for a comprehensive water planning management strategy. This strategy should address conservation, water withdrawals and management of treated wastewater. Discharge of treated sewage into high quality bodies of water such as Lake Lanier should be the last option after complete study of re-use strategies and alternatives including land application, industrial uses and potable reuse.

#### CONCLUSION

The state of Georgia is at a crossroads in managing water resources. The time is NOW to focus on water and take the steps necessary to protect and manage water in the state for the future. Alternative uses of treated sewage must be seriously explored, not given lip service. Potable reuse is clearly an alternative to lake discharges, and it provides a "win – win" situation. If reuse becomes a reality, then withdrawals will be reduced, and more water becomes available for growth and sustainability across the state.