

RAS Q-3

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OFFICE OF SECRETARY  
RULEMAKINGS AND  
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I'm concerned that unprecedented circumstances with regard to water should impact decisions being made. To ignore them could have unintended unanticipated consequences.

The nuclear industry is very demanding and unforgiving .  
The short-term benefits might be appealing, but the long-term effects could be devastating.

The Savannah River water is not inexhaustible.

The deep aquifers are not inexhaustible.

The rate of flow of the Savannah River has continued to decrease since 1870 as more dams were constructed and upstream draw down increases. At this time the Strom Thurmond reservoir is 8 feet below full lake level which bodes poorly for this summer. The Broad river and Stevens Creek, tributaries to the Savannah, are respectively at 47% and 34% of normal flow. Based on past history a prudent person might assume that the rate of flow of the Savannah will continue to decrease as water demands continue to increase and precipitation is fickle, and that to base the permitted withdrawals of water on today's rate of flow is flawed.

TEMPLATE = SECY-038

DS-03

The consumption of the cooling towers is calculated as a percentage of the rate of flow of the Savannah River. I'd like to suggest that this consumption should be calculated as a percentage of the flow above a base rate of flow, the conservation flow rate, of the Savannah. It is unreasonable to believe permits would allow all the water to be withdrawn from the river. Therefore, the prudent person, would describe a base rate of flow as one where no further withdrawals of water can be made to protect an ecosystem, disperse waste products, maintain oxygenation, and provide water to downstream communities in the least. With this point of view Vogtle's consumption would leap from insignificant to enormous.

I would like to see a worst case scenario study of the proposed water discharge on the river ecosystem: where the river flow continues to decrease, water temperature is up, air temperature is up, river water flow is low, greater water flow is required for ambient cooling, and heated water is discharged into the Savannah from 4 cooling towers. I suspect that the effect would be multiple times the effects from the present discharges. Is Vogtle prepared to shut down if cooling is no longer possible as has occurred in Alabama and France, or is water the length of the states of Georgia and South Carolina going to be held hostage to provide cooling water for Vogtle?

I feel that if water is being withdrawn from the deep aquifers, a study should show how much volume these aquifers hold, how they're recharged, from where and how fast, and how quickly the draw down will be. In my mind I find the reply to a question posed in Waynesboro regarding the loss of groundwater levels untenable, "We don't know. Use the tort system." The loss of groundwater does affect not only the individual homeowner, but agriculture and the ecosystem at large.

There has been more climactic change in the last ten years than the previous one hundred years including temperature and precipitation distribution and storm frequency. A documentary this past week surmised that the mighty Colorado might not have the ability to provide water within the next five years or 2013. Atlanta GA is struggling with water supplies.

There is more growth in the CSRA in the last 5 years than in the previous sixty years.

The CSRA is no longer a remote area.

It is inappropriate to grant water permits of this magnitude twenty years into the future and beyond.

An early site permit should not be granted without more and in depth understanding of population growth and distribution and information on the area's water dynamics now, and projected into the future.

# Georgia

## Georgia's moisture recharge period is over.

If Georgia has normal weather this summer, we can expect the soils to continue to dry out and groundwater levels, stream flows and reservoir levels to drop across the entire state.

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COMPLETE STORY ↴

**By David Emory Stooksbury**  
**University of Georgia**

Winter and early spring rains have helped, but north Georgia remains in severe to extreme drought. The northern coastal plain is abnormally dry. Moisture conditions for the southern coastal plain along the Florida border are near normal for now.

From Oct. 1 through the middle of April is considered Georgia's moisture recharge period, when the state typically gets more rain than moisture loses due to evaporation and plant use.

North Georgia didn't receive enough rain to fully recharge soil moisture, groundwater, streams or reservoirs. Since Oct. 1, north Georgia has received only 70 percent to 80 percent of normal rainfall.

Most north Georgia streams are at or near record low flows for late April. At many locations, only 1986 and 2007 stream flows were lower than they are now.

Both Lake Lanier and Lake Hartwell are well below desired levels for late April. Smaller reservoirs are near full, though. However, with the extremely low stream flows across north Georgia, these smaller reservoirs must be managed well because drought conditions are expected to continue.

From the northern coastal plain to the North Carolina and Tennessee borders, soil moisture is abnormally low. It is especially low across the northern piedmont and into the mountains. In northwest Georgia, soil moisture is extremely low.

Soil moisture in south-central and southeast Georgia is near normal for late April. But levels are already decreasing. In southwest Georgia, most flows are low for late April and decreasing. The development of drought conditions over the next month is possible.

Late April through October, moisture loss from soils is usually greater than rainfall. If Georgia has normal weather this summer, we can expect the soils to continue to dry out and groundwater levels, stream flows and reservoir levels to drop across the entire state.

Updated drought information is available at [www.georgiadrought.org](http://www.georgiadrought.org). The state drought Web site includes information on how to deal with the drought.

The University of Georgia statewide network of automated weather stations can be found at [www.georgiaweather.net](http://www.georgiaweather.net).

## COMMUNITY

# Drought conditions far from over

By Rob Pavey  
Staff Writer

Think we're out of the drought? Think again.

April marks the end of the "recharge season" for the atmospheric weather year, and Georgia State Climatologist David Stooksbury said much of the state remains far too dry.

"Augusta, for the year so far, is down just 1.75 inches in terms of rainfall, which isn't too bad," said Dr. Stooksbury. "Up here in Athens, we're already down about 5 inches."

Although we are months away from parched, withering weather

that created water shortages last summer, much of the rain needed to recharge aquifers, streams and lakes should have already arrived, he said.

"Early October to mid-April is the normal recharge period, when rainfall is greater than what we lose to evaporation and

plant use," he said. "Now that this period has passed, we can expect warmer temperatures and thirsty plants that are growing full-tilt boogie, and using lots of moisture."

Stream flows, he said, are an accurate gauge of impending drought.

### AUGUSTA RAINFALL YEAR-TO-DATE

Month	Average	Actual	Difference
January	4.50	3.19	(-1.31)
February	4.11	3.84	(-0.27)
March	4.61	5.20	+0.59
April	2.33	1.66	(-0.67)

(April figures are month-to-date)

Source: National Weather Service

"Right now the Broad River, which is a major upper Savannah River basin stream, is at 47 percent of its normal flow," Dr. Stooksbury said.

Stevens Creek, a Savannah River tributary, is at just 34 percent of normal flow.

The Savannah River, he added, is controlled by the Army Corps of Engineers through timed releases from dams, so its flow is of no value in determining weather trends.

Thurmond Lake was at 321.58 feet above sea level Thursday, or more than eight feet below full pool. The lake has risen more than five feet since December.

### IN BRIEF