

# Drought Management

**T**he Hartwell and Thurmond pools are maintained in a balanced condition equally drawn down on a foot-by-foot basis. However, when Thurmond falls below 315 feet above mean sea level (ft-msl), water managers can no longer match the pool level foot-by-foot. Instead the U.S. Army Corps of Engineers changes the balance to an equal percentage of elevation remaining in their respective conservation pools. This means Hartwell Lake's greater depth of conservation storage must provide more of the downstream water supply needs once Thurmond Lake falls below 315 ft-msl.

Under normal conditions, all project purposes can be met, even when meeting our hydropower commitments. However, once the pools have declined below Drought Trigger Level 1, drought rules are imposed and our priorities begin to shift. Our hydropower commitments are no longer met as we restrict releases from Thurmond. By restricting our releases, we try to protect the other project purposes with the initial focus being recreation. Once the pools reach level 2, the priorities again shift focusing on releasing only what is necessary to meet the minimum downstream water quality and water supply requirements.

The Savannah River Basin Drought Plan, updated in 2012 in coordination with state and federal natural resources agencies, establishes four trigger levels of drought with associated minimum release rates:

- **Drought level 1** is reached when the pool elevation drops 4 feet from full pool at either Hartwell Lake or Thurmond Lake. At level 1, Hartwell is 656 feet above mean sea level (ft-msl) and Thurmond is 326 ft-msl. This level restricts discharges from Thurmond to a maximum average weekly release of 4,200 cubic feet per second (cfs), if flows at the Broad River gauge near Bell, Ga., are greater than 10 percent of the historical flow rate. If Broad River flows are less than or equal to 10 percent of the historical flow rate, Level 1 discharges at the Thurmond Dam are 4,000 cfs.
- **Drought Level 2** is reached when either reservoir drops an additional 2 feet. At level 2, Hartwell is 654 ft-msl and Thurmond is

324 ft-msl. Upon reaching level 2, discharges from Thurmond Lake will be further reduced to a maximum average weekly release of 4,000 cfs, if flows at the Broad River gauge near Bell, Ga., are greater than 10 percent of the historical flow rate. If Broad River flows are less than or equal to 10 percent of the historical flow rate, level 2 discharges at the Thurmond Dam are 3,800 cfs. However, during the wintertime months in drought level 2 (Nov. 1 through Jan. 31), outflows will be further reduced to 3,600 cfs, regardless of flows at the Broad River.

- **Drought Level 3** is reached when Hartwell Lake drops to 646 feet above mean sea level (ft-msl) or Thurmond Lake drops to 316 ft-msl, at which time the maximum average daily release from Thurmond is reduced to 3,800 cfs, regardless of Broad River flows. The Hartwell and Russell discharges change to keep the reservoirs in balance and to meet downstream flow needs. However, during the wintertime months in drought level 3 (Nov. 1 through Jan. 31), outflows will be reduced to 3,100 cfs, regardless of flows at the Broad River.
- **Drought Level 4** is reached when Hartwell Lake drops to 625 ft-msl or Thurmond Lake drops to 312 ft-msl. During level 4, maximum discharge is 3,600 cfs but is reduced to 3,100 cfs from Nov. 1 to Jan. 31. These releases would continue as long as possible until all storage is depleted. Historically, the reservoirs have never reached Drought Level 4.

Because we manage the reservoirs as one system, when one reservoir enters a more severe drought level, all enter that level. The trigger levels vary by season since the "guide curve" or our target water level, varies by season. Find the current reservoir levels, guide curve, and drought trigger levels on water our management page online at [water.sas.usace.army.mil](http://water.sas.usace.army.mil)

Learn more about the Corps' Water Management by visiting our Frequently Asked Questions on our news blog "Balancing the Basin" at <http://balancingthebasin.armylive.dodlive.mil/faq/> 

*By Tracy Robillard, Corporate Communications Office*

## Savannah River Basin Comprehensive Study

The Savannah River Basin Comprehensive Study will examine extensive interactions of resources, project purposes, and environmental and social aspects of the entire basin. This study is required to make changes to the water management plan which is outside of the Corps' existing Congressionally-assigned authorities. Once fully complete, it will provide data and recommendations for any extensive changes in water management and water resource allocations for the entire basin. The next portion of the Comprehensive Study will focus on updates to the Drought Plan using data gathered during the last drought of record (2007-2009). It will not result in wide-sweeping changes to pool allocations or outflows; it will only consider improvements and refinements of drought operations. Results of this portion of the study would guide long-term changes to the Corps' Drought Plan. The study represents a joint endeavor between the Corps and the states of Georgia and South Carolina. Funding is cost-shared between the federal government and the states (non-federal sponsors).