

Savannah River Basin

Water Use Data Collection and Stakeholder Interaction



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Comprehensive Water Resources Study

- **Background**
 - Encompasses a drainage area of approximately 10,577 square miles
 - Includes portions of 27 counties in Georgia, 13 counties in South Carolina, and 4 counties in North Carolina
 - While the basin is predominately rural, it is beginning to experience growth and development pressures.

Water Use Analysis Phase Comprehensive Water Resources Study



Evaluate the **current** and future water needs of those who rely on the Savannah River Basin.



- **Task Objectives**
 - Identify participants and stakeholder groups as described in the “Project Study Plan for the Savannah River Basin Georgia, South Carolina, and North Carolina”
 - Develop stakeholder-group estimates of current and projected water use



- Focused on Four Stakeholder groups:
 - Industry/municipal
 - Agriculture
 - Homeowner and recreation
 - Hydropower
- Consulted States to identify permitted facilities that withdraw from and/or discharge to the SRB



- Data Requirements
 - Determine water volume requirements
 - Withdrawal and discharge volumes
 - Anticipated future demand
 - Determine water level or flow requirements
 - Location/elevation of intake structures
 - Recreational uses
 - Grouped by River Segment

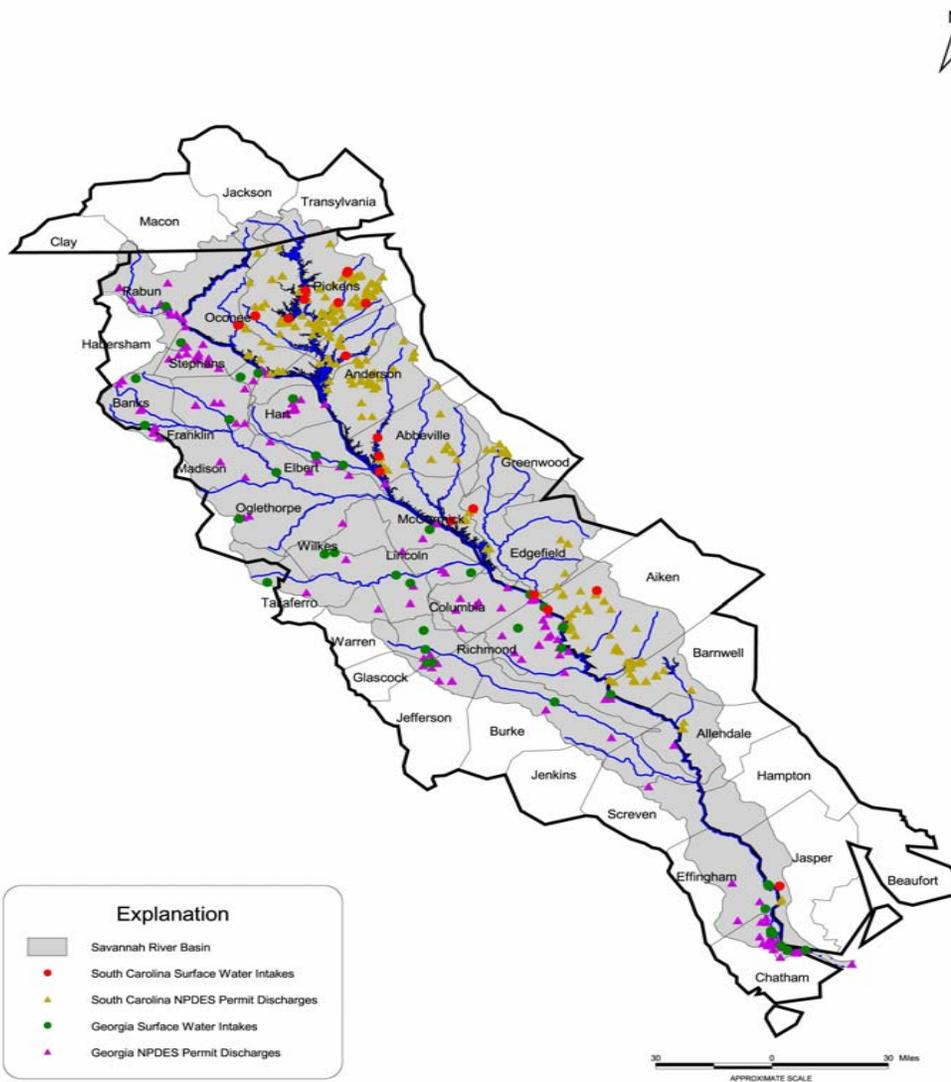
Stakeholder Groups



■ Industry/Municipal

- More than 350 Industrial and Municipal facilities directly depend on the Basin
- 69 intake facilities owned/operated by 56 entities currently permitted with either State to withdraw from surface waters within the Basin
- Approximately 602 permitted points of discharge owned/operated by 266 entities to surface waters within the Basin
- Initial contact was made with the permit holders (285 stakeholder entities)

Savannah River Basin





■ Agriculture

- Acquired SC and GA information on Agricultural Surface Water Withdrawal Permits
- Consulted States to identify acreage in each state that is irrigated with surface water from the SRB
- More than 120 Agricultural Water Use/Water Intake Surveys have been sent to Agricultural Stakeholders



- Homeowner and Recreation
 - Reservoir or River levels required for seasonal activities
 - Boat ramp access and required lake/river levels
 - Many organizations have supported this study by
 - Providing input into the design of surveys
 - Distributing and collecting surveys
 - To date we have received 371 completed surveys



- Hydro-Power
 - Thirteen Hydro-Power Facilities within SRB
 - Three USACE Projects
 - Six Facilities in GA
 - Four Facilities in SC
 - Average Daily Release Volumes
 - Projection of production/releases in the future
 - Identify changes in Operational Plans



Stakeholder Communications

- Advertisements in Local and Regional News Papers (April)
- Initial Survey Mailing (April- May)
- Follow-up phone calls to Recipients of Surveys(June)
 - Additional mailing and emails based on calls (June – July)
- Specific Stakeholder Meetings (September)
- Data Validation (October - November)



US ARMY CORPS OF ENGINEERS Savannah River Basin Comprehensive Study

As part of the Savannah River Basin Comprehensive Study the United States Army Corps of Engineers, the State of Georgia, the State of South Carolina, and ZapataEngineering are seeking information with regards to water use within the Savannah River Basin. The study is authorized by the Water Resources Development Act of 1996, and funded by the states of South Carolina, Georgia, and the US Army Corps of Engineers.

ZapataEngineering, on behalf of the U.S. Army Corps of Engineers, is requesting general water-use information from business groups, organizations, and individuals (i.e., “stakeholders”) that have interests concerning water use within the Savannah River Basin.

The Savannah River Basin Comprehensive Study is intended to provide information regarding current water use trends throughout the basin, and the protection and conservation of our limited water resources.

ZapataEngineering is currently mailing water use surveys to Stakeholders. Instructions are provided with the surveys detailing information requested from Stakeholders. Interested parties who wish to provide input, and who have not received a mailing by June 15, 2003, may contact the Savannah River Toll Free Information Line at 1-877-330-3588. You may also submit request for information or comments via email at savannahriver@zapeng.com, by facsimile at 704-358-8240, or mail to:

ZapataEngineering
SRB Comprehensive Study
1100 Kenilworth Avenue
Charlotte, NC 28204

For additional information on the Savannah River Basin Comprehensive Study visit the USACE Savannah River Basin website at www.sas.usace.army.mil/srbstudy.htm.



- Project website
www.sas.usace.army.mil/projects/srbcomp.htm
- Project Hot Line **1-877-330-3588**
- Project Email **savannahriver@zapeng.com**
- Public Announcements/Press Releases



- Relatively more data was received from the lower portion of the SRB
- Of 56 entities owing/operating intake we received submitted data from 16
- Of 601 discharge facilities we received submitted data for 71



- Seven responses received
- Water demand for agriculture depends upon variables, including crop, soil type, best management, irrigated acreage, climate etc.
- Data submitted by Georgia provided information for 370 withdrawal permits for agricultural use.
- Current acreage in Georgia portion of the SRB irrigated by surface water is estimated at 28,649
- Estimated 110,000 acres used for agricultural purposes in South Carolina



- 59 surveys returned
- Average number trips taken to Lakes during the past 12 months was 15
- Recreational areas most frequently visited:
 - Hartwell (48%)
 - Thurmond (28%)



- Increase in number of lake trips if drought conditions had not existed was 57%
- Minimum water levels
 - -4.26 ft acceptable for all recreational uses
 - -7.5 ft serious impact on recreational uses



•How do recreational users alter their recreational plans during periods of low water?

- 38% would continue their plans
- 20% would go to a different lake
- 20% would not make a water-based trip
- Others indicated that they (a) would go to the same lake but use a different access point, (b) would go to the beach for water recreation, or (c) did not specify.

Project Findings/Homeowners



- 312 surveys received/262 homeowners,
- Reasons people chose to live in the SRB
 - Recreation (47%)
 - Retirement (28%)
- Reasons for having full lake-levels
 - 37% of the respondents said boating,
 - 30% answered safety, and
 - 13% answered accessibility



- Lake Level Necessary for use
 - Hartwell 655.8 / (-2.8)
 - Thurmond 326.9 / (-1.9)
- Lake levels that eliminate use
 - Hartwell 649.2 / (-9.5)
 - Thurmond 321.7 / (-7.2)



- Data received for 3 commercial hydro- electric facilities with storage capacity
 - Bad Creek
 - Jocassee
 - And Keowee
- SEPA provided storage and generation data for
 - Thurmond
 - Russell
 - Hartwell



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