

# EMERGING WATER RESOURCES MANAGEMENT ISSUES IN THE SAVANNAH RIVER BASIN

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**Abstract.** The Savannah River basin is an important natural resource for the States of Georgia and South Carolina, due to both its valuable ecological and economic resources. In recent years, agencies, organizations, and industry from both states have begun an effort to cooperatively manage the resources of the Savannah River basin to conserve, restore, enhance, and protect its ecosystems in a way that allows the balancing of multiple uses.

To that end, the Savannah River Basin Watershed Project was initiated in 1993 to begin a process for cooperative and comprehensive management of the basin. Basin stakeholders have been identifying and prioritizing resource issues in the basin, and a structure has been put in place to address these issues. Additionally, each agency and organization involved in the project is utilizing the project structure and process to address issues pertinent to their individual organization. This panel of basin stakeholders will express their views on the important emerging issues for their agency or organization and the relevance of the Savannah River basin Watershed Project for addressing these issues.

## INTRODUCTION

Over the past several years, many discussions have been held concerning water management of the Savannah River basin. As a result of these discussions, several key efforts have been formed and are being advanced to address the many varied interests in the basin. Of these, there are: water quality collection and management studies being conducted by Georgia and South Carolina, the U.S. Environmental Protection Agency's Savannah River Basin Watershed Project (SRBWP), and the recently authorized U.S. Army Corps of Engineers Savannah River Basin Comprehensive Study.

Today's panel has been assembled to present their views of the water management issues and problems facing the future growth and health of the basin. They will also present perspectives on the progress being made to address these issues and problems.

We would like to emphasize that the panel assembled, while

diverse, is not fully representative of all the views and perspectives in the basin. Nonetheless, this panel represents a number of efforts being made to address the problems emerging in the Savannah River basin. Although much of the focus of the past years has been on the ACF/ACT basins, concerted efforts have begun and will be areas of discussion and involvement as the river basin water management focus of Georgia shifts from the Alabama/Georgia border to the Georgia/South Carolina border.

The following is a brief summary of the emerging priority issues of several basin stakeholders and their perspective on the SRBWP and its efforts to cooperatively and comprehensively manage the resources of the Savannah River basin.

## DISCUSSION

### **Savannah River Basin Watershed Project**

In 1993, the U.S. Environmental Protection Agency (EPA) initiated a stakeholder-driven process for cooperative management of the resources of the Savannah River basin. This process has resulted in the development of 80 recommendations from 6 Resource Committees addressing such issue areas as: water quality; water quantity, navigation, and hydropower; land use and wetlands; recreation; fish and wildlife; and industry and economic development. These 80 recommendations were prioritized by the project Management Committee and submitted to the Policy Committee for action. Currently, the Policy Committee is convening 11 Action Teams to implement the Priority 1 recommendations (26 highest priority recommendations). These Action Teams consist of basin stakeholders who are interested in implementation of the recommendations being addressed by each Action Team. Implementation will begin during the next year, after the development of specific Action Plans. Once these recommendations are underway, the Policy Committee will begin to address Priority 2 recommendations. In this way, the Policy Committee expects to address, in a cooperative manner, those issues found to be most important to the stakeholders. Concurrent with this process, individual participants in this project will be

conducting the work of their agency/organization, as it pertains to the Savannah River basin. The SRBWP will enhance and complement the work of these agencies and organizations.

#### **Georgia DNR - Wildlife Resources Division**

There are several issues of concern to the Wildlife Resources Division (WRD) of the Georgia Department of Natural Resources. These include:

The WRD has been working to restore the native striped bass populations to the Savannah River since the 1980s. The decline of the striped bass occurred after the operation of the Savannah River Tide Gate began and apparently had severe impacts on the historic spawning area of this species. WRD has stocked striped bass into the river for several years in an effort to restore the population. Although there has been good survival of the fish stocked by the WRD, a self-sustaining, naturally reproducing population has not been restored. However, as more of the stocked striped bass reach maturity, it is hoped that natural reproduction will eliminate the need for stocking. Also, once a self-sustaining population is established, the popular sport fishery for this species can be re-opened (it is currently closed). Of concern, however, is that even though the tide gate no longer operates, the river has not completely returned to the pre-tide gate status and this may be preventing successful spawns. The WRD is still monitoring the river to determine if and/or when the striped bass will begin to successfully spawn again.

Another example is the water quality below Clark Hill Dam and the desire by local anglers to establish a trout fishery downstream. A recent study by WRD indicated little chance for the trout to survive the low dissolved oxygen and the high temperatures in the discharges from the dam in the late summer and early fall. The WRD hopes to work with the U.S. Army Corps of Engineers, the State of South Carolina, and other interested groups to improve the water quality in the stream. This should significantly enhance the fisheries resources below the dam, regardless of whether the area proves suitable for trout.

Through WRD's involvement in the SRBWP, we hope to improve our dialogue and interaction with other agencies regarding issues such as the two examples above. Through an integrated approach by various agencies concerned with similar problems, better and more effective solutions should be possible.

#### **Georgia DNR - Environmental Protection Division**

The Water Resources Management Branch of the Georgia Environmental Protection Division (EPD) supports the recommendations of the six resource Committees of the SRBWP. The issues identified that relate to adequate water supply for all citizens is especially important to the State of Georgia. Specifically, we support the study process which includes interaction and input from all major stakeholders of the Savannah River basin. The participation of these stakeholders is essential for a better understanding of various perspectives and to balance reservoir releases and surface water minimum instream flow and water withdrawal needs for our citizens. Releases from the reservoirs must be sufficient to meet current and projected municipal and industrial water supply demands in the Savannah

river basin, help alleviate reliance on the upper Floridian aquifer, provide adequate water supply to make the lower Savannah Environmental Restoration Project viable, and provide sufficient assimilative capacity to protect water quality and meet future wastewater discharge demands.

The U.S. Army Corps Comprehensive Study of the Savannah River basin has been authorized by Section 414 of the Water Resources Development Act of 1996, Public Law 104-303. The study should be funded in Fiscal Year 1998 and will require at least one year for the Corps of Engineers reconnaissance studies to be completed. The study is very much supported by the other federal, state, and local agencies, citizens, and industrial groups. The study should address the recommendations of the SRBWP and utilize all available data and information. Georgia EPD looks forward to working with South Carolina DHEC and the Savannah District of the Corps of Engineers on this important study.

#### **South Carolina Department of Health and Environmental Control**

Emerging issues in the Savannah River basin for South Carolina Department of Health and Environmental Control (SC DHEC) include doing more with less when demands on state government increase and funding decreases, involving local entities to develop local solutions to local problems, and rapid development in some areas of the basin. Emerging issues underway to address these issues is implementation of SC DHEC's watershed approach to water quality programs. This approach requires more comprehensive monitoring, but for a limited time period to identify water quality problems. Rotating monitoring through watersheds allows us to collect more useful data overall. Our watershed approach includes citizen participation in problem identification and corrective actions.

SC DHEC has several efforts funded by Section 319 of the Clean Water Act underway in the Savannah River basin. These are Water Watch, a citizen water stewardship program, and Mini-Grants, 319 grants of up to \$10,000 each to local governments to address water quality problems caused by non-point source pollution. We have also focused 319 competitive money in the Savannah River basin.

SC DHEC works cooperatively with the Savannah District Corps of Engineers on dredging and monitoring issues for Savannah Harbor. We are also working with the State of Georgia and the EPA to have Lake Hartwell designated no-discharge with regards to marine sanitation devices on boats.

SC DHEC has been active in all phases of the SRBWP. We had representatives on several resource Committees, the Management Committee, and the Policy Committee. We are now active in several Action Teams to develop and implement Action Plans to address high priority issues. We will be chairing the Action Team charged to address monitoring issues.

The implementation of the Action Plans by the Action teams for the SRBWP will likely address issues which are priority concerns for SC DHEC. Particular activities or programs these will address are water quality monitoring, water quality standards, and non-point source pollution.

### **Georgia Environmental Organization, Inc.**

The management and protection of a river basin involves a highly complex and integrated approach. The now four-year-old-and-counting SRBWP has confirmed that time and again. The following have emerged as key elements within the project:

- Genuine bi-state collaboration among stakeholders: federal governmental agencies, state governmental agencies, industry, and the environmental community;
- Opportunity to get to know people from the other stakeholder areas and learn from them as we each share from our own perspectives, knowledge, and commitments and engage those of others;
- Involvement of a number of people, working at various levels to do the research, analyzation, and envisioning (the resource Committee and its sub-committees; the Technical Advisory Committees; the Management Committee) - all long before we come to management and protection guidelines (the Policy Committee);
- Understanding that the river basin must be considered in its entirety and that what happens in one area of the basin affects the rest of the river basin;
- Understanding that with a watershed approach - writ large, writ small - all the ecological elements that make up the habitat of the watershed are important and must be integrated in planning and decision-making;
- Realization that intensive studies must be done to establish baselines, indicators, benchmarks, and thresholds - all of which flow together in an understanding of the river basin;
- The constant struggle to overcome the lethargy and inefficiency of one bureaucracy or another so that the job can get done and progress can be made while trying to hold together a number of groups who have no external, integral organizational relationship with each other.

Certain areas still have to be incorporated into the thinking and process of the SRBWP:

- Understanding that the principal focus should not be the Savannah River itself but the many watersheds of its tributaries and their tributaries until we have incorporated every little stream into the total plan;
- Understanding that still lying before the Policy Committee is the enormous task of communicating the work of the SRBWP to the officials and the general public and developing a process whereby they can become fully involved in watershed management and protection;
- Understanding that interstate waterways need oversight and management from an interstate authority that can coordinate efforts without undermining the powers of each state unto itself and the will of the people working on water issues in their own back yard;
- Understanding that the job of ecosystem management within a river basin and its many watersheds and eco-basins lies beyond the capability of any authority or any state or federal agency but ultimately belongs to and lies with the people who take responsibility for the watershed in which they live; and
- Understanding that the work of the SRBWP never ends, even though the SRBWP *qua* project might conclude; our science and

our level of involvement are still so meager that the SRBWP as concern for the river basin and its eco-basin is a lifetime of work and beyond.

### **CONCLUSION**

There are many efforts underway to address environmental and water management issues in the Savannah River basin, both by individual agencies and organizations as well as by the cooperative efforts of the SRBWP. What distinguishes these actions apart from the past is that the basin stakeholders are working with a cooperative understanding of how their actions affect the actions of others. Through the framework of the SRBWP, the issues and problem-solving efforts are being approached through cooperation and mutual understanding, hopefully leading to improving the overall health of the Savannah River basin.