

OVERVIEW OF THE SAVANNAH RIVER BASIN WATERSHED PROJECT

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REFERENCE: *Proceedings of the 1995 Georgia Water Resources Conference*, held April 11 and 12, 1995, at The University of Georgia, Kathryn J. Hatcher, Editor, Carl Vinson Institute of Government, The University of Georgia, Athens, Georgia.

INTRODUCTION

At the United States Environmental Protection Agency, the emphasis of environmental protection programs is shifting towards an integrated, holistic management approach in order to cohesively address the many diverse environmental threats to the water, air, and land. Administrator Carol Browner has identified this approach as one of her seven "guiding principles" for the Agency (U.S. EPA, 1994). The approach, termed "ecosystem protection", emphasizes the achievement and measurement of environmental results and builds on a water quality protection approach that has been established in Region IV since 1991. This water quality protection approach is being applied in the Savannah River basin to reduce environmental and human health risk through improved water quality and resource protection. This presentation illustrates the watershed protection approach in the Savannah River basin, describes the desired results, and presents the actions completed to date.

BACKGROUND

The watershed protection approach in the Savannah River basin is built on three main principles: 1) identification of the primary threats to human and ecosystem health within the watershed; 2) involvement of the people, or stakeholders, most likely to be concerned or affected or most able to take action; and 3) the development and implementation of corrective actions in a comprehensive, integrated manner (U.S. EPA, 1991). The Savannah River Basin Watershed Project (SRBWP) is one of several watershed projects in the southeast, and it was initiated because of the importance of the watershed as a natural resource, the high public use of the watershed for recreation, municipal, and industrial purposes, the many known environmental impacts to the watershed, and the susceptibility of the watershed to additional degradation. In addition, there is a high degree of interest, involvement, and coordination with the many federal, state, and local agencies that have a role in managing and protecting the basin resources.

The vision of project participants is to manage comprehensively the Savannah River basin to conserve, restore, enhance, and protect its ecosystems, especially aquatic ecosystems, in a way that allows the balancing of multiple uses. Their goal is to develop and implement a multi-agency/organization environmental protection project that incorporates the authorities and expertise of all interested parties in the future management and protection of the basin's resources (Savannah River Basin Watershed Project, 1995).

DISCUSSION

Study Area

The study area for the SRBWP is defined as the entire Savannah River basin, from the headwaters in North Carolina and Georgia to the Atlantic Ocean (Figure 1). The Savannah River is one of the major river systems of the southeast and is a vital natural resource for the area. The entire basin encompasses a total area greater than 10,000 square miles and includes portions of North Carolina, South Carolina, and Georgia. The Savannah River is formed at Hartwell Reservoir by the Seneca and Tugaloo Rivers and flows southeast to the Atlantic Ocean at the port city of Savannah, Georgia. Above the confluence of the Seneca and Tugaloo Rivers, the headwater streams (Keowee River, Twelve Mile Creek, Tallulah River, and Chattooga River) originate in the Blue Ridge Mountains of North Carolina and Georgia.

Along its route, the Savannah River passes through three physiographic provinces (Blue Ridge Mountain, Piedmont, and Upper and lower Coastal Plains) and forms the border between the states of Georgia and South Carolina. Ecosystem types within the basin are diverse and include agricultural systems, upland forests, reservoirs, bottomland hardwoods, tidal freshwater and marine marshes, free-flowing streams, and the near-coastal waters of Georgia and South Carolina.

Land use and physiography change dramatically in the basin. The upper portion of the basin in the Blue Ridge is mountainous, with forested terrain, relatively steep gradients, many small headwater streams, and small reservoirs. The middle portion in the Piedmont is rolling, with forests,

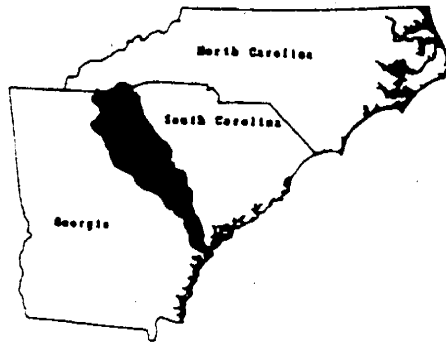


Figure 1. Study area for the Savannah River Basin Watershed Project.

agriculture and pasture, several large, dendritic reservoirs, and larger streams. The lower portion of the basin is in the Coastal Plain, which has low gradients with relatively few streams and reservoirs and is dominated by pine and bottomland forests (FTN Associates, Ltd. and Raschke, 1994).

Although the study area is predominantly rural, expanding urban centers are found on the Savannah River in Augusta and Savannah, Georgia. The City of Savannah serves as a major port for commercial and military goods for the southeast. The Savannah estuary is a multi-function ecosystem, including a 42-foot deep dredged harbor, a significant fishery resource, and a fish and wildlife sanctuary. The Savannah River Site (operated by the U.S. Department of Energy), Fort Gordon, Fort Stewart, Hunter Air Force Base, and Savannah National Wildlife Refuge (managed by the U.S. Fish and Wildlife Service) are located in the Savannah river basin.

Project Overview and Status

At the initiation of the SRBWP, eighty-eight (88) environmental issues related to the Savannah River basin were identified by basin stakeholders. These issues included impacts to fish resources, riparian habitat degradation, reservoir discharge impacts, and wetlands impacts, for example. The issues formed the basis for the development of a project structure, which consists of six (6) Resource Committees, three (3) technical advisory committees, a Management Committee, and a Policy Committee (Figure 2).

The Resource Committees were formed to provide the technical analysis of basin resources and develop any corresponding recommendations. The six Resource Committees are: Water Quality, Water Quantity/Navigation/Hydropower, Fish and Wildlife, Land Use and Wetlands, Recreation and Cultural Resources, and Industry and Economic Development. These committees

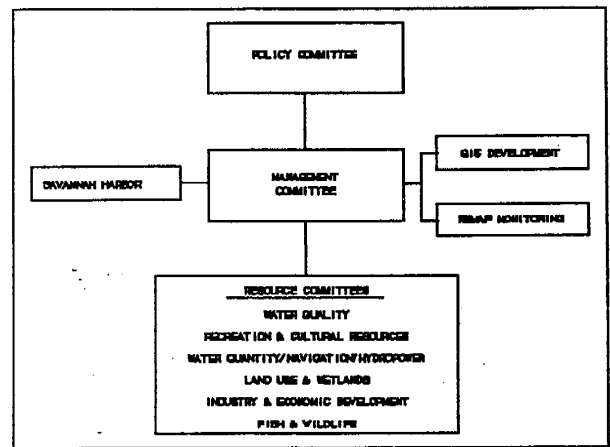


Figure 2. Savannah River Basin Watershed Project Structure.

were charged to address the environmental issues through a baseline assessment of each committee's resource area.

The Resource Committees have completed the Baseline Assessments that describe their resource of concern in the basin, identify known or suspected impacts to the resource, describe the available data concerning the resource, identify data gaps, and propose recommendations for resource improvement. The six Baseline Assessments are now being merged into a comprehensive report of the basin status.

The Technical Advisory Committees provide technical support to the Management Committee on areas such as monitoring, geographical information systems, and the Savannah Harbor. Basin stakeholders are primary members of these committees.

The Management Committee provides guidance and direction to the Resource Committees. This committee manages the ongoing activities of the Resource Committees and forwards recommendations and findings to the Policy Committee. The Management Committee is merging the Baseline Assessments prepared by the Resource Committees into a comprehensive report of the basin status. This will be the basis for development of a watershed strategy for the Savannah River basin.

The Policy Committee will provide expert leadership and decision-making on the nature and scope of the SRBWP. In addition, the Policy Committee will develop and implement a watershed strategy from the comprehensive basin report. All project decisions will be made by this committee, and resources to implement the watershed strategy will be sought by the Policy Committee.

Future Direction

The multi-stakeholder process will accomplish short- and long-term basin management and protection efforts utilizing the expertise, authorities, and resources of all basin

stakeholders while not superseding the existing authorities and mandates of the individual agencies and organizations participating in the process. It will promote coordination, cooperation, and planning among the stakeholders, ultimately maximizing resources and environmental results.

The comprehensive basin status report is expected to be complete by May 1995. From this report, the Policy Committee will develop the watershed strategy after full and thorough consideration of the recommendations and supporting information presented. Both short-term and long-term strategies will be developed to implement the priority recommendations. Specifically, the watershed strategy will: identify the highest priority problems, as presented in the comprehensive basin status report; describe specific actions to address problems and identify who will take these actions; specify problems or issues that require additional data gathering and analysis; identify opportunities for cooperative efforts among stakeholders; and delineate ways to leverage resources from project participants. Development of the short- and long-term strategies will begin in May 1995 and will require the communication, cooperation, and coordination among all members of the Policy Committee.

SUMMARY

EPA's Administrator Carol Browner is leading the agency toward a holistic, comprehensive approach to environmental protection. The SRBWP is an opportunity to utilize comprehensive, integrated management techniques to address diverse environmental impacts to a watershed. A comprehensive basin status report is being developed from the results of six baseline assessments describing basin resources. From this status report, a watershed strategy will be developed to guide cooperation and communication among the stakeholder groups while implementing recommended actions. The accomplishments of this project thus far illustrate that communication and cooperation among stakeholders can be productive in planning and responding to environmental issues. The SRBWP will demonstrate short- and long-term planning and implementation using the ecosystem protection approach.

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