

**U.S. DEPARTMENT OF ENERGY
SAVANNAH RIVER SITE**

Lost Lake Restoration

The Lost Lake project is a major success story involving the collaboration of the U.S. Department of Energy, the U.S. Department of Agriculture (Forest Service, and Natural Resources Conservation Service), Westinghouse Savannah River Corporation, the University of Georgia, and the University of South Carolina-Aiken. The wetland restoration project was required following the RCRA remedial action of the M-Area seepage basin at the Savannah River Site. The remedial action included the removal of all vegetation and metals contaminated topsoil from the Lost Lake Carolina Bay. Carolina Bays are a wetland type unique to the Southeastern United States.

The Lost Lake wetland restoration was designed to test the effects of varying levels of soil treatment and planting effort on the rate and quality of wetland recovery. All four treatment combinations produced measurable initial recovery, with the most intensive treatment producing the least desirable results in this unique ecosystem. Subsequent monitoring indicated that reptile, amphibian, and mammal populations rapidly recolonized the restored wetland habitat with the numbers of species utilizing the wetland increasing over time. Seasonal and annual changes in species abundance appear to be more influenced by local climate and hydrology than by the intensity of the initial restoration effort.

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Pen Branch Restoration

This large scale wetland restoration at the Department of Energy's Savannah River Site required the restoration of a 600+ acre stream-riverine swamp ecosystem that had been impacted by thermal stress, high flows and erosion-sedimentation effects. Remote sensing and ground truth studies documented that over 100 acres were naturally revegetating. The remaining areas were strategically planted with tree species appropriate to the soils, topography and hydrology. A comprehensive monitoring and research program is ongoing to document the performance of this large scale wetland restoration.

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CERCLA Remediation at the Savannah River Site

The Department of Energy's Savannah River Site is using a watershed approach to remediate the Site under CERCLA. In conjunction with EPA, the South Carolina Department of Health and Environmental Regulation and the Savannah River Site Natural Resource Trustees, a watershed approach has been deemed the most appropriate technique to satisfactorily evaluate and cleanup the Site streams. The streams are integrators of the watershed and existing physical, chemical and biological data has been compiled and evaluated to determine risk estimates that will drive any potential cleanup of contaminated areas within the watershed. Considerations for cleanup encompass all of the sources of pollution within the watershed before final decisions are made. This should help assure that the most responsible environmental remediation will be employed for any given cleanup activity.

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Savannah River Basin Watershed Project

The Savannah River Basin Watershed Project is an EPA initiative to evaluate potential problems and concerns in managing the Savannah River basin watershed. This is a multi-organizational team of government, industry, and environmental stakeholders tasked to identify the problem areas and make recommendation for solutions. The Savannah River Site has contributed on various levels to the project. Site personnel served on Resource Committees, such as Fish and Wildlife Committee and Water Quality Committee to developed recommendation for managing the resource and related problems. Action Committees were formed to develop actions to address the recommendations of each resource committee.

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