



# River project brings together Corps, The Nature Conservancy

By JOHN HICKEY  
*Hydrologic Engineering Center (on assignment with The Nature Conservancy) and*  
ANDY WARNER  
*The Nature Conservancy*

**T**he U.S. Army Corps of Engineers and The Nature Conservancy are collaborating on a broad array of projects, including reservoir management, dam removal, floodplain and wetland restoration, and coastal zone work. Based on number of projects, the Conservancy is now the largest nonfederal sponsor for Corps ecosystem restoration projects.

“The Nature Conservancy is one of our most important partners and the Sustainable Rivers Project, with its nation-wide focus, is at the forefront of our collaborations,” said Lt. Gen. Carl A. Strock, Chief of Engineers.

The Sustainable Rivers Project (SRP) partners the Corps and the Conservancy in an ongoing effort to reoperate Corps dams to achieve more ecologically sustainable flows, while maintaining or enhancing project benefits.

The SRP is being carried out under a Memorandum of Understanding between the Corps and the Conservancy signed in 2000, and was

sparked by an initial collaboration to restore native biodiversity of the Green River in Kentucky by changing the water release schedule from Green River Dam.

“The Sustainable Rivers Project is fundamentally about conservationists and water managers working together to find ways to meet human needs while restoring and protecting some of our nation’s most imperiled and important natural habitats.

The Nature Conservancy is extremely enthusiastic about our collaboration with the Corps, and we look forward to extending the SRP to its full potential,” said Steve McCormick, President of The Nature Conservancy.

“The SRP is not only demonstrating how sustainability can be incorporated into project planning and operations, it is also bringing to light new opportunities for collaboration in areas such as training and software development. Sustainable Rivers is a shining example of how our Environmental Operating Principles are being put into practice,” Strock said.

The SRP currently involves work on nine river systems across the country, with two more under consideration. The nine rivers include the West in Vermont; the Ashuelot in New Hampshire; the Roanoke in North Carolina and Virginia; the Savannah in Georgia and South Caro-

lina; the Big Cypress in Texas and Louisiana; the White, Black, and Little Red Rivers in Arkansas and Missouri; the Green in Kentucky; the Bill Williams in Arizona; and the Willamette in Oregon. Under consideration are the Allegheny in Pennsylvania and the Purgatoire in Colorado.

Today, Green River remains the SRP’s most advanced site. The Conservancy first became interested in the Green because of its rich biodiversity, with more than 60 species of mussels (seven endangered and 21 imperiled), 152 species of fish (12 globally rare), and a host of endemic species in a cave system connected to the river.

In 2001, the Corps enacted a three-year interim operational plan designed with the Conservancy to create more natural regimes of flow and stream temperature while continuing to provide recreation benefits and flood damage reduction to downstream communities. This interim plan has been a success.

Local communities are pleased by the extended summer recreational pool, now maintained six weeks further into the fall, and, after three years of altered water management, scientists are finding that many mussel species have reproduced during the reoperation period and are encouraged by this promise for added recovery.

In fact, there is momentum not only to extend the interim plan for the Green River, but also to implement similar changes for other reservoirs in Louisville District.

The Savannah River has followed a different path while developing as an SRP site. The Savannah collaboration began when the Conservancy initiated discussions with Savannah District regarding conservation hopes for the river.

At that time, the District was working on the Savannah River Basin Comprehensive Study, which is addressing current and future needs for flood damage reduction, water supply, fish and wildlife enhancement, drought control, water quality, recreation, and other related purposes.

The District and the Conservancy agreed that the conservation goals and study purposes were complementary and that both were related to the mission of the SRP. The Savannah was later enrolled as a Sustainable Rivers site and the District invited the Conservancy to participate in the Comprehensive Study’s planning process, especially by helping to develop ecosystem flow recommendations for the Savannah.

In April 2003, the Conservancy organized



U.S. Army photo

**New Savannah Bluff Lock and Dam is shown during the pulse release. When flows in the Savannah exceed 16,000 cubic feet per second, the gates of the structure are raised, which scientists hypothesized would encourage fish passage through the structure.**

and facilitated a workshop with nearly 50 scientists from a dozen different agencies (including the Corps) to create initial flow recommendations for the Savannah River, floodplain, and estuary.

If fully implemented, the recommendations are expected to help restore and protect 200 river miles, at least 70,000 acres of bottomland forest, and more than 20,000 acres of estuary habitat. The flow recommendations are now one of more than 50 water management alternatives proposed by stakeholders in the Savannah Basin.

In March 2004, the Corps released a pulse flow designed to encourage migration and passage of shad, sturgeon, and striped bass (as part

of the ecological flow recommendations) from J. Strom Thurmond Dam, the largest and most downstream dam on the Savannah. Scientists from South Carolina Department of Natural Resources and University of Georgia worked downstream to collect data through electro-fishing and monitoring of groundwater levels in the floodplain.

A second pulse flow, designed to trigger migration and spawning of fall-run sturgeon, was released in October 2004.

Prior to both pulses, the Water Management Group in Savannah District temporarily stored water in the flood pool at J. Strom Thurmond Dam until the timing aligned with higher releases called for in the recommendations, great

examples of interagency cooperation and coordination.

Sustainable Rivers work also is advancing at other sites across the country. The Corps and the Conservancy recently completed a first look at the hydrologic effects of Otter Brook and Surry Mountain Reservoirs on the Ashuelot River in New Hampshire and are scoping a feasibility study to continue those investigations and begin work on the West River in Vermont.

Also, in cooperation with U.S. Geological Survey, the U.S. Fish and Wildlife Service, the Bureau of Land Management, Arizona Fish and Game, and others, the Corps and the Conservancy organized a workshop last month to develop ecosystem flow recommendations for the Bill Williams River in Arizona.

Beyond the site-based work, SRP progress includes development of two joint Corps-Conservancy training courses, a personnel agreement that assigned a Hydraulic Engineer from the Corps to the Conservancy in support of the SRP, and start of the first joint software development project between the two organizations.

In November 2004, the Corps and the Conservancy held their first Partnership Conference highlighting the accomplishments of regional and national collaborations between the two agencies. During an SRP workshop held prior to the conference, attendees were asked to take a critical look at the SRP and its current directions.

Two of the most resonating responses were that the SRP has potential to improve the ecological sustainability of water management and is in many ways still searching for the means of support needed to best realize this potential. For conference proceedings visit the web site at [www.hec.usace.army.mil/misc/2004\\_COE\\_TNC\\_Conference/index.html](http://www.hec.usace.army.mil/misc/2004_COE_TNC_Conference/index.html).

For details on the Sustainable Rivers work described in this article, please contact John Hickey ([john.t.hickey@usace.army.mil](mailto:john.t.hickey@usace.army.mil)) or Andy Warner ([awarner@tnc.org](mailto:awarner@tnc.org)).

For more information about the national Corps-Conservancy partnership or the SRP, contact Lisa Morales, Corps National Liaison to the Conservancy, ([lisa.t.morales@usace.army.mil](mailto:lisa.t.morales@usace.army.mil)), or Ted Illston, Senior Policy Advisor for The Nature Conservancy, ([tillston@tnc.org](mailto:tillston@tnc.org)).

*Editor's note: This is the first in a recurring series of articles about the Sustainable Rivers partnership between the U.S. Army Corps of Engineers and The Nature Conservancy.*



U.S. Army Photo

The Savannah River below New Savannah Bluff Lock and Dam is shown during the pulse release. The release caused changes in the river stage and an influx of organic material from a backwater area.