

# SUSTAINABLE RIVERS PROJECT



Improving the Health and Life of Rivers

Enhancing Economies

Benefiting Rivers, Communities and the Nation



US Army Corps  
of Engineers®



Protecting nature. Preserving life.™

# Improving the Health and Life of Rivers

The Sustainable Rivers Project (SRP), formally established in 2002, is a national partnership between the U.S. Army Corps of Engineers (Corps) and The Nature Conservancy (Conservancy). SRP focuses on modifying operations at Corps dams to enhance habitat conditions for the plants and animals that depend on downstream river flows.

River flows that create the conditions needed to sustain freshwater ecosystems are known as environmental flows. As points of management in river systems, reservoirs offer an opportunity to affect the timing and magnitude of river flows to meet the needs of both human and natural communities. By implementing environmental flow strategies, reservoirs can generate increased benefits, such as improving fish migration and water quality, while supporting the aquatic plants and animals that rely on river flows to help them survive, eat and reproduce.



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SRP is a leader in modifying reservoir operations to achieve multiple benefits. SRP activities are taking place at eight U.S. river basins, making it one of the largest coordinated efforts of its kind in the world. At SRP sites, scientists gather data on river flows. Water managers work with scientists to modify dam and reservoir operations, including releases of water from the reservoirs, within existing water control policies for each reservoir. Scientists monitor environmental responses to different management decisions, which improves the managers' knowledge and allows for more informed decision-making.

Corps and Conservancy staff are sharing their knowledge with water managers from countries around the world. The organizations hold joint training sessions every year to teach water managers from different agencies about the methods developed in SRP.



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## Enhancing Economies

**D**ams across the United States provide important benefits like reducing flood damages, generating hydropower, and supporting navigation and recreation. Corps dams, levees and dikes have prevented an estimated \$706 billion in river and coastal flood damage, most within the last 25 years. SRP recognizes the economic value of these services. SRP works within the Congressionally authorized purposes of dams to include environmental benefits along with other services.

SRP not only maintains economic benefits, it improves local and regional economies. Modified reservoir operations support longer recreation seasons at lakes and healthy fish populations in rivers, which contribute to increased tourist revenues. SRP activities can also provide greater flood protection for communities.

## Communities Coming Together

**C**ommunities around the country support SRP activities because of their environmental and economic benefits. Incorporating environmental goals with existing reservoir purposes brings community members together to address common challenges. Through workshops, meetings and outreach efforts, SRP strives to include the input of all groups that live near and rely on rivers.

At SRP sites, citizens, businesses, government agencies, universities and non-governmental organizations work together to ensure that authorized purposes are maintained. At the same time, environmental goals help enhance natural communities. The collaborative nature of SRP activities is central to their success throughout the United States.

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# Site Status

## Sustainable Rivers Project Sites



The Nature Conservancy

SRP encompasses sites around the nation. From New England to the desert Southwest to the Pacific Coast, Corps and Conservancy personnel are working to improve natural and human communities through reservoir re-operations. Each site presents unique challenges and opportunities to benefit the people, plants and animals that rely on these rivers.

An exciting part of SRP is its potential to widely affect the ways that reservoirs are used to manage rivers. Work at SRP sites currently involves 36 reservoirs in eight river systems. This is just a fraction of the 600-plus reservoirs currently operated by the Corps for flood risk management, hydropower generation, navigation, water supply, water quality management, fish and wildlife, and recreation.

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## Site Status

### Green River

Kentucky

#### *Groundbreaking changes to reservoir operations*

As the first collaboration between the Corps and Conservancy in reservoir management, activities on the Green River have been a catalyst for the entire Sustainable Rivers Project. Environmental management strategies were drafted in 1998, implemented in 2002, and incorporated into the official operating policies for Green River Dam in 2006. Today, nearly 10 years after the strategies were put into practice, local communities are pleased with extended recreation seasons, economies related to the tourism industry are growing, and scientists are reporting increases in the number and diversity of downstream natural communities.



John Hickey/USACE

### Savannah River

Georgia, South Carolina

#### *Developing new approaches to meet multiple needs*

The Savannah River provides drinking water for more than one million people and hosts numerous endangered, threatened and rare species of plants and animals. The three Corps dams on the river included in SRP activities generate hundreds of millions of kilowatt hours of hydroelectricity each year. The reservoirs at J. Strom Thurmond Dam, Richard B. Russell Dam and Hartwell Dam are visited by a total of more than one million people annually. Because of the river's vital importance, the Corps and Conservancy are modifying reservoir operations to maintain and even enhance the many services provided by the Savannah, particularly in the face of continuing drought conditions.



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### Bill Williams River

Arizona

#### *Managing rare ecosystems in a unique natural setting*

The Bill Williams River flows through the wild Arizona desert. Most of the river below Alamo Dam, the only major dam and reservoir in the watershed, runs through wholly undeveloped lands. This makes the Bill Williams a river of critical ecological importance and unique scientific opportunity in the Southwestern U.S., where most rivers are highly engineered for human uses. The Corps, Conservancy and numerous partner organizations are working together to better understand the connections between water and nature as part of an ongoing and collective effort to promote science-based stewardship of this rare oasis.



John Hickey/USACE



# Site Status

## Big Cypress Bayou

Texas, Louisiana

### *Enhancing interconnected rivers, lakes, and wetlands*

In eastern Texas the Big Cypress Bayou flows into Caddo Lake, which was named a globally significant wetland by the Ramsar Convention. SRP activities are seeking to re-introduce variability in river flows to regenerate rare cypress forests and fish habitats. Reduced flow variability has allowed invasive species to impact much of the native ecosystems. Collaborating with many partners, the Corps and Conservancy are aiming to use periodic flood conditions and dry spells to invigorate floodplain and backwater habitats.



Lynn McBride/TNC

## Willamette River

Oregon

### *Expanding efforts for holistic watershed management*

Nearly 70% of all Oregonians live within 20 miles of the Willamette River, making this waterway crucial to the social and economic well-being of the region. Corps dams in the basin provide numerous benefits such as flood risk management, hydropower generation and water supply. Environmental flow releases as part of SRP activities are improving in-stream and side-channel habitats for salmon while maintaining important human uses of the river. Healthy habitats can support increased recreation and help the salmon industry.



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## White River

Arkansas, Missouri

### *Supporting ecosystem health before new impacts*

The White River in Arkansas is an important source of hydropower and water supply for the area, and more water resource development projects are being considered. Corps and Conservancy staff are working to determine how much water needs to stay in the river to support wildlife before any new changes take place. Maintaining vibrant river and floodplain ecosystems supports outdoor recreation including boating, hunting and fishing activities, which are important economic generators in the region. Healthy habitats also benefit migrating birds at this stop on the Mississippi Flyway.



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## Site Status

### Connecticut River Connecticut, Massachusetts, New Hampshire, Vermont

#### *Integrating many project purposes in a large area*

The Connecticut River SRP site currently involves 14 Corps dams on nine tributaries across four states. This large project entails significant research on the benefits provided by the dams, environmental needs in the river basin, and the effects of potential modifications. A total of 70 reservoirs are being considered for eventual inclusion in the project, making this effort one with the potential to benefit humans and wildlife throughout an entire region.



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### Roanoke River

North Carolina, Virginia

#### *Incorporating sustainability into broader efforts*

The Roanoke is one of the largest rivers on the eastern slope of North America. It provides habitat for a vast unfragmented system of bottomland hardwood forests and a diverse population of fishes. The Corps is examining possible modifications to the operations of John H. Kerr Dam and Reservoir on the Roanoke. Corps and Conservancy staff and other stakeholders are helping to define environmental strategies as part of water management plans. The goal is to enact an adaptive management policy for the river that supports the continual use of scientific knowledge in water release decisions.



Mike Horak/TNC

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# SUSTAINABLE RIVERS PROJECT

## Improving the Health and Life of Rivers Enhancing Economies Benefiting Rivers, Communities and the Nation

The Sustainable Rivers Project proactively improves environmental health by changing reservoir operations to benefit natural communities. Modifying operations to include environmental needs with authorized project purposes is an effective way to restore, protect and sustain river habitats.

Healthy environments support healthy economies through increased tourism, recreation and flood protection. These effects benefit the communities near rivers and encourage people to work together towards multiple goals. SRP is serving the Nation by pursuing these improvements at sites across the United States.

*Paul Keith/PaulKeithPhoto*

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