

# Sustainable Rivers, an ongoing and expanding partnership

By Janet Meredith  
USACE, St. Louis District

The U.S. Army Corps of Engineers' Sustainable Rivers Program held their national meeting May 23 – 25 at the Missouri History Museum in St. Louis, Missouri. More than 80 attendees convened to review accomplishments and determine program focus for environmental efforts to enhance management of water and ecosystems at USACE infrastructure projects.

Key themes included sustaining partnerships, communicating successes, and strengthening connections between local, state, and federal organizations and stakeholders. The three-day event concluded with a visit to Melvin Price Locks and Dam, a USACE facility on the Mississippi River and site of Sustainable Rivers work with the USACE St. Louis District.

Sustainable Rivers is a nationwide program done in partnership by The Nature Conservancy and USACE. The program began in 2002 and works to improve the health and life of rivers by modifying infrastructure operations to achieve ecologically sustainable flows while maintaining or enhancing other project benefits.

Principle Deputy for the Assistant Secretary of the Army for Civil Works Mr. Jaime A. Pinkham noted, "... partnerships matter, science matters, and nature matters and we need to think differently on how we operate these assets and natural wonders that have been entrusted to us to manage in a way that provides a multitude of benefits."

Management of flows through the Sustainable Rivers Program began on the Green River in Kentucky. Declines of mussel populations noticed by an ecologist sparked concern and gave rise to the first collaboration between The Nature Conservancy and USACE to consider alternative reservoir operations to better manage ecosystems such as adjusting the transition from summer pool to winter pool at Green River Lake to promote recruitment of mussels. From this meeting, water management changes were made and measured and lessons learned were shared with reservoir operators and managers working in other systems.

"Work on the Green River was a successful proof of concept that existing reservoirs could be used as a tool to restore ecosystems. Given the documented and continued decline of freshwater species, it is important that programs like Sustainable Rivers work to apply that strategy for as much of the nation's water infrastructure as possible," said Jim Howe, Sustainable Rivers Program lead for The Nature Conservancy.

According to the National Inventory of Dams, there are 90,000 dams in the United States. These dams provide important functions for society, but many were built before biologists fully understood how those projects would affect water temperatures, sediment regimes and connected wetlands, as well as the associated effects for native fish and wildlife populations.

With knowledge gained through the Sustainable Rivers Program, water managers are using science to drive collaboration internally and bring together state, federal, and non-governmental academic institutions to develop new operating ideas that produce positive results.

What started at Green River Dam is expanding and now involves 48 rivers across the United States. Sustainable Rivers teams use a strategic and science-based approach to identify and implement operational changes that enhance benefits provided to the nation. All changes are accomplished in the context of existing infrastructure authorizations.

"It is rewarding to see the Sustainable Rivers Program grow and deliver environmental benefits," said John Hickey, Sustainable Rivers Program lead for USACE. "We recently surpassed 12,000 river miles engaged. But we also know that total is only a fraction of the more than 53,000 river miles the U. S. Army Corps of Engineers is involved with nationally. It is motivating that, even after 20 years, most of the Sustainable Rivers Program's potential to improve the health and life of rivers is still ahead of us."

In the meeting, key future directions for the program were discussed and debated. Moving forward, it is critical that Sustainable Rivers stays focused on achieving the overall program goal of more environmental

benefits from already built USACE water resources infrastructure, promoting good stewardship of rivers and associated ecosystems, leveraging partnerships, and expanding program efforts to new rivers and infrastructure. Ongoing Sustainable Rivers Program work in the St. Louis District is an outstanding example of ways the Sustainable Rivers Program can complement and help expand ongoing and already successful environmental efforts at USACE infrastructure.

St. Louis District is very active with the Sustainable Rivers Program. Efforts are underway to manage pools for environmental benefits on the Mississippi and Kaskaskia rivers and to improve spawning success of the state endangered Lake Sturgeon at Melvin Price Locks and Dam and at Mark Twain Lake Reregulation Dam on the Salt River. Efforts on the Salt River are just beginning, but work at Melvin Price Locks and Dam, through a partnership with Missouri Department of Conservation, has already resulted in only the second and third documented spawn of Lake Sturgeon in Missouri in the last 40 years! Historically, the Lake Sturgeon population has declined due to pollution, restricted migration routes, and inaccessible spawning habitat.

"The work in the St. Louis District are a couple examples of the value of the Sustainable Rivers Program," stated Brian Johnson, chief of the St. Louis District's Environmental Section. "There are just tons of potential for the program to be expanded to the more than 600 dams owned and operated by the Corps. Sustainable Rivers is really helping us find ways to operate our projects for their authorized purposes and still create habitat for plant and animal species that live within our project footprints. It may seem like a cliché, but the Sustainable Rivers Program is the definition of finding win-win scenarios at our infrastructure projects."

Through Sustainable Rivers, water managers, reservoir operators, and scientists are working to create better conditions for migratory shorebirds, restore flows to rejuvenate floodplains and wetlands, and improve fish spawning and passage while finding innovative ways to monitor results and incorporate environmental strategies into operations.



Participants from the national Sustainable Rivers meeting. (George Stringham)

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



Lake Sturgeon egg adhered to rock below Mel Price Locks and Dam. (Tyler Gobe)

 Sustainable Rivers Program