



Securing the Future of U.S. Rivers

Why Continued Federal Support for the
Sustainable Rivers Program Pays Off

Executive Summary

The Sustainable Rivers Program (SRP) is the nation's largest initiative to modernize dam operations to restore and protect river systems while maintaining critical infrastructure functions such as hydropower, flood risk reduction, and navigation. Established in 2002 through a partnership between the U.S. Army Corps of Engineers (USACE) and The Nature Conservancy (TNC), SRP has expanded from eight river systems to 65 rivers across 27 USACE districts, influencing nearly 15,000 river miles. This remarkable growth reflects the success that USACE districts have achieved through SRP projects. SRP offers a proven, scalable model for delivering outsized benefits to communities nationwide.

SRP delivers real benefits for local communities and an exceptional return on federal investment.

TNC commissioned RTI International (RTI) to evaluate the benefits of SRP across four case study sites. RTI's analysis shows that SRP investments stimulate recreation, tourism, and educational opportunities, while restoring fisheries, improving water quality, and enhancing flood protection. RTI estimated benefit-cost ratios at these four sites range from 7.9 to 12.4, with every \$1 invested yielding up to \$12 in quantifiable benefits.

SRP is a proven model for other water managers.

SRP's impact to river systems and stakeholder interests, as measured by its exceptional return on investment to taxpayers and widespread support from communities, shows that modifications to infrastructure management can be both impactful and cost-effective. SRP lessons and practices are transferable throughout the water management sector.

Sustained and expanded federal funding is necessary to respond to growing demand for SRP nationwide.

Over the last five years, SRP has been able to meet only 50% of funding requests from USACE offices. The current SRP footprint covers about 25% of USACE-managed river miles, highlighting both the potential of the program and the urgent need for expanded funding so that SRP can reach more communities and river systems nationwide.

Federal support is essential for SRP's future impact.

Federal leadership is needed to secure SRP's next chapter by leveraging robust evidence of its benefits to inform broader water infrastructure policy and ensure resilient, healthy rivers for generations to come.



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Sustained and expanded federal funding of the Sustainable Rivers Program (SRP) is essential to meet growing demand and secure resilient, healthy rivers for future generations.



SRP spans 65 river systems and 27 USACE districts, engaging nearly 15,000 river miles.



Demand for SRP from USACE districts far exceeds current resources. In a typical year, SRP is only able to meet half of SRP funding requests.



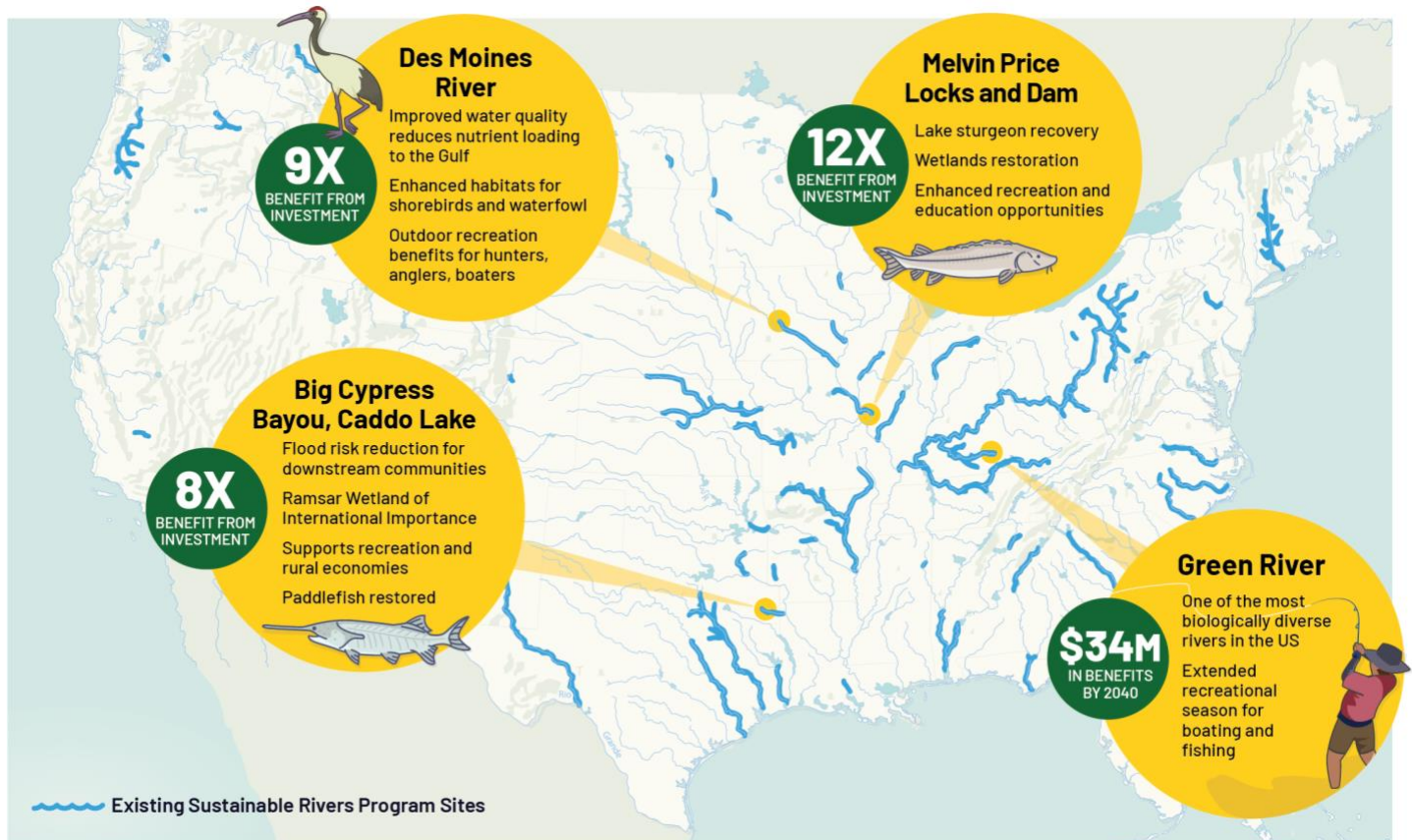
For every \$1 invested, SRP delivers up to \$12 in quantifiable benefits.



Only 25% of USACE-managed river miles are enrolled in SRP.

The Sustainable Rivers Program creates value across landscapes and communities.

RTI's analysis of the economic value of enhanced river systems at four case study sites (Melvin Price Locks and Dam, Des Moines River, Caddo/Big Cypress Bayou, and Green River) provides robust, independent evidence of the value created by SRP investments.



Adapted from: U.S. Army Corps of Engineers Sustainable Rivers Site Map

Introduction

The Sustainable Rivers Program (SRP) was established in 2002 following a four-year collaboration between the U.S. Army Corps of Engineers (USACE) and The Nature Conservancy (TNC). SRP's mission is to "improve the health and life of rivers by changing operations of USACE water resources infrastructure to restore and protect ecosystems, while maintaining or enhancing delivery of all authorized project purposes."¹ In 2002, when SRP began, the program involved eight river systems in two USACE districts. In fiscal year 2025, SRP involved 65 river systems across 27 USACE districts making it the largest and most comprehensive program for implementing environmental flows at USACE reservoirs.²

At its core, SRP uses an evidence-based and collaborative process to understand what will make a river system healthy and productive for both people and nature. SRP develops new operational strategies that promote more natural river flows downstream of reservoirs, mimic natural water level management in reservoirs, and open lock gates to promote fish passage. SRP then tests the effectiveness of these proposed water management strategies before they're adopted at USACE infrastructure.

SRP appropriations increased from \$400,000 per year in FY2019 to an average of \$5.3 million from FY2020-FY2025. Funding increases led to increased impact and expansion, as SRP grew from 16 river systems in FY2019 to 65 in FY2025 (see figure below). Nearly 15,000 river miles are now enrolled in SRP. Despite funding increases, demand for location-based funding and technical assistance through SRP exceeds current resources, with SRP able to meet only 50% of funding requests over the last five fiscal years.³

SRP innovates water management practices by leveraging science and stakeholder expertise to make

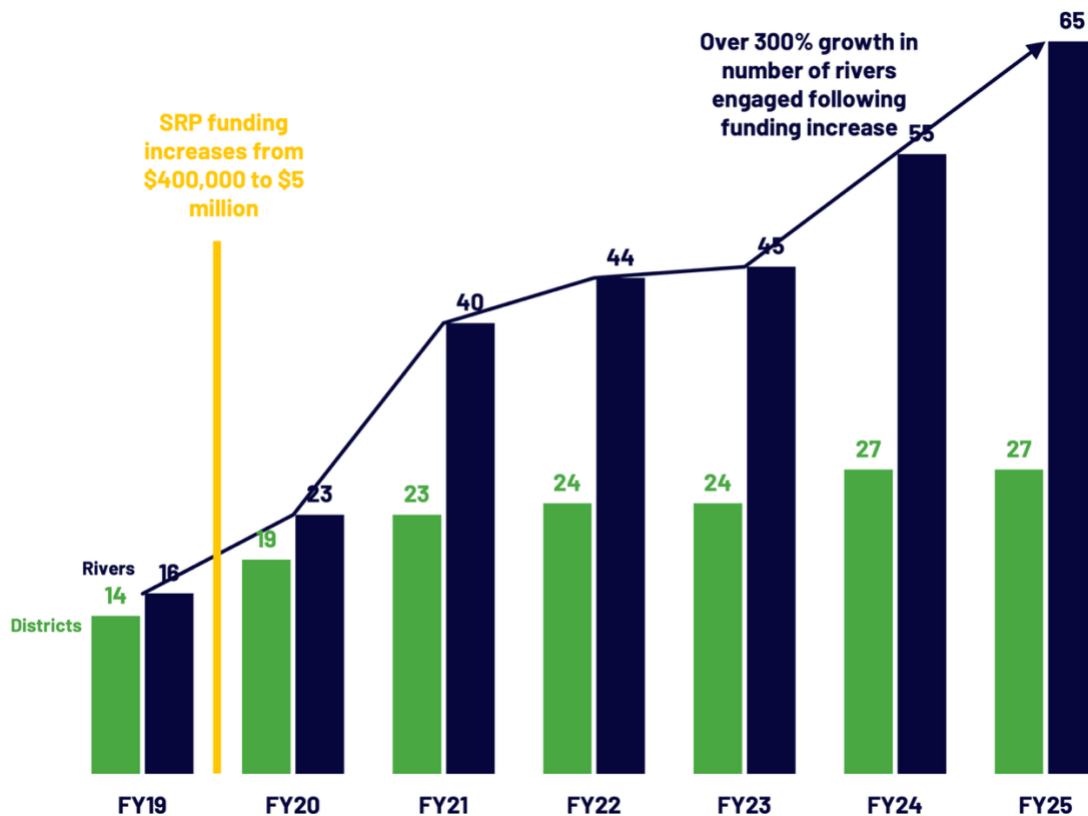
effective operational decisions that deliver additional benefits for river systems and stakeholders, while maintaining the intended purpose (e.g., hydropower, flood risk reduction, and navigation) provided by USACE infrastructure. Since SRP's inception, more than 500 organizations have directly engaged in SRP activities.⁴

USACE maintains and operates more than 700 dams across the United States, many of them built before we as a society understood the impacts they have on waterways. SRP is a critical program for modernizing the operations of these dams and ensuring that their critical functions are maintained while incorporating the most up-to-date science to maximize the health of river systems. Expanded and sustained funding for SRP ensures that evidence-based strategies continue to guide water management, preserving essential functions while unlocking even greater benefits for future generations.



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Sustainable Rivers Program funding increase led to growth in the number of rivers engaged.



Source: The Nature Conservancy

The Economic Case for the Sustainable Rivers Program

In 2025, RTI International (RTI) conducted a cost-benefit analysis of the economic value of river systems enhanced by SRP projects at four case study sites: Melvin Price Locks and Dam on the Mississippi River (Illinois-Missouri), Des Moines River (Iowa), Caddo/Big Cypress Bayou (Texas-Louisiana), and Green River (Kentucky).⁵ RTI interviewed USACE water managers and other on-site experts and then conducted a literature review and quantitative cost-benefit analysis to estimate benefits and projected net present value of SRP investments at each site through 2040.⁶

At each site, SRP implemented environmental flow and/or environmental pool actions that, together, help

manage the quantity, timing, and quality of water flows in river systems. Flow is the master variable in aquatic systems, so small changes in flow patterns can lead to major gains in the health of rivers. Environmental flow actions (Figure 1) promote more natural flows in the river system downstream of a reservoir by adjusting the timing, quantity, and quality of water released. Environmental pool actions (Figure 2) mimic natural water levels in a reservoir. For example, pool levels may be raised in the fall and winter to support waterfowl migration and provide habitat for other species. In the summer, pool levels may be lowered to support wetland restoration and improve water quality.

Figure 1: Environmental flow actions promote more natural river flow.

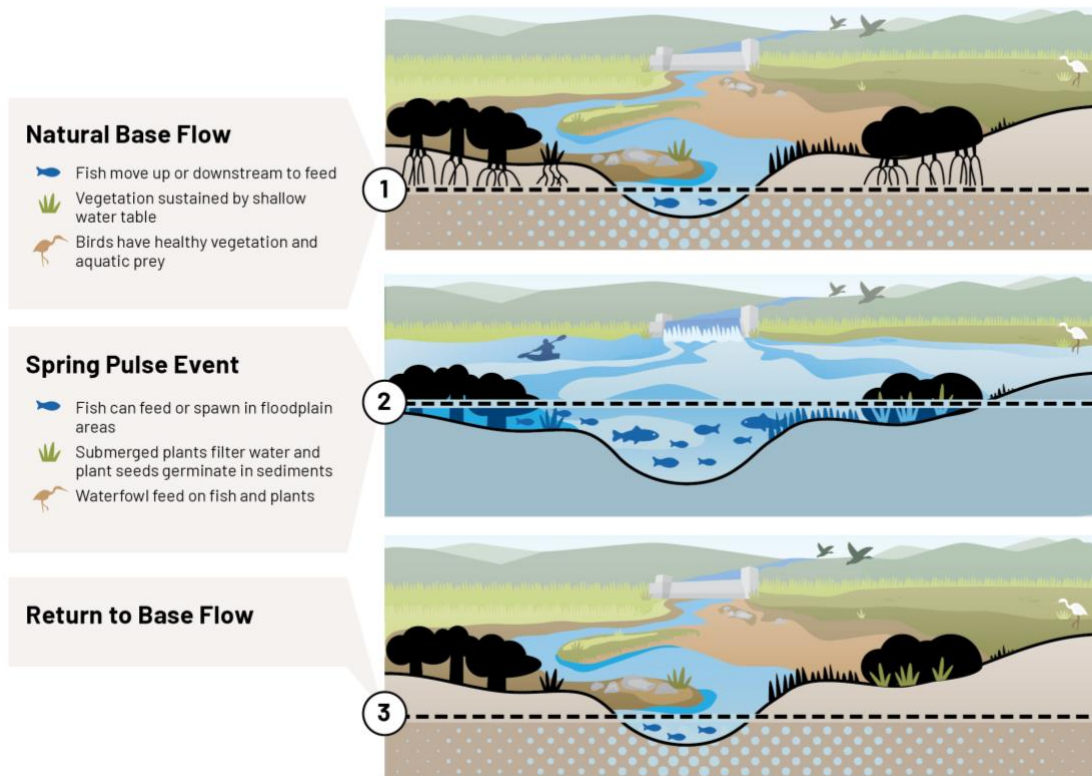
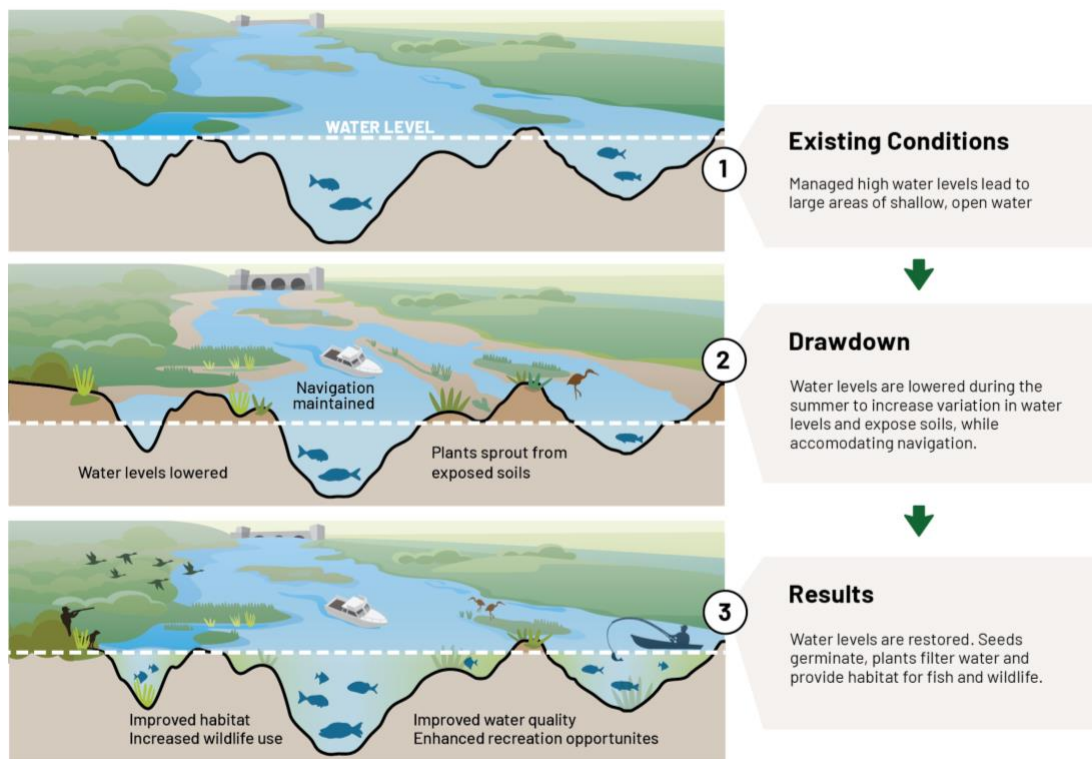


Figure 2: Environmental pool actions mimic natural water levels.



Adapted from: McFarlane, Aaron et al., September 2025 "Communication Materials to support Implementation of Growing Season Drawdowns," U.S. Army Corps of Engineers (Project ID I24-011).

RTI's analysis of the four case studies shows that SRP investments deliver strong economic returns. Program investments broke even as soon as three years after implementation of SRP strategies (Melvin Price Locks and Dam). Table 1 below shows the long-term (i.e., 2040) benefit-cost ratios of these four case studies, ranging from 7.9 (Caddo/Big Cypress Bayou) to 12.4 (Melvin Price Locks and Dam). That is, for every \$1 invested, SRP delivers up to \$12 in benefits. SRP-driven actions have restored and enhanced fisheries, mussel habitat,

wetland vegetation, water quality, and floodplain connectivity.

More importantly, RTI's analysis at the four case study sites shows how SRP investments have stimulated local economies through increased recreation, tourism, and education opportunities. By 2040, the total present value of benefits across these four case studies is estimated at \$60 million, far exceeding the \$32.7 million of funding appropriated to the *entire* SRP program since FY2017.

Table 1: Sustainable River Program case studies show strong economic value alongside enhanced river health.

| Case Study Site | SRP Start Year | Present Value (2040, \$ million) | | Benefit-Cost Ratio (2040) | Key Benefits Identified |
|--|----------------|----------------------------------|--------|---------------------------|---|
| | | Benefits | Costs | | |
| Melvin Price Locks and Dam, Mississippi River <i>(Illinois-Missouri)</i> | 2021 | \$2.94 | \$0.24 | 12.4 | <ul style="list-style-type: none"> - Created more than 1,000 acres of enhanced wetland vegetation habitat for waterfowl, shorebirds, fisheries, and other wildlife. - Stimulated natural spawning of lake sturgeon—a state-endangered species. - The facility includes a public museum and educational center. |
| Des Moines River <i>(Iowa)</i> | 2015 | \$19.90 | \$2.20 | 9.0 | <ul style="list-style-type: none"> - Supported life histories of native mussels and fish across 142 river miles. - Managed and reduced nutrient loading and hypoxia at Lake Red Rock, a major nutrient source to the Mississippi River system and ultimately the Gulf. |
| Caddo/Big Cypress Bayou <i>(Texas-Louisiana)</i> | 2010 | \$3.22 | \$0.36 | 7.9 | <ul style="list-style-type: none"> - Improved river-floodplain connectivity and water storage capacity across nearly 2,000 acres. - Recognized as Ramsar Wetland of International Importance, supporting high biodiversity with species such as paddlefish, bluehead shiners, and freshwater mussels. - Contributed to outdoor recreation economies of nearby rural communities. |
| Green River <i>(Kentucky)</i> | 2002 | \$37.80 | N/A | N/A | <ul style="list-style-type: none"> - Extended boating and fishing recreation seasons for several weeks in September, October, and November. - Enhanced habitat across more than 3,000 acres supporting life histories of vulnerable native mussels and fish populations. - Recognized as one of the most biologically diverse rivers in the U.S. |

Note: Present value costs and benefits calculated using a 7% discount rate. All costs and benefits calculated from SRP's start year through 2040. Costs were not estimated for Green River due to lack of data prior to 2010.

Source: Smit Vasquez Caballero, Robert Beach, Brooke Shaw, and Daden Goldfinger, November 2025, "Sustainable Rivers Program Cost-Benefit Analysis: Final Report," RTI International project number 0219728.002, available at [nature.org/en-us/about-us/who-we-are/how-we-work/policy/sustainable-rivers-program-economic-benefit-report](https://www.nature.org/en-us/about-us/who-we-are/how-we-work/policy/sustainable-rivers-program-economic-benefit-report).

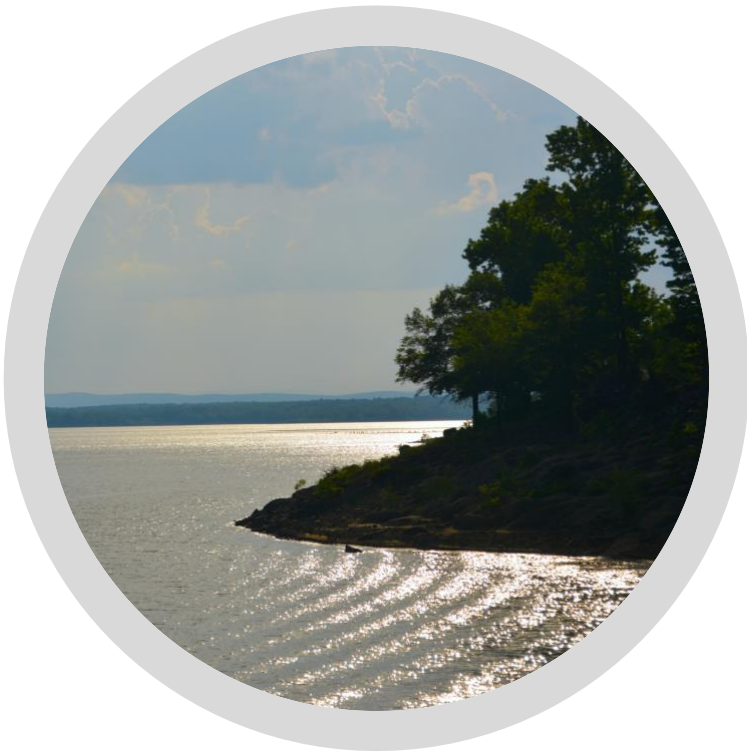
Securing the Sustainable River Program's Next Chapter

SRP offers a balanced, collaborative, and adaptive approach to the management of USACE's portfolio of more than 700 dams and related infrastructure across the United States. The primary objective of SRP is to identify water management changes that can be made to restore and protect river systems while maintaining the authorized functions for which that infrastructure was built (e.g., hydropower, flood risk reduction, and navigation). The restoration and protection of these river systems provides real benefits to nearby communities, such as enhanced water quality, increased recreation opportunities, and improved hunting and fishing seasons. The principle of "no net loss" of authorized benefits is foundational to SRP's success and longstanding stakeholder support.

SRP offers a proven model for scalable, cost-effective federal investments to secure multiple benefits from America's water management infrastructure. To ensure the continued success of the program, it is essential to sustain and expand federal funding for SRP in USACE annual budgets. Demand for SRP participation now far outpaces available resources, with documented need for additional technical support at USACE infrastructure across the United States.

Today, SRP's footprint—nearly 15,000 miles of river downstream from SRP sites—represents only a little more than 25% of the nearly 53,000 river miles influenced by USACE infrastructure. Expanding SRP's formula for success to new projects and new districts will enable more communities to benefit from modernized dam operations that offer outsized returns for people and waterways.

Federal leadership and support are essential to the long-term success of SRP. It is critical that USACE Headquarters, Divisions, Districts, Congress, and the Executive Branch recognize SRP's proven impact, return to taxpayers, and balanced approach to infrastructure management. RTI's analysis of the economic value of enhanced river systems at four case study sites provides robust, independent evidence of the value created by SRP investments, with benefit-cost ratios ranging from 7.9 to 12.4. These findings can inform broader water infrastructure policy, demonstrating that investments in SRP pay off in the long run by maintaining essential river functions, maximizing additional benefits, and supporting resilient communities nationwide. Ultimately, sustained and expanded federal support for SRP is a cost-effective strategy for securing the future of U.S. rivers and the services they provide every day for the American people.



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ENDNOTES

- 1 Authorized project purposes include hydropower, flood risk reduction, and navigation. U.S. Army Corps of Engineers, "Our History," last accessed 17 November 2025, available at <https://www.hec.usace.army.mil/sustainableivers/history/>.
- 2 *Ibid.*
- 3 The Nature Conservancy.
- 4 Sustainable Rivers Program, February 2025, "Metrics Framework to Track and Communicate Program Impact," available at <https://www.hec.usace.army.mil/sustainableivers/publications/docs/Sustainable%20Rivers%20-%20Metrics%20framework.pdf>.
- 5 Smit Vasquez Caballero, Robert Beach, Brooke Shaw, and Daden Goldfinger, November 2025, "Sustainable Rivers Program Cost-Benefit Analysis: Final Report," RTI International project number 0219728.002, available at [nature.org/en-us/about-us/who-we-are/how-we-work/policy/sustainable-rivers-program-economic-benefit-report](https://www.nature.org/en-us/about-us/who-we-are/how-we-work/policy/sustainable-rivers-program-economic-benefit-report).
- 6 RTI conducted two rounds of expert interviews at each case study site. The expert interviews were designed to identify the environmental actions introduced under SRP and the intended benefits of each action. RTI then applied a value transfer function, based on a meta-analysis, to estimate ecosystem service value of each intended benefit at each case study site. RTI used actual site-level annual costs, as reported by TNC and USACE staff, for cost estimations.

SUGGESTED CITATION

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