Community-Based Watershed Restoration Partnerships

Accomplishments for FY 2000 - 2002

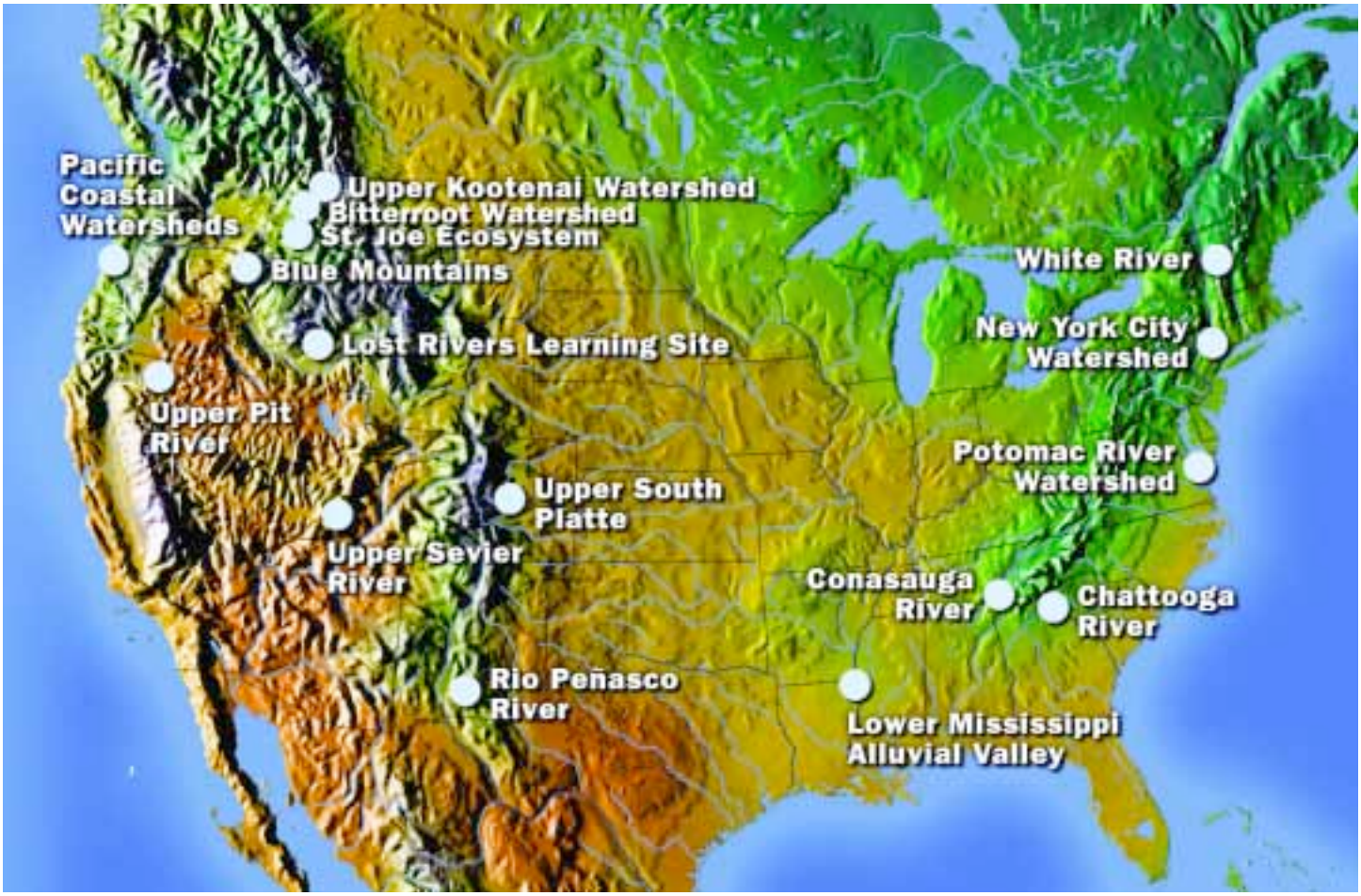
Stewardship, Partnerships, and Watersheds

Over a century ago, public concern about adequate supplies of clean water contributed to the establishment of federally protected forest reserves. These reserves are now part of the U.S. Department of Agriculture Forest Service (USDA Forest Service) National Forest System. In 1999, the USDA Forest Service refocused on this original purpose and established an innovative approach to restoring watersheds through partnerships—large-scale watershed restoration projects. The USDA Forest Service national office invested in 16 sites across the Nation.

Prior to 1999, there wasn't a strong push for collaboration. The USDA Forest Service determined what was right for the national forests; other land managers and landowners (both public and private) independently determined what was right for their lands. No one considered the total effects on the river basins; nor were attempts made to forecast catastrophic events. The USDA Forest Service has now realized that solutions to watershed issues require working collectively across mixed ownerships within a watershed. By collaborating with other Federal and State agencies, local communities, private landowners, and organizations, the USDA Forest Service can restore large watersheds to healthy and sustainable conditions.

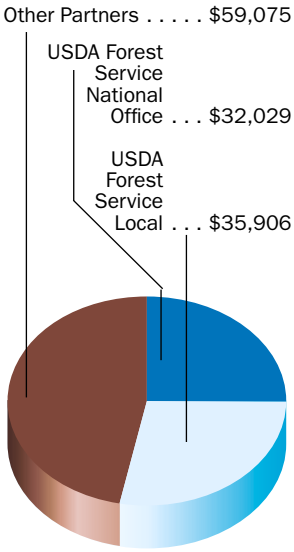
Restoration activities provide—

- Cleaner drinking water
- Increased fish populations
- Healthy wetlands and forests
- Decreased risks of wildfire
- Reduced insect and disease infestation
- Improved recreation experiences
- Unpolluted water as a result of road closings and wiser agriculture practices
- Protected streambanks
- Abundant wildlife habitat
- Fewer invasive, nonnative plants



Projects

Total Estimated Expenditures Total Funds for Three Years (In thousands)



Project Funding

Trusting that what is learned from this experiment could be shared and used in other settings, the USDA Forest Service has invested $68 million in selected large-scale watershed collaborative projects over the last 3 years. Part of this funding included $32 million directly from the USDA Forest Service national office. Funding from the national office was provided in an unprecedented and innovative move to accelerate teamwork in the field. Field offices redirected funds to projects to provide the additional funding. Partners invested almost $60 million for specific projects.

Project Selection

From more than 60 very worthwhile projects that competed for project funding, 16 large-scale watershed projects were selected to become national prototypes for more visionary management of ailing watersheds and ecosystems. Located in 26 States, these watersheds provide water for millions of people and habitat for numerous sensitive and threatened species.

Project Implementation

To ensure that the projects were based on a partnership approach, specific requirements were attached to the funding provided by the USDA Forest Service. Project partners were required to—

- Develop a standardized business plan
- Establish accountability mechanisms
- Develop new public and private partnerships and strengthen existing ones
- Identify on-the-ground work accomplishments based on clear objectives
- Provide an annual report
- Develop and follow a 5-year self-sufficiency funding plan

As part of the business plan, each watershed partnership has a communication and education component; uses adaptive management, or "learning by doing," as a central principle; and uses scientific findings to set priorities for projects and to guide planning and decisionmaking.

With these collaborative partnerships, people work together to determine how to improve and sustain the health of entire watersheds, regardless of ownership. Teams agree on priorities and do the most important work first, using grants and agreements to stretch resources. Alternatives are developed that allow everyone's issues, concerns, and goals to be considered, ensuring better, more comprehensive results.

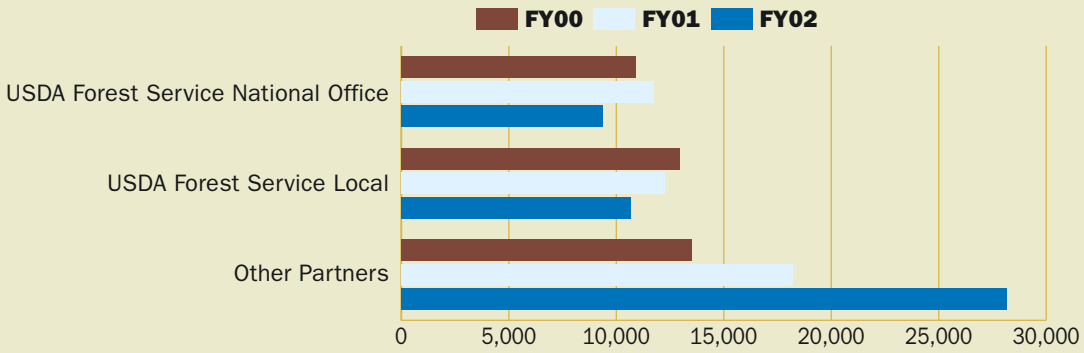
Project Accomplishments

Progress towards long-term gains is becoming more evident; the communities can see how much they are achieving through partnerships. The process of reevaluating their goals and projects tightened the focus for each selected watershed, helping identify other partners who could collaborate for the common good. Existing partnerships were strengthened by the infusion of capital and community interests. Existing restoration work was unified, multiplied, and strategically folded into watershed assessments and plans. Perhaps most importantly, most of the program's funds have gone to on-the-ground projects.

The Community-Based Watershed Restoration Partnerships have produced many important successes and outcomes in the short time they have existed. In addition to the resource work shown on page 3, they developed:

- Stronger public-private partnerships
- Greater knowledge of watershed conditions
- Improved watershed health

FY 2000-2002 Community-Based Watershed Partnerships Investments by Partner Total investments for the first 3 years of operation. (in thousands)



- Improved water quality and aquatic habitat conditions
- Livable fire-safe communities
- Improved forest health
- Reduced fire hazards
- Less fragmented forests
- Evaluations of restoration success
- More local commitment to watershed management and restoration

The watershed partnerships wrote collaborative business plans to guide the work and established functioning working groups with diverse interests. Numerous Federal, State, and local governments; private parties; and nonprofits have been engaged in the projects.

From the Pacific Northwest forests to New York City's watershed, new technologies are being developed, including the pioneering of new contract mechanisms and modifying wood fibers to absorb pollutants from surface runoff.

In FYs 2000 to 2002, collaborative teams—

- Completed work that improved the health of over 103,450 acres of forests through thinning, prescribed fire, fuels reduction, and tree planting
- Established more than 523 miles of riparian forest
- Established 4,500 acres of native grasslands
- Restored more than 12,600 acres of wetlands
- Decommissioned more than 200 miles of roads
- Rehabilitated 1,600 miles of roads
- Restored over 3,375 miles of stream habitat and streambanks
- Improved 35 recreation sites and 470 miles of trails
- Treated 30,000 acres of noxious weeds
- Restored 3,500 acres of wildlife and upland habitat
- Improved grazing management practices on 32 pubic allotments and 4 private ranches—over 830,000 acres
- Surveyed hundreds of miles of streams for restoration potential
- Implemented hundreds of soil and water improvement and protection projects, ranging from culvert replacements and drainage ditch improvements to improved toilet facilities in recreation sites

Percent of Large-Scale Watershed Restoration Projects Acreage Present on USDA Forest Service Land

Bitterroot Watershed	70
Blue Mountains Demonstration Area	50
Chattooga River Watershed	68
Conasauga River Watershed	18
Lost Rivers National Learning Site	57
Lower Mississippi Alluvial Delta	13
New York City Watersheds	0
Pacific Coast Watershed	16
Potomac River Watershed	18
Rio Peñasco Watershed	75
St. Joe Ecosystem	47
Upper Kootenai Watershed	79
Upper Pit River Watershed	26
Upper Sevier River Community Watershed	64
Upper South Platte Watershed	80
White River	11

Watersheds in this project run the gamut from majority holdings by the USDA Forest Service to very little National Forest System land. However, the USDA Forest Service is actively engaged in all projects through its Research and Development and State and Private Forestry programs.

Partnerships

Building momentum toward on-the-ground accomplishments has not been easy at any site. All locations have faced major local conflicts over values, disagreement on priorities, and lack of understanding of issues. But the efforts to overcome differences among partners and collaborate for the common good are testimony to the passion for success. Better, broader, and faster results come from communities intent on planning, collaborating, and acting decisively.

Partnerships have included new alliances of every type—public and private, large and small. From the hardwood forests of the Mississippi Delta to the Green Mountains of Vermont, community development is happening on many levels and attests to the connection between ecological and economic health. Personal contacts and networking have joined with media and public education events to promote the values of collaboration while restoring watersheds. Take a look at http://www.watershed.interactive-environment.com/ for interesting watershed information presented for the general public in the Chesapeake watershed of the mid-Atlantic coast area.

The combination is potent. The lessons are powerful and transferable. They can also describe what happens when degradation is reversed and whole watersheds begin to heal. When knitted together strategically, restoration projects start to multiply their effects.

Only by collaborating with diverse groups of people—some who depend on the watershed for their livelihood, others who cherish the land, and organizations that want to create a vigorous landscape—can teams of partners bring these watersheds back to a vibrant, healthy condition and sustain them. Americans are expressing their views, working with their neighbors, and achieving the results they want.

As each of the following descriptions demonstrates, these unique partnerships are proving that sustaining watershed restoration takes an innovative team approach. The approach blends sharing a long-term vision; collaborating to make decisions within complex landownership patterns; and sharing costs, workloads, and new ways of thinking and acting. These are all essential for effective watershed restoration. Working together makes the difference.

Categories of Partners	Number of Groups
Private Landowners	Hundreds
Conservation Organizations	25
Environmental Organizations	10
Wildlife and Fish Organizations	20
Industry Organizations	20
State Government Organizations	30
Local Government Organizations	50
Universities	15
American Indian Tribes	5
Federal Government Organizations	15
Local Businesses	Hundreds

Evaluation

In 2001, the USDA Forest Service initiated a formative evaluation of the watershed partnerships. Bob Doppelt and Craig Shinn of Portland State University (PSU) carried out the review with assistance from Jessica Wilcox, a graduate student at PSU, and Dewitt John of Bowdoin College.

The review was not a report card on the Community-Based Watershed Restoration Partnerships. Rather than simply evaluate success or failure, it determined the strengths as well as weaknesses—those elements helping and those hindering the institutionalization of the landscape-level, community-based management approach into everyday agency operations.

While there is much for the USDA Forest Service, its employees, and the watershed partnerships to be proud of, the review found many obstacles to future success. Removing those barriers will improve the functioning of the partnerships and improve the agency's ability to institutionalize the approach throughout the National Forest System.

Major Findings

- The most successful projects were found where strong people and groups exist within the community external to the USDA Forest Service—that is, where civic capacity is high. Civic capacity can be thought of as the social capital (an established network of relationships among individuals and institutions), community competence (variety and abundance of knowledge, skill, and ability within a community), and civic enterprise (history of collective action). Social capital may include local governments, nonprofits, special districts, private businesses, and others.

- In a number of cases, USDA Forest Service employees thought they were performing better than did their external partners. Agency staff, for example, reported they had developed successful partnerships with stakeholders. The review found that in many cases the most successful partnerships were primarily between the USDA Forest Service and other Federal Government agencies. Non-Governmental partners struggled to be considered full partners in planning and decisionmaking. The divergent views about the performance of the USDA Forest Service indicated the agency may be too internally focused. Therefore, it may unknowingly screen out information that may be vital to its health and the lands it manages. Efforts to turn outward and increase the agency's ability to accurately receive external information may reduce the crisis-response mode the agency often finds itself in.

- USDA Forest Service employees seem caught between very different views of the agency's mission, goals, and role. Some believe it is to restore and sustain watershed health and the production of economic benefits that result from, and does not override, these goals. These employees believe that a fundamental change is needed in the way the agency operates—a shift toward landscape-level, collaborative multidisciplinary approaches—to accomplish the goals. Other employees believe that the primary mission of the agency is to suppress fires, produce commodities for industry or local communities, or foster other single purposes such as recreation. These employees believe that the existing way the agency operates works just fine and that the major constraints to success are lack of funds and/or ineffectual legal requirements and procedures.

People with both of these views believe the USDA Forest Service rarely follows through on new initiatives and, therefore, see the watershed projects as simply another in a series of projects that will soon fade away. The lack of confidence that the agency will stick with the collaborative watershed approach for long leads many people to focus on getting as much money as possible to complete backlogged projects rather than investing time and energy on designing and testing a new way of doing business. Widely divergent views suggest a lack of clarity exists among USDA Forest Service employees about the long-term viability of the watershed projects and the mission and direction of the agency as a whole.

- Due to the issues above, many projects are struggling to understand or develop clarity about what landscape-level, partnership-based collaboration involves. Those who view the watershed projects as a new way of doing business tend to describe new visions, goals, and strategies and seek synergy among multiple partners. They strive for entrepreneurial, integrative solutions to problems such as the fragmentation of authorities and laws and the functional isolated roles that exist within the USDA Forest Service. Those who do not believe that a new approach is needed, and/or do not believe the agency is fully committed to the new approach, struggle to develop effective new visions, goals, and strategies, and tend to believe that improved coordination between government agencies and talking with a few trusted external stakeholders constitutes effective partnership building.

Given their findings, the researchers concluded that in most cases the competency exists within the USDA Forest Service to engage effectively in the new landscape-level, partnership-based approach represented by the community-based watershed restoration partnerships. The agency has employees with an exceptional range of high-quality scientific, engineering, planning, outreach, and communication skills. USDA Forest Service research programs are some of the best in the Nation. The agency has been dealing with the public for many years, although not specifically in the manner required for the large-scale watershed projects.

The primary obstacles to success are not related to human competency; they are related to—

- A lack of clarity over the mission and goals of the agency.
- A need for commitment to the administrative and coordination requirements of landscape-level collaboration.
- The design of governance systems, structures, and human resource practices that were established for other purposes.

The research suggests these issues must be resolved before the new landscape-level partnership-based approach can become fully embedded in the agency's standard operating procedure and culture. Improving the function of landscape-level, community-based watershed partnerships falls to those in leadership roles—the Chief and headquarters staff, the regional offices and forest staff, and those within the partnerships.

The report provides recommendations to address obstacles and findings at each level of USDA Forest Service management and for the community partners. The complete report may be accessed at http://www.fs.fed.us/largewatershedprojects/.

Next Steps

In FY 2003, money was not held in the USDA Forest Service national office to be allocated to the partnerships as in previous years. During the budget planning sessions, forests were instructed to include the historic level of funding for the partnerships in their base budgets.

Some of the partnerships were included in their forest's base budgets for FY 2003. In other forests, some of the money was reallocated to higher regional or forest priorities. At the same time, the effects of the downturn in the economy were felt in most partnerships as private funds were also in short supply. In some cases, partnership expectations and trust were shaken when anticipated funding could not be found.

In future budgets, forests and regions are assuming more responsibility and authority to allocate funds to the Community-Based Watershed Restoration Partnerships. As we have already seen, some projects are faltering while others are still thriving. Those with an involved partner base, good support from several sources of funds, and a sound plan for project work are most likely to be able to continue to compete effectively for limited funds.

The USDA Forest Service National Leadership Team supports the watershed partnership approach. The Community-Based Watershed Restoration Partnerships help accomplish many important goals, including those related to—

- The Chief's National Emphasis areas
  - Benefits to Communities
  - Forest and Rangeland Health
  - National Fire Plan

- The 2000 Revision to USDA Forest Service Strategic Plan
  - **Objective 1.a:** Improve and protect watershed conditions to provide the water quality and quantity and the soil productivity necessary to support ecological functions and intended beneficial water uses

- The Guiding Principles for the President's Management Initiatives
  - Increasing reliance on the use of partnerships, volunteers, and interagency cooperation to accomplish work

The National Leadership Team supports community-based collaborative approaches and partnerships as models for a new way of doing business. In Chief Bosworth's March 14 message to employees, he emphasizes the need for land managers to act as conveners and facilitators, sharing stewardship challenges with willing partners.

The PSU report provides insights on the successes and obstacles experienced by Community-Based Watershed Restoration Partnerships, which have application to other partnership projects. One of the most consistent themes heard throughout the PSU review process was that because USDA Forest Service personnel had become involved with stakeholders in meaningful ways, trust had been built where little existed and a better appreciation for the agency was gained. Working in partnership with diverse groups—towards a desired future condition for the land—is a challenge, but one that greatly benefits the USDA Forest Service.

The USDA Forest Service encourages its employees to continue to explore opportunities to expand community-based management approaches and large-scale watershed restoration partnerships.

For the most recent information on Community–Based Watershed Restoration Partnerships, please visit the Web site: http://www.fs.fed.us/largewatershedprojects/.

Bitterroot Watershed Partnership

The Bitterroot watershed encompasses approximately 2,800 square miles in southwestern Montana. Nearly 70 percent of this area is federally owned and managed. Federally owned lands include portions of the Bitterroot and Lolo National Forests, as well as a portion of the Selway-Bitterroot Wilderness—a component of one of the largest pristine wilderness areas in the lower 48 States and a key protected area in the Yellowstone to Yukon ecoregion. The Bitterroot watershed provides important large-species habitat as well as migratory corridors and linkages. Its rivers and streams support populations of bull trout (a federally listed threatened species) and westslope cutthroat trout (a Montana State sensitive species), as well as a variety of other aquatic species. The watershed's rivers, streams, and associated riparian areas provide essential resources for many terrestrial species. Most of the privately-owned land in the Bitterroot watershed is located in the Bitterroot River valley, home to a rapidly growing human population.

The Bitterroot watershed is in Montana's fastest growing county. The population increased by 44 percent during the 1990s. New residents have been drawn by the area's rural character and natural beauty. However, the area is being rapidly transformed as former agricultural areas are converted to subdivisions and ranchettes. The Bitterroot watershed was also profoundly impacted by the wildfires of 2000, which burned over 300,000 acres.

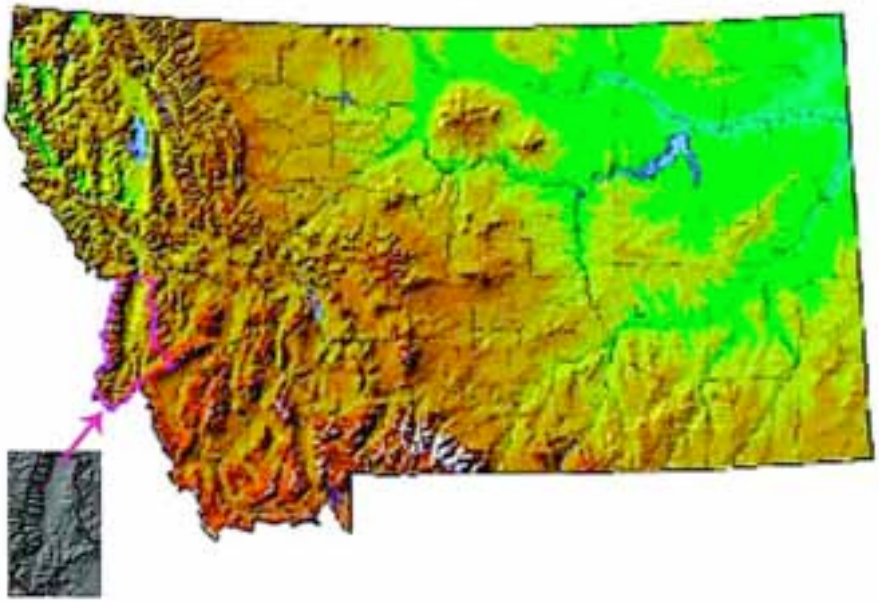
The Bitterroot watershed has much in common with many other gateway communities throughout the West—

- Wildlands are juxtaposed against an increasingly urban landscape.
- Rapid population growth is beginning to undermine the qualities that first attracted new residents.
- Economies once based on agriculture and resource extraction are increasingly service-based.
- Both current land use practices and the legacy of past practices have altered the structure and function of natural systems.
- Residents are concerned with the loss of traditional ways of life and the degradation of natural resources that provide livelihoods, recreational opportunities, and the dominant character of the landscape.

Major threats to the Bitterroot watershed include—

- Loss, degradation, and fragmentation of habitat.
- Water diversion from the Bitterroot River and its tributaries for irrigation.
- Over-appropriated water rights.
- Nonpoint source pollution of streams.
- Forest conditions that depart markedly from historic conditions.
- Impacts from the wildfires of 2000.
- Noxious weeds.
- Limited public understanding of the ecological and societal costs posed by a degraded watershed.

The Bitterroot watershed can be considered a system at risk, but one with potential for restoration and recovery if action is taken now.



Mission

The quality of our watershed defines the quality of life we enjoy. The Bitterroot Watershed Partnership (BWP) is a collaborative group of citizens, organizations, and agencies conserving and enhancing our watershed health through teamwork and local initiatives to benefit our communities.

Goals

- Ecological: Support healthy human and ecological communities along our rivers, streams, riparian, and upland areas.
- Social: Empower communities to make ecologically responsible decisions.
- Economic: Encourage retention, expansion, and development of new economic opportunities to support sound watershed management practice.

Restoration Highlights

Of the seven projects for which funding was received in FY 2001, BWP has completed five and is on schedule with the other two. Completed projects include—

- Education and Public Awareness: Initiate Community Education Partnership.
- Bitterroot Community Conservation Center.
- Bitterroot Important Bird Areas.
- Fire-Dependent Birds.
- Agricultural Entrepreneurs Support.

The two projects which are still underway are Monitoring and Water Resource Center and Model Tributary Stream Restoration.

Other activities sponsored during FY 2002 by the BWP include a 2-day workshop on the National Fire Plan and Large-Scale Watershed Restoration Program. The BWP also co-sponsored a forum on noxious weed management for interested landowners and community members.

The BWP has only begun to address the needs articulated in its 2001 Business Plan. The business plan was based on a commitment from the USDA Forest Service to provide substantial funding for several years. The funds simply did not materialize. To address this change in funding and how the partnership would function:

- The Bitterroot National Forest provided some funds to support a few of the initial projects and helped fund a national partnership coordinator.
- The coordinator worked with a steering committee to secure grant funds.
- Much time was spent redefining the role of the partnership and strategic planning. This effort is not complete.

Partners

The need for increased communication, collaboration, and coordination among entities committed to protecting the natural resource values and way of life in the Bitterroot watershed helped catalyze the formation of the BWP in the spring of 2001. The BWP is governed by a steering committee that meets monthly, including —

- Bitter Root Resource Conservation and Development Area
- Bitter Root Water Forum
- Bitterroot Chapter of Trout Unlimited
- Bitterroot National Forest
- Hackett Ag Consulting
- Lee Metcalf National Wildlife Refuge
- Montana Audubon
- Montana Department of Environmental Quality
- National Forest Foundation
- Tri-State Water Quality Council

In addition to organizations represented on the steering committee, the partnership includes members such as the Bitterroot Conservation District; Montana Department of Fish, Wildlife and Parks; University of Montana; and USDA Natural Resources Conservation Service.

Funding

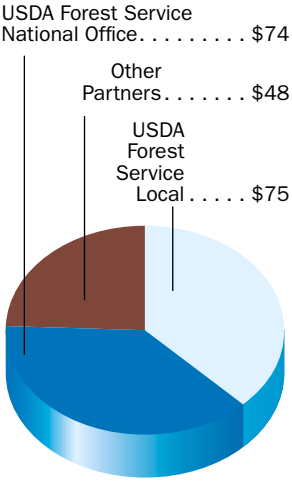
As a late entry to the national Community-Based Watershed Restoration Program, the BWP has not had access to large sums of national-level funding and has depended significantly on the Bitterroot National Forest for financial support. Consequently, there will be far less of a challenge for the BWP to transition away from nationally earmarked USDA Forest Service funds. Approximately 35 percent of BWP's operating capital has been provided by the Bitterroot National Forest.

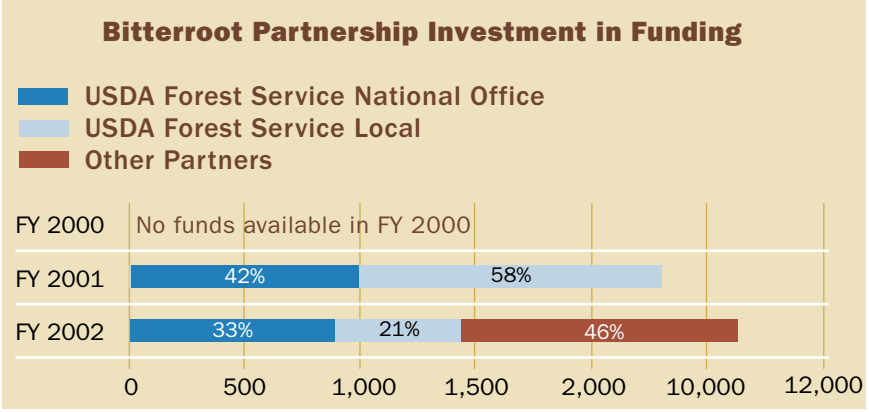
For More Information

Contact Nan Christianson at nchristianson@fs.fed.us or (406) 363-7113.

Bitterroot Partnership 3-year Funding Summary

(FY2000-FY2002 in thousands)





Bitterroot Watershed Partnership Model

Tributary Restoration Project — Threemile Creek

The BWP's tributary restoration project is providing a model for tributary restoration and for how the partnership approaches restoration and conservation throughout the watershed. BWP uses an integrated and cooperative approach that it plans to extend to other tributaries of the Bitterroot River. The Threemile Creek watershed has restoration needs in grazing management, bank stabilization, fisheries restoration, noxious weed management, and fuel load reduction. Threemile Creek carries the largest nutrient load for any tributary of the Bitterroot River. Initial efforts have focused on identifying sources of sediment and nutrients, managing grazing (fencing of selected riparian areas to limit impacts from cattle grazing), monitoring flow (10 sites monitored monthly), and involving students from a local school in water quality monitoring. In addition to USDA Forest Service funding, assistance has been received from the Montana Department of Environmental Quality and River Network's Watershed Assistance Grants program.

The initial work on Threemile Creek has attracted additional partners such as the Ravalli County Weed District, which is exploring development of a weed management area. A field tour was held with the semiannual meeting of the Tri-State Water Quality Council, and the project received press coverage in the local newspaper.

The BWP is identifying all conservation and restoration projects taking place within the Threemile watershed so that gaps and additional priorities for action can be identified. Plans are underway for holding a "Know Your Watershed" Workshop for residents of the watershed in 2003.

Involvement and leadership by a variety of partners, including local community members and landowners, has been crucial to the success of the project. In addition to organizations represented on BWP's steering committee, partners include the U.S. Bureau of Reclamation; Montana Department of Fish, Wildlife and Parks; Montana Department of Natural Resources Conservation; Montana Watercourse; and the Lone Rock School.

Blue Mountains Demonstration Area

The Blue Mountains of eastern Oregon have been identified as ecologically and economically at risk. Several studies have concluded that the area's wildlife, fish, water quality, recreation and forest resources are at risk from wildfires, forest insects and diseases, noxious weeds, and roads. At the same time, many local communities are enduring business closures, double-digit unemployment, decreasing school enrollments, and a loss of public services as a result of reduced timber harvests from Federal lands.

The Blue Mountains Demonstration Area (BMDA) was established to demonstrate the effectiveness of collaboration in improving these undesirable watershed and community conditions. The BMDA is based upon three principles:

1. To be sustainable, watershed restoration strategies must integrate ecological objectives with local economic and social objectives.

2. The ability of organizations and individuals to achieve ecological and economic goals is dependent upon cooperation from organizations and individuals outside of their control. People and organizations are interdependent.

3. Collaboration offers the most promising approach to integrate organizations and individuals who are interdependent.

The BMDA provides a forum that unifies watershed and community health, works to facilitate development and implementation of a cooperative restoration strategy, fosters communication and cooperation among participants, and identifies solutions for barriers hindering progress.

The BMDA is large and complex. It includes approximately 1.6 million acres of Federal land, and 1 million acres of State and private lands located in the Middle Fork of the John Day River, Desolation Creek, and Grande Ronde watersheds. Fifteen communities are directly affected. There are 10 federally listed threatened or endangered species and 1,200 miles of Clean Water Act impaired streams. Included are trust lands ceded to the Federal Government by the Confederated Tribes of the Umatilla Indian Reservation and the Nez Perce and Warm Springs Tribes.

Mission

To promote watershed and community health through innovation and cooperation.

Goals

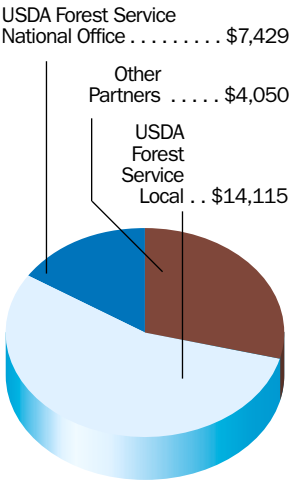
- Accelerate forest and watershed restoration resulting in clean, cool water; restored wildlife and fish habitats; and sustainable and diverse forest and grassland conditions.
- Contribute to the economic health of local communities by providing family-wage jobs.
- Unite restoration efforts through an integrated and collaborative landscape-level restoration strategy that encompasses all land ownerships.
- Evaluate new ideas and transfer knowledge that will benefit other restoration efforts.

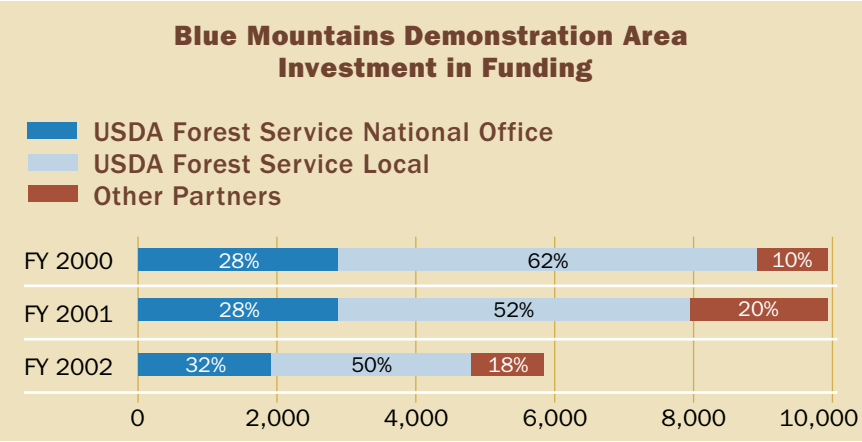
Restoration Highlights

All noxious weed infestations within priority watersheds have been treated. Over half of the stream and road miles in need of restoration have been treated within high-priority watersheds. Thinning and fuels reduction activities have been done on almost 46,000 acres of national forest lands.

Blue Mountains Partnership 3-year Funding Summary

(FY2000-FY2002 in thousands)





Specific restoration accomplishments include—

- Restored 2,060 acres of wetlands and uplands.
- Restored 300 miles of water-quality-limited streams.
- Restored 1,080 miles of eroding roads and 145 miles of trails.
- Protected 21 sites for rare plants.
- Reduced wildfire and insect and disease risk on 45,916 acres.
- Developed plans to reduce fire risks for 14 at-risk communities.
- Controlled noxious weeds on 21,900 acres.

Community employment accomplishments include—

- Offering 74.9 MMBF of timber products.
- Awarding $6,285,000 in contracts.
- Contracting for $1,125,000 work on private lands.
- Training of displaced timber workers to successfully acquire restoration contracts.

Process refinements include—

- Developed three contracting tools to facilitate removal of high fuel loads. One 2,300 acre contract resulted in 15 MMBF of timber, saving $850,000.
- Developed project design criteria to reduce delays in Threatened and Endangered Species Act consultation; expected to reduce consultation time by 40 percent.
- Implemented refinements of National Environmental Policy Act planning processes.
- Reduced removal costs for small trees.

Partners

- Grande Ronde Model Watershed
- North Fork John Day Watershed Council
- Wallowa Resources
- The Nature Conservancy
- Trout Unlimited
- Ducks Unlimited
- Oregon Hunters Association
- Rocky Mountain Elk Foundation
- Training and Employment Consortium
- Union County Commissioners
- Wallowa County Commissioners
- Confederated Tribes of Warm Springs
- Confederated Tribes of the Umatilla Indian Reservation
- Nez Perce Tribe
- Tricounty Noxious Weed Board
- Oregon Governor's Office
- Oregon Department of Fish and Wildlife
- Oregon Department of Environmental Quality
- Oregon Department of Forestry
- Oregon Department of Employment
- Oregon State University
- Pacific Northwest Research Station
- U.S. Environmental Protection Agency
- National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- Wallowa Whitman National Forest
- Malheur National Forest
- Umatilla National Forest
- Bureau of Land Management

Funding

The BMDA invested $25.6 million completing 406 restoration projects in 3 years. Thirty-seven projects were completed on private lands. National forests and the Pacific Northwest Region contributed 55 percent, the USDA Forest Service national office contributed 29 percent, and 40 partners contributed 16 percent ($4.0 million).

Challenges and Future Actions

The future of the BMDA is uncertain. Although most participants have indicated an interest in expanding collaborative efforts, loss of off-the-top USDA Forest Service funding and the retirement of Governor Kitzhaber removed two important catalysts that had brought people together. Time for collaborative efforts has diminished among Federal managers and participant organizations as they seek to cope with downsizing and multiple priorities. Divisiveness and competition among participants could undermine the effort unless tangible incentives for collaborative efforts continue.

Although progress has been made, achievement of ecological and economic goals is limited by project delays and unreliable and inadequate production of employment opportunities and forest products.

For More Information

Contact the project coordinator, Bob Rainville, at rrainville@fs.fed.us or 541-962-6537. Web site: http://www.fs.fed.us/bluemountains.

Blue Mountains Demonstration Area

Meadow Creek Restoration Project

To encourage cooperation and maximize accomplishment of meaningful outcomes, participants in the BMDA prioritized watersheds for restoration. Priorities were established based upon—

- The importance of the watershed's terrestrial and aquatic resources.
- The severity of risks posed by wildfires, insects, diseases, noxious weeds, and roads.
- The potential effectiveness of the treatments.

Meadow Creek is a 115,000 acre watershed of which 22,000 acres is privately owned. This watershed was identified as a priority because its aquatic resources are water quality impaired and it is an important watershed in the recovery of federally listed Steelhead and Chinook salmon populations. Its terrestrial resources include the Starkey Experimental Forest and regionally significant elk populations. High fire danger resulting from a spruce budworm epidemic poses a serious threat to terrestrial and aquatic resources. Range and wetland areas are at risk due to the expansion of noxious weeds. Correction of road and grazing-related impacts are critical for aquatic recovery.

Restoration Highlights

- Restored 6 miles of channelized stream.
- Constructed four off-channel watering devices to reduce livestock grazing along stream channels on private lands.
- Implemented alternative livestock grazing strategies on Federal lands.
- Constructed riparian fencing along 2 miles of stream.
- Obliterated 6 miles of draw-bottom road.
- Eliminated sedimentation originating from 8 miles of county and private roads.
- Monitored water quality to evaluate the effects of channel and road restoration on water temperature and flow regimes.
- Controlled noxious weeds on 50 acres.
- Reduced insect and disease risk on 106 acres of private forest lands.
- Reduced fuels and thinned forests on over 4,700 acres of Federal lands.
- Developed a new contracting tool, which permitted fuels reduction on 1,800 acres and the recovery of 14 MMBF of timber products.
- Provided over $1.1 million of work for local contractors.
- Conducted research studies on the effect of fuels reduction on elk and deer movements.

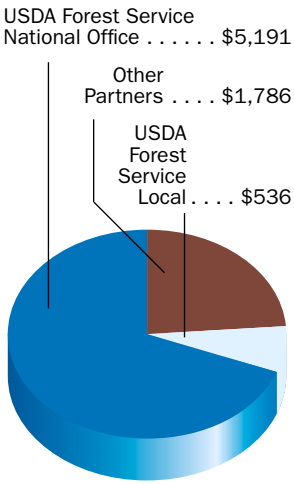
Partners:

- Confederated Tribes of the Umatilla Indian Reservation
- Grande Ronde Model Watershed
- Union County Commissioners
- Private landowners (three families)
- Oregon Department of Forestry
- Oregon Department of Environmental Quality
- U.S. Environmental Protection Agency
- Pacific Northwest Forest and Range Sciences Laboratory
- Wallowa Whitman National Forest

Chattooga River Watershed

Chattooga Watershed 3-year Funding Summary

(FY2000-FY2002 in thousands)



The Chattooga River watershed contains one of the most highly treasured wild and scenic rivers in the Eastern United States. It is centrally located between Atlanta, GA; Greenville, SC; Charlotte and Asheville, NC; and Chattanooga, TN. All of these areas are experiencing intense development. A population of more than 25 million people has ready access to this cherished resource, which contains some of the best trout fisheries and white-water rafting in the Southeastern United States. The purpose of this project is to significantly improve water quality through a variety of actions that promote watershed restoration and health.

The ecosystem of the Chattooga River watershed was heavily impacted by activities that occurred during the 1800s and early 1900s. Rapid increases in population and the demands made upon the forest to provide clean water, recreational opportunities, productive soils, and forest products now have a tremendous impact on the watershed.

In 1999, a Board of Directors was established for the project. Made up of 14 representatives from the USDA Forest Service; the USDA Natural Resources Conservation Service; the U.S. Environmental Protection Agency; State and Private Forestry from Georgia, South Carolina, and North Carolina; and the U.S. Fish and Wildlife Service, the board oversees the activities of the project and assures the transition to a locally-led initiative.

Mission

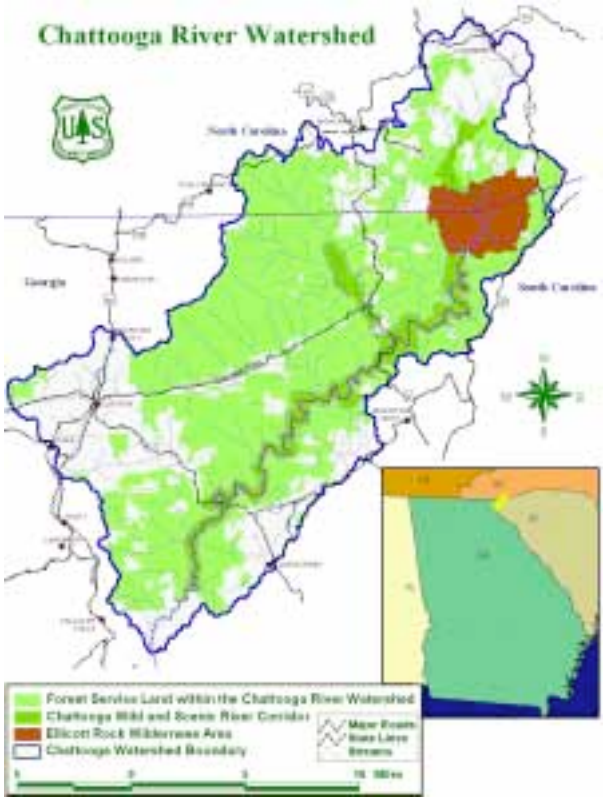
To help public and private land managers in this watershed and in other areas make sound investments in restoration.

Goals

- Significantly improve watershed health.
- Transition to a permanent watershed partnership.
- Expand a vigorous information and education program.
- Track watershed health, assess project success, and identify new research needs.
- Protect sensitive areas.

Restoration Highlights

- Inventoried 84 miles of streams.
- Monitored 68 stream reaches.
- Rehabilitated 150 miles of trails.
- Rehabilitated 81 miles of roads.
- Maintained 319 miles of roads.
- Revegetated 80 acres of illegal all-terrain vehicle trails.
- Rehabilitated 23 camp sites.
- Rehabilitated 24 miles of county roads.
- Stabilized 1,250 feet of streambanks.
- Controlled 2 acres of noxious weeds.
- Reduced fuel loads on 150 acres.
- Treated 410 acres of wildlife habitat.
- Planted 2 acres of native plants.



- Transitioned to a permanent watershed partnership.
- Conducted numerous tours and educational sessions.
- Conducted mussel surveys at 73 sites.
- Acquired over 500 acres of sensitive lands within the watershed.

The partnership has completed 70 percent of the work planned in their business plan in the first 3 years. The project's success relies on leading by example while educating and encouraging people to implement corrective actions, building strong partnerships with nontraditional partners, and sharing technology. The partnership plans to increase work projects and work with private and non–Federal land owners to improve water quality.

Partners

Partners include three State governments, four county governments, three national forests, private landowners, and numerous citizen and conservation organizations. USDA Forest Service Research is a critical partner, bringing with it a wealth of studies and collaboration from the G.W. Andrews Forestry Sciences Laboratory, Bent Creek Experimental Forest, and Coweeta Hydrologic Laboratory.

Project work focuses on reducing sediment from roads, trails, and areas of construction and cultivation; alleviating excess fecal coliform concentrations; and restoring riparian areas.

Funding

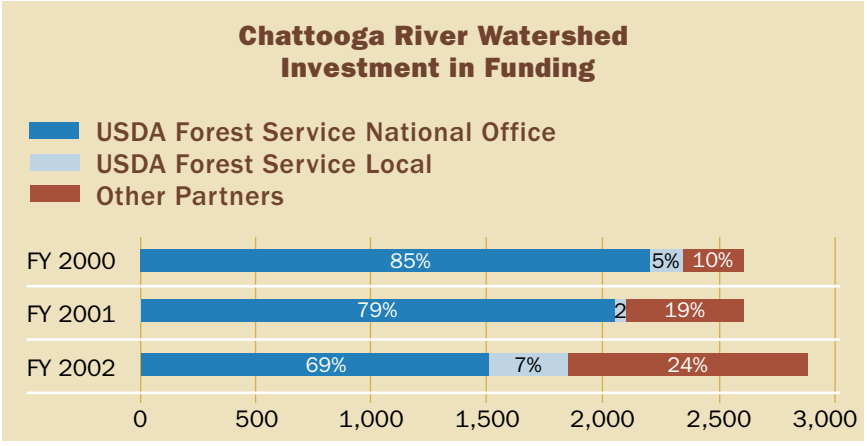
USDA Forest Service funding totaled $5,727,000 for the 3 years. Contributions from partners totaled $1,786,000. USDA Forest Service funding in FY 2002 was reduced by $546,000 due to money borrowed to fight the forest fires. Additionally, $3.6 million in appropriations for land acquisition were lost to this effort.

For More Information

Contact Randy Fowler at dlfowler@fs.fed.us or (706) 782-3320 or Ray Johnston at rjohnston@fs.fed.us or (404) 347-4807.

Nicholson Hill after restoration

Nicholson Hill before restoration



Chattooga River Watershed Partners in Action—The Challenges of the Wooly Adelgid

The Eastern and Carolina hemlocks that have graced the forest for centuries are facing a new challenge, the hemlock woolly adelgid (HWA). This small exotic insect similar in size to an aphid, feeds on the stored nutrients from young twigs of hemlock trees. The tree's loss of needles and new shoots can seriously impair its health, usually causing it to die within 4 years. Hemlock stands are of great importance to wildlife and water quality within the watershed. Infestations of the adelgid have been found in all three forests and all three States in the watershed. The HWA is transported by wind, birds, and mammals.

Individual hemlock trees infested with HWA populations can be treated with insecticides; however, in the forest, individual treatment of hemlock trees becomes impractical. The best hope for controlling the HWA populations appears to be by using biological controls. Though there appears to be no known native predators or pathogens capable of keeping up with the exotic adelgid, scientists are placing emphasis on rearing and releasing an assortment of nonnative predators.

The Chattooga conservancy has been instrumental in convening partners to assist in establishing breeding facilities for one of the predators in an attempt to salvage the hemlocks from destruction. Efforts are focused at finding a science-based solution to the adelgid problem. The conservancy used a National Forest Foundation grant to pull together nontraditional partners. The breeding lab will be established at Clemson University in South Carolina.

Additionally, the conservancy has aggressively educated and advised the local public about the potential catastrophic impacts of the HWA and encouraged individuals to treat their ornamental hemlock trees.

For more information on the HWA, contact the USDA Forest Service, Northeastern Area, State and Private Forestry at 610-975-4186.

This local citizen has volunteered many hours to locate HWA infestations as he walks the trails of the three national forests in the Chattooga Watershed with a GPS device.

The cottony sacs at the base of the needles are good evidence of a HWA infestation.

Conasauga River Watershed Partnership

In 1995, citizens interested in the Conasauga River watershed in Tennessee and Georgia were brought together by the Resource Conservation and Development (RC&D) Council (through a grant from the Natural Resources Conservation Service) to begin a close and coordinated look at the watershed. The citizens identified various threats to the river and developed cooperative solutions to protect this economically important and biologically diverse river system. Any interested and participating citizen was considered part of the Conasauga River Alliance. Incorporated in 2002, the alliance is led by a Board of Directors made up of local opinion leaders. The Limestone Valley RC&D continues to provide leadership and organizational support to the alliance.

Over 30 different organizations and groups participate within the alliance. Major improvements have been accomplished in the past 6 years, including the establishment of over 30 miles of vegetation buffers along streams by cooperative landowners. In addition to being the primary potable water source for Dalton, GA, the river provides approximately 30 million gallons of water per day for the carpet industries around Dalton. The Conasauga River is home to more than 90 species of fish and 25 species of mussels, including 12 federally listed species. Most sensitive species are downstream from the Cherokee and Chattahoochie National Forests in areas characterized by slower gradients, lower elevation, limestone geology, and thicker streambed substrates than the habitats found in the headwaters on the national forests.

Mission

To promote and coordinate efforts between private citizens and government agencies to maintain and improve the quality of the Conasauga River watershed while protecting landowner rights.

Goals

- Develop respect for natural resources and educate people about their proper use.
- Protect private property rights.
- Sustain and improve a clean Conasauga River.
- Encourage and promote the restoration of the biodiversity in the aquatic and terrestrial ecosystems of the watershed.
- Work with a wide range of partners to achieve the mutual goals of the alliance.
- Function as a nonprofit organization with high management standards regarding finances, equipment, relationships, and other assets.

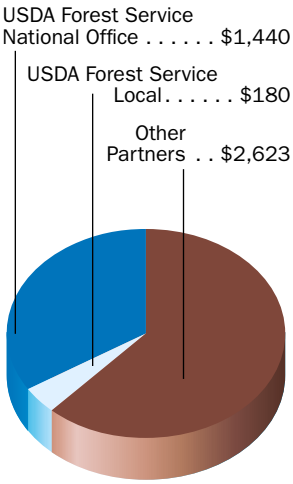
Restoration Highlights

- Improved 4,083 acres of vegetation.
- Contracted for 34 dead-chicken composters.
- Contracted for 36 chicken-litter storage sheds.
- Built 14 fences to exclude livestock from streams.
- Constructed eight wet weather feeding stations.
- Planned rotation grazing systems on 2,760 acres.
- Enrolled 380 riparian acres in Conservation Reserve Programs.
- Removed 27 truck loads of trash.
- Planted 260 acres of hardwood forest.
- Educated 63 loggers in Master Timber Harvest Workshops.
- Established vegetation buffers on 30 miles of stream.
- Reconstructed 24 miles of poor condition USDA Forest Service roads.

The partnership has completed an estimated 20 percent of the work planned for the upper watershed in the first 3 years of their 5-year business plan. The alliance board has since clarified its goals and has broadened its vision, which now includes the lower watershed as well. This larger vision means that more funding and commitment is needed from partners old and new.

Conasauga River Watershed 3-year Funding Summary

(FY2000-FY2002 in thousands)



Partners

They consist of more than 30 agencies and private organizations, including:

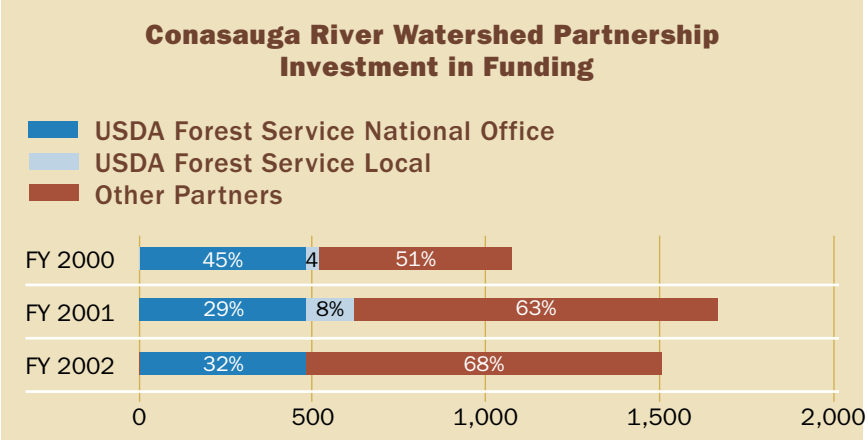
- Universities of Tennessee, Georgia, North Carolina, and Florida
- Auburn University
- DOW Chemical
- Trout Unlimited
- Conservation Fisheries
- Tennessee Aquarium Research Institute
- Tennessee Wildlife Resources Agency
- Southern Appalachian Forest Coalition
- Pacific Rivers Council
- Forest Watch
- National Wild Turkey Federation
- Appalachian Sportsmen's Club
- The Nature Conservancy
- Extension Service, University of Tennessee and University of Georgia
- Tennessee Department of Environment and Conservation
- Georgia Department of Natural Resource
- USDA Natural Resources Conservation Service
- USDA Farm Service Agency
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- USDA Forest Service
- Georgia and Tennessee Forestry Agencies

Funding

In the past 4 years, 30 partner organizations have spent over $4 million in projects, equipment and staff time for this watershed.

For More Information

Contact Doug Cabe of the Limestone Valley RC&D at 706-625-7044 or lvrcd@pointlink.net, or Kent Evans, Project Coordinator from the Cherokee and Chattahoochee National Forests at (706)-632-3031 or kevans@fs.fed.us.
Web site: http://www.conasaugariver.net/



Conasauga River *Partners Working Together to Maintain a Clean and Beautiful Conasauga River*

The south prong of Sumac Creek originates on the Chattahoochee National Forest and flows 6 miles through eight landownerships before entering the Conasauga River. Management activities along these lands have the potential to affect water quality in the stream and in the river. Property owners have modified their management practices to install vegetation buffers adjacent to 2.5 miles of the stream. This effort on Sumac Creek is an example of how the 25-plus partners of the Conasauga River Alliance work together to restore stream corridors through farms, connecting these riparian zones with headwater habitats in the Cherokee National Forest and Chattahoochee National Forest.

The alliance contacted Mr. Holcomb and suggested ways the alliance partners could help to improve his portion of Sumac Creek. USDA NRCS field staff provided designs and guidance to Mr. Holcomb to meet his goals of improving water quality and wildlife habitat. Mr. Holcomb reshaped the streambank, constructed fencing to exclude livestock, and developed an alternative water supply outside the riparian area. Local 4-H students mulched and seeded the bank.

The nearby Plemmons farm also had opportunities for stream restoration. The NRCS surveyed degraded streambank conditions and designed several stabilization structures, including a brush revetment to stabilize an undercut bank. Mr. Plemmons provided the labor as dozens of trees were folded into the bank—a successful bioengineering solution. Vegetation buffers were established with incentives from the USDA Conservation Reserve Program (CRP) for the entire length of stream frontage in the farm.

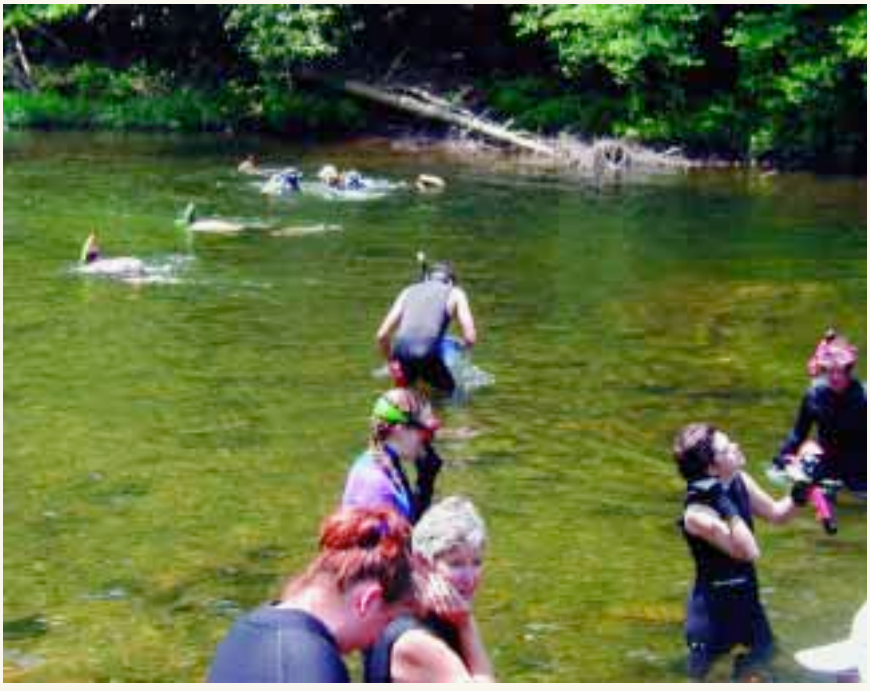
The Petty family farm contributed in many ways to improving riparian habitats. They established miles of vegetation buffer along this stream and the river through CRP. Murray County government accepted a land donation from the Petty family for a new park and agreed to protect Sumac Creek's existing buffer of native cane and hardwood trees. Since the Conasauga River Alliance Board was conceived in 1995, the Petty family has served in leadership roles.

The Nature Conservancy (TNC) helped coordinate dozens of volunteers from Grand Valley State University (Michigan) and St. Norberts College (Wisconsin) who planted hundreds of trees within these new buffer strips. To help this effort, TNC applied for grants from the U.S. Fish and Wildlife Service partner's fund. TNC and the University of Georgia monitoring efforts and documented improvements in stream biodiversity following restoration efforts.

The Limestone Valley RC&D provides leadership for the alliance and has supplied staff and technical assistance to the Sumac Creek project. The RC&D also manages the Georgia Environment Protection Division (EPA section 319) grant in the watershed.

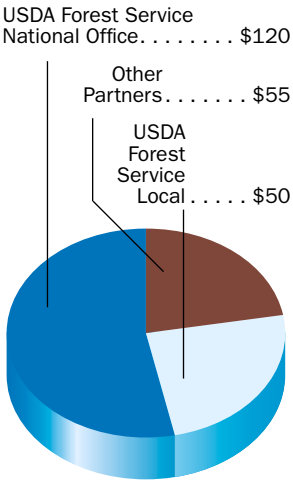
The USDA Forest Service led the alliance partners in efforts to transfer the technology of these successful management stories by facilitating conservation field days, teacher workshops, and the development of an alliance interactive Web site: http://www.conasaugariver.net/.

In the last 3 years, 600 local citizens and 100 teachers from 3 States have been provided interpretive tours of success stories on family farms and the national forests. Guests were provided masks and snorkels for interpretation in the clear waters of the Conasauga River on the Cherokee National Forest. At this "Watchable Wildlife" site, biologists of the USDA Forest Service, Tennessee Valley Authority, University of Georgia, and Conservation Fisheries, Inc., point out many of the 76 species of native fish. The Conasauga River has more biodiversity than much larger basins, including the combined freshwater diversity in the Columbia River and the Colorado River.



Lost Rivers National Learning Site in Holistic Management

Lost Rivers 3-year Funding Summary
(FY2000-FY2002 in thousands)



The Lost River Valley, just over the hill from Sun Valley, ID, is nationally known for its unique, majestic landscape and wildlife habitat. The valley is also becoming known for the conflict that has arisen during the past 10 years over natural resource use and management.

The valley is located near the towns of Arco, Mackay, and Moore and is nestled in the Rocky Mountain Range of Idaho. This area has the three highest peaks in the State; Craters of the Moon, one of the largest lava flows in the world; and the Idaho National Environmental Engineering Lab, a nuclear site.

In the valley, Custer and Butte Counties are being severely impacted by changes in both demographics and Federal land management policy. Because 96 percent of the land is public land, the local economy depends on Federal land for income-producing activities such as grazing, recreation, and timber. Since only 4 percent of the land is private land, the area has virtually no property tax base and populations are declining. In many cases, land management policies and turnover at agencies hinder individual and collective efforts to create a more stable economy and sustain the natural resources. In addition, many management, production, and distribution decisions are being made by large corporate buyers and industrial packing plants. Rarely do people on the land have a significant opportunity to shape the policies that directly, and often negatively, impact them.

Mission

To provide a site and opportunity where producers, conservationists, agencies, and other citizens can use holistic management (as well as other methodologies) in their efforts to enhance and restore natural resources and build a stronger economy.

Goals

- Broaden the Core Planning Group to State and national environmental groups.
- Identify and get commitment from a public land permittee group and a private landowner to be part of the Learning Site.

- Develop an organization to train others and hold meetings.
- Develop a fire hazard reduction plan for the Antelope drainage.
- Facilitate a community of partners to work together for the benefit of the land and the people that live on it.

Restoration Highlights

- Began holistic management planning with a private landowner.
- Gave numerous talks about the Learning Site.
- Secured private funding to match USDA Forest Service money.
- Worked with families to develop a fire-hazard reduction plan.
- Collected baseline social, economic, and ecological data.
- Developed crucial relationships with Federal, State, local, and private groups.
- Trained USDA Natural Resources Conservation Service representative in holistic management.
- Developed a newsletter to keep participants informed.

The partnership continues to have a difficult time obtaining the appropriate commitments from partners to do the work envisioned in the business plan. The on-the-ground capacity to run this project has been drained over time.

Partners

- USDA Forest Service—Lost River Ranger District of the Salmon-Challis National Forest
- Savory Center for Holistic Management
- Mackay Action Center
- Custer Development Corporation
- USDA Natural Resources Conservation Service—Arco Field Office
- U.S. Fish and Wildlife Service
- Bureau of Land Management—Challis Field Office and Idaho Falls Field Office
- The Nature Conservancy
- USDA Forest Service and Bureau of Land Management permittees
- Private landowners
- University of Idaho Cooperative Extension—Arco Extension Office
- Custer and Butte County Commissioners
- City council representatives from the towns of Mackay, Arco, and Howe
- Idaho Fish and Game
- Butte County Conservation District
- Rocky Mountain Elk Foundation
- Idaho Conservation League

Funding

This project has had difficulty securing funding when needed. This has slowed progress on the goals.

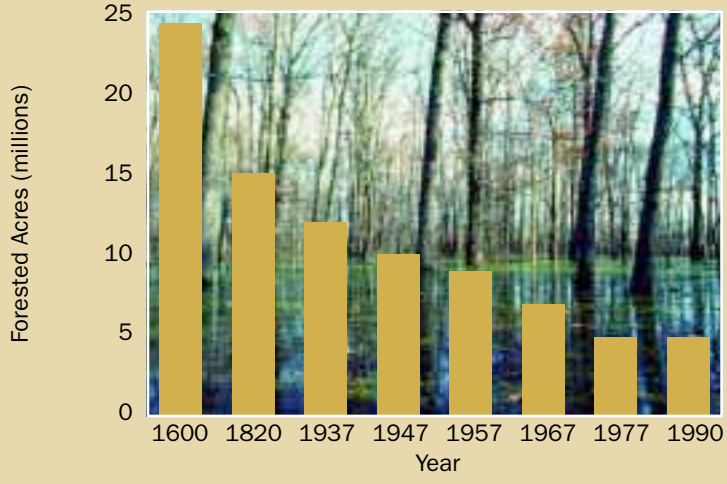
For More Information

Contact Carol Eckert at ceckert@fs.fed.us or (208) 588-3400.

Lower Mississippi Alluvial Valley

The Lower Mississippi Alluvial Valley (LMAV) covers more than 24 million acres in parts of seven States extending from southern Illinois to the Gulf of Mexico. Historically, the LMAV was largely bottomland hardwood forests. Flooding of the mighty Mississippi River and its tributaries shaped this land. Rich soils left by these floods produced a vast forested wetland sheltering a great diversity of wildlife. Searching for fertile farmland in the 1800s, settlers cleared forests, starting with the highest and best-drained sites. During the 1900s, flood control efforts straightened and deepened rivers, drained swamps, and encouraged forest clearing on lower, wetter sites. Between 1950 and 1976, approximately one-third of the LMAV's bottomland forests were converted to agriculture. By the 1980s, less than 20 percent of the original forest was left.

Bottom Hardwood Forest Acreage in the LMAV



Deforestation and draining of wetland areas resulted in a loss of critical wildlife and fish habitat, decreased water quality, reduced floodwater retention, and increased sediment loads, all of which have contributed to the hypoxic zone in the Gulf of Mexico. The U.S. Environmental Protection Agency has identified the Mississippi Delta as an area of significant concern regarding surface and ground water quality. The LMAV is also one of seven high-priority areas originally identified in the North American Waterfowl Management Plan.

The restoration journey has begun. Numerous agencies and organizations are playing a variety of roles in restoring this valuable ecosystem. **Restoring the Delta** seeks to catalyze and expand existing partnerships among the public and private interests addressing restoration needs and management challenges in the LMAV. Because over 90 percent of the LMAV is in private ownership, developing economically viable restoration is critical to achieving the biological needs of the LMAV.

Simply put…it's about providing economically and biologically sustainable restoration using Federal, State, and nongovernmental agencies; organizations; landowners; and companies. **Restoring the Delta** is being implemented on a State-by-State basis with restoration being delivered by the existing partners' programs developed in support of the Lower Mississippi Valley Joint Venture.

Mission

To develop strategic alliances to sustain a bottomland hardwood ecosystem that provides a healthy forest, a viable economy, restored wetlands and riparian areas, wildlife and fish habitat, quality agriculture, clean water, and an improved quality of life.

Goals

- Restore 2 million acres of vegetation.
- Restore 1 million acres of hydrology.

Approach

- Develop biologically and economically diverse landscape level restoration.
- Focus research on biologic, economic, and social restoration issues.
- Provide sustainable restoration education.

Restoration Highlights

- Implemented **Restoring the Delta** in Arkansas, Mississippi, and Louisiana.
- Completed Geographic Information System (GIS) forest change detection planning tool.
- Completed GIS Soil Moisture Index planning tool.
- Developed a multimedia environmental credit trading presentation.
- Reforested 1,160 acres of bottomland.
- Restored the hydrology to 90 acres.
- Enhanced the hydrology on 200 acres.
- Developed a black willow restoration study.
- Designed an 80-acre wetland/waterfowl enhancement project.
- Set up the organizing committee for a 2004 Carbon Sequestration Conference.

The partnership is in the process of revising its original business plan to better reflect the objectives of the partners, to develop clear and measurable indicators of success, and to better serve its customers.

Partners

The **Restoring the Delta** watershed project enhances and expands the existing partnerships of public and private interests that are addressing restoration needs and management challenges in the LMAV. The number of partners participating in **Restoring the Delta** has more than doubled. This includes the addition of five nonprofit organizations, three State agencies, three Federal agencies, and two companies.

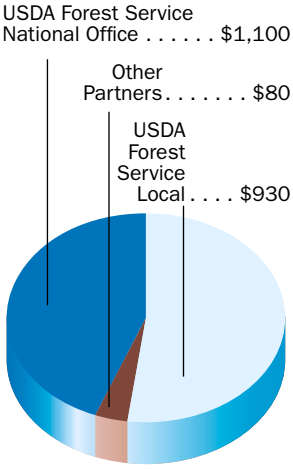
Funding

Restoring the Delta funding has increased 137 percent since FY 2000.

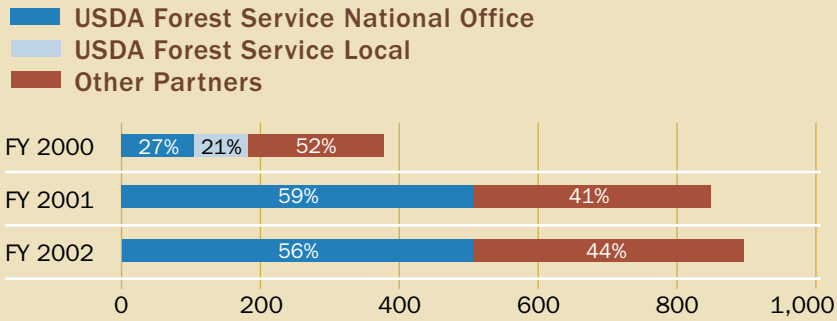
For More Information

Contact Gary Young at gyoung@ducks.org or (601) 206-5466, or Ted Leininger at tleininger@fs.fed.us or (662) 686-3178.

Lower Mississippi Alluvial Valley 3-year Funding Summary (FY2000-FY2002 in thousands)



Lower Mississippi Alluvial Valley Investment in Funding



Restoring the Delta Partners

2001	2002	
USDA Forest Service	USDA Forest Service	Mississippi Forestry Commission
Ducks Unlimited	Ducks Unlimited	Mississippi Department of Wildlife, Fisheries and Parks
Lower Mississippi Valley Joint Venture	Lower Mississippi Valley Joint Venture	Louisiana Office of Forestry
USDA Natural Resources Conservation Service (AR)	USDA Natural Resources Conservation Service (AR)	U.S. Fish and Wildlife Service (MS)
U.S. Fish and Wildlife Service (AR)	U.S. Fish and Wildlife Service (AR)	U.S. Geological Survey
Arkansas Forestry Commission	Wildlife Mississippi	International Paper Company
Arkansas Game and Fish Commission	Delta Wildlife Foundation	Environmental Synergy, Inc.
	American Forest Foundation	Arkansas Forestry Commission
	The Nature Conservancy	Arkansas Game and Fish Commission
	Edison Electric Institute	U.S. Army Corps of Engineers

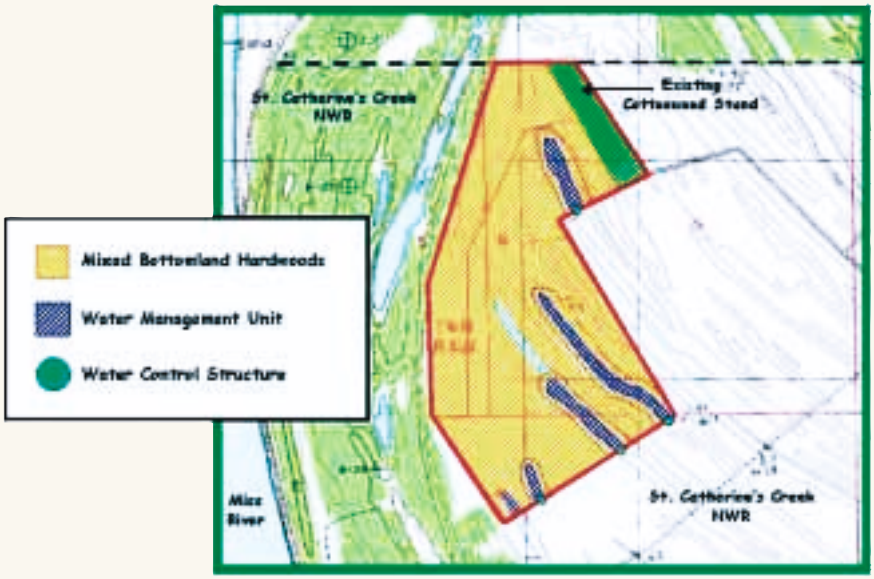
Lower Mississippi Alluvial Valley *Working with Landowners*

The Site

The Passbach property is a good example of a project that demonstrates **Restoring the Delta's** approach of developing biologically and economically sustainable projects using a diversity of partners to achieve the landowners' management objectives. The management objectives were to gain economic benefit, manage for waterfowl, and provide for long-term resource conservation and education.

The property shares a common boundary with St. Catherine's Creek National Wildlife Refuge. The current land use is unimproved pasture. The property is within one-fourth of a mile of the Mississippi River and is subject to periodic flooding from the river. The property has a high potential conservation value.

Restoration	Acres
Mixed Bottomland Hardwood	210
Water Management Units	105
Existing Cottonwood Stand	20



The Restoration

The bottomland hardwood plantings will provide long-term pulp and timber returns, as well as potential annual hunting lease returns. Immediate income will also be provided on 40 acres enrolled in the Conservation Reserve Program (CRP). The landowner will also have over 100 acres of high-quality waterfowl habitat with the potential for substantial economic benefit through leasing the hunting rights.

Organization	Contribution
Mississippi Forestry Commission	Seedlings, planting, and technical assistance
Ducks Unlimited	Technical assistance, pipes, and planting
U.S. Fish and Wildlife Service	Levee construction
USDA Natural Resources Conservation Service	Hydrology design and CRP
USDA Forest Service	Technical assistance, pipes, and planting

New York City Watersheds

Agrarian and forested watersheds located in portions of eight New York counties produce more than a billion gallons of water daily to supply the 9 million residents of the New York City (NYC) metropolitan area. Besides providing a reliable flow of high-quality water, these farms and forests provide wildlife habitat, agricultural products, outdoor recreation, and scenic beauty. Healthy, well-managed forests are critical to sustaining a clean, long-term supply of water for New York City and to supporting vital local economies.

The NYC Watersheds partnership project includes land management, research, and educational components designed to protect, restore, and improve forested watersheds.

The NYC Department of Environmental Protection and the nonprofit Watershed Agricultural Council (WAC) are working with private landowners to maintain a traditional open-space landscape that sustains rural economic opportunities while protecting the water supply. This voluntary, open-space protection approach through farming and forestry is seen as the preferred land use for the watersheds.

Research and demonstrations done through the WAC Watershed Forestry Program's Model Forests and Watershed Stewardship Planning communicate the importance of proper forest management to landowners and citizens. Increasing the use of forestry Best Management Practices will ensure that water quality is protected when timber is harvested. Riparian forest buffers will reduce pollution from runoff. Also, the use of wood fiber filtration technology tests the feasibility of low-grade and waste wood for removing phosphorus from milk-house wastewater.

Mission

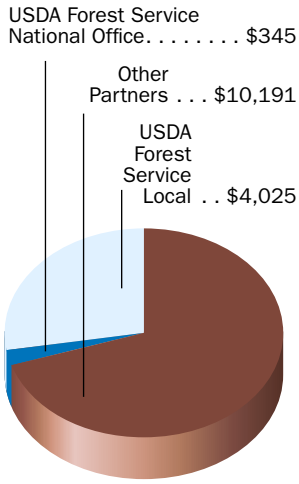
To improve the economic viability of forest lands and the forest products industry, benefit local communities, protect water quality, and enhance sustainable forest management.

The NYC Watershed Forestry Program—a cooperative effort among the USDA Forest Service, NYC, New York State, and the Watershed Agricultural Council—is providing assistance to private landowners and industry by:

- Developing forest stewardship management plans.
- Demonstrating Best Management Practices to protect water quality.
- Communicating the importance of forest lands to water quality.
- Restoring riparian forest buffers.
- Promoting sustainable, forest-based economic development.
- Applying wood research and technology to mitigate water pollution.

New York City Watershed 3-year Funding Summary

(FY2000-FY2002 in thousands)



Restoration Highlights

- Supported management planning on 29,480 acres involving hundreds of landowners.
- Contributed to EPA's decision not to require filtering for the Catskill/Delaware watershed.
- Taught 33 resource professionals to identify and manage riparian areas.
- Completed a Green Connections project among four urban and rural classrooms.
- Assisted 40 forest product businesses that employ 885 people.

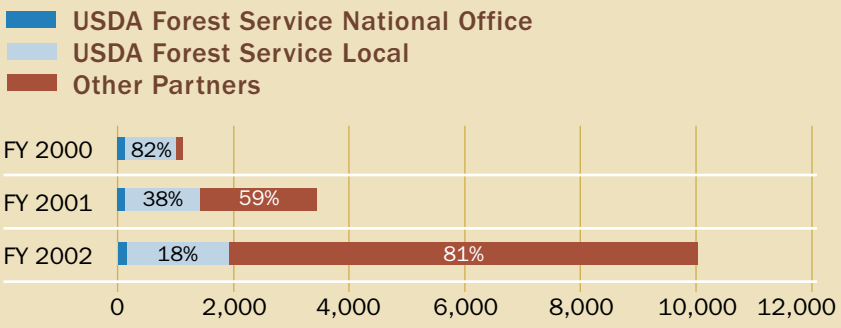
The USDA Forest Service will continue its active role by:

- Communicating the values of forested watersheds.
- Continuing to operate and maintain four model forests.
- Increasing knowledge about watershed science and technology.
- Enhancing the management of riparian areas to protect water quality.
- Developing forest resources to create jobs and economic growth.

For More Information

Contact Marcus Phelps at mphelps@fs.fed.us or (413) 577-0650, or Al Todd at atodd@fs.fed.us or (410) 267-5705.

New York City Watersheds Investment in Funding



New York City Watersheds Using Wood to Filter Pollutants from Runoff

It is estimated that 40 percent of rivers in the NYC watershed are unhealthy because of nutrient enrichment; 50 percent of surveyed lakes and reservoirs and 57 percent of surveyed estuaries are similarly affected. Methods historically used to remove phosphorus from wastewater include adding chemicals, phosphate-accumulating organisms, or light-expanded clay aggregates. The NYC Watersheds Study focuses on removing phosphorus from water.

The Forest Products Laboratory (FPL) has an ongoing research program using lignocellulosic fibers to remove dissolved ions from water; removing these pollutants is typically the most difficult and expensive part of water filtration. The natural sorption capacity of lignocellulosic fibers varies, depending on the type of material. FPL researchers have determined that modifying the surface of the lignocellulosic fiber can substantially increase its effectiveness.

The goals for 2001 and 2002 were removal of phosphates from dairy farm wastes. The long-range goal is to develop a technology based on using modified wood fibers to absorb pollutants from surface water runoff. Most of 2002 was spent in improving the filtration media and system.

The two basic sources of pollution in agricultural wastes are animal manure and milk-house waste. The process of collecting and spreading animal manure is not easy to monitor or apply this new technology, but it is not impossible. The most effective way of addressing filtration was to study milk-house waste. In 2001, two systems were installed in Delaware County and data were collected. In 2002, the systems were redesigned and replaced.

The raw material for filter media is the Juniper (*Juniperus monosperma*) small-diameter and underutilized (SDU) lignocellulosic material. Using SDU material is a good example of producing a value-added product in the forestry industry, and it also can impede forest fires by removing fuels.

The iron-containing lignocellulosic filter media were used at the NYC watersheds to remove phosphates. The isotherm experiment of phosphorus removal was performed on slags and various clays and chemicals, such as iron, zinc, aluminum, and calcium.

Results

The filtration system can reduce about 30 percent to 40 percent of milk-house phosphorus. The annual rate of phosphorus reduction is expected to be about 1,400 kg/yr, which is 20 percent of the nonpoint source pollution from the entire Croton area (6,798 kg/yr). Wastewater treatment plants reduce phosphorus from point sources of pollution. This filtration system technically reduces phosphorus from nonpoint sources.

Since 1999, several changes have been made to increase the effectiveness of the operation. Two engineering colleges have been involved, and one university has been retained because of its proximity to the work. Bray Engineering was added as a partner for work in the Catskill/Delaware area. Activity in the Delaware County Soil and Water Conservation District has increased. New communities will become involved as the research becomes more visible.

Two manuscripts were published and another was submitted for publication. The fiber selection process, refining process, formation of mats, test procedures for filter capacity, and design of filtration boxes are detailed. In the past 2 years, the system has been tested in the Wayne National Forest, the Monroe Street detention pond (Madison, WI), and Lake Stewart (Mount Horeb, WI); new fiberglass boxes were installed in New York and Middleton, WI.

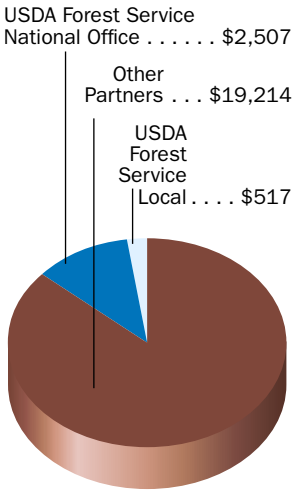
For More Information

Contact James Han at jhan@fs.fed.us or 608-231-9423.

Pacific Coast Watershed Partnership

Pacific Coast Watershed Partnership 3-year Funding Summary

(FY2000-FY2002 in thousands)



The coastal watersheds and estuaries of western Oregon and Washington boast outstanding natural features and resources, including waters and habitats to support wild Pacific salmon and significant congregations of migratory birds. More than 7 million people live, work, and recreate in the Pacific Coast region of the United States—from the pristine wilderness watersheds of its coastal mountain range, to productive agricultural and rural lands, to the major metropolitan areas of Seattle and Portland. Across the border, another 2 million people inhabit greater Vancouver, British Columbia.

The convergence of rich natural resources and rapidly growing urban areas means not only an extraordinary living environment for people, but also increasing pressures and conflicting demands on natural resources. This unique combination of place and people also fosters abundant opportunities for developing partnerships to conserve, restore, and enhance the water quality and aquatic and estuarine habitats.

The Pacific Coast Watershed Partnership (PCWP) was formed to recover and protect wild salmon and other aquatic species and migratory birds. The PCWP work links key estuaries, wetlands, and uplands to restore the habitat and water quality necessary for the survival of these internationally important resources and to contribute to the livable environment that is the hallmark of the Pacific Northwest. Balancing social, economic, and environmental needs in this diverse region is the key to the restoration and protection efforts. More than 40 Federal, State, and private partners are working together across five watersheds to tackle the complex challenges facing these dynamic and invaluable coastal ecosystems.

Mission

To create a network of intact, naturally functioning watersheds that provide habitat for salmon, migratory birds, and other species. Success will be measured by an increasing capacity of Oregon and Washington communities to restore their coastal and estuarine habitats through leveraged resources and shared knowledge that helps to build healthy ecosystems, diversified economies, and increased employment.

Vision

The PCWP is a diverse partnership working on restoration at a landscape scale across multiple ownership boundaries from Canada to the Californian border. It promotes healthy watersheds from ridgetop to estuary that sustain local economies. It provides a regional perspective and framework for local restoration efforts, thus engaging a broader base of political and economic support for restoration. The partnership functions as a learning network as it links the knowledge and experience gained in one community to other communities in the region.

Goals

Long-term

- Identify and protect intact and important habitat within basins for salmon, migratory birds, and other unique species.
- Demonstrate successful principles of restoration.
- Create knowledge and technology transfer mechanisms to benefit local efforts.
- Develop strategies for diverse local economies and support local, long-term living wage jobs.
- Create periodic communications, regionally and locally, that ensure broad participation.
- Celebrate and market successful projects that compel others to participate.
- Increase funding by providing a framework for coastal watershed restoration.
- Recognize and promote the social, economic, and ecological values of restoration.

Short-term (2003)

- Gather studies of the Oregon and Washington coastal watersheds to identify the highest priorities for protection and restoration.
- Communicate a geographical context for local efforts.
- Analyze past successes, lessons learned, and make recommendations for the future.

- Determine fundraising targets and develop marketing tools.
- Continue to support the PCWP coordinator.

Restoration Highlights

- Restored 12,300 acres of key wetlands, estuaries, riparian areas, and upland habitats.
- Completed 175 projects in 5 priority watersheds.
- Acquired and restored over 300 acres of waterfowl habitat and river-bottom hardwood forest.
- Decommissioned 3.4 miles of road, created 0.4 miles of trail, stabilized 6.3 miles of road, repaired 7 flood damaged sites, and closed a 10-site campground located adjacent to the river in a watershed.
- Evaluated the effectiveness of the restoration work and identified future restoration opportunities.
- Restored 2,000 acres of critical wetland habitat in Washington State.
- Restored hundreds of acres of gallery riparian forest.
- Conducted 50 restoration, protection, education, and outreach projects.
- Completed an integrated 6th field watershed scale assessment on 9,000 acres.

Partners

Over 50 Federal, State, and private partners are working together to demonstrate visible and measurable results.

The partnership is at a critical juncture. The PCWP has just hired a private, nongovernment coordinator to assist regional and State partners. The goal is to expand the PCWP to include regional partners who are interested in a strategic approach to restoration, including identifying areas of greatest need and sharing knowledge and skills across watersheds. The PCWP will build on existing efforts in key areas, and recognizes the tremendous opportunities to enhance the sharing of resources and leveraging of funds to maximize the restoration and protection efforts.

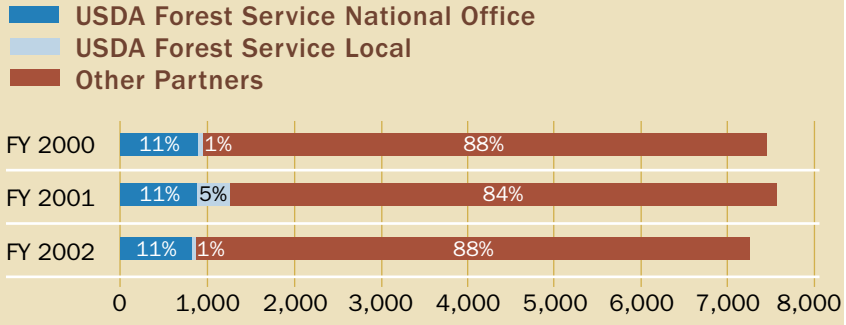
Funding

Partners have made the majority of investments in these watersheds.

For More Information

Contact Brent Davies at (503) 467-0761 or brent@ecotrust.org, or Margaret Peterson at mpetersen02@fs.fed.us or (503) 808-2414.
Web site: http://www.pacificwatersheds.net.

Pacific Coast Watershed Partnership Investment in Funding



Pacific Coast Watershed Partnership

Premier Partner—Ducks Unlimited

Ducks Unlimited has been a major partner in the PCWP since the beginning. They have contributed over $8 million to the work of the PCWP over the last 3 years.

Some of the accomplishments include restoration work on the following lands.

Philpot Ranch
- 600-acre former dairy farm (dike breaching and ditch filling), U.S. Fish and Wildlife Service land

Allen (Gomes)
- 60-acre pasture (dike breaching), private land

Cowan
- 80-acre diked pasture (excavating swales, fishway water control structure), private land

Nix
- 120-acre diked pasture (dike breaching), private land

Leeds Island
- 300-acre former island (de-leveling, dike breaching, new tide-gate system), private land

Dean Creek
- 250-acre estuary/wetlands, Bureau of Land Management administered land

Dawson
- 50-acre diked pasture (dike breaching, installing setback levee), private lands

Smith River
- 150-acre wetlands (installing water-control structures in ditches), private land

Siuslaw River
- 350-acre diked pasture (dike breaching), private land

Lint Slough
- Historical estuary (dike breaching) Oregon Department of Fish and Wildlife land

Salmon River
- 40-acre diked wetlands and 1/2 mile of creek (dike breaching, wetland enhancement), USDA Forest Service-administered land

Sand Lake
- 120-acre diked estuary (dike breaching, installing setback levee), private land

Sharnell Fee
- 100-acre wetlands (dike breaching, installing ditch plugs), private land

Sauvie Island
- 300-acre wetlands (installing water control structures), Oregon State land

Smith and Bybee Lakes
- 1,800-acre wetlands (removing dam, installing fish-friendly water control structure)

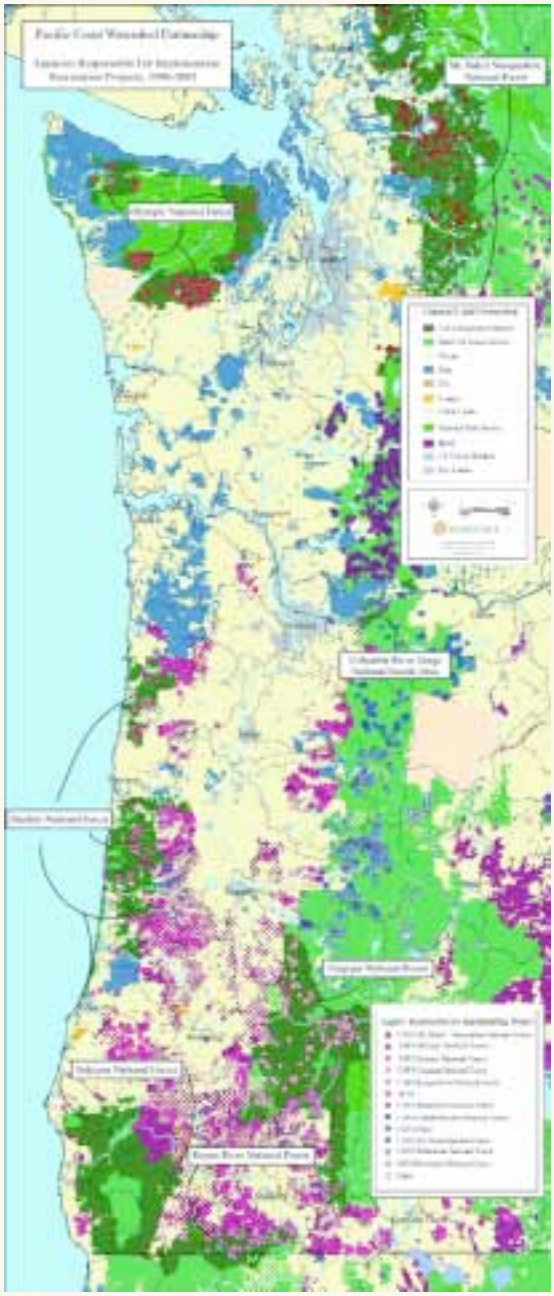
Bend, WA
- 3-miles of dike and several tidegate systems, private and State lands

Sandy River Delta
- 120-acre floodplain (de-leveling, installing water management system), USDA Forest Service-administered land

Tide Creek Ranch
- 50-acre seasonal wetlands (de-leveling, installing water control structures), private land

Vancouver Lake
- 200-acre wetland (de-leveling, water control structures, planting trees)

Swan Marsh
- 200-acre wetland (replacing failing structure with fish-friendly water control structure), private land



Potomac Watershed Partnership

The Potomac River is the second largest contributor of fresh water to the Chesapeake Bay and is one of the Nation's most geologically and ecologically distinct river basins. Unsustainable agricultural, forestry, and industrial practices, compounded by explosive population growth and urban sprawl, have exacted a critical toll on the watershed. Agricultural practices have degraded wetland and riparian areas and reduced water quality because of pollution from high nutrient and sediment run-off, while urban development has resulted in loss of open space and natural habitats throughout the watershed.

In response to these challenges, the Potomac Watershed Partnership (PWP) was formed in 2000 as a multipartner collaboration. The partnership serves as a catalyst for expanded, on-the-ground partnerships that address the wide variety of issues affecting the watershed's health. The partnership produces lasting economic and ecological benefits for the entire Potomac River Basin. These include—

- Reducing the need to heavily treat drinking water.
- Increasing flood control.
- Improving water quality.
- Expanding wildlife habitat.
- Restoring riparian and wetland areas.

To do this, the partnership leverages the unique skills of partner organizations to provide technical assistance for restoration and stewardship efforts, while helping partners expand their own outreach in the Potomac watershed.

The partnership has made groundbreaking strides toward permanent land conservation, riparian restoration, forest stewardship, livable communities, and increased partnerships and awareness about the watershed. In most cases, partners worked toward several of these goals at once. After the first year, the partnership revisited the original business plan to ensure that the goals and objectives of the plan were appropriate given the on-the-ground conditions found in the Potomac watershed. This reevaluation resulted in the development and refinement of a strategic plan supporting goals, objectives, and indicators to document environmental change as a result of partner activities.

Mission

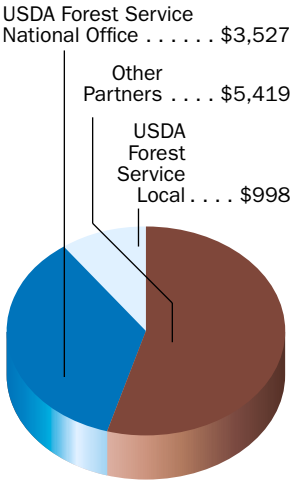
The PWP creates a collaborative effort among Federal, State, and local partners to restore the health of the land and waters of the Potomac River basin, thereby enhancing the quality of life and overall health of the Chesapeake Bay.

Goals

- **Increase and Spread Knowledge through Assessment, Monitoring, and Education**: The essential first step toward ultimate protection of the Potomac River is knowledge and understanding of the watershed, its problems, and the value of restoration and stewardship actions. This effort involves communicating this information to the general public and engaging them in restoration activities.
- **Accelerate Riparian and Wetland Restoration:** The partnership places a major emphasis on restoring riparian forests, wetlands, and watersheds. These efforts improve water quality, fish and wildlife habitat, the drinking water supply, and river-based recreation.
- **Promote Land Protection and Stewardship:** One of the key ingredients of the partnership's success is its land protection and resource management programs. These activities reduce or mitigate the loss and fragmentation of forest habitats and working forests due to urban sprawl.
- **Enhance Forest Stewardship and Reduce Wildfire Risk**: Forest stewardship is vital to increasing the health of critical watersheds. The ongoing program to protect communities from the threat of wildfire goes hand-in-hand with stewardship efforts.
- **Create More Livable Communities**: The creation and expansion of green infrastructure are important elements that enhance the quality of life for communities and the health of urban watersheds. Green infrastructure includes the cre-

Potomac Watershed Partnership 3-year Funding Summary

(FY2000-FY2002 in thousands)



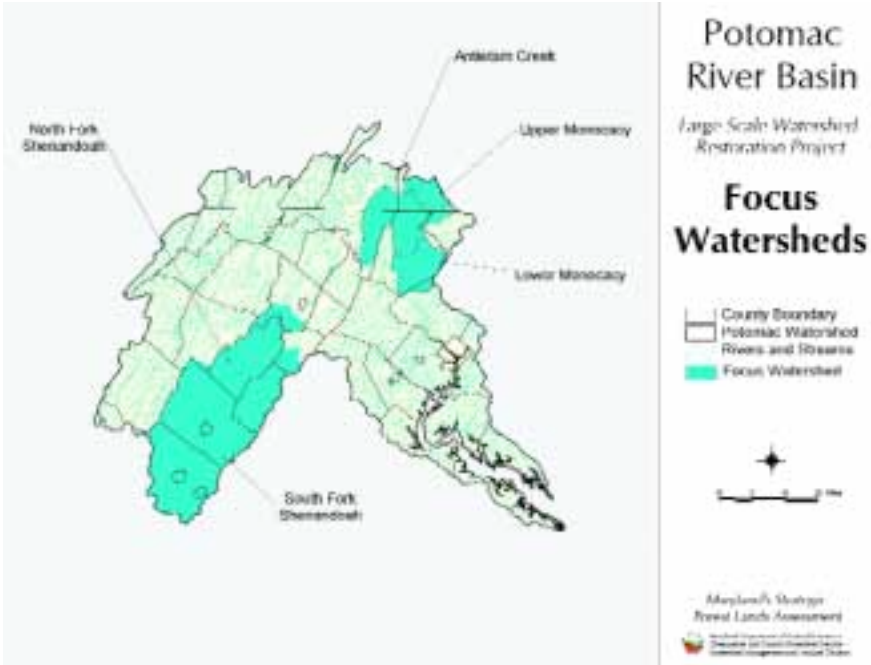


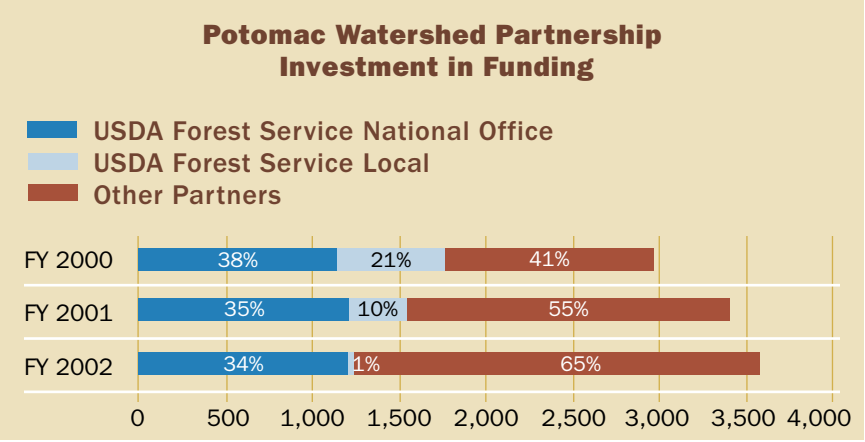
Photo by Ed Neville

ation of trails and bike paths, parks, and pedestrian-oriented facilities and community centers.

- **Sustain and Expand Partnerships**: In addition to on-the-ground restoration work, the partnership is continually leveraging the skills and resources of partners, other organizations, and citizens to expand, sustain, and network conservation activities in the Potomac watershed.

Restoration Highlights

- Developed 29 baseline monitoring sites to measure the effectiveness of riparian buffers.
- Conducted more than 65 educational seminars.
- Restored 490 miles of riparian buffers.
- Restored 782 acres of wetlands.
- Rehabilitated 54 miles of roads.
- Restored 460 acres of native grasslands.
- Fenced 31,080 feet of streambanks.



- Developed 40 forest management plans for landowners.
- Stabilized 35 miles of streambanks.
- Reforested 5,082 acres.
- Permanently protected 2,181 acres.
- Installed 8 dry hydrants.
- Involved 28 communities in watershed restoration and protection activities.
- Reduced fire hazards on 2,350 acres.
- Treated 62 acres for insects and diseases to reduce fire load and improve forest health.
- Installed 13 rain gardens.
- Completed 12 urban greenway projects.
- Hosted 26 tree plantings.
- Had 335 groups participate in Growing Native and collected more than 20,000 pounds of native hardwood seed to support reforestation efforts.

Partners

The Potomac Watershed Partnership builds on the leadership and work of six primary partners:

- USDA Forest Service—State and Private Forestry Northeastern Area, Region 8, and George Washington and Jefferson National Forests
- Potomac Conservancy
- Maryland Department of Natural Resources–Forest Service
- Virginia Department of Forestry
- Ducks Unlimited
- Pennsylvania Department of Environmental Protection

Funding

The partnership is successful in leveraging monies to support projects throughout the watershed. It has been able to find and distribute financial support to programs supporting the partnership mission from private foundations and organizations, as well as Federal and State grant programs. A concerted effort has been undertaken to develop a broader, more diverse base of funding for the partnership to ensure continuing support and programming in the future.

For More Information

Contact Allison McKechie at mckechie@potomac.org or (703) 222-6154, or Al Todd at atodd@fs.fed.us or (410) 267-5705. Web site: http://www.potomac.org/, and http://www.potomacwatershed.net/.

Potomac Watershed Partnership

Growing Native

In October, more than 3,500 volunteers throughout the Potomac River and Chesapeake Bay watersheds took part in the second annual Growing Native. Everyone from Girl Scouts to military personnel joined in on this fun "scavenger hunt" for native hardwood tree seeds. Volunteers at 250 sites gathered almost 15,000 pounds of seeds. These seeds were donated to State nurseries, where they are being grown into seedlings that will be used in stream-and river-side reforestation efforts. More than 20 species of seeds—particularly chestnut oak, black walnut, northern red oak, and white oak—were collected.

Festivities kicked off on October 7 with a seed collection hosted by Ford Motor Company, Growing Native's premier sponsor, on the grounds of the historic Mount Vernon estate. A few days later, on October 12, the bulk of the seeds were collected at hundreds of public and private collection sites. The partnership provided support for several other conservation organizations—such as Community Commons in Frederick, MD, and the Alliance for the Chesapeake Bay in the Richmond, VA, area—coordinated multiple collection sites within their own communities. The partnership recruited and assisted school groups, corporate groups, Girl and Boy Scouts, garden clubs, homeowner associations, individual families, and others who took part in their own private collections. Collection sites included the historic grounds of the Washington National Cathedral and Arlington National Cemetery.

The demand for native seeds has increased significantly in recent years due to a surge in restoration programs available to landowners, especially farmers, at the State level. This increase in restoration work is fueled by a growing awareness of the benefits of forests, particularly along rivers and streams. Growing Native saves the Virginia and Maryland Departments of Forestry tens of thousands of dollars that would otherwise have been spent buying the seeds from suppliers or paying State foresters to collect them. It also provides a local seed source, an important factor in long-term seedling survivability.

Stream and river-side forests are essential for the health of the watersheds. As rain and other precipitation runs over roads, parking lots, and houses, it picks up surface pollutants—oil, pesticides, fertilizers, and sediment—and carries them into streams and rivers. These pollutants choke the water, killing aquatic life and blocking sunlight from reaching plants that provide the foundation for healthy aquatic ecosystems. Trees, however, absorb pollutants and trap water in the ground, reducing soil erosion and sedimentation. Streamside trees not only ensure cleaner water, but they also purify and cool the air, recharge the groundwater table, and provide food and habitat for wild animals.

Science teachers throughout the watershed took advantage of Growing Native to teach their students about the importance of trees. Several teachers developed interactive curricula around the seed collection. Alan Hammond, a science teacher at Allegany High School in Cumberland, MD, brought three other local high schools on board for Growing Native and engaged the students in an interactive lab to determine how many seeds they had collected. Students at Poolesville High School in Poolesville, MD, kept a portion of the seeds they collected to plant in their own nursery to grow for future tree planting activities.

Next year's Growing Native will feature the first round of tree plantings, in addition to seed collections, bringing the program full-circle.

"Growing Native is wonderful not only because it helps in our efforts to create and maintain healthy forests, but also because it instills a conservation ethic that will be passed down from generation to generation," says Matthew Logan, President of the Potomac Conservancy.

"Growing Native is helping to make the landscapes and waterways of the Potomac River and the Chesapeake Bay healthier today and well into the future."

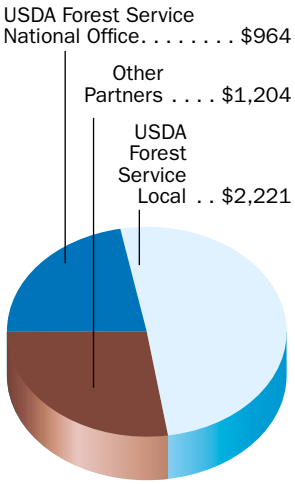
For more information, visit the Web site: http://www.growingnative.org/.

Photo by Bridget Fico
Brownies from Troop 1494, Reston, VA, collected over 100 pounds of nuts.

Photo by Matthew DiBona

Rio Peñasco Watershed Restoration Project

Rio Peñasco Watershed Restoration Project 3-year Funding Summary (FY2000-FY2002 in thousands)



The Rio Peñasco is a 160,000-acre watershed that feeds the Pecos River and Tularosa basin in southern New Mexico. Most of the watershed is in the Lincoln National Forest that surrounds Cloudcroft, High Rolls-Mountain Park, Mayhill, many subdivisions, and includes headwaters of the La Luz and Fresnal drainages, a water source for Alamogordo, NM. Community leaders have served as partners in many ways including writing and coordinating grants, leading resource assessments, and in setting priorities.

The watershed is home to a unique mix of rare plant, amphibian, insect, and bird species that have special Federal or State status. Over 370 species of animals (including 100 species of neo-tropical migratory birds) use the Rio Peñasco area. The Rio Peñasco project was designed specifically to explore a broad range of restoration activities applied to a large land area and to develop more effective ways to involve communities of place and of interest.

Mission

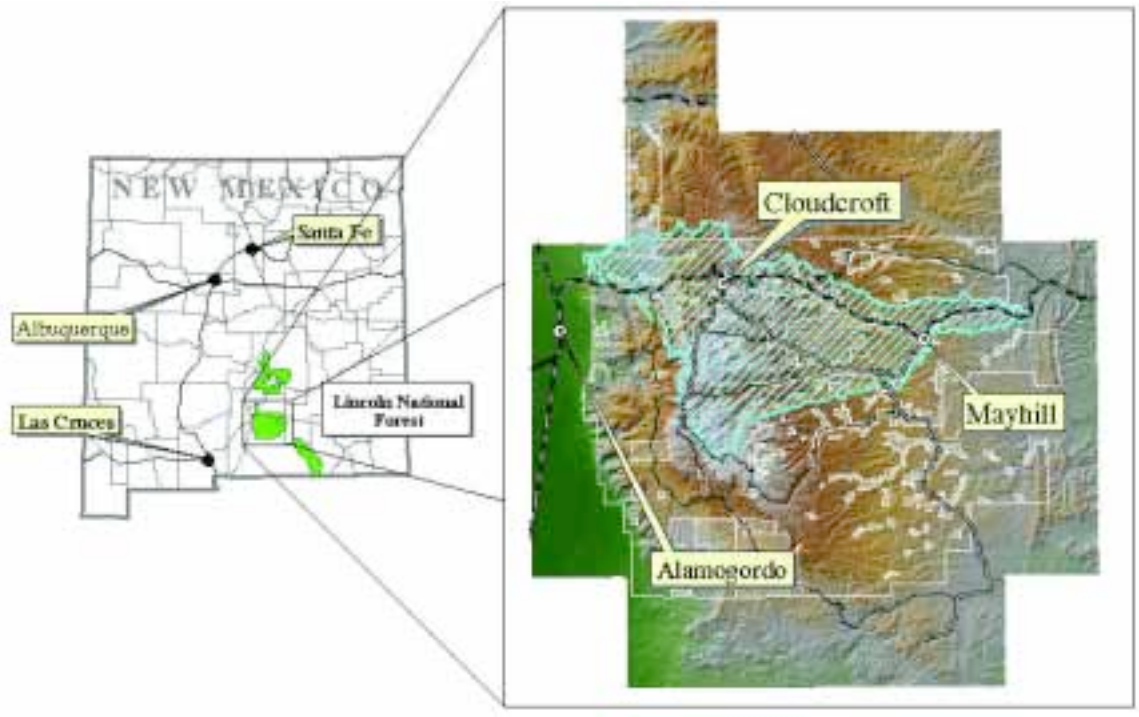
Restore the Upper Rio Peñasco to a safe and healthy watershed.

Goals

- Improve water yield and water quality.
- Reduce fire hazards for communities and individuals.
- Maintain a healthy forest that supports biodiversity.
- Improve economic stability.

Restoration Highlights

- Thinned 3,130 acres of small diameter trees and 775 acres for sawlogs.
- Prescribed burned 2,720 acres.
- Protected threatened plant species by restoring 1,200 acres of meadows.
- Improved drainage on 14 spring crossings of roads.
- Closed and obliterated 22 miles of roads.
- Improved 2,600 acres of threatened wildlife habitat.
- Relocated a mile of power lines.
- Prepared documentation for 2,000 acres to allow prescribed fire and 1,100 acres of precommercial thinning.
- Upgraded three campground sites and constructed a pedestrian bridge.



Fire hazard reduction was achieved on about 6 percent of the targeted acres within the project area. Activities focused on areas where fuels reduction (thinning trees and controlled burning) was the highest priority. Area citizens and homeowners' associations are taking a lead role in reducing fire hazards on private property. The Mescalero Apache Tribe purchased the White Sands Forest Products sawmill. These improvements resulted in 50 additional jobs.

The partnership has completed 21 percent of the work planned in its business plan in the first 3 years. The trend for the future is bright as the Lincoln National Forest begins intensifying its thinning and fuels treatment programs. Most obstacles limiting progress are linked to establishing an accelerated vegetation management program. In the midst of competitive sourcing and seeking talented technical expertise, the Lincoln National Forest is feeling some growing pains. Creating the local infrastructure required removing and using small trees to offset costs. In addition, limiting smoke from controlled burns has created a somewhat cautious approach toward a full-scale assault upon hazardous fuel treatment.

- Treatments completed 1,720 acres
- Treatments in progress 1,330 acres
- Scheduled for 2003 3,268 acres
- Scheduled for 2004-2005 11,043 acres
- Scheduled beyond 2006 12,173 acres

Partners

- USDA Forest Service—Lincoln National Forest
- USDA Natural Resources Conservation Service
- South-Central Mountain Resource and Development Council
- Village of Cloudcroft
- Robin Hood and Cloud Country Homeowners Associations
- U.S. Environmental Protection Agency
- State of New Mexico—Division of Forestry
- Modular Energy Corporation

State and Federal Grants

State Grants, 2001-2002

Western State Foresters Wildland-Urban Interface

Otero County	$366,400	77 projects
Lincoln County	$477,700	185 projects

Federal Grants, 2001-2002

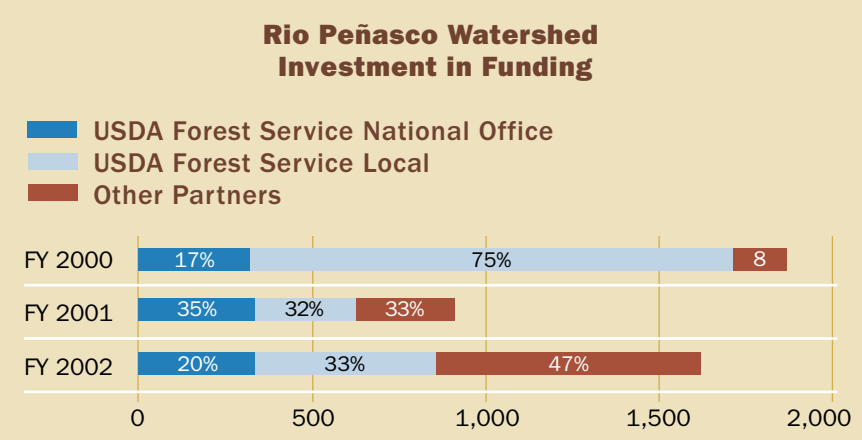
Lincoln National Forest Collaborative Forest Restoration	$893,500
Rural Community Assistance Economic Action Program	$735,000
Community Planning	$60,000

Funding

The USDA Forest Service allocated over $1 million in 2000 and over $600,000 in 2001 and 2002 to the Rio Peñasco Project. In addition, the State of New Mexico has allocated $150,000 to the Cloudcroft Wildland Urban Interface Committee for vegetation treatment of private, State, and National Forest System land within the watershed.

For More Information

Contact Ron Hannan at rhannan@fs.fed.us or 505-434-7200.



Rio Peñasco Watershed *Peñasco Wildfire Rehabilitation*

The Peñasco Wildfire began on April 30, 2002, and spread through Curtis, James, Cox, and Rio Peñasco Canyons. Approximately 16 miles southeast of Cloudcroft, the fire burned more than 15,000 acres, of which over 5,000 acres were private land.

Private landowners; Cloudcroft, Mayhill, and Otero Counties; USDA Natural Resources Conservation Service; local fire departments; New Mexico State Forestry; Soil and Water Conservation Districts; Youth Conservation Corps; New Mexico State Highway Department; and Lincoln National Forest quickly mobilized to assist a burned area emergency rehabilitation (BAER) team in completing fire rehabilitation projects in the watershed before heavy rains produced flooding.

Together, the community and BAER team reseeded 8,500 acres of public and private land; aerially applied 3,000 bales of hay; and built 210 log-silt dams, 22 earthen tanks, 85 wooden trash racks, and 165 earthen check dams. Other activities included contour-felling trees on 400 acres and removing 30,000 yards of silt from existing earthen tanks. These actions treated 16 miles of stream channel.

St. Joe Ecosystem Restoration Project

Located in northern Idaho, the St. Joe Ecosystem Restoration Project consists of multifaceted and integrated activities to improve the terrestrial and aquatic conditions of the St. Joe River subbasin, an area that encompasses over 1.5 million acres. Approximately 47 percent of the area is National Forest System lands. The other 53 percent of the land base is in large corporation, private, State, or other Federal ownerships.

This project includes enhancing aquatic species and watershed restoration through—

- Obliterating roads.
- Reconstructing roads.
- Removing fish blockages.
- Restoring vegetative composition and structure through timber harvest and burning.
- Creating a fuel hazard reduction zone through thinning.
- Improving wildlife habitat through burning and access management.
- Improving river access.
- Managing a forest road system that provides public and management access to maintain high-quality recreation opportunities and sustainable ecosystems.

Mission

Improve the land and water resource conditions to maintain sustainable physical, biological, social, and economic communities.

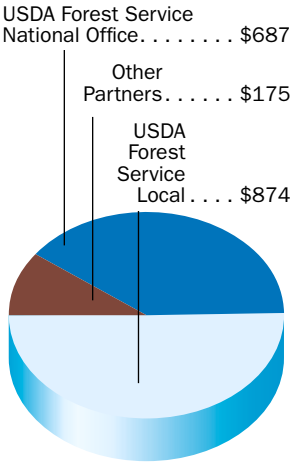
Goals

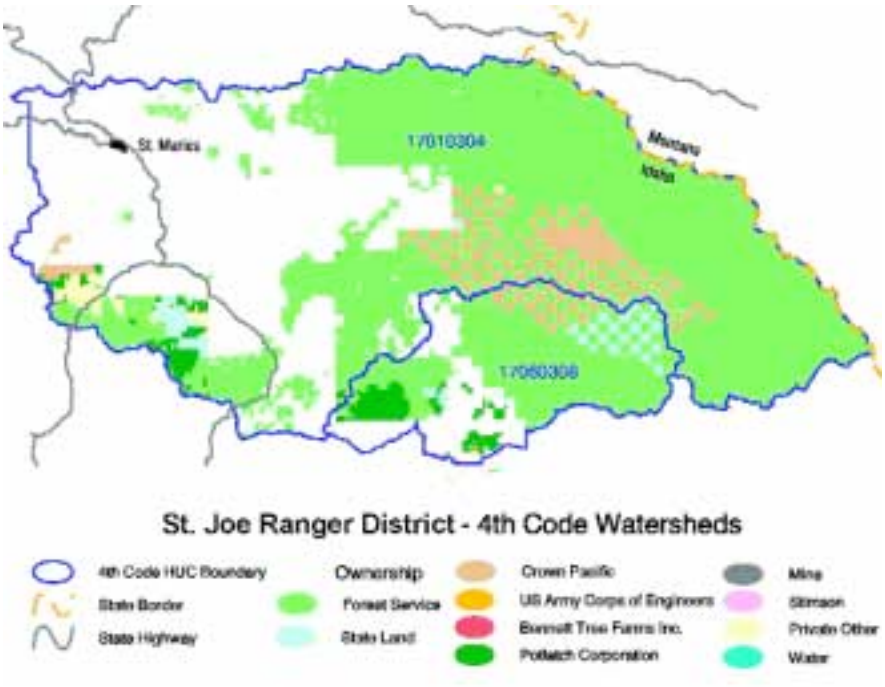
- Improve hydrologic and channel conditions.
- Reduce pollutant sediment delivery to streams.
- Protect populations and improve habitat of bull trout.
- Move vegetation toward historic conditions.
- Maintain and enhance wildlife habitat and maintain or improve wildlife security.
- Restore rare vegetation communities and habitats.
- Create a trend allowing fires to play a natural role and use fire as a disturbance mechanism.
- Contribute to community economic stability by using timber harvest to achieve objectives.
- Based on the identified risks to the watersheds and future needs, obliterate, put into long-term storage, restrict, recondition, reconstruct, or maintain roads within the project.
- Provide motorized and nonmotorized recreation access that is consistent with the designation in plans that guide the management of the area.
- Maintain dispersed recreation and single-track recreation in a roaded, natural setting.

Restoration Highlights

- Obliterated 57 miles of road.
- Reconditioned 37 miles of road.
- Controlled noxious weeds on 387 acres.
- Planted 8 acres of riparian habitat to native brush species.
- Coordinated access management among corporate landowners, the State, and the national forest.
- Improved instream fish habitat.
- Removed dams.
- Burned 1,800 acres to improve wildlife habitat.
- Inventoried 9,000 acres.
- Surveyed fish, bat, lynx, and eagle habitats.
- Performed old growth surveys on 1,202 acres.

St. Joe Ecosystem Restoration Project 3-year Funding Summary (FY2000-FY2002 in thousands)

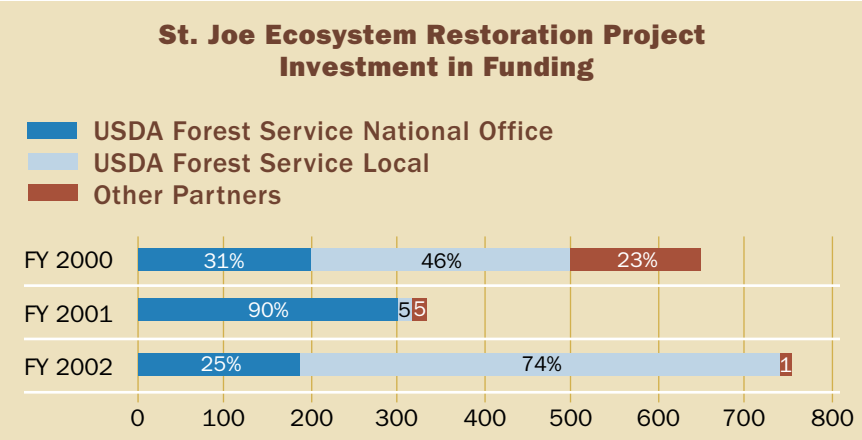




Partners

Several partners are working with the Idaho Panhandle National Forest to coordinate efforts across many ownerships in the St. Joe watershed. Partners have included:

- Idaho Department of Fish and Game
- Idaho Department of Parks and Recreation
- Shoshone County
- Potlatch Corporation
- Crown Pacific Inland
- Trout Unlimited
- Rocky Mountain Elk Foundation
- Many local interest groups, such as the North Idaho Fly Casters, Taft Tunnel Preservation Society, Panhandle Backcountry Horsemen, and the St. Joe Snowriders.



Funding

The USDA Forest Service redirected $113, 000 of FY 2002 money to fighting wildfires.

Heller Creek Enhancement Project

In March 1999, a Scoping Notice was sent out to the public introducing the proposal to enhance the aquatic habitat of Heller Creek. Based on the input supplied by the public and by USDA Forest Service specialists, a project was designed and a decision memo signed on November 17, 1999.

In 2001, a partnership was developed between the St. Joe Ranger District of the Idaho Panhandle National Forest, Crown Pacific International (CPI), AVISTA, and the Coeur d'Alene Tribe to implement the Heller Creek project. CPI provided 205 logs averaging about 20 feet in length and 1.2 feet in diameter. AVISTA assisted with funding to fly the logs into the work site, and the Coeur d'Alene Tribe provided people to conduct snorkel surveys prior to the implementation of the project. The USDA Forest Service provided personnel and the funding used for the equipment contract.

The project began in August 2001. Twenty-two sites were completed the first summer. Work resumed on July 15, 2002, and finished on August 9, 2002. Overall, 117 sites were completed. There were 17 log revetments installed. This structure looks similar to a log debris jam and was used to stabilize eroding banks at bends in the channel and to diversify the fish habitat. There were 26 upstream vee pools installed, which provide deeper water areas that are good for overwintering habitat as well as summer rearing habitat. Eighteen diagonal weirs were installed, which created pools thus improving overwintering habitat. Fifty-six barbs were installed, which are used to provide lateral habitat diversity primarily for younger fish and to turn high flows away from eroding banks. These structures were chosen for this stream because there were natural structures already present in the channel that were similar to these structures. Overall, 591 logs were used to construct these structures and add additional cover in the stream.

A typical section of stream after structures were installed.

Upper Kootenai Watershed Restoration Partnership

The Upper Kootenai subbasin is located in northwestern Montana. The subbasin extends from the Canadian border south-southwest to the Idaho border. The watershed has some of the most productive and biologically diverse forest lands in Montana. The Upper Kootenai subbasin includes many features that are unique and valued by people.

In 2002, the third year of the Upper Kootenai Watershed Restoration project, the Kootenai National Forest took a big step forward by completing the Upper Kootenai Subbasin Review. The review identified restoration opportunities on 1.4 million acres. The majority of the watershed is national forest land, with more than 1,135,000 acres (79 percent) administered by the Kootenai National Forest. Private land makes up 18 percent of the watershed, with 84,000 acres in corporate timber lands and 160,000 acres in other private lands. The remaining 3 percent of the watershed is Montana State or U.S. Army Corp of Engineers land.

The subbasin review is a blueprint for restoration. It depicts both the risks and opportunities of the ecological components of the watershed. It will enhance existing partnerships by illustrating the restoration needs and focusing resources in areas with the highest priorities.

Mission

To protect, maintain, and restore watershed health and ecosystem condition through application of ecosystem management principles while providing for a range of uses, values, products, and services.

Goals

Establish a coalition of partners to meet the mission.

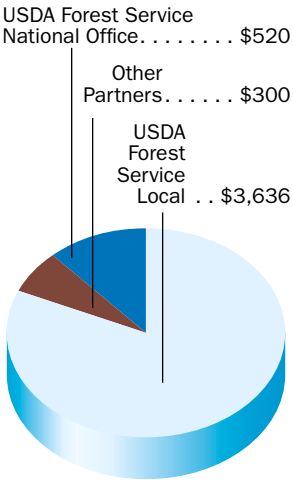
Restoration Highlights

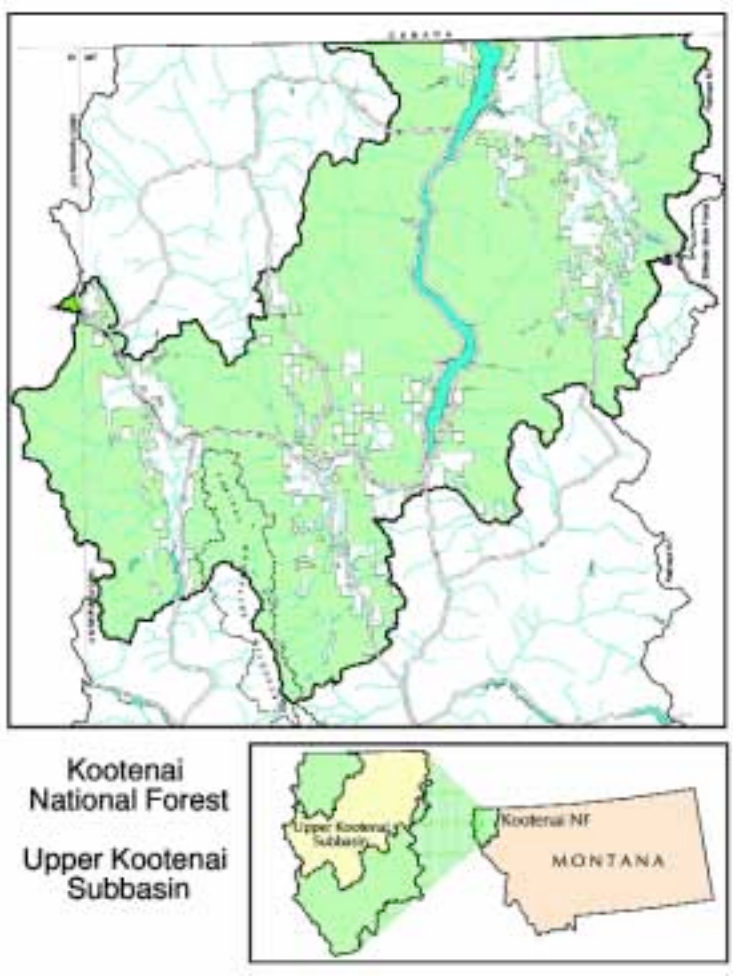
- Removed a dam and stabilized the channel on Grave Creek, a priority bull trout stream.
- Accomplished 17 miles of stream improvement work.
- Decommissioned 54 miles of road by removing culverts, bringing stream crossings to natural profile, and recontouring some roads.
- Improved 400 miles of roads by replacing undersized culverts, adding 132 new culverts, installing more drainage structures, and reducing sediment delivery to streams.
- Used prescribed fire to enhance 7,000 acres of wildlife habitat and 3,700 acres of natural fuel reduction, of which 990 acres were associated with the wildland urban interface.
- Reduced hazardous fuels on 1,335 acres.
- Rehabilitated all fire lines and roads associated with the approximately 28,000 acres that were burned by wildfire in the Upper Kootenai watershed.
- Treated 6,500 acres for noxious weeds.

The partnership completed about 30 percent of the work in the business plan in the first 3 years. This was accomplished primarily due to enlisting more partners, investments from the USDA Forest Service national office, and creative financing for accomplishing projects. The partnership expects to continue to accomplish similar work in the future and stay almost on target. The reductions will be primarily due to the reduction in commercially treated acres. Partners will provide more funds as Federal funds decrease.

Upper Kootenai Watershed Restoration Project Partnership 3-year Funding Summary

(FY2000-FY2002 in thousands)





Partners

- Glen Lakes Irrigation District
- Kootenai River Network
- Bonneville Power Authority
- Rocky Mountain Elk Foundation
- Trego School
- Montana Departments of Fish, Wildlife and Parks
- USDA Natural Resources Conservation Service
- Lincoln County Weed Board
- Trout Unlimited
- Tansy Ragwort Cooperative
- Montana Natural Heritage Program
- Foundation for North American Wild Sheep
- U.S. Fish and Wildlife Service
- Libby Area Conservancy
- Cutthroat Trout Foundation
- Lincoln and Sanders Counties
- Local schools, landowners, and associations
- AVISTA
- The Nature Conservancy
- Yaak Valley Forest Council

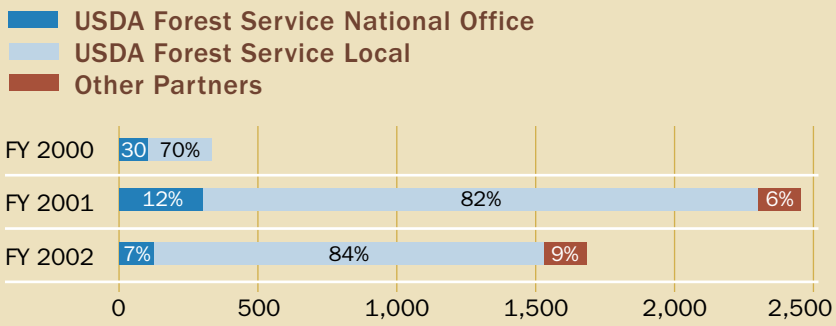
Funding

The work was financed by the Community-based Watershed Restoration funds, trust funds, other National Forest System appropriated funds, and National Fire Plan funds.

For More Information

Contact Mark Romey at mromey@fs.fed.us or (406) 293-6211.

Upper Kootenai Watershed Restoration Partnership Investment in Funding



Upper Kootenai Watershed
Subbasin Review

A major accomplishment of this project is the completion of the Upper Kootenai Subbasin Review. It is the basis for establishing partnerships and restoring the Upper Kootenai watershed. The review characterizes the ecological and social conditions in the subbasin and provides a context for future decisions on national forest lands. It describes the status of ecosystem diversity, identifies risks to ecological sustainability, and prioritizes areas for future restoration projects. The review also describes the social and economic setting of the watershed. It is a great tool to show potential partners where restoration is needed in their areas of interest.

Another highlight was the completion of the Glen Lakes Irrigation District (GLID) Diversion Partnership. The log dam on Grave Creek was removed under the Upper Kootenai Restoration Partnership. Although this dam supplied—through a diversion—irrigation water to the town of Eureka, it was a barrier to spawning and migrating fish. The GLID project replaced the dam with a series of rock weirs that restored the hydrologic function of the channel. A 60-foot self-cleaning screen was placed in front of the ditch head gate to keep fish out of the irrigation ditch. Another mile of stream was restored below the dam. The benefits to the fisheries resources within Grave Creek drainage are substantial. The project is expected to help restore the Tobacco Grave bull trout (endangered) population by improving habitat continuity and reducing the potential loss of several hundred bull trout and westslope cutthroat trout.

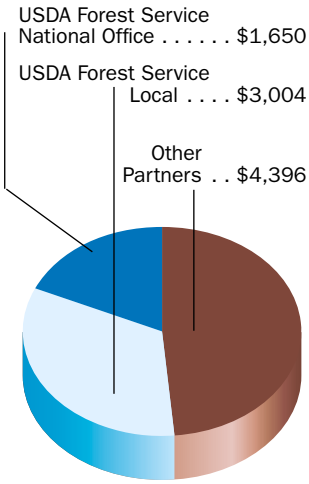
These restorations will improve ecosystem conditions intricately related to many activities and uses. Restoration of big game habitat, watersheds, and fisheries habitat will maintain and improve hunting and fishing opportunities. Recreational opportunities will be maintained through improved ecosystem conditions. Timber harvest to achieve restoration objectives will provide for continued jobs and income while meeting a national demand for wood fiber products. Other restoration activities will provide for local employment opportunities. Restoration activities will protect local communities from wildland fires.

With this project, there have been numerous restoration successes including reducing sediment to streams through road restoration (implementing Best Management Practices, improving drainage), decommissioning of roads, and improving stream stability and water quality. The forest has implemented a prescribed burning program to enhance forage for elk, big horn sheep, and deer. Another highlight is the forest's success in implementing the National Fire Plan in the Upper Kootenai watershed.

The mission cannot be achieved without cooperation and development of strong working partnerships. The forest will use the Upper Kootenai Watershed Restoration Partnership to focus and direct discussions with partners and communities to develop trust, commitment, and financial support.

Upper Pit River Watershed Alliance

Upper Pit River Watershed Alliance 3-year Funding Summary (FY2000-FY2002 in thousands)



The Upper Pit River Restoration Project encompasses approximately 500,000 acres within the 2-million-acre Modoc National Forest. Activities include developing and enhancing the wetland, constructing wildlife viewing and interpretive areas, obliterating nonessential roads, thinning and prescribed burning, issuing new grazing decisions on 26 range allotments, restoring riparian areas, improving fisheries habitat, and managing aspen and upland vegetation. This project will result in benefits to downstream users from the Pit River to the Sacramento Bay Delta.

Situated in northeastern California, near the Oregon and Nevada borders, the Upper Pit River watershed includes over 3 million acres. The watershed, which includes numerous ownerships, supplies almost 20 percent of the water to the Sacramento River. The watershed is vital to the culture, environment, and economics of the State of California.

Watershed restoration projects within the Upper Pit River watershed have been ongoing for the past 10 years. The Pit River Watershed Alliance was formed in 2000 to strengthen individual efforts in restoring watersheds in the Upper Pit River watershed. The alliance is a collaborative, nonregulatory group of private and public interests that want to enhance water quality and aquatic habitat in the Upper Pit River watershed. The North Cal-Neva Resource Conservation & Development Area provides oversight for the alliance.

The alliance monitors lands managed by four USDA Natural Resources Conservation Service districts; the Lake, Modoc, Lassen, Shasta, and Siskiyou County Boards; the Bureau of Land Management; the USDA Forest Service; and the U.S. Fish and Wildlife Service. Most of the area is within California Congressional District 2.

Mission

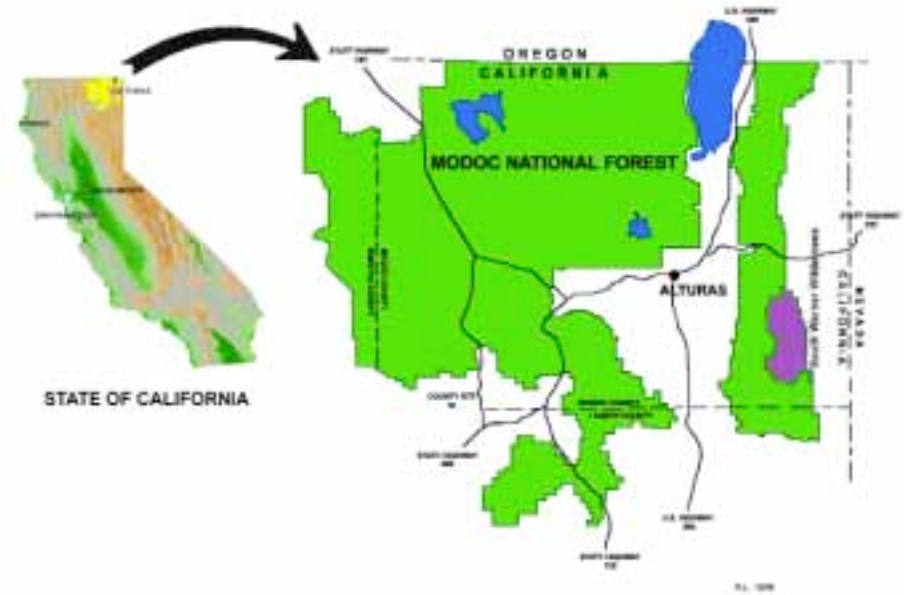
Foster partnerships that achieve integrated long-term cultural, economic, and environmental health of the watershed through active community participation.

Goals

- Develop educational materials about the watershed.
- Comprehensively assess watersheds.
- Monitor results using a common database.
- Secure funding for restoration projects.
- Implement "ready to go" restoration, such as the Modoc National Forest Upper Pit River Watershed Restoration and Enhancement Project.

Restoration Highlights

- Treated 5,329 acres with prescribed fire to reduce risk of catastrophic fires.
- Treated 7,300 acres of vegetation to improve wildlife habitat and forest health.
- Decommissioned 49 miles of road.
- Restored 1,748 acres of wetland, 164 islands for nesting waterfowl, and numerous potholes.
- Installed four guzzlers and constructed two waterholes in partnership with the Rocky Mountain Elk Foundation.
- Reconstructed four existing dams.
- Received National Environmental Policy Act decisions on 26 range management allotments, encompassing over 300,000 acres and modifying grazing practices.
- Completed 3,000 feet of riparian restoration.
- Commercially thinned 4,656 acres of forest with multiproduct contracts, small material was removed as biomass.
- Precommercially thinned 4,886 acres with material being removed as biomass.
- Constructed 11 miles of fence.
- Enhanced 100 acres of aspen.
- Thinned 559 acres to improve bald eagle habitat.



Restoration Action in FY 2002

In 2002, the Upper Pit River Watershed restoration and enhancement project accomplished the following projects on the Modoc National Forest—

- Reduced fuels on 1,675 acres using prescribed fire.
- Enhanced 635 acres of wetlands.
- Constructed 57 nesting islands.
- Constructed 2 dikes.
- Constructed 11 miles of fence.
- Enhanced 100 acres of aspen.
- Thinned 4,000 acres for forest health and fuel reduction.

Partners

In partnership with Ducks Unlimited, wetland recovery was accomplished, enhancing existing wetlands on the Modoc National Forest that annually produce more than 3,500 Canada geese and 10,000 ducks. Other partners include:

- North Cal-Neva Resource Conservation & Development Area.
- USDA Natural Resources Conservation Service.
- Lake, Modoc, Lassen, Shasta, and Siskiyou County Boards.
- USDA Forest Service-Modoc National Forest.
- Bureau of Land Management.
- U.S. Fish and Wildlife Service.
- Private landowners.
- Rocky Mountain Elk Foundation.
- California Department of Forestry.
- Modoc Resource Advisory Council.

The alliance is continuing to embrace new members, and one of the challenges is to build a database easily accessible to everyone with the statistics on income, investments, and outcomes across all ownerships in the alliance area. In FY 2003, the alliance will develop a revised business plan for 2005-2009. The alliance will review the findings of the watershed assessment and begin development of a strategic plan based in the findings of the assessment.

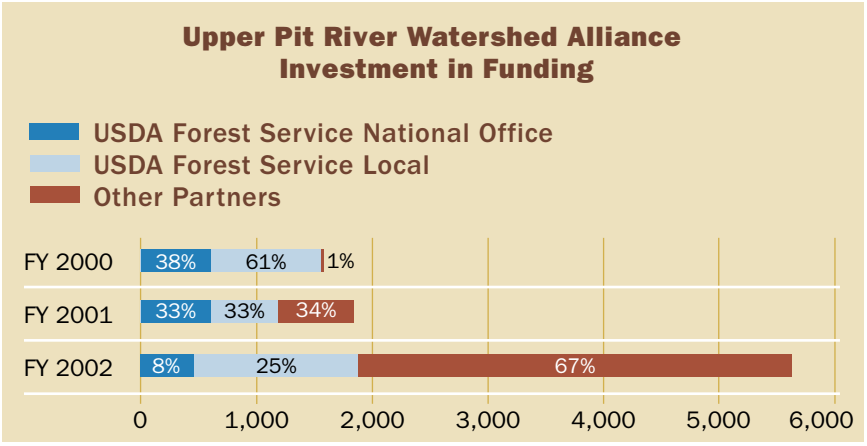
Funding

In FY 2002, the Modoc National Forest committed $450,000 of earmarked funding from the national office, plus $1,388,400 of appropriated funds for projects within the Upper Pit River Watershed Restoration and Enhancement Project.

- $550,000 grant for watershed assessment, watershed coordinator, and the River Center.
- $2,750,000 USDA Natural Resources Conservation Service grants for private land restoration.
- $37,000 Modoc County Title III grant for the River Center.
- $125,000 Modoc County Education Grant for the River Center, which will become the focal point for watershed information within the community.
- Countless volunteer hours.

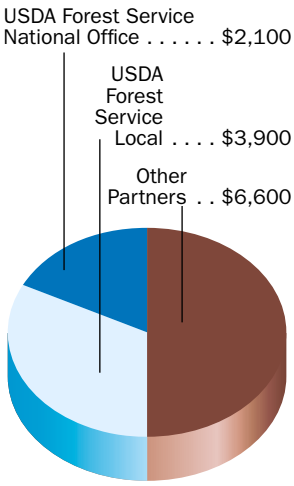
For More Information

Contact Mark Steffek, Upper Pit River Watershed Alliance Coordinator, at Mark.Steffek@ca.usda.gov; Paul Bailey at pdbailey@fs.fed.us or (530) 233-8810; or Edie Asrow at easrow@fs.fed.us or 530-279-6116.
Web site: http://www.pitriveralliance.net/.



Upper Sevier River Community Watershed Project

Upper Sevier River Community Watershed Project 3-year Funding Summary
(FY2000-FY2002 in thousands)



The Upper Sevier River Community Watershed Project is a collaborative partnership addressing restoration needs, management challenges, and research opportunities for rangelands, agricultural lands, forest lands, and aquatic ecosystems in the Upper Sevier River watershed.

Located in rural southwestern Utah, the 1.2-million-acre Upper Sevier watershed has provided goods and services to people for a long time. As use increased over the decades since settlement, the health of the watershed declined. Streamside vegetation has diminished, streambanks have eroded, and water quality has been impaired. Fish and wildlife habitat has also degraded.

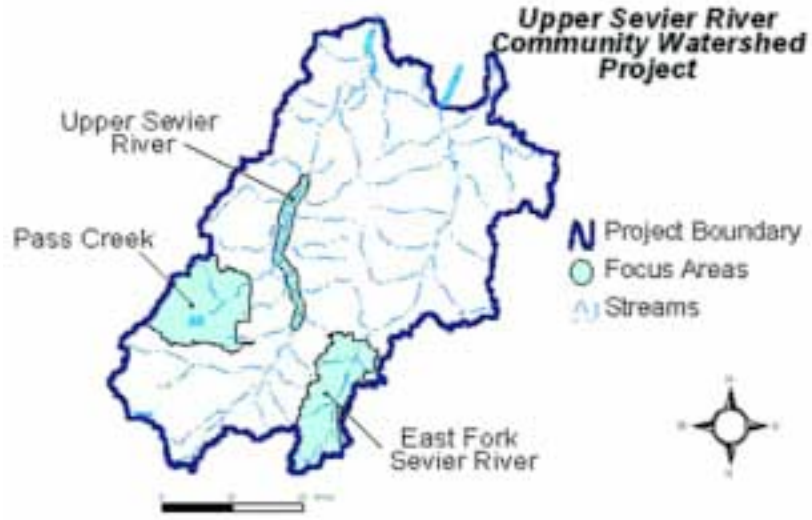
Decades of fire suppression, although well intentioned, have damaged the health of the watershed: Forest types that depend on fire for renewal are outside their historic range of condition. Fire suppression has also resulted in high volumes of fuel (dense forests, brush, heavy accumulations of dead wood on the forest floor), creating a wildfire risk to homes and other structures bordering wildlands.

The natural resources within the Upper Sevier River watershed are vital to the local communities, both economically and for maintaining rural lifestyles of ranching and farming. If these values are to be sustained, measures must be taken to improve resources in the watershed. Specific issues addressed include—

- **Water Quality:** How to ensure water quality and quantity for local ranchers, farmers, and communities, while providing for the needs of recreationists, fish, and wildlife?
- **Riparian and Upland Vegetation:** How to maintain or restore streamside and upland vegetation communities that are resilient and sustainable?

- **Fire Safety:** How to continue to protect private property while using fire to improve forest and rangeland health?
- **Access:** How to continue to provide access while ensuring that roads and trails do not degrade the environment?

Because the Upper Sevier watershed is so large, subwatersheds and key issues have been identified in which restoration efforts will be concentrated. These issues were identified through collaboration among the Upper Sevier River Watershed Steering Committee members. By focusing efforts, they have achieved significant and measurable success in areas that are the highest priority for restoration work.



Mission

The mission is organized into four major endeavors:

- Research monitoring and adaptive management.
- Demonstrating restorative techniques.
- Restoring and maintaining watershed ecosystems.
- Cooperating, coordinating, and collaborating.

Goals

- Utilize current watershed assessment to set priorities and plan restoration opportunities.
- Hire a watershed coordinator to ensure watershed plan implementation.
- Increase understanding of the watershed structure and dynamics.
- Understand current and historical conditions.
- Enhance leveraging ability through cooperation.
- Update business plan for fiscal years 2004 to 2007.

Restoration Highlights

- Improved 20 miles of riparian habitat.
- Inventoried 25 miles of riverine valleys.
- Improved 5,000 acres of habitats.
- Stabilized 12 miles of stream channels.
- Initiated new grazing practices with 3 private landowners to improve riparian conditions.
- Treated 3,000 acres with prescribed fire to reduce fire risk adjacent to private in-holdings.
- Maintained 200 miles of trails.
- Treated 1,700 acres of noxious weeds.
- Monitored 550,000 acres of rangeland.
- Reforested 30 acres.
- Harvested 6 MMBF of timber.
- Burned 70,000 acres to meet ecological goals.
- Treated 2,500 acres in the wildland/urban interface.
- Sponsored workshops dealing with feedlot operations, riparian ecosystems, and livestock management for ranchers and farmers within the watershed.
- Facilitated development of a community-owned, interactive Web site.

The partnership has completed 60 percent of the work in their business plan in the first 3 years. Several of the planning projects for access and vegetation management have been delayed. Southern Utah is in its 5th consecutive year of drought and has been affected by immediate needs of wildfire occurrences and range allotment management. Future accomplishments will be redirected by the watershed plan and revised business plan. The hiring of the watershed coordinator will solidify future trends with a locally led perspective.

Partners

- USDA Forest Service—Dixie National Forest and Rocky Mountain Research Station
- Jack H. Berryman Institute for Wildlife Damage Management (Utah State University)
- Utah Association of Conservation Districts
- Bureau of Land Management
- National Park Service
- Utah Department of Environmental Quality
- Utah Division of Wildlife Resources
- USDA Natural Resources Conservation Service
- Color Country Resource Conservation & Development
- USDA Farm Service Agency
- Utah State University Extension
- Paiute Tribe of Utah
- State of Utah Division of Forestry, Fire and State Lands
- Panguitch City
- Garfield, Iron, and Kane Counties
- Southern Utah University
- Upper Sevier Soil Conservation District

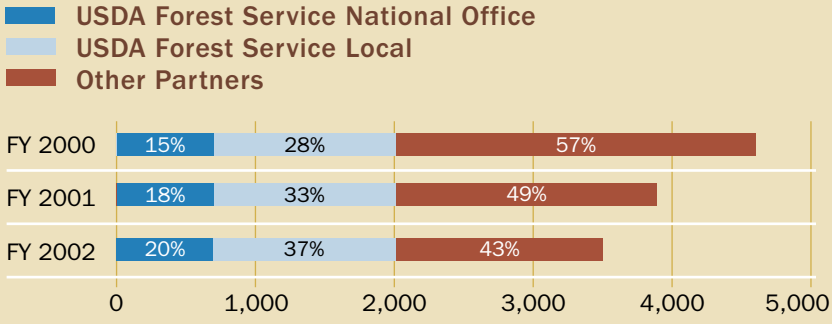
Funding

The inclusion of multiple partners in design, planning, and decisionmaking has encouraged partners to contribute almost half of all investments.

For More Information

Contact: Rich Jaros at sjaros@fs.fed.us or (435) 865-3722, or Tyce Palmer at tyce-palmer@ut.nacdnet.org or (435) 865-0703.
Web site: http://www.uppersevier.net/.

Upper Sevier River Community Watershed Project Investment in Funding



Upper Sevier River Community Watershed *Private Partners, Public Benefits*

Allen Henrie has been involved in the Upper Sevier Watershed with his ranching operation and also as the chairman of the Upper Sevier Soil Conservation District Board.

Water quality is not new to Allen; he grew up on his family ranch located at the headwaters of the Upper Sevier watershed. Even at an early age, his father taught him that the river running through their property was best to wind back and forth and that moderate stocking rates for their cow-calf operation were best for productive grasses, the land, and water quality. Today, he continues to learn about water quality and build upon this foundation of taking care of the land.

Allen was one of the first operators in the Upper Sevier watershed who sought out and obtained funding to complete a demonstration project on his private property. His projects include fencing riparian areas so that livestock grazing could be managed properly, improving upland by using controlled burns, looking at alternative methods of controlling rabbit brush, planting native willows, and replanting pasture with more productive grass species. As a result of these projects, Allen's operation has improved economically, water quality has improved, the vegetation is vigorous, and the cows and the wildlife are happy.

Allen Henrie is a good example of how a private landowner can improve water quality through management. In recognition of his efforts, Allen received the Annual Non Point Source (NPS) Water Quality Award from the National Park Service Taskforce.

Upper South Platte Watershed Protection and Restoration Project

The Upper South Platte Watershed is located in the foothills of the Colorado Rocky Mountains, and is critical to the State, providing 80 percent of Denver's citizens with water that comes from or is transmitted through this river drainage. Most of the watershed is located within the Pike National Forest, southwest of metropolitan Denver.

The greater Upper South Platte Watershed covers approximately 1.7 million acres and includes 41 major subwatersheds. Within that, the overall Upper South Platte Watershed project assessment area encompasses 645,000 acres southwest of Denver, including lands managed by the State, Denver Water Board, and the USDA Forest Service.

During the short-term, three of the project area's subwatersheds—Waterton-Deckers, Horse Creek, and Buffalo Creek—will be the focal areas for vegetation treatment. These subwatersheds cover about 140,000 acres of public and private lands and were ranked as top priority areas for restoration management based on their high risk of fire and soil erosion. They are located in Jefferson and Douglas Counties.

The South Platte drainage is a major recreation area in Colorado, highly regarded for its Gold-Medal trout fishery, its wildlife habitat, and its trails. It is home to many species, including several threatened and endangered species. Water quality issues have become a major concern in recent years, with the drainage listed as a "high-priority watershed in need of restoration" in the Colorado Unified Watershed Assessment.

The watershed is in an urban/forest interface zone and has been identified as a Red Zone, or area that is susceptible to catastrophic fire. For years, fire has been suppressed, and logging and grazing practices have had real impacts on the ground. The result: Fires escape, becoming catastrophic events. The Buffalo Creek (1996), Hi Meadow (2000), and Hayman (2002) fires brought home to resource managers, public officials, and homeowners in the area the importance of both the watershed to the area and the critical need to effectively treat and manage the forest.

The intensity of the 2002 fire season visibly demonstrated the importance of the Upper South Platte Watershed Protection and Restoration Project to the region and, particularly, to the communities in and around metropolitan Denver. Within this framework, the vision and goals originally established for the Upper South Platte Watershed Project are even more valid and profound than when the project was first established.

Mission

To achieve sustainable forest conditions within the watershed and surrounding forest area that enable the forest ecosystem to thrive and function over time while adapting to changing environmental and social conditions.

Goals

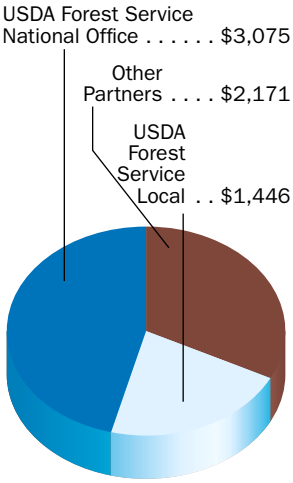
- Reduce risks of large catastrophic fires.
- Reduce risks to human life and property.
- Protect water quality for all users.
- Establish continuous and effective forest management through integrated research, continuous monitoring, and adaptive management techniques.

Restoration Highlights

- Completed the final stages of the National Environmental Planning Act (NEPA) planning process for a 17,400-acre project.
- Redesigned the approved treatments in the burned areas because of the Hayman and Schoonover wildfires that burned over 142,000 acres in the watershed.
- Treated over 1,400 acres in critical national forest subwatersheds.

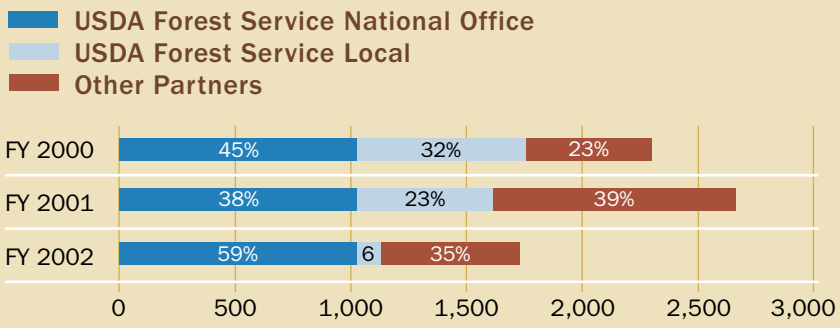
Upper South Platte Watershed 3-year Funding Summary

(FY2000-FY2002 in thousands)



- Completed the 8,000-acre Polhemus prescribed burn in September–October 2001 to reduce ladder fuels. The Polhemus burn is credited with causing the 137,000-acre Hayman wildfire to drop to the ground, saving 30 homes and stemming the rapid movement of the fire towards Denver.
- Increased overall wildlife monitoring to document fire effects on wildlife and habitat.
- Continued monitoring to measure the effects of the wildfires on the Pawnee montane skipper butterfly, a threatened species. Forty percent of suitable skipper habitat was burned in the wildfires.
- Adjusted the focus to monitoring the after-effects of wildfire from monitoring the effects of forest management to prevent crown fires.
- Changed from measuring forest thinning effects to measuring post-fire runoff/sediment production and the general effects of wildfire and rehabilitation treatments.
- Completed 1,200 feet of trail extension and rerouting; closed and rehabilitated 23 social trails; and completed a variety of trail-widening, repair, and switchback realignment projects.
- Completed more than 100 acres of fuel breaks funded through the National Fire Plan, including 22 acres in defensible space and 32 in the project area.
- Completed a host of fuels treatment projects on 186 acres of land around Cheesman Reservoir.
- Provided fuels reduction planning assistance to the Perry Park residential development in the wildland-urban interface zone just east of the watershed.

Upper South Platte Watershed Protection and Restoration Project Investment in Funding



During 2002, the Upper South Platte Watershed Protection and Restoration Partnership completed the restoration of 1,156 acres on private lands. At the same time, USDA Forest Service partners were able to complete their planning process, despite undergoing two appeals, and also wrote a monitoring strategy for the project and commenced actual on-the-ground monitoring. The USDA Forest Service also began forest restoration of 945 acres of National Forest System land during the summer and fall of 2002, once the many wildfires were controlled. These accomplishments represent approximately 20 percent of what the business plan actually projected to be accomplished before the outbreak of the region's 2002 fire season. It's anticipated that the number of acres of National Forest System lands in the watershed that will be restored during the coming years will increase.

Partners

The collaborative relationships established among the watershed's Federal, State, and local agency partners was a major factor in the USDA Forest Service's and region's ability to effectively respond to the fire incidents occurring on the national forest.

- Coalition for the Upper South Platte
- USDA Forest Service
- Colorado State Forest Service
- Denver Water Department
- U.S. Geological Survey
- USDA Natural Resources Conservation Service
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service

Funding

The total cost for this project was estimated to be $12 million over a 5-year period. Total Federal and private funding provided over 3 years has been $6,692,000. Although the partners will continue to fund most of the project costs, the partnership will also continue to seek other funding sources.

For More Information

Contact Fred Patten at fpatten@fs.fed.us or (303) 275-5641 or Dave Hessel at dhessel@lamar.colostate.edu or (303) 635-1597. Web site: http://www.uppersouthplatte.net/.

Upper South Platte Watershed
2002 Fire Impact

Since the inception of the Upper South Platte Watershed Project in 1998, fires in the watershed have had a devastating impact. Fire season 2002 was no exception, with the most destructive fire season in Colorado's history burning over 500,000 acres throughout the State. The Hayman Fire, the largest fire in the State's history, which consumed over 137,000 acres, 133 homes, and 447 other structures significantly impacted the Upper South Platte Watershed southwest of Denver. Two other significant fires, Schoonover and Snaking, destroyed 6,400 acres in the project area.

The key impact of the 2002 fires to the national Upper South Platte Watershed Project involved the loss of over 6,000 of the 17,400 acres of National Forest System lands that had been planned for fuel treatment by the NEPA decisions of the summer of 2001 and spring of 2002. Other project layout work was also lost. Nearly all the fuels treatments done on Denver Water properties around Cheesman Reservoir were lost to the Hayman Fire, as well as the monitoring studies and the research. The fire also had a catastrophic impact on soils, water quality, recreation, and wildlife habitat.

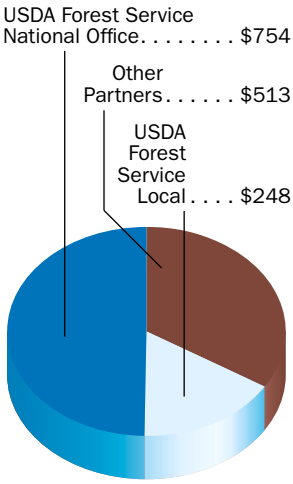
The 2002 fires and their impacts brought public agencies and communities closer together and focused even greater attention among the media, public, and legislators on the importance of the watershed to the region. The burned area rehabilitation effort on private and public lands is now underway. This work will continue for years. The Watershed Steering Committee's efforts will be to reassess and readjust project planning for the watershed and to work even more closely with the Pike National Forest to potentially expand the project to incorporate a larger area of the watershed that directly abuts the urban interface areas. This will increase the partnership's work with the public, State, counties, and other local agencies. It will also increase efforts to collaborate closely with local communities and publics as forest restoration treatments expand into a larger project area.

Changing Role of a Project Partner

In the aftermath of the Hayman Fire and its impact on private property owners and entire communities, one of the watershed's primary project partners assumed a new and more significant role, as well as a new identity. In July 2002, at the request of watershed stakeholders, the Coalition for the Upper South Platte (CUSP), formerly the Upper South Platte Protection Association, assumed responsibility for coordinating an interagency effort to aid victims of the Hayman Fire. Initially formed as the Hayman Recovery Assistance Center, the program needed long-term leadership to help coordinate recovery and rehabilitation efforts for fire victims, to aid the healing of impacted communities, and to work with State and Federal agencies to aid forest recovery efforts and lessen the impacts on the community of future wildfires. Through the end of September 2002, CUSP's accomplishments included coordinating over 40 volunteer events (6,000-plus hours of volunteer time), seeking and receiving funding to assist livestock owners with meeting hay needs, facilitating and attending scores of meetings with members of the public and public officials, and responding to dozens of media requests for information.

White River Partnership

White River Partnership 3-year Funding Summary
(FY2000-FY2002
in thousands)



In 1996, the White River Partnership formed as a locally led, needs driven collaboration between local citizens, communities, groups and organizations, and State and Federal agencies. The White River watershed is 454,000 acres covering all or part of 21 towns in central Vermont. The White River is an important river in the Connecticut River Atlantic Salmon Restoration Program and a major tributary to an American Heritage River (Connecticut River). Despite the watershed's rich human, cultural, and natural resources, the partnership faces many challenges on its journey to build sustainable communities and provide for natural resource stewardship.

Mission

To help local communities balance the long-term cultural, economic, and environmental health of the White River watershed through active citizen participation.

Goals

- Locally-led watershed assessment.
- Stream corridor restoration.
- Outreach and education.
- Economic sustainability.
- Long-term stewardship.

Restoration Highlights

- Established systematic, volunteer-driven water quality monitoring program, collecting weekly samples at 23 sites during June, July, and August.
- Completed Phase I of the Vermont Agency of Natural Resources three phase physical assessment for the entire watershed.
- Completed 30 reaches of Phase II; utilized Phase III for all of the in-stream restoration projects.
- Surveyed 70 miles of river, including the entire Third Branch and parts of the First Branch and Middle River area.
- Restored 3 miles of river through streambank stabilization, reestablishment of riparian vegetation, and in-channel restoration of natural river features.
- Planted over 6,000 trees.
- Sponsored Green Up Day—river cleanup events throughout the watershed.
- Established six stream teams, one in each subwatershed.
- Sponsored River Days and Green-Up Days educational events.
- Helped over 100 schoolchildren each year plant trees along the river.
- Developed a Summer Institute for teachers to establish common protocols for use in the schools, trained new teachers and provided teachers an opportunity to learn from one another.
- Hosted landowner workshops and public forums.
- Established the forestry work group.
- Developed a watershed map focusing on the cultural, economic, and environmental resources in the watershed, including over 22 in-stream restoration projects.

The partnership has made considerable progress on the work plan outlined in the 5-year business plan. In all cases, the partnership is on its way toward completing the tasks as outlined.

- **Assessment:** The partnership has committed to the State of Vermont's protocol; built an understanding of and commitment to the protocol at the grass-roots level; and completed Phase I, which is now used to inform project selection. The partnership is working towards an understanding of the best use for Phase II information and a subsequent commitment to how it will be completed.
- **Stream Corridor Restoration:** Six teams are in place and in various stages of development; the partnership is working toward the goal of getting four major restoration projects completed each year. These projects are more staff intensive than anticipated, resulting in efforts to increase capacity by contracting with the National Wildlife Federation.

- **Outreach and Education:** The partnership is meeting goals in this area and momentum is building as name recognition increases.
- **Economic Sustainability:** The partnership has experienced setbacks in getting business owners engaged and is currently exploring a different model of achieving goals in this area. The forestry work group is in full swing and making progress on sustainable forestry issues.
- **Long-Term Stewardship:** The partnership is on track with long-term viability as an organization. It has recently started to manage some of its own smaller grants and has updated the 5-year business plan to reflect the current situation.

Partners

- Private citizens
- Vermont Institute of Natural Science
- Vermont Agency of Natural Resources
- Two Rivers Ottaquechee Regional Planning Commission
- National Wildlife Federation
- Trout Unlimited
- USDA Forest Service—National office, Northeastern Area State and Private Forestry, and Green Mountain National Forest
- U.S. Fish and Wildlife Service—Silvio Conte National Wildlife Refuge
- George D. Aiken Resource Conservation and Development Center
- USDA Natural Resources Conservation Service
- U.S. Environmental Protection Agency
- Connecticut River Joint Commissions
- The towns of Bethel, Sharon, Randolph, Rochester, Hancock , Granville Royalton, Barnard, and Chelsea

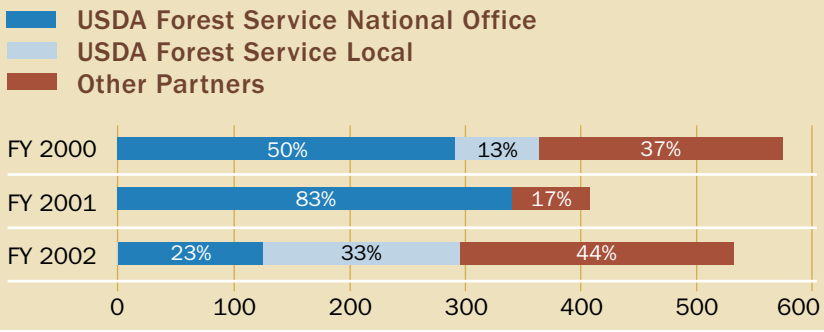
Funding

Over the years, partners are getting more involved and are investing more resources in the partnership.

For More Information

Contact Amy Sheldon at wrpamy@together.net or (802) 767-4600, or Steve Roy at sroy@fs.fed.us or (802) 747-6739. Web site: http://www.whiteriver-partnership.org/.

White River Partnership Investment in Funding



White River Partnership
Benefits of Riparian Buffers

Riparian buffers are the most effective protection for our water resources. The grasses, shrubs, trees, and other plants that grow along our rivers and streams filter polluted runoff, stabilize the riverbank and bed, and provide complex ecosystems and habitat for wildlife.

Since European settlement, many of the natural riparian buffers have been lost. Although Vermont has gone from being 80 percent deforested in the 1860s to being almost 80 percent forested today, many stretches of our rivers still suffer from a complete lack of, or inadequate, buffers—the White River is no exception. Restoring the lost riparian buffers will improve water quality, riverbank stability, fish and wildlife habitat, recreational opportunities, and the aesthetic value of the White River.

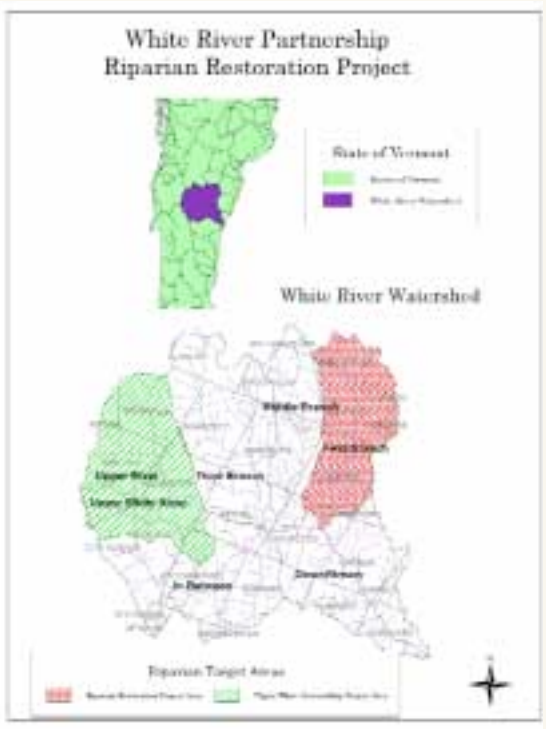
This Upper River Riparian Restoration Project was selected by Congress as one of the USDA Forest Service Stewardship Contracting pilot projects, allowing the project to test authorities that typically direct USDA Forest Service activity. Project managers are considering the possibility of exchanging use of USDA Forest Service lands for farmland taken out of production along riparian areas. Next year, project managers plan to expand the buffer program to the First and Middle Branches of the watershed.

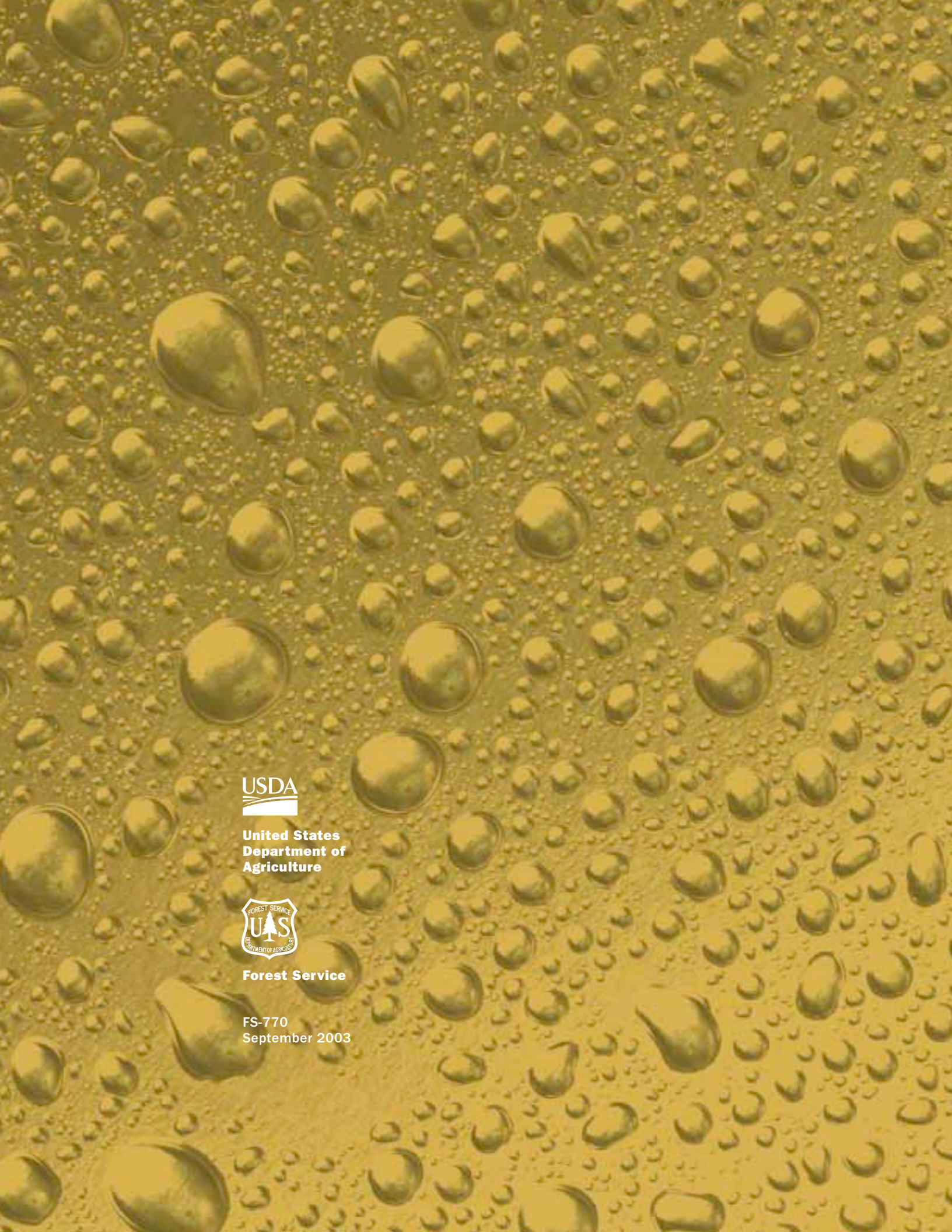
The Watershed

The White River Watershed is 454,000 acres covering all or part of 21 towns in central Vermont. Land ownership is 85 percent private, 5 percent municipal and State lands, and 10 percent national forest. The 56-mile long White River is free flowing. The watershed is 84 percent forested, 7 percent in agricultural use, and only 5 percent developed. The White River Watershed is a Clean Water Action Plan National Showcase Watershed, an important river in the Connecticut River Atlantic Salmon Restoration Program, a Special Focus Area of the Conte National Fish and Wildlife Refuge, and a major tributary to an American Heritage River—the Connecticut River.

White River Partnership and National Wildlife Federation Join Forces To Establish Riparian Buffers

The Upper White River Riparian Restoration Project is a fine example of partnerships at work. The White River Partnership in conjunction with the National Wildlife Federation (NWF), contacted over 130 landowners in the Upper White River subwatershed to educate them on the benefits of riparian buffers and to deliver existing partner programs that are available to assist landowners with tree plantings. NWF raised money to help property owners, including farmers, with their portion of the cost share that is usually required for USDA Natural Resources Conservation Service programs. As of 2003, 12 private landowners have agreed to plant trees on 4,466 feet of streambank. There will be an additional 7,095 feet of buffer established on USDA Forest Service easements along the river in 2003. In 2004, 6,525 feet of buffer will be planted on parcels owned by the USDA Forest Service. This makes 3.4 miles of riparian area to be restored through this effort.





USDA

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Forest Service

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