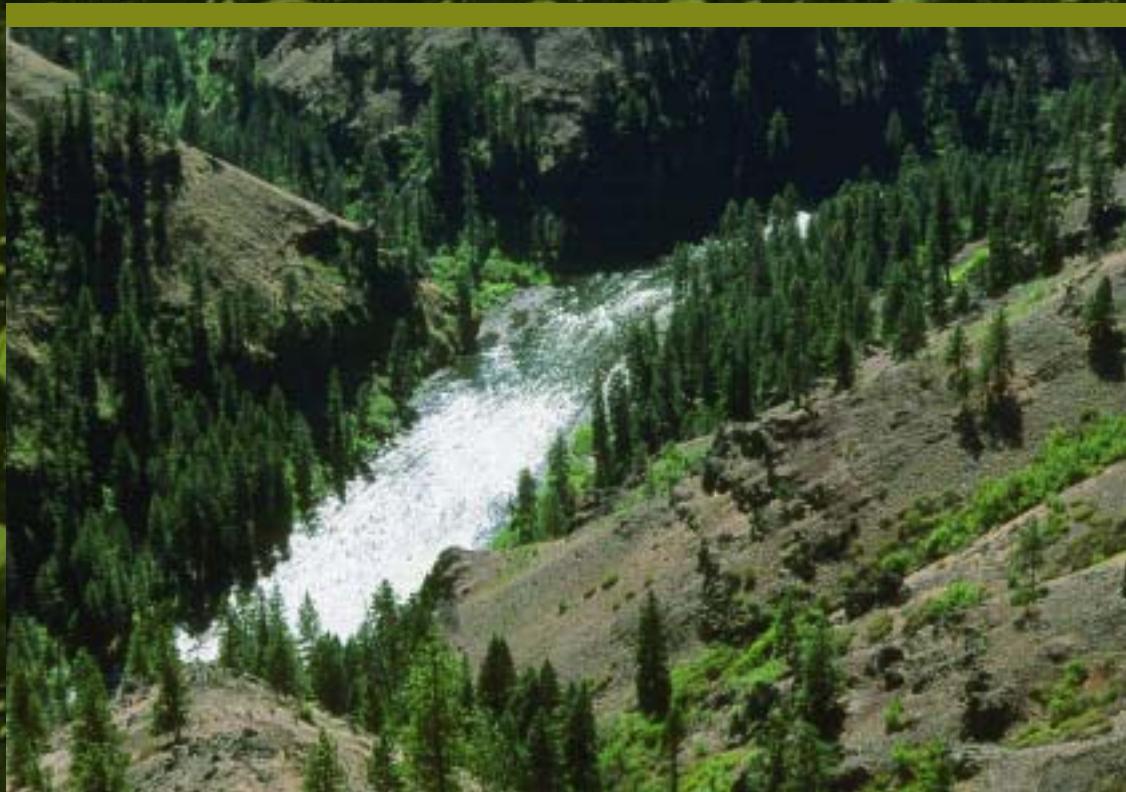


# Community-Based Watershed Restoration Partnerships



## Accomplishments for fy 2000



# Stewardship

## Stewardship and Watersheds: The USDA Forest Service Comes Home

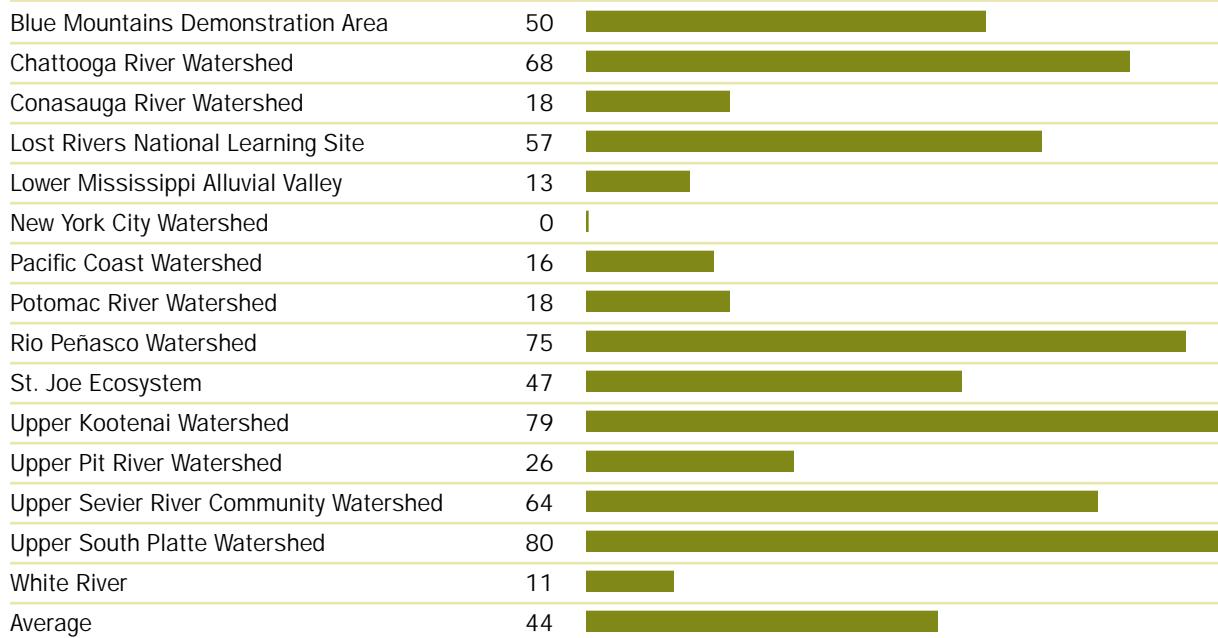
Over a century ago, public concern about adequate supplies of clean water contributed to the establishment of federally protected forest reserves. These reserves are now part of the U.S. Department of Agriculture Forest Service (USDA Forest Service) National Forest System. In 1999, the USDA Forest Service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

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

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



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 & Development and the State and Private Forestry programs.

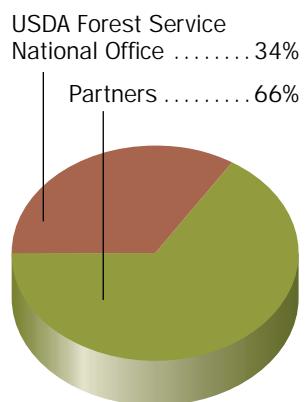
# Projects

## Projects

### Project Funding

Trusting that what is learned from this experiment could be shared and used in other settings, we have invested \$24 million in selected large-scale watershed collaborative projects. Part of this funding included \$11 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 in the Large-Scale Watershed Restoration Program to provide the additional funding in Fiscal Year (FY) 2000. Partners also contributed funding for specific projects. As a result, national funds were leveraged an average of two-to-one by the field offices and their partners.

### FY 2000 Funding Graph



FY 2000 Large-Scale Watershed Program Funding Distribution.



## Project Selection

From more than 60 very worthwhile projects that competed for project funding, 15 projects were selected to become national prototypes for more visionary management of ailing watersheds and ecosystems. Located in 24 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

### Fifteen Large-Scale Watershed Restoration Projects

	States Involved
Blue Mountains Demonstration Area	OR
Chattooga River Watershed	GA, NC, SC
Conasauga River Watershed	GA, TN
Lost Rivers National Learning Site	ID
Lower Mississippi Alluvial Valley	LA, MS, AR, TN, KY, MO, IL
New York City Watershed	NY, CT
Pacific Coast Watershed	OR, WA
Potomac River Watershed	MD, VA, PA, DC
Rio Peñasco Watershed	NM
St. Joe Ecosystem	ID
Upper Kootenai Watershed	MT
Upper Pit River Watershed	CA
Upper Sevier River Community Watershed	UT
Upper South Platte Watershed	CO
White River	VT



As part of the business plan, each watershed project must have a communication and education component; use adaptive management, or “learning by doing,” as a central principle; and use scientific findings to set priorities for projects and to guide planning and decisionmaking.

With these collaborative projects, 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 results.

#### In FY 2000, collaborative teams —

- Completed work that improved the health of over 31,000 acres of forests through thinning, prescribed fire, fuels reduction, and tree planting
- Established more than 85 miles of riparian forest
- Established 1,500 acres of native grasslands
- Restored more than 7,000 acres of wetlands
- Decommissioned more than 100 miles of roads
- Rehabilitated 1,000 miles of roads
- Restored over 100 miles of stream habitat and stream banks
- Improved 25 recreation sites and 170 miles of trails
- Treated nearly 4,000 acres of noxious weeds
- Restored 1,600 acres of wildlife and upland habitat
- Improved grazing management practices on 30 public allotments and 4 private ranches
- Surveyed hundreds of miles of streams for restoration potential
- Implemented three monitoring projects
- 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

#### Project Accomplishments

The first year’s accomplishments are significant. Long-term gains will be even more impressive once communities see how much more can be accomplished through partnerships. The process of writing a business plan tightened the focus for each selected watershed, helping to identify partners who could collaborate for the common good. Existing partnerships were strengthened by the infusion of capital and community interest. 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.

Specific accomplishments include:

- Hiring three project coordinators
- Sponsoring restoration workshops and fire protection seminars that were attended by thousands
- Awarding \$2 million in contracts after competition by 80 contractors
- Acquiring more than 225 acres of land, including 1 mile of a wild and scenic river, from private partners who purchased the land and transferred it to the USDA Forest Service

From the Pacific Northwest forests to New York City’s watershed, new technologies are being developed, including the pioneering of electronic ear-tags to manage cattle grazing near streams, and modifying wood fibers to absorb pollutants from surface runoff. Funded plans for the next 2 years pledge to continue work at an even greater pace.

# Partnerships

**B**uilding 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 value of collaboration.

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

Categories of Partners	Number of Groups
Private Landowners	Hundreds
Conservation Organizations	14
Environmental Organizations	6
Wildlife and Fish Organizations	6
Industry Organizations	5
State Government Organizations	30
Local Government Organizations	37
Universities	13
American Indian Tribes	5
Federal Government Organizations	13

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.



# Blue Mountains Demonstration Area

The purpose of establishing the Blue Mountain Demonstration Area (BMDA) was to develop and implement a widely accepted landscape strategy to restore watersheds and preserve rare and highly valued ecosystems, while providing communities with multiple benefits that are sustainable and compatible with the ecosystem's capabilities. The BMDA encompasses over 3 million acres of Federal, State, and private lands. The project uses a collaborative process to prioritize restoration work based on subbasin resource assessments and watershed analyses. Activities include thinning vegetation, reducing unnaturally high levels of forest fuels, restoring and enhancing instream habitats, aggressively treating noxious weeds, establishing new employment opportunities in the local economy, and preserving and accelerating development of old growth.



## Mission

To promote watershed and community health through innovation and cooperation.

## Goals

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

## Partners

Over 40 partners are involved in planning and prioritizing projects. These partners include:

- Grande Ronde Model Watershed\*
- Union County Commissioners\*
- Wallowa County Commissioners\*
- Wallowa Resources\*
- USDA Forest Service\*† National Forest Systems and Research
- U.S. Environmental Protection Agency†
- National Marine Fisheries Service
- U.S. Fish and Wildlife Service†
- John Day Chamber of Commerce
- U.S. Army Corps of Engineers\*
- North Fork John Day Watershed Council\*
- Soil & Water Conservation Districts\*
- Tricounty Noxious Weed Board\*
- Oregon Watershed Enhancement Board\*†
- Oregon Governor's Office†
- Oregon Department of Fish and Wildlife\*
- Oregon Department of Environmental Quality\*
- Oregon Department of Forestry\*†



Many ecological assessments have identified the Blue Mountains of eastern Oregon as an area of poor aquatic and forest health where wildfires, forest insects and diseases, and noxious weeds represent serious risks to wildlife, fish, water quality, recreation, and forest resources. Social assessments indicate that communities in the Blue Mountains have low social/economic resiliency and are enduring high unemployment due to their historic dependence on natural resources. The USDA Forest Service and the State of Oregon established the BMDA in 1999 to accelerate watershed restoration at a landscape level in ways that contribute to the economic health of local communities.

# Demonstration Area



- Oregon State University Extension\*
- USDA Natural Resources Conservation Service\*
- Warm Springs Tribe
- Nez Perce Tribe\*
- Umatilla Indian Reservation\*
- Trout Unlimited
- Ducks Unlimited, Inc.
- The Nature Conservancy\*
- Oregon Hunters Association
- Rocky Mountain Elk Foundation
- National Fish & Wildlife Foundation
- Bureau of Land Management\*†

\*Participating in integrated project planning

†Members of the State/Federal Coordination Council

## Restoration Highlights

- Collaborated with local, State, Federal, and tribal cooperators
- Prioritized, planned, funded, implemented, and monitored restoration activities on private and Federal lands using unprecedented collaboration
- Integrated State, Federal, and research agencies' programs of work. Completed subbasin analyses cooperatively to prioritize watersheds and watershed assessments, identifying restoration work across all ownerships
- Provided adaptive learning opportunities
- Evaluated contracting approaches that facilitated achievement of watershed and community economic goals
- Developed and refined subbasin assessment techniques, predictive models, and landscape monitoring approaches
- Completed project work
- Restored 44 miles of stream

- Restored 175 acres of riparian and upland vegetation
- Restored 641 miles of roads
- Restored 105 miles of trails
- Thinned 9,310 acres of trees, resulting in approximately 62,000 hundred cubic feet or 31 million board feet of wood
- Treated 3,427 acres for noxious weeds
- Treated 6,896 acres to reduce forest fuels
- Reforested 1,707 acres
- Restored 26 sites of aspen
- Analyzed three watersheds
- Sponsored workshops involving over 80 contractors and nearly \$2 million in restoration contracts

## Funding

The BMDA spent \$9.9 million in completing 158 restoration projects in FY 2000. National forests contributed 47 percent (\$4.7 million), the Pacific Northwest Region contributed 14 percent (\$1.4 million), and the USDA Forest Service national office contributed 28 percent (\$2.8 million). Over 40 partners participate in the BMDA. Their contributions totaled 10 percent (\$1 million).

## For More Information

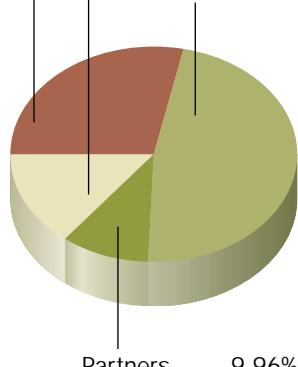
Contact the project coordinator: Bob Rainville at [rainville@fs.fed.us](mailto:rainville@fs.fed.us) or 541-962-6537 or visit the Web site: [www.fs.fed.us/bluemountains](http://www.fs.fed.us/bluemountains)

## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 28.32%

USDA Forest Service  
Regional Office .... 14.4%

National  
Forests ... 47.32%



# Chattooga River

## Chattooga River Watershed

Located within a corner of the three adjoining States of Georgia, South Carolina, and North Carolina, this watershed is the Nation's first designated Wild and Scenic River basin. A population of over 25 million people has ready access to this resource, which contains some of the best cold-water trout fishing and whitewater rafting in the Southeastern United States. Approximately 68 percent of the 180,000-acre watershed is National Forest System land. Aimed at improving water quality and aquatic habitats, proposed activities are related to road reconstruction, redesign, and maintenance; bank stabilization; prescribed burning; and development of additional trail systems and semideveloped camp sites.

This project builds on research and relationships developed through the Chattooga River Ecosystem Management Demonstration Project conducted from 1993 to 1995, which identified needs for the watershed based on a wealth of public input, data, and scientific reports. It looked at sedimentation sources, fecal pollution, impacts from reduction in timber harvesting, an old growth inventory, and timber type conversion as the primary concerns and impacts to the watershed. Other challenges include the management of the area under three forest plans, three State governments, and the high percentage of private landownership.

### Mission

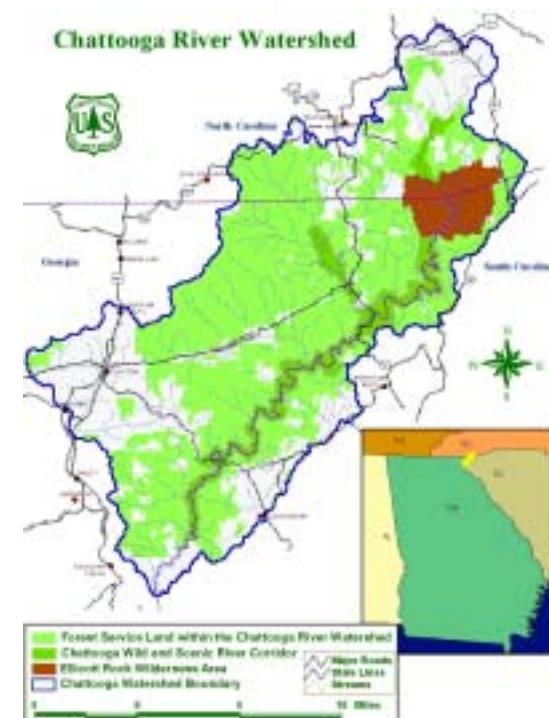
To help managers in this watershed and in other areas make sound investments in restoration.

### Goals

Maintain and restore high-quality water and aquatic habitats by relocating and improving recreation facilities, roads, and trails and providing conservation education to private, state, and federal recreation users and landowners. This will be accomplished through the cooperative efforts of all partners in reducing all sources of sedimentation and by improving the riparian areas throughout the watershed.

### Restoration Highlights

- Completed first project in March 2000
- Initiated a streambank stabilization project on the West Fork of the Chattooga River
- Supplemented a grant received through the National Fish and Wildlife Foundation with funds from the watershed project to complete streambank stabilization
- Hired a full-time project coordinator
- Maintained and rehabilitated 65 miles of trails
- Started replacing trail bridges on 25 sites
- Maintained or rehabilitated 127 miles of roads
- Rehabilitated 5 recreation sites and started rehabilitating 15 additional sites

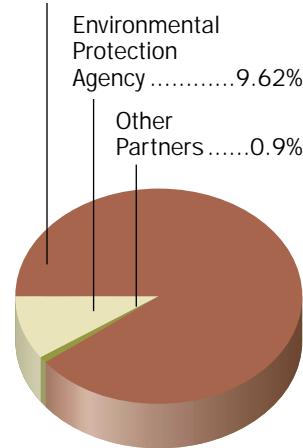


# Watershed



## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 89.48%



- Improved soil and water on 40 acres by reducing erosion
- Performed stream inventories on 16.8 miles and started the process on 10 additional miles
- Monitored 46 miles of stream to determine water quality

### Partners

- States of Georgia, North Carolina, and South Carolina
- Rabun County, GA; Oconee County, SC; and Macon and Jackson Counties, NC
- USDA Forest Service—Tallulah Ranger District, Chattahoochee National Forest; Highlands Ranger District, Nantahala National Forest; Andrew Pickens Ranger District, Sumter National Forest; San Dimas Technology and Development Center; and Southern Research Station, Coweeta Hydrological Laboratory, and Bent Creek Experimental Forest
- Clemson University
- University of Georgia
- University of Minnesota
- Chattooga Watershed Conservancy
- Western Carolina University

- U.S. Environmental Protection Agency
- USDA Natural Resources Conservation Service
- Oconee County Soil and Water Conservation District
- Foothills Resource Conservation and Development Council
- Partners for Trout
- South Carolina Department of Natural Resources

### Funding

USDA Forest Service funding totaled \$2,196,000 in FY 2000. Contributions from partners totaled \$253,200. USDA Forest Service funding in FY 2001 is \$2,043,000, with expected contributions from partners totalling \$976,700.

### For More Information

Contact Randy Fowler at [dlfowler@fs.fed.us](mailto:dlfowler@fs.fed.us) or 706-782-3320 or Tom Speaks at [tspeaks@fs.fed.us](mailto:tspeaks@fs.fed.us) or 770-297-3010.

# Conasauga River

## Conasauga River Watershed Project

In 1994 the Cherokee and Chattahoochee National Forests joined with other community members to form the Conasauga River Watershed Alliance. A strong collaborative history of community interest and interagency support is the basis behind the Conasauga River Watershed Restoration Project.

The Conasauga River is a Category 1 priority watershed in the State's Unified Watershed Assessment. Eighteen miles of the river and 54 miles of its tributaries are on Georgia's List of Impaired Waters for fecal, metal, toxic chemical, sediment, and nutrient pollution. In addition



to being the primary potable water source for Dalton, Georgia, the river provides approximately 30 million gallons of water per day for use by the carpet industries around Dalton. The Conasauga River is also home to more than 90 species of fish and 42 species of mussels, including 12 federally listed species. Most sensitive species are downstream from the national forests in areas characterized by slower gradients, lower elevation, limestone geology, and thicker streambed substrates than the headwaters.

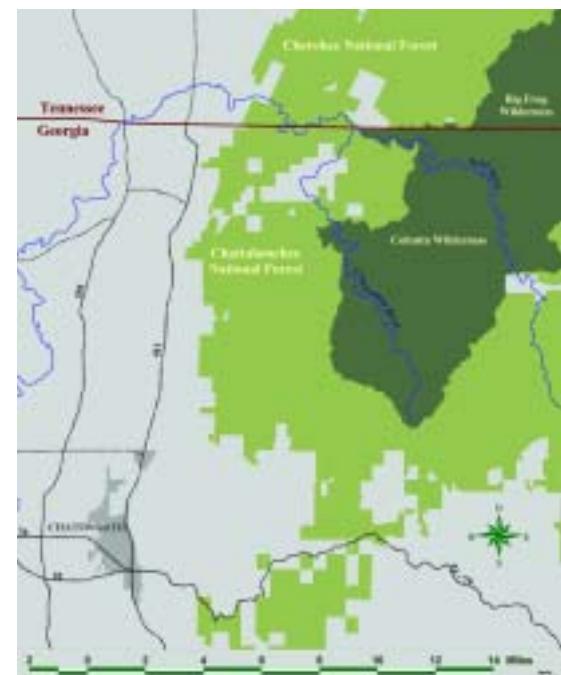
The Conasauga River Alliance formed in 1995 following a \$200,000 USDA Ecosystem-based Assistance Study. The Nature Conservancy and other grants fund the Alliance staff.

### 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

- Provide a business plan for the Conasauga River Alliance that describes the business of watershed restoration by the partners in the watershed.
- Build and maintain relationships that improve watershed quality on private and National Forest System land.
- Establish new partnerships with diverse private and nonprofit organizations and other agencies to improve watershed quality.
- Complete mapping of the Ecological Classification Units on National Forest System land within the watershed. Develop ecosystem restoration projects that are appropriate within these units.
- Help the land management planning revision process to refine descriptions of the desired future conditions of the watershed.
- Establish rigorous monitoring and evaluation studies of critical management issues.
- Assist the Conasauga River Alliance in hosting conservation education Field Days, which demonstrate and showcase stewardship to diverse groups such as teachers, landowners, farmers, and recreationists.
- Evaluate sediment sources from the road systems in the upper watershed.



# Watershed

- Rehabilitate, reengineer, or close problem roads and trails to disconnect sediment from streams.
- Strengthen agency environmental education programs in the watershed.
- Develop new outreach methods to communicate critical messages of resource stewardship.
- Assist the Conasauga River Alliance in obtaining funds for watershed restoration on private land.
- Inventory the Conasauga River physical habitat.
- Integrate National Forest System and State and Private programs into the watershed so that private landowners, schools, and other eligible groups have access to grants and assistance.
- Complete work started along the Jacks and Conasauga Riverbanks to rehabilitate eroded streambank areas and improve the dispersed campsites.
- Analyze wilderness and dispersed recreation uses. Plan rehabilitation and management changes needed for resource stewardship.
- Acquire funding needed for snorkel site interpreters, quality teaching aids, and other tools.
- Provide teacher workshops and student field trips.
- Construct a Conservation Education Center in the Conasauga River watershed.

## Restoration Highlights

The Cherokee National Forest delivers its message by hosting a unique Watchable Wildlife Site—Snorkeling the Conasauga River. External groups are using the river as a platform to distribute their messages about the USDA Forest Service and about aquatic resources. Other highlights include:

- Planned vegetation improvements on 1,400 acres
- Installed four dead chicken composters
- Installed three chicken-litter storage facilities
- Developed three exclusions to keep livestock from streams
- Installed a wet-weather stock-feeding station
- Placed 250 acres in rest-rotation grazing systems
- Reestablished 50 acres of hardwood forest
- Rehabilitated 4 riparian campsites
- Removed 5 dump-truck loads of trash
- Established 3 miles of buffer along streambanks
- Provided four conservation workshops for teachers
- Distributed 4,000 educational brochures
- Treated 6 miles of forest road for sediment disconnection from streams

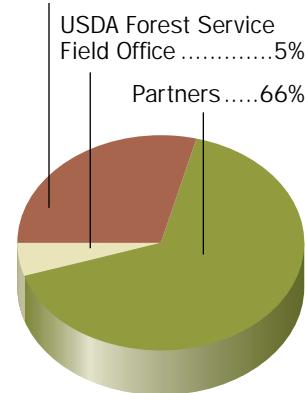
## Partners

The alliance consists of more than 30 agencies and private organizations, including:

- University of Tennessee
- University of Georgia
- DOW Chemical
- Trout Unlimited
- Conservation Fisheries, Inc.
- Auburn University
- Southeastern Aquatic Institute
- Southern Appalachian Forest Coalition
- Tennessee Aquarium
- National Wild Turkey Federation
- Appalachian Sportsmen's Club
- Pacific Rivers Council
- The Nature Conservancy
- Georgia Forest Watch
- USDA Natural Resources Conservation Service
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- USDA Forest Service

## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 29%



## Funding

In the past 4 years approximately \$700,000 has been spent by partners other than the USDA Forest Service. In FY 2000 the USDA Forest Service national office invested \$259,000, local field offices invested \$41,000, and partners invested \$600,000.

## For More Information

Contact Rick Guffey, Conasauga River Alliance Project Manager, at [rguffey@tnc.org](mailto:rguffey@tnc.org) or 706-695-3950 or Kent Evans, Project Coordinator from the Cherokee and Chattahoochee National Forests, at [kevans@fs.fed.us](mailto:kevans@fs.fed.us) or 706-632-3031.



# Lost Rivers National Learning Site in Holistic Management

The Lost River Valley, just over the hill from Sun Valley, Idaho, 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, 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, the area has virtually no property tax base and populations are declining. In many cases, land

## 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

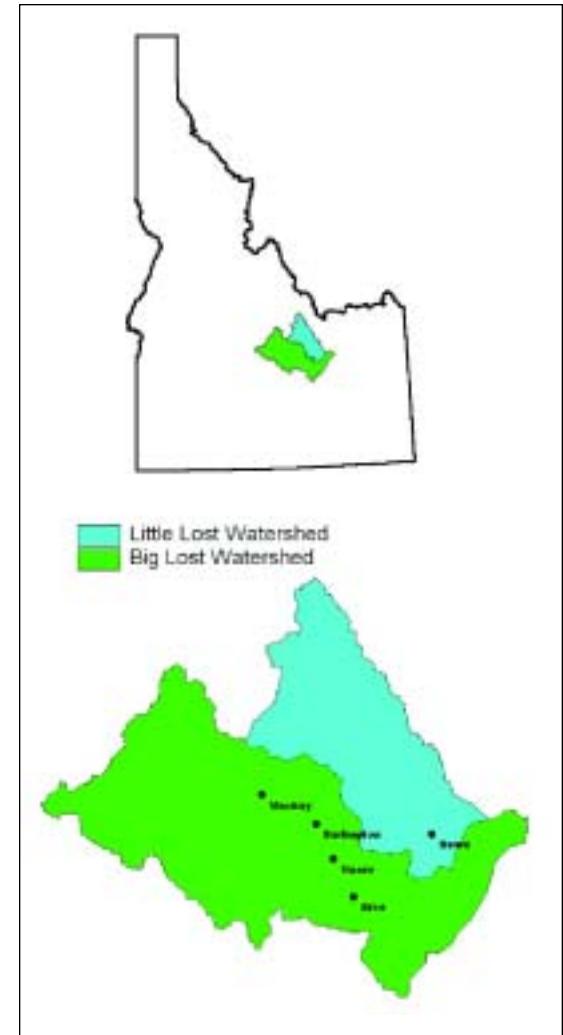
- Focus on the development of human and natural capital based on the input of the local citizens
- Increase productivity of the land
- Increase income
- Build strong relationships
- Foster a culture of lifelong learning, with sustainability as a process, not an event

## Restoration Highlights

The choices of the Lost Rivers Project Team and the people who live in this area are many. They include a range of options from accepting changes largely imposed from the outside to actively managing those changes in designing their own future



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 living on the land have a significant opportunity to shape the policies that directly, and often negatively, impact them.



# nal Learning Site



and maintaining the values, traditions, and culture that define them. With the trends of increasing Federal land regulations and market consolidations, the choices appear limited. The communities in this area do not want to create the fast, uncontrolled growth other towns like Sun Valley have experienced. There is some knowledge of how to move toward something different, but it can be difficult to create momentum throughout the community.

In order to better control their own future, the communities can create a new kind of economy—one based in regenerative harvesting of natural resources, mixed with tourism, recreation, and other enterprises that align with their values. For the agriculture industry to flourish, models of ranching and timbering that produce increasingly healthy land and habitat need to be created before development, policies, and regulations eliminate these sources of revenue and the open landscapes. Producers, townspeople, personnel from various agencies, and recreationists need to find common ground in working toward solutions that produce healthy land, stable economies, and beautiful places.

## 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

## Funding

This project did not receive any federal money during FY 2000. Initial steps in getting the project underway were done with donated time and materials. In FY 2001, the USDA Forest Service has contributed \$120,000 and the USDA Natural Resources Conservation Service has contributed \$55,000. The project anticipates having approximately \$60,000 in contributed time and materials, and several grant requests are pending approval.

## For More Information

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



# Lower Mississippi Alluvial Valley

In colonial times, the bottomland hardwood forest of the Lower Mississippi Alluvial Valley occupied 24 million acres in parts of 7 States. Now less than 5 million acres exist. Deforestation and the development of flood control projects resulted in the loss of critical wildlife and fish habitat, decreased water quality, reduced floodwater retention, and increased sediment loads.

Since the mid-1980s, efforts to restore this bottomland hardwood ecosystem have gained momentum. Several agencies and organizations have active afforestation programs. Afforestation is not restoration, but it is the first and perhaps the most important step in beginning to restore a healthy bottomland hardwood ecosystem. We have much to learn in understanding and influencing the restoration of ecological processes. What we have learned:

- Agricultural lands in the Lower Mississippi Alluvial Valley vary in productivity and sustainability. Current economic factors are resulting in low profit margins when farming some of these lands. Generally, these lands consist of wetter soils and are on lower, more easily flooded sites.
- The market fluctuations, general hardships of farming, changing values, and shifting demographics are leading many farmers to start changing land management practices. This is occurring through a variety of means, including

retiring farmlands and converting to trees. It is anticipated that future economic returns from timber harvest, combined with recreation leases, will provide landowners with a viable means to retain these lands in trees.

- Many landowners are looking for ways to preserve their land and way of life for future generations, and also to continue to use the land for their own benefit. Conservation easements are being used as a planning option. In addition to benefiting landowners, the contributed land value from certain easements may be used to leverage additional funds for conservation.
- The economy has increased the pressure for efficient farming techniques. Often these techniques result in less available habitat for wildlife, thus increasing the importance of lands managed for conservation.
- Carbon sequestration by establishing forests to offset greenhouse gas emissions is emerging as an economic incentive to retire lands from farming and reestablish forests.
- Some migratory bird species dependent on Lower Mississippi Alluvial Valley native habitats are experiencing population declines. Fortunately, migratory bird conservation is increasing in local, national, and international importance. Several large funding initiatives are working their way through Congress.



# Alluvial Valley



- Establish the Delta National Forest as a management model and feature it in education programs for landowners and others
- Coordinate a discussion forum and technology transfer session for carbon sequestration
- Focus research programs at the Center for Bottomland Hardwoods Research (Stoneville, MS) to help provide assistance to landowners and guide adaptive management for afforestation efforts

## Restoration Highlights

- Merged two proposals, developed consensus, and completed a draft business plan
- Sponsored Sustainable Forestry Workshop to develop measurable indicators for afforestation efforts
- Increased dialog and networking with other partners in the Lower Mississippi Alluvial Valley, including Lower Mississippi Alluvial Valley Joint Venture Management Board, Delta Wildlife Foundation, and Delta F.A.R.M.
- Hired a full-time project coordinator

- Leases or fees on lands suitable for hunting, fishing, and recreation are emerging as viable management options that can offer economic returns.
- Nationally, recent catastrophic floods have prompted discussions over future land use patterns and new approaches to flood control. Much of this discussion has application in the Lower Mississippi Alluvial Valley.

## Mission

To develop a strategic alliance to help landowners establish a watershed approach to sustaining 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

- Examine nursery capacity and quality of seedlings for afforestation, building and refining as needed
- Develop a database for types, projected uses, and outcomes of current landowner assistance programs
- Identify landowner needs and provide assistance as needed
- Continue expanding and enhancing the information repository, and sharing the Geographic Information System database

## 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 Lower Mississippi Alluvial Valley. Restoration of agricultural lands to bottomland hardwoods has been going on for many years. Partners such as the Fish and Wildlife Service, Ducks Unlimited, State Forestry and Wildlife Agencies, USDA Forest Service, USDA Natural Resources Conservation Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Business Council for Sustainable Development, Delta Council, Lower Mississippi Valley Joint Venture, and many other State and local government agencies are active and committed to restoring this valuable ecosystem.

## Funding

Total funding for FY 2000 was \$375,447. The USDA Forest Service national office invested \$100,000; other Forest field offices invested \$80,000; and partners invested \$195,447.

## For More Information

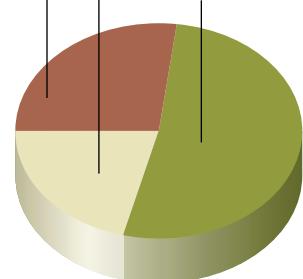
Contact Ray Johnston at [rjohnston@fs.fed.us](mailto:rjohnston@fs.fed.us) or 404-347-4807, Gary Young at [gyoung@ducks.org](mailto:gyoung@ducks.org) or 601-206-5466, or Ted Leininger at [tleininger@fs.fed.us](mailto:tleininger@fs.fed.us) or 662-686-3178.

## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 27%

USDA Forest Service  
Field Offices ..... 21%

Partners ..... 52%



Daily, the New York City water supply system provides more than 1.3 billion gallons of high-quality drinking water to approximately 8 million New York City residents and 1 million residents of southeastern New York. The quality of this water depends greatly on its watersheds. The challenge is to protect the watersheds from environmental degradation while allowing the economic growth of communities and management of timber resources.



The Catskill, Delaware, and Croton watersheds in New York State provide high-quality, unfiltered water to over 8 million people. Privately owned forests make up the majority of these watersheds and are of paramount importance to the integrity of the watershed and the long-term stewardship of this water supply. For generations, people have also lived and worked in farming and natural resource industries in the watershed. To implement a comprehensive watershed forestry program aimed at finding a balance between watershed protection and economic viability, the USDA Forest Service has been working with a variety of partners since 1994. The New York City Watershed Filtration Technology Study adds a new research dimension to this ongoing effort. The goal of the study is to develop a technology that could significantly reduce municipal water treatment costs. Preliminary results from research at the Forest Products Laboratory have shown that filters made

Preliminary results from research at the Forest Products Laboratory have shown that filters made

from wood and agricultural fibers can remove significant amounts of heavy metals, oils, phosphates, and pesticides from water. The efficiency of the filters can be improved by simple chemical modification of the fiber. For example, oxidation of Douglas-fir fiber with nitric acid has greatly improved the fiber's ability to remove heavy metals.

## Mission

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

## Goals

The overall goal of the New York City Watershed Study is to enhance riparian restoration and develop a technology based on the use of locally derived materials for absorption of pollutants in surface water runoff within these watersheds.

Specific goals include:

- Improve technologies currently being used to filter municipal water sources and storm water discharges
- Determine whether simple, safe, environmental filters such as wood can remove toxins from our water supply
- Determine how effective these filters will be and whether they may be efficient and economical enough to do the job well

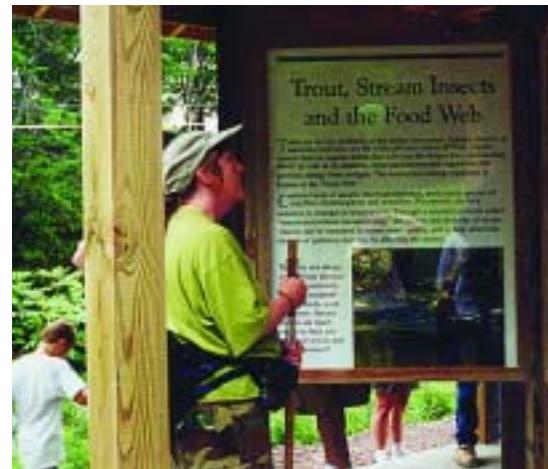


## Restoration Highlights

This technology of filters made from wood and agricultural fibers is part of an ongoing \$3 million New York City watershed restoration project, of which about \$800,000 is provided by USDA Forest Service Northeastern Area State and Private Forestry. These funds have supported technical assistance to private forest landowners for watershed forestry plans, established educational programs through four Model Forests, allowed implementation of a riparian forest buffer restoration program, and supported projects to diversify the local natural resource economy. In addition, the Northeastern Area has a full-time liaison to the Watershed Agricultural Council. Other highlights include:

- Publishing two papers:
  - "Removal of toxic heavy metal ions in runoffs by modified alfalfa and juniper," by James S. Han, J.K. Park, and S.H. Min
  - "Stormwater filtration of toxic heavy metal ions using lignocellulosic materials: Selection process, fiberization, chemical modification and mat formation" by James S. Han. Proceedings, 2nd Inter-Regional Conference on Environment-Water 99, Lausanne, Switzerland
- Preparing two more papers to be published in 2001
- Developing and installing filtration media at the site in spring 2001
- Diversifying local economies by having local industries produce wood fiber filters—offering jobs while making use of nonmerchantable forest products and waste materials.

Results to date indicate that the filtering system has a 30 to 40 percent level of efficiency in reducing soluble heavy metals and phosphors. The capacity of wood fibers to remove pollutants will improve with new techniques for chemically modifying the fibers.



## Partners

- USDA Forest Service—Forest Products Laboratory and Northeastern Area State and Private Forestry
- U.S. Environmental Protection Agency
- U.S. Geological Survey
- New York City Watershed Agricultural Council
- Watershed Forestry Program
- New York City Department of Environmental Protection
- University of Wisconsin-Madison
- Cornell University
- École Polytechnique Federale de Lausanne
- Catskill Watershed Corporation
- Cranberry Institute
- Watershed Agricultural Council
- Odbek Industries, Inc.

## Funding

Total funding for the project was \$289,947, with USDA Forest Service contributions totaling \$203,647 and partner contributions totaling \$86,300.

## For More Information

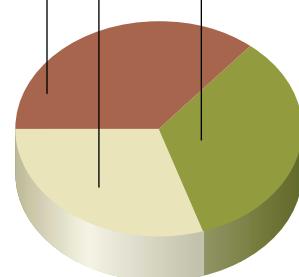
Contact James Han at [jhan@fs.fed.us](mailto:jhan@fs.fed.us) or 608-231-9423.

## FY 2000 Funding Summary

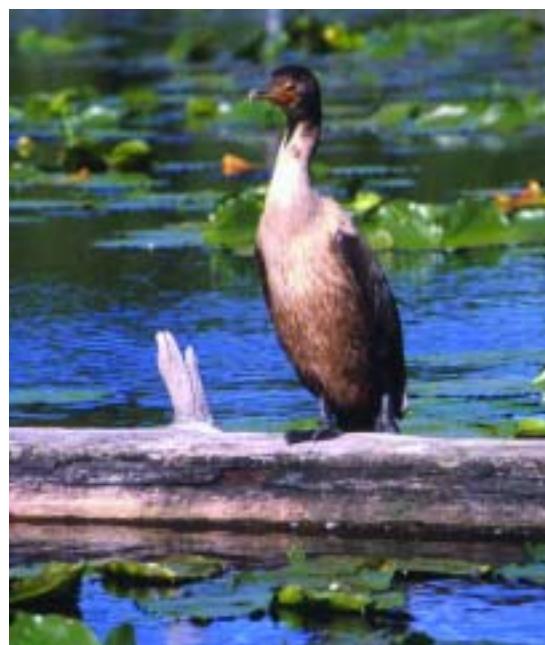
USDA Forest Service  
National Office ..... 36%

USDA Forest Service  
Field Office ..... 30%

Partners ..... 34%



**D**emographically and economically, the Pacific Northwest is one of the fastest growing regions in the United States. Coastal areas of the Northwest have seen particularly heavy development. The cost of this growth has been an increasing need for energy, housing, transportation systems, and food production. This has produced a landscape with highly altered hydrology, drained wetlands, fragmented forests and riparian areas, increased exotic plant species, blocked fish passages, threatened fish and wildlife species, and increased heavy nutrient and sediment loads in rivers and streams.



The coastal region is distinguished by a diverse mix of Federal, State, and private lands. Every Oregon congressional district and 80 percent of Washington's congressional districts are within the area enhanced by the partnership. Most of the watersheds are in public ownership. Within them lie potentially productive estuaries, broad flat valley bottom streams, and flood plains that are in private ownership. Restoring these watersheds can only happen when partners work together to bridge science and practical applications.

Located in the coastal watersheds and estuaries of western Oregon and Washington, the Pacific Coast Watershed Partnership is trying to save wild salmon and the international flyway of migratory birds. It is linking key estuaries, wetlands, and uplands to restore the habitat necessary for their survival.

The future of the Pacific Coast is one in which people and their activities, livelihoods, and communities are in balance with the ability of natural resources to sustain those activities.

## Mission

To design restoration efforts to recover and protect salmon, other aquatic species, and migratory birds; improve water quality; and contribute to the livable environment that has been the hallmark of the Pacific Northwest.

## Goals

- Ensure that rivers run clear and cold, and that they support people and wildlife
- Provide the highest livability ranking in the Nation
- Establish a highly sought ecotourism destination
- Ensure that waterfowl and wildlife abound
- Restore 20,000 acres of wetlands, 45,000 acres of riparian habitat, 3,000 miles of streams, 15,000 miles of roads, and 300,000 acres of upland habitat
- Improve livability in the Northwest
- Recover internationally acclaimed and imperiled fish such as the salmon
- Create and protect an intact migratory bird flyway
- Improve water quality
- Enhance biodiversity
- Involve others in restoration choices

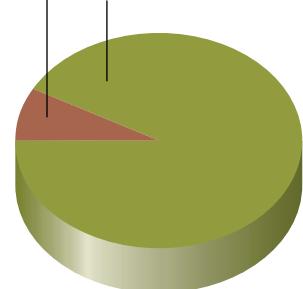
# ershed



## FY 2000 Funding Summary

USDA Forest Service .....8%

Partners .....92%



### Restoration Highlights

- Leveraged funds with Ducks Unlimited, Inc. and other partners at a 10-to-1 ratio
- Restored 6,720 acres of key wetlands, estuaries, riparian areas, and upland habitats
- Strategically planned restoration for phase 1 areas (which include the Siuslaw and Coquille Rivers and the lower Columbia estuary). Phase 2 includes coastal Washington and Puget Sound
- Orchestrated strategic restoration, and partnered efforts through the completed business plan

- Skagit Watershed Council
- Fish and Wildlife Service
- National Marine Fisheries Service
- Bonneville Power Administration
- National Audubon Society
- Native American Tribes
- Oregon Department of Environmental Quality
- U.S. Environmental Protection Agency
- Pacific Coast Joint Venture

### Funding

In FY 2000, the USDA Forest Service funded the Pacific Coast Watershed Partnership at \$855,000. All of the funding was sent to the field and to partners; none was kept at the Forest Service's Pacific Northwest Regional office. Distribution included \$500,000 to the major partner, Ducks Unlimited, Inc., and \$355,000 to individual forests. The funds were leveraged with \$8.9 million (a 10- to 1-ratio) in State and private matching funds.

### Partners

Over 23 Federal, State, and private partners are working together to demonstrate visible and measurable results. These partners include:

- Bureau of Land Management
- Local landowners
- USDA Forest Service
- Ducks Unlimited, Inc.
- State of Oregon
- Siuslaw Watershed Council
- State of Washington
- Soil and Water Conservation Districts
- Coquille Watershed Council
- Dungeness River Management Team
- USDA Natural Resources Conservation Service
- USDA Farm Service Agency
- Sport Fisherman



### For More Information

Contact Margaret Peterson at [mpeterson02@fs.fed.us](mailto:mpeterson02@fs.fed.us) or 503-808-2414 or Jeff Uebel at [ruebel@fs.fed.us](mailto:ruebel@fs.fed.us) or 503-808-2847.

The Potomac River is the second largest tributary to the Chesapeake Bay—the heart and soul of the mid-atlantic region. Often called the “Nation’s river,” the Potomac flows through the Nation’s Capital, touching the lives of millions of Americans and foreign visitors each year. The Potomac River watershed includes an area of 9 million acres in the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. A history of agricultural land use and a rapidly expanding urban population presents challenges for future watershed health.

The project will initially target public and private lands in the Monocacy and Antietam River watersheds of Maryland and the North and South Forks of the Shenandoah River in Virginia. The George Washington National Forest makes up 23 percent of the Shenandoah watershed. These watersheds have a variety of problems related to

2. Riparian and Wetland Restoration. Improve water quality and aquatic habitats through the restoration of riparian forests and wetlands. Expand outreach and technical assistance to landowners and communities and accelerate implementation of the Conservation Reserve Enhancement Program.

3. Upland Forest Stewardship and Fire Risk Reduction. Reduce the impacts of wildfire, insects, and disease; forest harvesting; and changes in land use on watershed health. Assist communities in reducing the loss and fragmentation of forest lands due to urban growth.

4. Watershed Monitoring and Applied Research. Expand our knowledge of linkages between forests and watersheds and evaluate restoration tools and techniques.

### Mission

To create a collaborative effort among partners to restore the health of the land and waters of the Potomac River Basin and thereby enhance overall health of the Chesapeake Bay and the quality of life in communities near the Chesapeake Bay.

### Goals

- Improve water quality and reduce impacts on fisheries, drinking water supplies, and river-based recreation
- Restore critical riparian forests and wetland habitats lost in agricultural and urban areas
- Increase participation of landowners, communities, businesses, private groups, and governments in watershed restoration
- Reduce the loss and fragmentation of forests due to urban growth
- Reduce the risks of wildfire and improve forest health

### Restoration Highlights

- Established public-private watershed restoration teams to expand landowner outreach and assistance
- Established watershed fire prevention teams to implement community-based “Firewise” education
- Reduced fire hazards on 500 acres of forest lands
- Implemented WATER (Watershed Awareness To Enhance Restoration)—a new education program to stimulate involvement in watershed restoration by landowners, schools, and civic groups
- Implemented demonstration wetland, riparian, and urban greenway projects in each watershed
- Restored 70 miles of riparian forest on priority streams



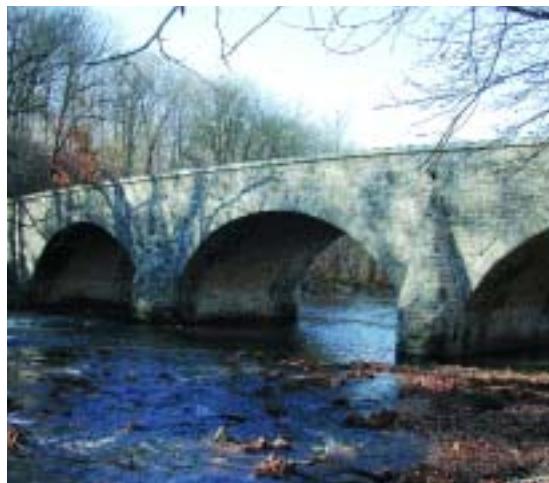
forests and watershed health. Rivers and streams are seriously impaired due to nutrient and sediment pollution. Fisheries and wetlands are impacted by past land use and have a high potential for improvement through restoration. Agriculture is the dominant land use and the pressure of urban growth is great. Forest health has also been impacted by repeated insect and disease outbreaks and wildfire.

Project Components include:

1. Watershed Assessments. Assemble, synthesize, and analyze existing information on forest and watershed conditions to guide current and future restoration actions.

# ed Partnership

- Restored or enhanced 500 acres of wetlands and upland wildlife habitat through planting, stabilization, and prescribed fire
- Completed watershed characterization reports for each target watershed and completed Phase I of Strategic Forest Assessment and Conservation targeting model
- Initiated monitoring of restoration projects, formed a public-private Science Advisory Group to help plan future research needs and opportunities, and initiated planning for 2001 Restoration Conference
- Expanded partnerships with nongovernment organizations and other agencies



## Partners

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

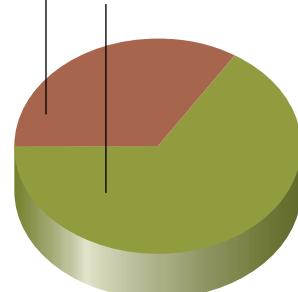
- USDA Forest Service—Northeastern Area State and Private Forestry and George Washington National Forest
- Maryland Department of Natural Resources—Forest Service
- Virginia Department of Forestry
- Ducks Unlimited, Inc.
- Potomac Conservancy

Partners will work to expand collaborative relationships among the local, State, and Federal natural resource agencies and private conservation groups and communities to accelerate watershed and forest stewardship efforts in the Potomac River Basin.

## FY 2000 Funding Summary

USDA Forest Service National Office ..... 34%

Partners ..... 66%

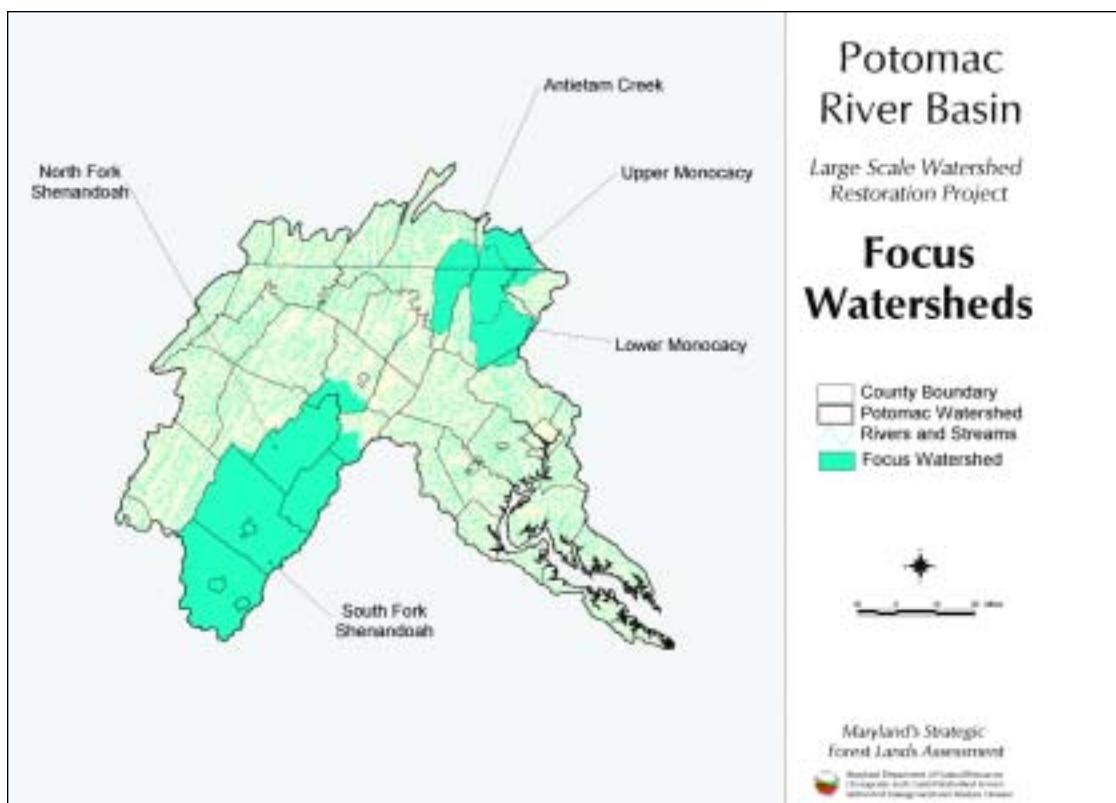


## Funding

Beginning in FY 2000, the USDA Forest Service and its partners committed to supporting the Potomac Watershed Partnership Project for 5 years. The USDA Forest Service has committed over \$1.2 million per year and partner contributions bring total project investments to over \$3.5 million per year.

## For More Information

Contact Al Todd at [atodd@fs.fed.us](mailto:atodd@fs.fed.us) or 410-267-5705 or Alison McKechee at [mkechie@potomac.org](mailto:mkechie@potomac.org) or 703-276-2777.



# Rio Peñasco Water

## Rio Peñasco Watershed Restoration Project

Located in southeastern New Mexico, the Rio Peñasco Watershed Restoration Project is a 200,000-acre watershed complex that feeds the Pecos River and Tularosa Basins. Although three-quarters of the watershed is located within the Lincoln National Forest, several communities and many permanent and seasonal residential subdivisions are also located within the watershed. The watershed is home to a unique mix of rare and endemic plant, reptile, insect, and bird species—including the Mexican spotted owl—that have

Federal and/or State protection status. Past use of resources, especially fire prevention activities, have contributed to current watershed conditions—reduced surface water availability and water quality and increased invasive nonnative plants. The surrounding forest area is at high risk for catastrophic wildfires and insect and disease infestations. Initial restoration activities will center on re-introducing fire into the urban-wildland interface along with direct water quality improvements and treatment of noxious weeds.

### Mission

To restore the Upper Rio Peñasco to a safe and healthy watershed.

### Goals

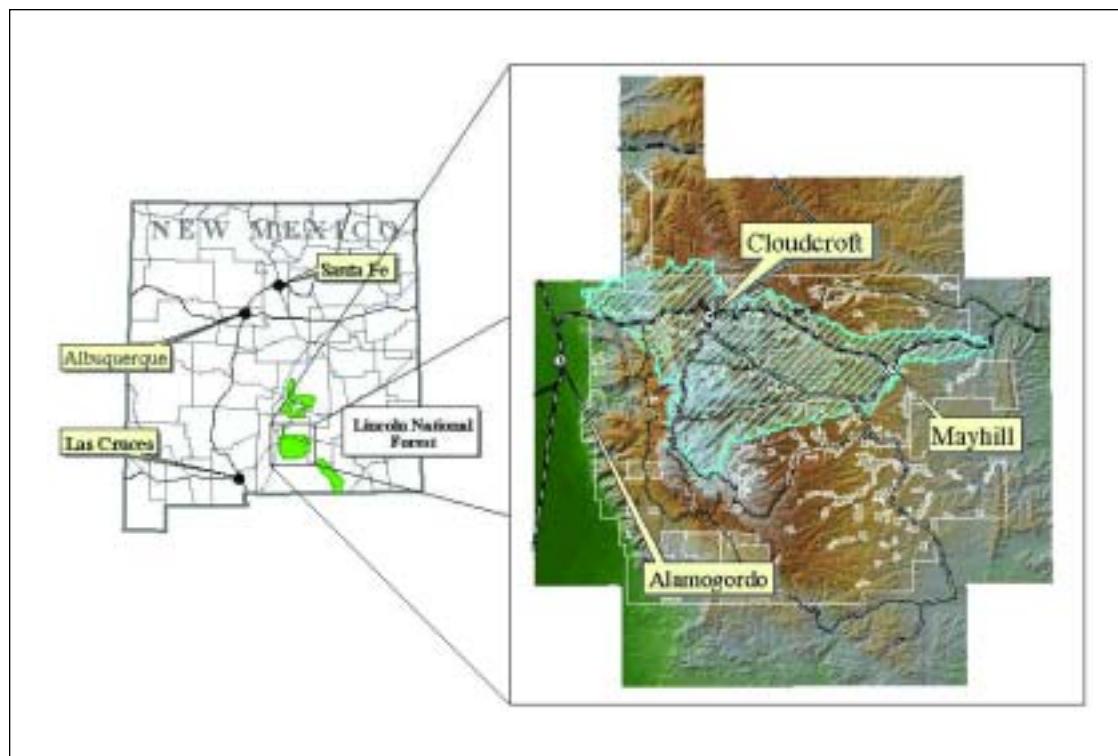
- Reduce catastrophic fire danger
- Restore ecological integrity
- Restore biodiversity of the forest
- Improve water quality and water supply
- Create a sustainable economy that is based on diverse forest products and values
- Develop fuels reduction and water quality improvement projects
- Strengthen and expand the partnerships
- Leverage funds to accomplish mutual goals
- Explore new ways to commercially use small diameter trees that are the byproducts of restoration

### Restoration Highlights

- Thinned 1,000 acres of small diameter trees
- Reduced stand density through 400 acres of commercial timber sales
- Protected threatened plant species in meadow habitats
- Improved drainage on 14 spring crossings of roads
- Improved 10 acres of threatened plant habitat
- Prepared documentation for 2,000 acres to allow prescribed fire and 1,100 acres of precommercial thinning
- Prepared documentation for thinning 244 acres in the adjacent Cloudcroft West area
- Established a slash disposal pit for use by individuals thinning on private lands
- Delivered seminars and held a community-based partnership workshop
- Produced a business plan
- Hired a project design team leader



Cox Canyon circa 1925 (top), after being logged in 1903, and in 1995 (bottom). The Rio Peñasco Project is seeking an ecological balance between these two watershed conditions.

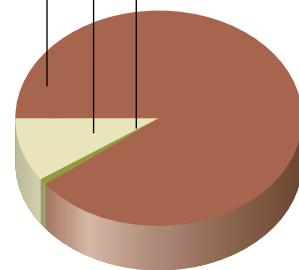


## FY 2000 Funding Summary

USDA Forest Service ..... 90.36%

Environmental Protection Agency ..... 9.04%

Other Partners ..... 0.6%



### 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

### Funding

The Rio Peñasco Project has a planned annual budget of more than \$2 million over the life of the project. Although the full planned budget will not be funded, the project was allocated over \$1 million in FY 2000 and at least \$500,000 in FY 2001 by the USDA Forest Service. 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](mailto:rhannan@fs.fed.us) or 505-434-7200.

# St. Joe Ecosystem

## St. Joe Ecosystem Restoration Project

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 Idaho Panhandle National Forest lands. The other 53 percent of the land base is in large corporation, private, State, or other Federal ownership.

This project includes protecting at-risk native 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, and managing a forest road system that provides public and management access to maintain high-quality recreation opportunities and sustainable ecosystems.

### Mission

As neighbors in this area of intermingled landownership and varied interests, project partners are working together to 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
- Restore vegetation toward historic conditions
- Maintain and enhance wildlife habitat and protect wildlife
- Restore rare vegetation communities and habitats
- Create a trend allowing fires to play their 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 need, 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 plans for the management of the area
- Maintain dispersed recreation and single-track recreation in a roaded natural setting

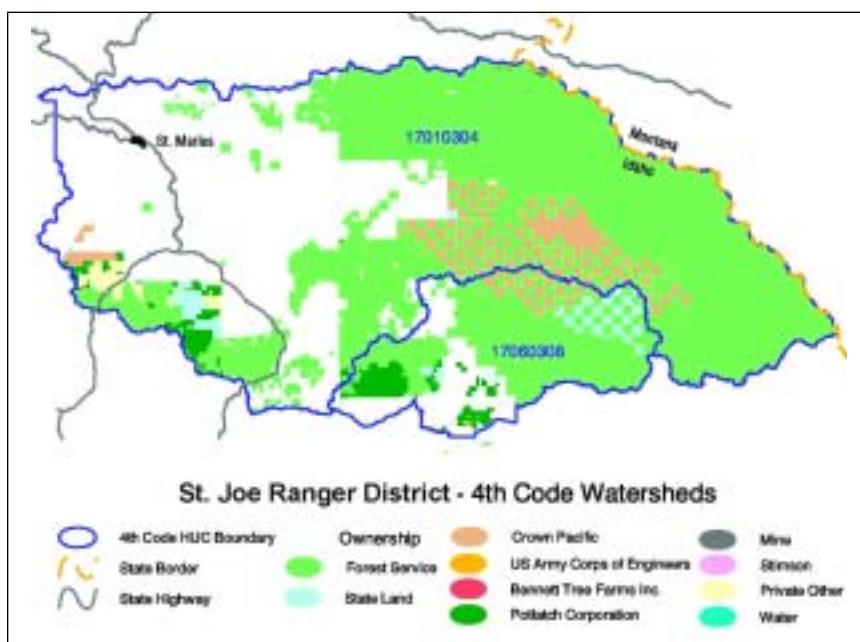
### Restoration Highlights

In FY 2000, the primary focus was on reducing adverse effects (sediment production) associated with forest roads. Work included:

- Obliterating 53.2 miles of road
- Reconditioning 37 miles of road
- Controlling 315 acres of roadside noxious weeds
- Burning 800 acres of wildlife habitat to improve browse
- Planting 3 acres of riparian habitat to native brush species

In FY 2001, a broader approach is being implemented. Projects include:

- Coordinating access among corporate land owners, the State, and the national forest
- Improving instream fish habitat



# Restoration

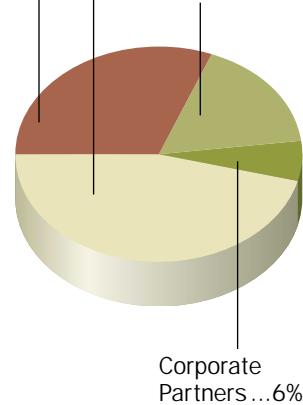


## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 31%

USDA Forest Service  
Field Office ..... 46%

Shoshone  
County ..... 17%



- 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

In FY 2000, the project spent approximately \$650,000. The USDA Forest Service national office contributed 31 percent of the funds; the USDA Forest Service, Idaho Panhandle National Forest, contributed 46 percent; Shoshone County contributed 17 percent; and corporate partners contributed 6 percent.

### For More Information

Contact George Bain at [gbain@fs.fed.us](mailto:gbain@fs.fed.us) or 208-245-6001.

### Partners

Several partners are working with the national forest to coordinate efforts across many ownerships in the St. Joe watershed. Partners include:

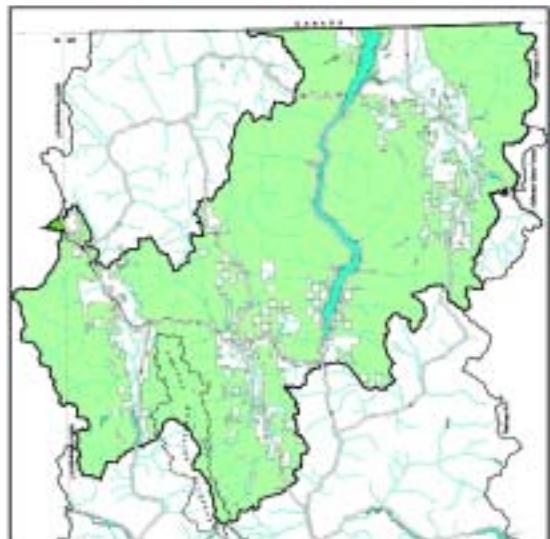
- Idaho Department of Fish and Game
- Idaho Department of Parks and Recreation
- Shoshone County
- Potlatch Corporation

# Upper Kootenai Watershed Restoration Project

**S**ituated in the northwestern corner of Montana, adjacent to the Canadian and Idaho borders, the Upper Kootenai Watershed subbasin is over 1.4 million acres and has some of the most productive and biologically diverse forest lands in Montana. The area has the lowest elevation, wettest, most productive habitats. The Upper Kootenai River basin is an extremely important area for recreational activities such as boating, hunting and fishing, rafting, wilderness exploration, and travel. Timber harvesting is also important to the local and statewide economies.

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.

Many watershed restoration projects have been completed in the Upper Kootenai over the past decade. A partnership will be formed in the near future to strengthen individual efforts in restoring watersheds in the Upper Kootenai subbasin.



Kootenai National Forest  
Upper Kootenai Subbasin



# Watershed



## Mission

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

## Goals

- Complete a subbasin review to characterize the ecological and social conditions and provide a context for future projects.
- Protect, maintain, and restore watershed conditions and aquatic habitat.
- Maintain or restore the characteristics of ecosystem composition and structure within a range of variability.
- Improve fire protection for communities.
- Provide for a range of uses, values, products, and services.

## Restoration Highlights

- Removed a dam and stabilized the channel on Graves Creek, a priority bull trout stream
- Accomplished 17 miles of stream improvement work
- Decommissioned 40 miles of road by removing culverts, bringing stream crossings to natural profile, and recontouring some roads
- Completed roadwork on 73 miles—replacing undersized culverts, adding 32 new culverts, installing more drainage structures, and out-sloping roads to reduce sediment delivery to streams
- Used prescribed fire to enhance 3,200 acres of wildlife habitat and 3,700 acres of natural fuel reduction, of which 990 acres were associated with the wildland urban interface

- To prevent any potential erosion, rehabilitated all fire lines and roads associated with the approximately 28,000 acres that were burned by wildfire
- Treated 900 acres for noxious weed control

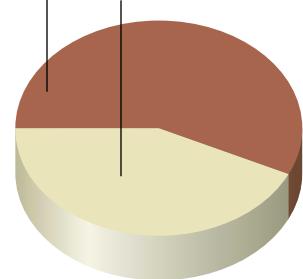
## Partners

- 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

## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 57%

USDA Forest Service  
Field Office ..... 43%

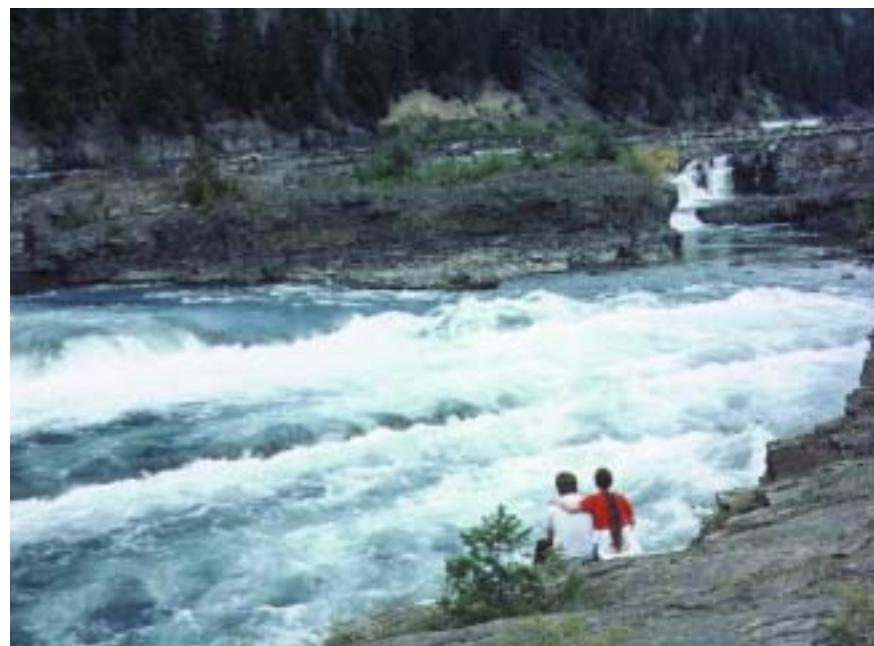


## Funding

Total funding for FY 2000 was \$530,000. USDA Forest Service national office invested \$300,000, USDA Forest Service field offices invested \$230,000. With the completion of the assessment and business plan in FY 2001, this project will be able to leverage more funds with partners.

## For More Information

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



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 is over 3 million acres in size. It supplies almost 20 percent of the water to the Sacramento River. The watershed is vital to the culture, environment and economics of California.

Watershed restoration projects within the Upper Pit River watershed have been going on for 10 years. The alliance was recently formed to strengthen individual efforts in restoring watersheds in the Upper Pit drainage. It is a collaborative, nonregulatory group of private and public interests that want to enhance water quality and aquatic habitat in the Pit River watershed. The North Cal-Neva Resource Conservation & Development Area provides oversight. This area includes lands managed by four Natural Resource and Conservation Service Districts; the Lake, Modoc, Lassen, Shasta, and Siskiyou County Boards; Bureau of Land Management; USDA Forest Service; and the U.S. Fish and Wildlife Service. Most of the area is within California Congressional District 2. The alliance is currently finalizing a memorandum of understanding (MOU) that will establish the framework for a collaborative watershed restoration and enhancement effort within the Upper Pit River watershed. The MOU will also identify key objectives and program emphases for the next 5 years.

## Mission

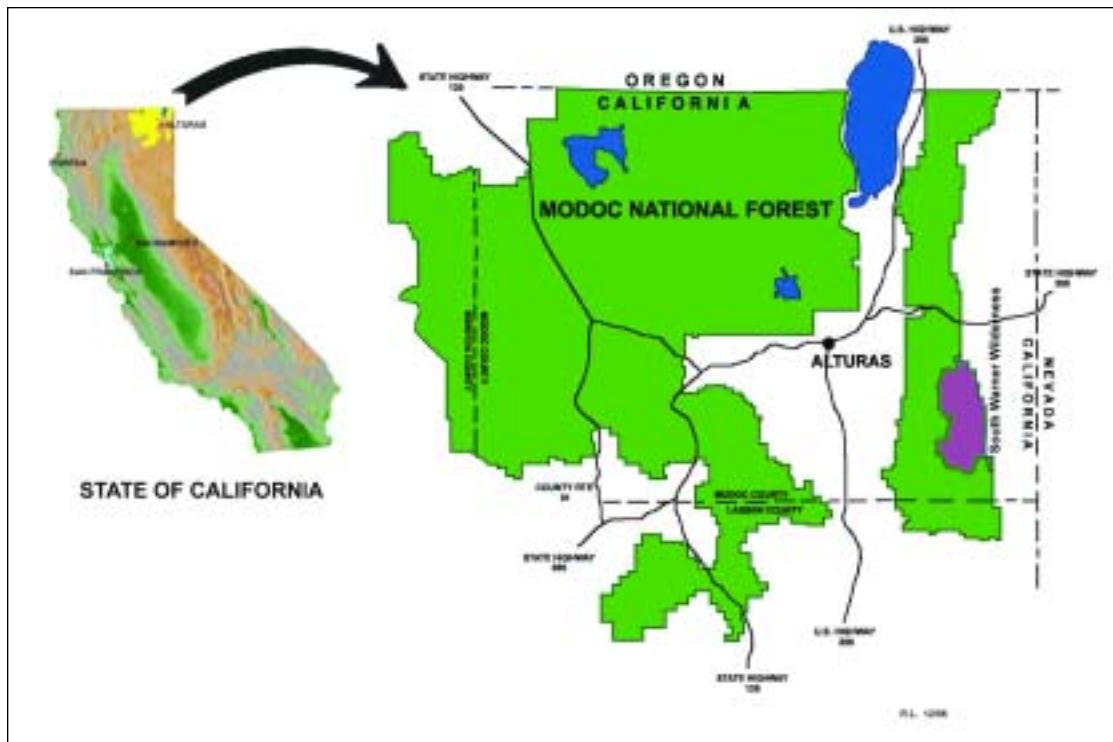
To foster partnerships that achieve integrated long-term cultural, economic, and environmental health of the watershed through active community participation.

## Goals

- Develop education around 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
- Restore over 10,000 acres of riparian habitat
- Implement new grazing strategies on 26 allotments
- Restore and monitor over 300 seeps and springs
- Rejuvenate 600 acres of aspen
- Enhance 1,200 acres of wetlands
- Obliterate more than 42 miles of roads
- Treat more than 40,000 acres with fire and mechanical means



# Watershed Alliance

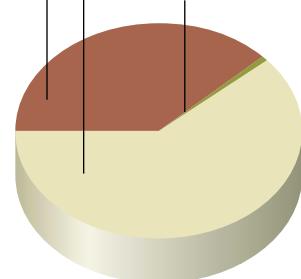


## FY 2000 Funding Summary

USDA Forest Service National Office ..... 37.86%

USDA Forest Service Field Office ..... 61.41%

Partners ..... 0.73%



### Restoration Highlights

- Treated 600 acres with prescribed fire to reduce risk of catastrophic fires
- Treated 5,000 acres of vegetation to reduce fuels and improve wildlife habitat and forest health
- Decommissioned 20 miles of road
- Restored 350 acres of wetland for nesting waterfowl
- Restored 45 waterfowl nesting islands
- Reconstructed existing dams
- Received National Environmental Policy Act decisions on 26 range management allotments, encompassing over 300,000 acres and modifying grazing practices

### Partners

In partnership with Ducks Unlimited, Inc., 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 and Development Area
- USDA Natural Resources Conservation Service
- Lake, Modoc, Lassen, Shasta, and Siskiyou County Boards
- USDA Forest Service
- Bureau of Land Management
- U.S. Fish and Wildlife Service
- Private landowners

### Funding

The USDA Forest Service national office contributed \$600,000, USDA Forest Service field offices contributed \$973,00, and partners contributed \$11,400. There are many opportunities for leveraging funds in the future.

### For More Information

Contact Randall Sharp at [rsharp@fs.fed.us](mailto:rsharp@fs.fed.us) or 530-233-8848.



# Upper Sevier River Community Watershed Project

The Upper Sevier River Community Watershed Project is a collaborative partnership addressing restoration needs, management challenges, and research opportunities for rangelands, forest lands, and aquatic ecosystems in the Upper Sevier River watershed. The project is composed of partners who have knowledge and expertise in managing watershed resources.



Located in rural southwestern Utah, the 1.2-million-acre Upper Sevier watershed has provided many 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 actually 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.

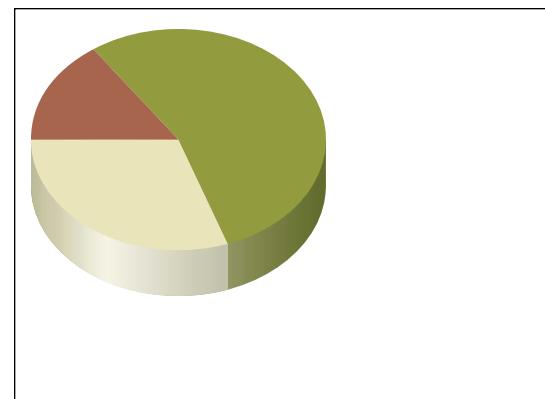
The natural resources within the Upper Sevier River watershed are vital to the local communities, both economically and for maintaining rural lifestyles of ranching and farming. If these values are to be sustained into the future, measures must be taken to improve resources in the watershed. Specific issues that will be 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, sub-watersheds have been identified in which restoration efforts will be concentrated. These areas were identified through collaboration among the partners and are termed “focus areas.” By focusing our efforts, we will achieve significant and measurable success in areas that are the highest priority for restoration work.

## Mission

To restore and maintain watershed ecosystems; cooperate, coordinate, and collaborate; perform research, monitoring, and adaptive management; and demonstrate restoration techniques.



## Goals

- Complete a watershed assessment to create a database for future work
- Increase public involvement and project awareness through a Web site, open houses, and hiring a partnership coordinator
- Increase involvement with the Rocky Mountain Research Station and universities to assist with monitoring
- Continue implementation of projects to improve water quality, riparian and upland vegetation, and fish and wildlife habitats
- Improve water quality
- Reduce water treatment costs
- Increase younger aspen across the landscape
- Improve health of riparian ecosystems
- Increase numbers of fish and wildlife
- Improve forage conditions for livestock
- Improve quality of life—sustainable lifestyles, economic stability, increased citizen participation, and development of a shared ownership in the management of resources within the watershed

## Restoration Highlights

- Improved 9 miles of riparian habitat
- Improved 750 acres of sage grouse habitat
- Stabilized 2 miles of a large gully system
- Initiated new grazing practices with three private landowners to improve riparian conditions
- Treated 2,000 acres with prescribed fire to reduce fire risk adjacent to private in-holdings
- Sponsored workshops dealing with feedlot operations, riparian ecosystems, and livestock management for ranchers and farmers within the watershed
- Awarded a contract to develop a community-owned, interactive Web site to better involve the public and partners in watershed restoration, monitoring, and information sharing

## 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

## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 15.22%

USDA Forest Service  
Field Office ..... 30.43%

Partners ..... 54.35%

## Funding

Total funding in FY 2000 was \$4.6 million. Half of the funding was contributed by the USDA Forest Service and the other half by partners.

## For More Information

Contact the project coordinators: Steve Robertson at [srobertson@fs.fed.us](mailto:srobertson@fs.fed.us) or 435-865-3735 or Tyce Palmer at [tyce-palmer@nacdnet.org](mailto:tyce-palmer@nacdnet.org) or 435-865-0703.



# Upper South Platte Watershed Protection and Restoration Project

The Upper South Platte River is classified as a “gold medal water” river and is nationally known as an outstanding fishery that attracts thousands of fishing enthusiasts yearly. Overall recreation use in the area is estimated at over 2 million visitor days per year.

The Upper South Platte Watershed Protection and Restoration Project was proposed in 1998 by the Denver Water Board, Colorado State Forest Service, the U.S. Environmental Protection Agency, Colorado State University, and the USDA Forest Service in response to concerns about future catastrophic disturbances in the watershed. Three issues are being addressed to respond to these concerns: landscape patterns of vegetation; soil development and movement; and water quality, quantity, and aquatic habitats. Nearly 75 percent of the water used by the 1.5 million Denver metropolitan residents comes from or is transmitted through this river drainage. Planned protection and restoration activities include a reduction in sediment delivery, incidence of crown fires, and risks to property in the urban interface, as well as the creation of sustainable forest conditions in the watershed.



The 645,000-acre Upper South Platte River Basin is located southwest of Denver, Colorado. This area encompasses large forested areas interspersed with small communities, subdivisions, and homes. Within the watershed, the Pike National Forest covers about 525,000 acres, private land about 100,000 acres, Denver Water land about 16,000 acres, and Colorado State land about 4,000 acres.

The current forested and developed environments are susceptible to catastrophic fires. The 1996 fires and floods severely degraded water quality and damaged water treatment and storage facilities, and the fire in 2000 destroyed 51 homes. The subprojects are designed to make the Upper South Platte watershed more sustainable in the future.

## Mission

To protect water quality for all users and create sustainable forest conditions across the landscape.

## Goals

- Reduce risks of large catastrophic fires
- Reduce risks to human life and property
- Integrate research, monitoring, and management

## Restoration Highlights

- Mechanically treated 200 acres on Denver Water land (December-April 2000)
- Rehabilitated 25 miles of unclassified roads (April 2000)
- Educated the public through newsletters, meetings, and newspaper articles
- Prepared a Prescribed Burn Plan for 1,200 acres
- Began working with private landowners within the Lower Elk Creek Management Unit and nearby subdivisions to develop and implement fire protection measures



# Upper South Platte Watershed

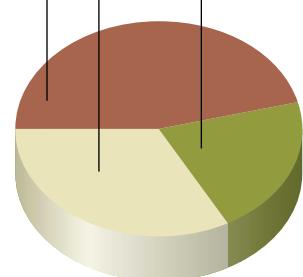


## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 46%

USDA Forest Service  
Field Office ..... 33%

Partners ..... 21%



## Partners

Restoration and protection activities are generally guided and coordinated by the Upper South Platte Steering Committee that consists of the USDA Forest Service, Colorado State Forest Service, Denver Water Board, U.S. Geological Survey, USDA Natural Resources Conservation Service, U.S. Environmental Protection Agency, and the Upper South Platte Protection Association.

## Funding

The estimated total cost of this project is \$12 million over 5 years. Total Federal and private funding provided equals \$2.3 million. The partners will fund most of the project costs. However, they will also seek other funding sources.

## For More Information

Contact Fred Patten at [fpatten@fs.fed.us](mailto:fpatten@fs.fed.us) or (303) 275-5641 or Dave Hessel at [dhessel@lamar.colostate.edu](mailto:dhessel@lamar.colostate.edu) or (303) 635-1597.

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.

The White River, located in Central Vermont, has its headwaters in the Green Mountains. It flows southeasterly into the Connecticut River and provides critical habitat for Atlantic salmon restoration.

### Mission

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



### State of Vermont White River Watershed



### Goals

The five goals of the project are related to locally-led watershed assessments, stream corridor restoration, outreach and education, economic sustainability, and capacity building:

- Engage local citizens in identifying priority areas for restoration activities
- Use natural channel design to restore stream function and processes
- Work with partner organizations to develop school programs
- Develop an informational map to link businesses and educate local citizens and visitors
- Build a long-lasting, independent organization that facilitates communication between government agencies and their citizens

### Restoration Highlights

- inventoried eroded and previously stabilized sites in the Upper River
- inventoried public access sites on the main stem
- Restored 1 mile of river through streambank stabilization, reestablishment of riparian vegetation, and in-channel restoration of natural river features
- Planted trees along 1/2 mile of the river
- Sponsored Green Up (river cleanup) event on Third Branch
- Created the "DownStream" stream team
- Sponsored "River Days" educational event at the Rochester School



- Helped over 100 schoolchildren plant trees along the river
- Developed water-quality monitoring protocol for use in the schools
- Initiated dialogue among teachers in the watershed
- Established the forestry work group
- Published two newsletters
- Held a preliminary membership campaign
- Developed bylaws and articles of incorporation
- Completed business plans

## Partners

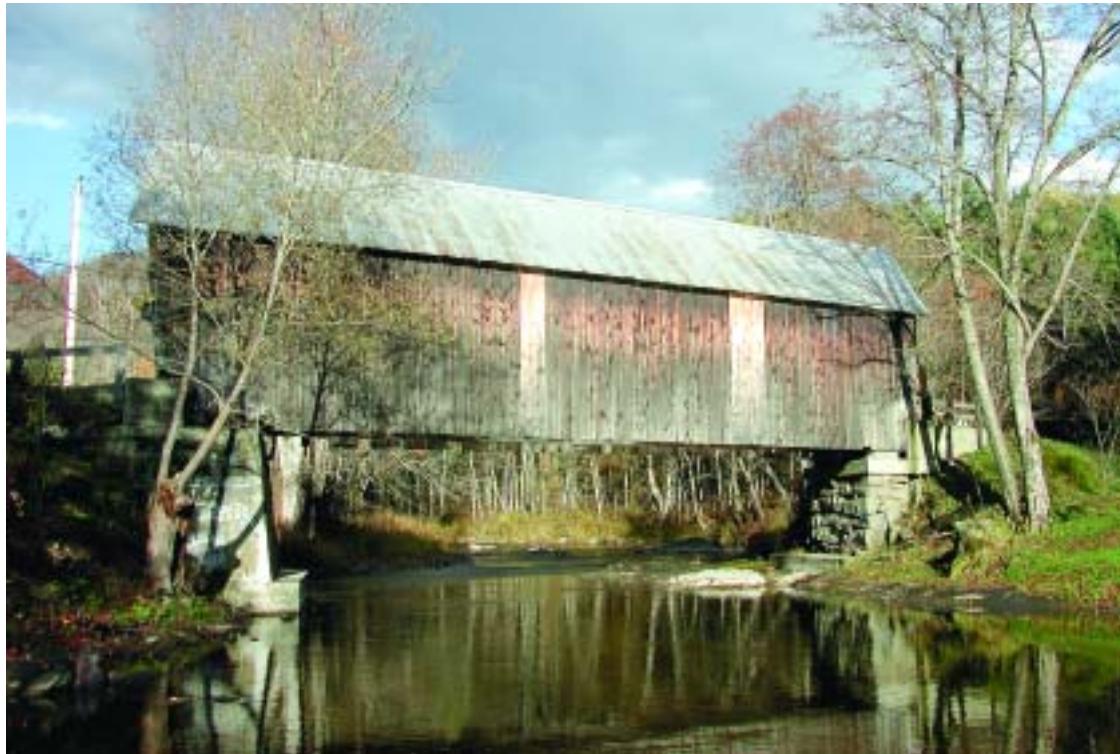
- Private citizens
- Vermont Institute of Natural Science (VINS)
- Vermont Agency of Natural Resources
- Two Rivers Ottaquechee Regional Planning Commission
- National Wildlife Federation
- Trout Unlimited
- USDA Forest Service—Washington Office, State and Private Forestry and Green Mountain National Forest
- U.S. Fish and Wildlife Service—Silvio Conte National Wildlife Refuge
- George D. Aiken Resource Conservation and Development Area
- Natural Resources Conservation Service
- U.S. Environmental Protection Agency

## Funding

Total funding provided for the project was \$575,000.

## For More Information

Contact Amy Sheldon at [wrpamy@together.net](mailto:wrpamy@together.net) or (802) 767-4600 or Steve Roy at [sroy@fs.fed.us](mailto:sroy@fs.fed.us) or (802) 747-6739.

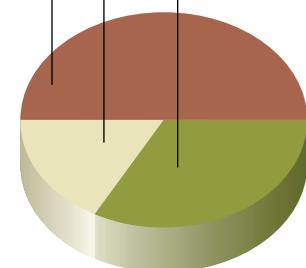


## FY 2000 Funding Summary

USDA Forest Service  
National Office ..... 50%

USDA Forest Service  
Field Office ..... 17%

Partners ..... 33%



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