

FOCUS ON THE EASTERN UNITED STATES



Conservation Capital:

Sources of Public
Funding for
Land Conservation

Citizen's
Guide



THE WILDERNESS SOCIETY

Our Mission

Since 1935, **The Wilderness Society** has worked to preserve America's unparalleled wildland heritage and the vast storehouse of resources these lands provide. From the threatened tupelo and cypress forests of the Southeast to critical grizzly bear and wolf habitat in the Yellowstone-to-Yukon corridor to the incomparable, biologically rich Arctic, The Wilderness Society has forged powerful partnerships with members and friends across the country to conserve interconnected landscapes for our nation. We want to leave a legacy rich in the biological diversity and natural systems that nurture both wildlife and humans alike.

Headquartered in Washington, D.C., the Society also maintains nine regional offices where our staff address on-the-ground conservation issues linked to local communities. Since spearheading passage of the seminal Wilderness Act in 1964, we have been a leading advocate for every major piece of Wilderness legislation enacted by Congress, work that is supported by an active membership of more than 200,000 committed conservationists. Our effectiveness stems from a team approach to conservation, which links our scientists, policy experts, and media specialists to thousands of grassroots activists — creating a potent force to promote change.

Building the case for land preservation with tactical research and sound science is the key to successful environmental advocacy and policy work. Nearly a quarter century ago, The Wilderness Society helped pioneer strategies that incorporated expert economic and ecological analysis into conservation work. Today, through focused studies, state-of-the-art landscape analysis — and diligent legwork by our many partners who provide us with on-site data — our **Ecology and Economics Research Department** is able to serve the needs of the larger conservation community.

Legislators, on-the-ground resource managers, news reporters, our conservation partners, and — most importantly — the American people must have the facts if they are going to make informed decisions about the future of this nation's vanishing wildlands. The answers to the pressing legal, economic, social, and ecological questions now at issue are the stepping stones to that understanding and, ultimately, to achieving lasting protection for the irreplaceable lands and waters that sustain our lives and spirits.



Conservation Capital:

Sources of Public Funding for Land Conservation

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By
Ann Ingerson

The Wilderness Society



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This citizen's guide is part of a series of publications that present findings from conservation research studies conducted by The Wilderness Society's Ecology and Economics Research Department. Other recent reports in the series include analyses of energy sources on western wildlands, ecological assessments of transportation networks on national monuments, a landscape analysis of forests in the Cascade Crest region of Washington State, an analysis of biodiversity and landscape connectivity in the Northern Rockies, an assessment of wildland fire, and an economic analysis of the Bureau of Land Management's budget.

These reports and related Science & Policy Briefs are available at The Wilderness Society's website <www.wilderness.org> and from The Wilderness Society, Communications Department, 1615 M Street, NW, Washington, DC 20036 (202-833-2300 or 1-800-THE-WILD).

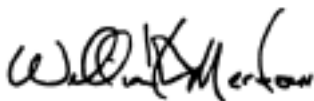
Preface

Land conservation at both large and small scales is an increasing priority for rural communities, suburban developments, and cities across this nation. Driven by the desire for safe drinking water, pollution-free air, and public amenities such as parks and greenways, new initiatives to conserve land and resources are emerging at every level of government.


Apart from the American people's long-standing love affair with wide open spaces, there is another good reason for this heightened emphasis on land conservation: nature's services — such as purifying water and air, providing venues for recreation and personal renewal, and sustaining valuable plants and wildlife — are free.

In The Wilderness Society's new resource guide, *Conservation Capital: Sources of Public Funding for Land Conservation*, Ann Ingerson, an economist based in our Vermont office, has created a tool for those who want to find a way to help conserve land using government dollars. Our report describes the primary federal programs that fund land and resource conservation in the United States, summarizing both little known federal funding sources and available state and local programs. Although the guide focuses on the eastern states, which include far fewer large conservation units than in the West, the specific examples presented here are applicable all across the country.

The information we have gathered reflects the efforts of thousands of active citizens who are working with local neighborhood associations, state and county governments, and federal programs to protect their communities' watersheds, scenic beauty, and natural capital. Be it traditional land acquisition funded by the federal Land and Water Conservation Fund, conservation easements financed collaboratively by government entities and non-profit organizations, or ground-breaking approaches such as the New York City Watershed agreement, it is clear that land and resource conservation has gained new credibility and momentum. Sound economics supports such visionary actions. So does sound science.



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Introduction

Forestlands harbor a variety of important societal and environmental values, from wild spaces for recreation to clean drinking water and habitat for wildlife species. These values are most efficiently provided by publicly owned land. But in the eastern United States, only 15 percent of forestland is publicly owned, compared to 68 percent in states west of the Mississippi River (USDA Forest Service 2003). In order to remedy the East's lack of public lands and the values that flow from them, many conservation organizations are seeking ways to help public entities acquire conservation lands and to assist private landowners in protecting the many values that their lands hold.

Large forested parcels offer the best opportunities to manage for values like wildlife habitat and remote recreation that require protection across a broad landscape. In the East, 80 percent of private forestland parcels over 5,000 acres were under corporate ownership in 1993, the date of the last complete woodlot ownership survey (Birch 1996).

The pattern of land ownership in the Northeast and Southeast is changing, however, and industrial ownership is becoming less dominant. Some 3.5 million acres of timberland in these regions were transferred out of forest industry ownership from 1977 to 1997, most often to institutional investors (Sampson et al. 2000). These forestland investors typically hold land for ten to fifteen years and may well subdivide parcels to achieve maximum return on their investment (Block and Sample 2001).

When land is transferred, there is a risk that large forested parcels will be converted to other uses or divided into smaller parcels, reducing the potential to provide both commercial timber and ecosystem services. By the same token, the transfer represents an opportunity to bring land into public ownership, there-

by assuring the provision of important public values far into the future.

Over the years two federal programs could usually be counted on to help protect those public values. The Land and Water Conservation Fund (LWCF) and Forest Legacy Program were the mainstays of financing for forest conservation through fee or easement purchases. Yet LWCF met only 8 percent of state grant requests from fiscal years 2000 to 2002 (McQueen and McMahon 2003). Forest Legacy funding, though growing, is not keeping up with the addition of new state participants in the program (46 states are currently approved or awaiting approval).

Given expanding opportunities to protect public forestland values and insufficient LWCF and Forest Legacy funding to meet the challenge, there is a need to identify and learn how to use additional sources of funds. Innovative approaches and a patchwork of funds from multiple programs may be necessary to achieve forest protection, particularly for large-scale projects.

This resource guide describes some of the resources available to people and organizations interested in protecting the many values of forestlands, with a special focus on the eastern United States.

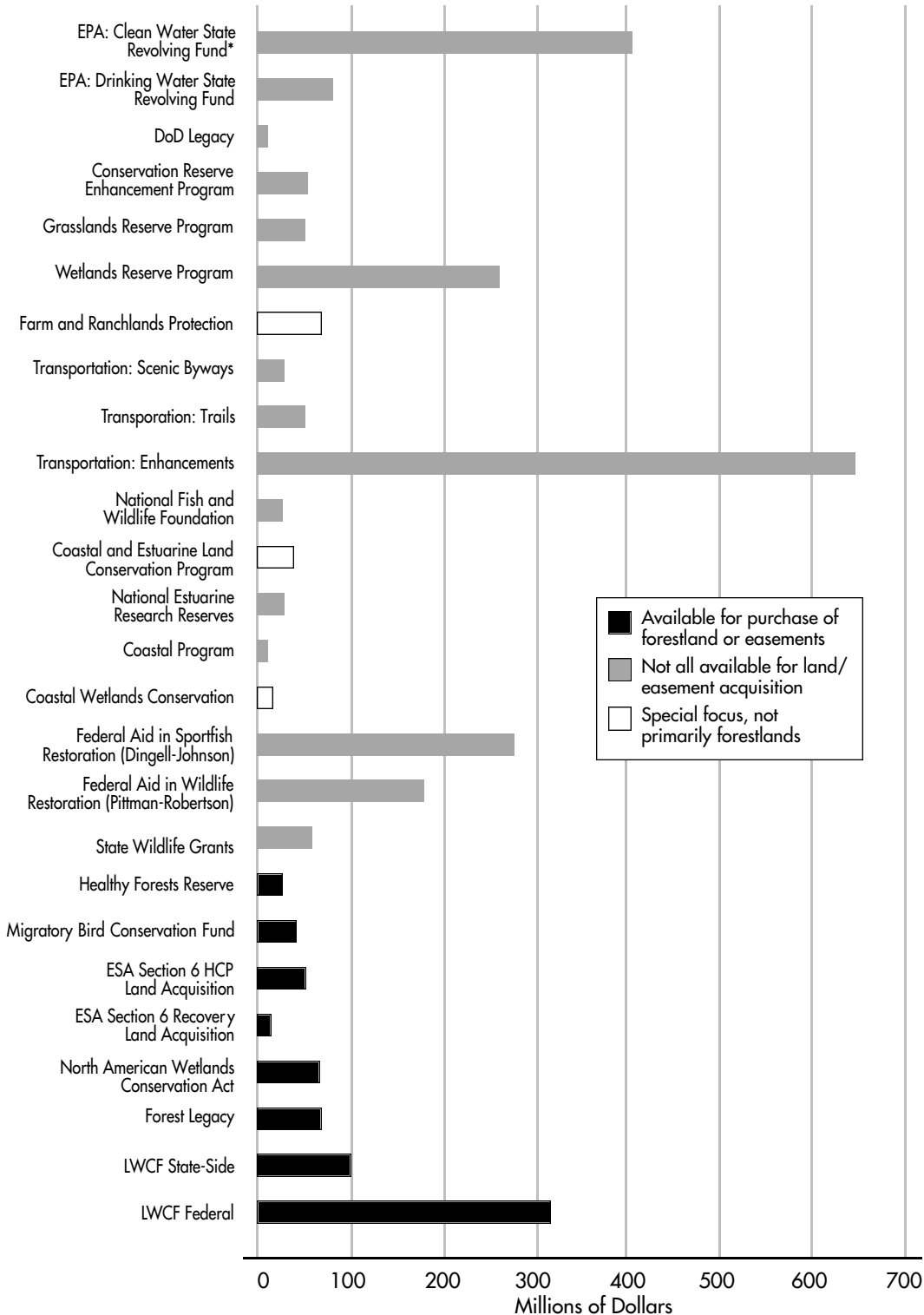
The guide first discusses a variety of federal conservation funding programs (Figure 1) and their requirements for participation. Many of these programs have a special focus on protecting wetlands, scarce wildlife habitat, urban watersheds, undeveloped coastline, or farmland. Although not all of these programs are devoted entirely or specifically to fee and easement purchase, they may well prove valuable in an overall strategy that includes participation by federal, state, tribal, and local governments, non-profit conservation organizations and land trusts, and private interests — from industry and small businesses to foundations and individual donors.

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This guide discusses major federal funding programs for land conservation, as well as state programs and innovative local projects. Emphasis is on the conservation of forestland.

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FIGURE 1.
Federal Programs that Funded Acquisition of Land or Easements, Fiscal Year 2003



*31% of total (maximum nonpoint portion for 1987-2002 for an eastern state — NH)

Appendix B contains information on the Fiscal Year 2003 appropriations for each of these programs, sources of funding, allocation of funds, typical project grant size, and special purposes.

The guide then summarizes state and local funding options, including notable innovative projects.

The Wilderness Society intends for this guide to be useful in continued work to protect the many benefits that forestlands in the East and elsewhere contribute to communities, both rural and urban, and to the health of the environment that ultimately sustains us all.

Conservation Fund and Forest Legacy Program

It is appropriate to begin with the Land and Water Conservation Fund and Forest Legacy Program. Both have proved extremely useful in protecting the many values of both public and private forestlands over several decades.

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF), initiated by Congress in 1964, is the major federal funding source for the purchase of land for new and existing federal and state parks and recreation lands. The fund's four original revenue sources included sale of surplus federal property, a tax on motorboat fuel, user fees at federal parks and other lands, and annual congressional appropriations. In 1968, Congress bolstered the fund with revenue received from federal leases for offshore oil and gas drilling.

LWCF is the main source of money for the National Park Service, U.S. Fish and Wildlife Service, and Bureau of Land Management — all agencies of the Department of the Interior— and the U.S. Forest Service in the Department of Agriculture to purchase land for recreational, conservation, and historic values. As examples of recent funding levels, Congress appropriated \$315 million in Fiscal Year 2003 and \$175 million in Fiscal Year 2004 for federal LWCF acquisitions.

The fund also provides matching grants to states and local governments to purchase and develop public outdoor recreation areas and facilities. This state-side portion of the program received no funding from 1996 through 1999. In Fiscal Year 2002, Congress appropriated \$144 million for state-side LWCF projects. Funding dropped in fiscal years 2003 and 2004 to \$98 million and \$91 million, respectively.

A complex formula determines how state-side funds are allocated, with a por-

tion distributed equally among the states and additional amounts distributed proportional to state population. In Fiscal Year 2003, states received between \$800,000 and \$8,000,000 each through the program. Congress and the Secretary of the Department of the Interior have used remaining state-side funds to finance priorities that the states identify as having national significance. In 2000, for example, \$2 million in discretionary state-side LWCF funds went to protect lands surrounding the West Branch of the Penobscot in northwestern Maine. At 329,000 acres, the West Branch project is the largest contiguous tract of land in Maine under permanent protection from development; it attracts tens of thousands of visitors and provides habitat for the blueback trout (*Salvelinus aureolus oquassa*) and a variety of freshwater mussels, as well as nesting sites for the Bald Eagle (*Haliaeetus leucocephalus*).

Appendix C lists projects earmarked for federal LWCF funding and shows the level of state-side funding, by state, for fiscal years 2003 and 2004.

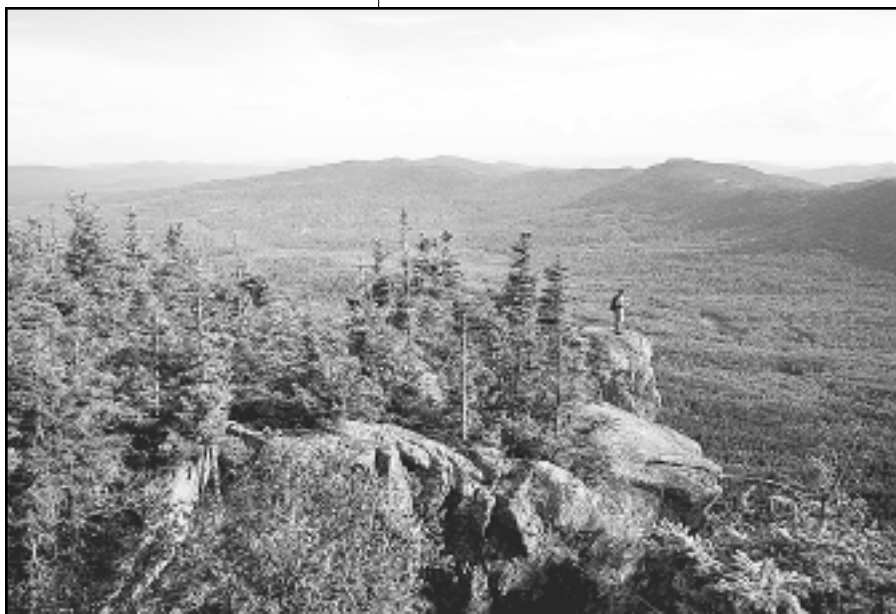
Total LWCF authorization increased from \$200 million per year in 1969 to \$900 million in 1978, where authorization remains today. Appropriations, however, have generally ranged well below this level. From 1965 through 2002, a total of \$11.8 billion was appropriated for land acquisition out of a total authorized amount of \$25.4 billion (McQueen and McMahon 2003). The total appropriated was \$573 million in Fiscal Year 2002, \$413 million in Fiscal Year 2003, and \$266 million in Fiscal Year 2004. See McQueen and McMahon 2003 for an excellent explanation and history of LWCF.

Forest Legacy

The Forest Legacy Program was authorized by the 1990 Farm Bill “to protect environmentally important forest areas that are threatened by conversion to non-forest uses.” Administered by the

▼
The federal
Land and Water
Conservation Fund
and Forest Legacy
Program have long
been mainstays of
efforts to protect
forestland.
▲

COURTESY OF JERRY AND MARCY MONKMAN/ECOPHOTOGRAPHY



Tumbledown Mountain, Maine. The federal Forest Legacy Program contributed more than \$3.5 million to protect land surrounding Mt. Blue State Park within the Mt. Blue/Tumbledown Mountain project area. The project aims to conserve 30,000 acres in all.

U.S. Forest Service, the program helps participating states acquire forestlands or conservation easements from willing private landowners. Forest Legacy funds up to 75 percent of acquisition costs for fee or easement purchase by the Forest Service, states, or local governments. The remaining 25 percent must be provided by non-federal sources. In an important departure from initial authorization of the program, proposals currently before Congress would allow non-profit entities to hold easements funded by Forest Legacy.

A state applicant for participation in the program begins by developing an Assessment of Need (AON), drawn up by the State Forest Stewardship Coordinating Committee. The AON defines the boundaries of Forest Legacy Area(s) and establishes specific eligibility criteria for projects. The AON must give priority to lands that can be effectively protected and managed and that have important scenic or recreational values, riparian areas, fish and wildlife values (including threatened and endangered species), or other ecological values.

Traditional forest uses such as timber management and outdoor recreation are

considered consistent with purposes of the Forest Legacy Program. Each state determines the relative emphasis to place on specific forest values, and Forest Legacy funds do not require that timber be harvested from protected lands. The Forest Service and the Secretary of Agriculture must approve each AON.

Demand for Forest Legacy funding has increased dramatically during the past five years, as more states join the program. Currently, 46 states and territories

TABLE 1.

Nationwide Forest Legacy Program Appropriations

Fiscal Year	Appropriation (thousands of dollars)
1992	\$4,938
1993	\$9,915
1994	\$6,948
1995 ^a	\$6,688
1996	\$3,000
1997	\$2,000
1998	\$4,000
1999	\$7,012
2000	\$29,933
2001	\$59,868
2002	\$65,000
2003	\$68,380
2004 ^b	\$71,132

^a \$7.8 million of unspent funds were rescinded in FY1995, including all FY1995 funds plus \$1.112 million of prior year funds. The amount shown for FY1995 is the original appropriation before the rescission.

^b Includes \$7 million in unspent appropriated funds from prior years.

Sources: USDA Forest Service, *Forest Legacy Program Overview* <<http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml>> and USDA Forest Service, *Northeastern Area, State and Private Forestry*, Durham, NH

participate in Forest Legacy or are developing plans for approval. States newly entering the program have received \$500,000 as a “placeholder” for the first project in the state.

Table 1 shows the nationwide appropriations history for the program, and Table

2 displays the status of participating eastern states as of the end of 2003.

Appendix D lists projects earmarked by Congress for eastern states in Fiscal Year 2003 and proposed for Fiscal Year 2004.

TABLE 2.

Eastern States Participating in the Forest Legacy Program as of December 31, 2003

State	Assessment of Need Approval	Projects	Acres	Total Value	Forest Legacy Payment
Alabama	March 22, 2002	1	656	\$602,000	\$500,000
Connecticut	October 26, 1994	13	6,789	\$7,483,000	\$4,299,000
Delaware	December 10, 1998	0	0	\$0	\$0
Georgia	March 22, 2002	0	0	\$0	\$0
Illinois	November 29, 1994	4	236	\$1,081,000	\$765,000
Indiana	December 10, 1998	7	2,186	\$2,244,000	\$1,765,000
Kentucky	Pending	0	0	\$0	\$0
Maine	March 18, 1994	15	416,133	\$55,226,000	\$31,291,000
Maryland	January 22, 1998	4	966	\$2,325,000	\$650,000
Massachusetts Amended	August 5, 1993 January 16, 2001	17	2,961	\$9,355,000	\$5,494,000
Michigan	Pending	0	0	\$0	\$0
New Hampshire Amended	February 11, 1994 December 10, 1998	21	193,769	\$29,101,000	\$19,128,000
New Jersey	October 26, 1994	5	2,597	\$14,003,000	\$2,262,000
New Mexico	March 22, 2002	0	0	\$0	\$0
New York Amended	October 26, 1994 December 10, 1998	6	1,555	\$4,773,000	\$2,403,000
North Carolina	February 29, 2000	3	3,431	\$10,377,000	\$5,594,000
Pennsylvania	March 7, 2002	0	0	\$0	\$0
Rhode Island	December 30, 1993	10	1,458	\$3,732,000	\$2,344,000
South Carolina	February 7, 2000	3	8,741	\$13,051,000	\$9,892,000
Tennessee	February 7, 2000	2	7,527	\$11,440,000	\$5,500,000
Vermont	February 11, 1994	13	51,619	\$9,381,000	\$6,010,000
Virginia	January 16, 2001	2	2,591	\$3,705,000	\$2,571,000
West Virginia	Pending	0	0	\$0	\$0
Wisconsin	January 16, 2001	2	35,337	\$13,251,000	\$5,000,000

Sources: USDA Forest Service, *Forest Legacy Program Overview* <<http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml>> and USDA Forest Service, *Northeastern Area, State and Private Forestry*, Durham, NH

▼
Grants from a variety of U.S. Fish and Wildlife Service programs help to conserve forestland.
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U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service, in the Department of the Interior, administers a variety of grants to states, organizations, and landowners. Some of these programs may be used to fund land or easements acquisition. Others provide incentives to protect wildlife habitat through cost-sharing landowner practices. They are described briefly here because they may provide additional incentives to landowners to sell or donate land or easements. Information about specific grant awards for the various programs can be obtained at <http://faims.fws.gov/DrillDown/search.do>.

North American Wetlands Conservation Act (NAWCA)

Grants under this program, established in 1989, support long-term protection of wetlands and associated uplands needed by waterfowl and other migratory birds in North America (including Mexico and Canada). Funds may support acquisition, restoration, or enhancement. Grants may be made to public or private organizations or to individuals. Grant requests between \$51,000 and \$1 million are accepted under the Standard Grants program, with lesser amounts administered under the Small Grants program. Projects are approved by the Migratory Bird Conservation Commission, the same body that approves Migratory Bird Conservation Fund grants (see below).

Most grant requests for this program flow through Joint Ventures, partnerships between private entities and governments formed under the North American Waterfowl Management Plan. The plan is an agreement between the United States, Canada, and Mexico to promote the recovery of waterfowl populations. The Atlantic Coast Joint Venture, which covers most of the eastern United States, initially focused on the Black Duck

(*Anas rubripes*) and other waterfowl, but it has been expanded to include habitat conservation for all birds.

Joint Ventures plan for habitat conservation at three scales: flyway (e.g., Atlantic Coast), bird conservation regions (e.g., Atlantic Northern Forests, Appalachian Mountains, Southeastern Coastal Plain), and focal areas (e.g., Inland Wetlands Focus Area in Maine and Oconee/Ocmulgee/Altamaha Rivers Focus Area in Georgia). For details, see <http://northeast.fws.gov/migratory-birds/acjv.htm>.

In addition to congressional appropriations, the North American Wetlands Conservation Act program receives funds from fines, penalties, and forfeitures under the Migratory Bird Treaty Act of 1918, from interest accrued on the fund established under the Federal Aid in Wildlife Restoration Act of 1937, and from federal fuel excise taxes on small gasoline engines. Spending has been authorized through Fiscal Year 2007, increasing from \$55 million in Fiscal Year 2003 to \$75 million in Fiscal Year 2007 (although lesser amounts have been appropriated).

The total estimated funding for Fiscal Year 2003 was about \$66 million — \$38.3 million in appropriations, \$15 million from Federal Aid in Wildlife Restoration, \$12 million from Federal Aid in Sportfish Restoration, and \$500,000 from Migratory Bird Treaty Act fines. For more information, see <http://northamerican.fws.gov/NAWCA/grants.htm>.

Sample Fiscal Year 2002 projects in the eastern United States are listed below, along with total acres affected (not all through fee purchase):

Maryland: Heart of the Chesapeake I and II, 38,674 acres (\$1 million and \$991,000)

New Hampshire/Vermont: Connecticut River Northern Valley Conservation Project, 82,829 acres (\$914,000)

Alabama: Mobile-Tensaw Delta III, 12,682 acres (\$1 million)

Kentucky: Green River State Forest, 1,980 acres (\$800,000)

Virginia: Whitehurst Marsh Acquisition, 2,610 acres (\$1 million)

Migratory Bird Conservation Fund

The Migratory Bird Conservation Fund provides the Department of the Interior with financing for the acquisition of migratory bird habitat, with total spending of about \$40 million per year. The Fund receives money from the sale of Migratory Bird Hunting and Conservation Stamps (commonly known as Duck Stamps); appropriations authorized by the Wetlands Loan Act of 1961; import duties collected on arms and ammunition; receipts from the sale of refuge admission permits; and the sale of products from rights-of-way across national wildlife refuges, disposals of refuge land, and reverted Federal Aid funds. Projects are funded through a national competitive grants process and are approved by the Migratory Bird Conservation Commission. For more information, see <<http://realty.fws.gov/mbcc.html>>.

Purchases in Fiscal Year 2003 included additions to the following wildlife refuges in the eastern United States:

Maryland: Blackwater National Wildlife Refuge, 500 acres

Tennessee: Lower Hatchie National Wildlife Refuge, 161 acres

New Jersey: Wallkill River National Wildlife Refuge, 8 acres

South Carolina: Savannah National Wildlife Refuge, 27 acres

Maine: Moosehorn National Wildlife Refuge, 8 acres

Michigan: Detroit River International Wildlife Refuge, 153 acres

Neotropical Migratory Bird Conservation Act

Passed by Congress in 2000, the Neotropical Migratory Bird Conservation

Act funds long-term protection of neotropical migrant bird species. At least 75 percent of funds must be spent outside the United States, with non-federal funds at least 3 times the federal share. Eligible projects include monitoring, law enforcement, and education, as well as land protection.

Though authorized at \$5 million, the Fiscal Year 2003 appropriation was \$3 million. About \$883,000 was awarded that year to 15 projects that included a U.S. component. To learn more, see <http://birdhabitat.fws.gov/NMBCA/eng_neo.htm>.

Cooperative Endangered Species Conservation Fund (Section 6 Funds)

Authorized by Section 6 of the U.S. Endangered Species Act, this program includes three types of grants: recovery land acquisition grants, Habitat Conservation Plan (HCP) planning assistance and HCP land acquisition grants. In 2002, an additional landowner assistance program (the Private Stewardship Program) was added to provide incentives to individual landowners to provide habitat for endangered species. The two land acquisition programs are described here (for more information, see <<http://endangered.fws.gov/grants/>>).

Recovery Land Acquisition Grants.

This program provides funds to states and territories for acquisition of habitat for endangered and threatened species. A total of \$12.7 million was made available nationwide in Fiscal Year 2003, allocated through competitive grants on a regional basis. Following are several examples of how this program was used in the eastern United States in Fiscal Year 2003.

Florida: Acquired 32.5 acres adjacent to Warm Mineral Springs Creek and identified management procedures to protect the endangered West Indian

▼ Imperiled plant and animal species associated with forests benefit from land conservation funded through U.S. Fish and Wildlife Service programs. ▲

manatee (*Trichechus manatus*), which uses the area as a warm-water refuge (\$455,835).

New York: Acquired and protected Saratoga West and Saratoga Sandplains properties for recovery of Karner blue butterfly (*Lycaedes melissa samuelis*), protected habitat for the Prairie Peninsula/LakePlain bog turtle (*Clemmys muhlenbergii*), and advanced open-space conservation efforts in the state (\$347,381).

North Carolina: Acquired the Beck Tract (2,432 acres), an essential longleaf pine (*Pinus palustris*) habitat corridor linking two forested sections of Camp Lejeune. Provided foraging habitat and future nesting habitat for the federally listed endangered Red-cockaded Woodpecker (*Picoides borealis*) and habitat for the rough-leaved loosestrife (*Lysimachia asperulifolia*) (\$556,150).

Tennessee: Acquired and protected an 850-acre parcel along the Clinch River. The Kyles Ford shoal supports ten federally listed mussel species (\$1.685 million).

Tennessee: Acquired 1,500 acres of privately owned timberland along the Cumberland Plateau stream gorge that harbors populations and habitat for the threatened Virginia spiraea (*Spiraea virginiana*), large-flowered skullcap (*Scutellaria montana* Chapman), and Bald Eagle (\$562,500).

Maine: In the Machias River Atlantic salmon conservation project, helped to protect the river corridor through easements on or purchase of 24,834 acres of land along 213 stream and riverfront miles (\$2 million).

Habitat Conservation Plan Land Acquisition Grants. This program provides funds to acquire land associated with an existing Habitat Conservation Plan (HCP). About 40 percent of HCPs are in the U.S. Fish and Wildlife Service's Region 1 (west), about 30 percent in Region 2 (southwest, with most in Texas), and about 20 percent in

Region 4 (southeast). In Fiscal Year 2003, \$51.1 million was available, through national competition. Examples of grants awarded in Arkansas and the eastern United States that year include:

Arkansas: Helped to acquire and protect shortleaf (*Pinus echinata*) and loblolly (*P. taeda*) pine habitat on 1,680 acres of Potlatch and Plum Creek Lands, adjacent to two other Habitat Conservation Plans, that will contribute to the recovery of the Red-cockaded Woodpecker (\$250,000).

Georgia: Through collaboration with the Statewide Conservation Plan for Red-cockaded Woodpeckers on Private Land, helped to acquire permanent conservation easements on four tracts (7,900 acres) currently managed as quail habitat. The tracts are some of the most important remaining properties for conservation in the Red Hills region, a priority area for the conservation of longleaf pine and wiregrass (*Aristida stricta*) and habitat for the largest Red-cockaded Woodpecker population found on private land (\$2 million).

Federal Aid in Wildlife Restoration and Federal Aid in Sportfish Restoration

Two of the oldest sources of conservation funding in the country, these programs use excise taxes on sporting equipment and fuels to generate federal funds that are redistributed to state wildlife agencies. Through the Pittman-Robertson Act, excise taxes on hunting equipment are allocated to states by formula based on land area and number of licensed hunters. Since its inception in 1938, the Federal Aid in Wildlife Restoration program, funded by Pittman-Robertson dollars, has protected more than 4 million acres nationwide in state wildlife management areas. Program funds also finance operation of the areas, as well as hunter education and research. The program provides about \$179 million annually, with indi-

vidual state shares ranging from \$268,000 to more than \$7 million.

In 1950, through the Dingell-Johnson Act the federal government began collecting taxes on fishing equipment. In 1984, the Wallop-Breaux amendment expanded the tax to additional equipment and marine fuels. Like Pittman-Robertson, these funds are allocated to states based on land and water area and number of licensed fishermen. Land acquisition funded by this source has traditionally been limited to the purchase and development of public fishing access areas. In 1991, however, an expansion of the Wallop-Breaux amendment funded the National Coastal Wetlands Conservation Grant program (see below). Total funds available through Federal Aid in Sportfish Restoration, funded by Dingell-Johnson dollars, are \$275 million (exclusive of Coastal Wetlands grants), with individual state shares ranging from \$900,000 to \$13.6 million.

Coastal Program

This program funds restoration management as well as easements and land acquisition in 16 targeted high-priority coastal ecosystems, including in the East the Gulf of Maine, Southern New England/New York Bight, Delaware Bay, Chesapeake Bay, Albemarle/Pamlico Sound, South Carolina Coast, Everglades/South Florida, and the Florida Gulf Coast. Each geographically targeted program coordinates multiple federal programs that provide services and funding. Since 1994, the program and its partners have protected 1,066,460 acres of coastal habitat through conservation easements nationwide. Funding for Fiscal Year 2003 was \$11.021 million. See <<http://www.fws.gov/cep/cepcode.html>>.

National Coastal Wetlands Conservation Grant Program

This competitive state matching grants program awarded more than \$15.7 million in grants to 15 states in Fiscal

Year 2003 to conserve, restore, and protect coastal wetlands. Partners include state natural resources agencies, land trusts, universities, timber companies, private landowners, and conservation groups. Projects funded by Fiscal Year 2003 grants will protect and/or restore more than 17,000 acres. Funding for the program is generated from excise taxes on fishing equipment and motorboat and small engine fuels. Approximately 15 percent of Dingell-Johnson funds generated by these excise taxes are allocated to the program. For more details, see <http://federalaid.fws.gov/cw/cw_jul97.html>. Four examples of projects recently funded in the eastern United States are:

Alabama: The Alabama Department of Conservation and Natural Resources, with assistance from several other state agencies, will acquire 3,160 acres (Mobile-Tensaw Delta Wetlands) in Mobile County. This acquisition will preserve a variety of coastal habitats including maritime forest, salt marsh, shrub scrub, bay forests, and wet pine savanna (\$1,000,000).

Florida: The Florida Department of Environmental Protection, in cooperation with the Florida Division of State Lands, will purchase 1,000 acres (McIlvane Marsh Acquisition) for inclusion in the Rookery Bay National Estuarine Reserve. The project will benefit a variety of wading birds, important recreational fisheries, and several federally listed species, including a large population of the American crocodile (*Crocodylus acutus*) (\$1,000,000).

Maryland: The Maryland Department of Natural Resources will acquire a perpetual conservation easement on 1,351 acres (Nanticoke River and Marshyhope Creek Wetlands) at the confluence of the Nanticoke River and Marshyhope Creek in Dorchester County to protect 32 miles of river shoreline, several active Bald Eagle nests, and spawning areas for a number of fish species (\$660,000).

New York: The New York State Department of Environmental Conservation will acquire 40 acres of land (Peconic Estuary Critical Wetlands Acquisition) in the Pipes Cove Focus Area in Suffolk County to protect maritime forest and habitat for a variety of fish, neotropical migratory songbirds, and endangered or threatened species, including the Piping Plover (*Charadrius melodus*). The Town of Southold will also acquire 100 acres as part of this protection effort (\$1,000,000).

State and Tribal Wildlife Grants

These grants are awarded by the U.S. Fish and Wildlife Service to state fish and wildlife agencies and tribes. The purpose is to fund planning and implementation of programs that benefit wildlife and their habitat. Federal cost-share is 50 percent. Funds may be used by states to purchase interests in land, although uses vary from state to state and year to year. Most funds to date have supported the development of comprehensive state wildlife plans, due in October 2005. These plans will guide federal transportation and agricultural spending.

State Wildlife Grants are apportioned to states based on land area and population, with each state receiving at least 1 percent of total available funds. The total appropriated in Fiscal Year 2003 was \$65 million, with \$57.7 million of that distributed to states. The remainder went to tribes, program administration, and budget reductions required by the Office of Management and Budget. The minimum received by any state was \$576,727, and the maximum received (by both California and Texas) was \$2,883,633. The examples that follow illustrate how some eastern states have used this grant program for land protection (for more, see <<http://federalaid.fws.gov/swg/swg.html>>).

Georgia: Georgia Department of Natural Resources, with Chattowah

Open Land Trust, will acquire 1,100 acres comprised of mainly steep slopes and hardwood-dominated forests adjacent to Zahnd Natural Area in Walker County from Municipal Electric Authority of Georgia (\$377,114).

Kentucky: The Kentucky Department of Fish and Wildlife Resources will acquire 1,270 acres of floodplain habitat to be incorporated into the Boatwright Wildlife Management Area in Ballard County (\$1.5 million).

Massachusetts: The Massachusetts Division of Fisheries and Wildlife will acquire 1,636 acres from Northland Cranberry Inc. in the towns of Hanson and Halifax to create a new Wildlife Management Area (\$2,545,757 total federal share, of which \$683,485 was from State Wildlife Grants program).

National Fish and Wildlife Foundation

The National Fish and Wildlife Foundation is a private, nonprofit, 501(c)(3) tax-exempt organization, established by Congress in 1984 and dedicated to the conservation of fish, wildlife, and plants and the habitat on which they depend. Funds are a combination of federal appropriations and private donations. Federal, state, and local governments, educational institutions, and nonprofit organizations can apply for grants, which typically range from \$25,000 to \$75,000, although some are much larger.

A variety of special targeted programs have been developed, many funded through donations from private firms. Each program has unique goals, and many will consider land acquisition. Special grant programs in the East include the Southern Company's Longleaf Pine Restoration Fund (eligible area includes Georgia, Alabama, Florida Panhandle, and southeastern Mississippi) and the Maine Atlantic Salmon Conservation Fund (III).

Total public funding for the National Fish and Wildlife Foundation in Fiscal

Year 2003 (approximate figures) by agency included: Bureau of Land Management, \$3 million; Bureau of Reclamation, \$850,000; U.S. Forest Service, \$2.65 million; National Oceanic and Atmospheric Administration, \$4 million; USDA Natural Resources Conservation Service, \$3 million; and U.S. Fish and Wildlife Service, \$10.67 million. Another \$2.7 million in nonfederal funds included \$1.2 million was for land and easement acquisition.

In Fiscal Year 2002, the National Fish and Wildlife Foundation Atlantic Salmon Initiative funded a variety of projects in Maine, including \$400,000 to the Atlantic Salmon Commission to purchase easements on 5,360 acres along the Machias River and \$100,000 to the Sheepscot Valley Conservation Association to purchase 96 acres along the Sheepscot River. For more information, see <<http://www.nfwf.org/>>.

Related Wildlife Funding

The three programs described here do not fund acquisition of land or easements, but rather provide financial assistance to private landowners who manage for wildlife habitat and other environmental values. They are included here because of their potential to help fund practices that might be required by conservation easements, thus enhancing the incentives of landowners to sell or donate such easements.

FWS ESA Private Stewardship

Grants. These grants provide financial assistance to landowners who undertake voluntary actions to benefit imperiled species. National funding for 2003 was \$10 million, apportioned to the seven

Fish and Wildlife Service regional offices, including the southeast and northeast regions. Landowners and organizations that work with the regional offices can apply. Projects are mostly to fund management practices that benefit listed threatened and endangered species or other species at risk and are not available for land acquisition. To learn more, see <http://endangered.fws.gov/grants/private_stewardship.html>.

FWS Landowner Incentive

Program. This program funds state and tribal programs that provide incentives for private landowners to protect threatened and endangered species or other species at risk. Nongovernmental groups can partner with state agencies to administer the programs. Like the private stewardship grants, these funds are not generally available for land acquisition. For details, see <<http://federalaid.fws.gov/lip/lip.html>>.

FWS Partners for Fish and Wildlife

Program. This program assists private landowners who want to restore or improve habitat on their property. Private landowners (including businesses and individuals) apply through Fish and Wildlife Service state contacts, sign an agreement, and receive cost-share and technical assistance. Sample activities include restoration of wetland hydrology, planting of native trees and shrubs in formerly forested wetlands and other habitats, installation of fencing and off-stream livestock watering facilities to restore stream and riparian areas, removal of exotic plants and animals, and prescribed burning. For details, see <<http://partners.fws.gov/>>.

▼
In Fiscal Year
2002, the National
Fish and Wildlife
Foundation Atlantic
Salmon Initiative
granted \$500,000
for projects in
Maine alone.
▲

National Oceanic and Atmospheric Administration (NOAA)

National Estuarine Research Reserves

Administered by the National Oceanic and Atmospheric Administration (Department of Commerce), the National Estuarine Research Reserve System was established by the Coastal Zone Protection Act of 1996 to provide sites for long-term coastal research, by removing lands from the threat of conversion. State governors can nominate reserves. New reserves must help balance the types and geographical distribution of the reserve system.

Twenty-six reserves (with two more proposed) have been designated nationwide, the first in 1974 (South Slough, Oregon) and the most recent in 2003 (San Francisco Bay, California). In the East, the reserve system includes more than 746,000 acres in 16 states (including Ohio, with a coast along Lake Erie). The National Estuarine Research Reserve Association (<http://www.nerra.org/>) advocates for funding of the reserve system and tracks relevant legislation.

NOAA may provide federal funds to acquire land for existing or new reserves. Grants for Estuarine Research Reserves may support planning, administration, and educational programs, as well as



COURTESY GEORGE GENTRY (U.S. FISH AND WILDLIFE SERVICE)

Coastal grasses on Bon Secour National Wildlife Refuge, Alabama.

land acquisition. Of the \$38.7 million in the Research Reserves grant program in Fiscal Year 2003, NOAA awarded \$27.7 million to support acquisition for existing reserves.

Coastal and Estuarine Land Conservation Program

Established in 2002, the Coastal and Estuarine Land Conservation Program provides for a national competitive grants program to fund land and easements purchases that protect estuarine or coastal areas. To date, most funding has been provided through congressional earmarks, and for Fiscal Year 2004, no funding was available for the competitive grants process (<http://coastalmanagement.noaa.gov/landconservation.html>).

Program goals are to protect conservation, recreation, ecological, historical, or aesthetic values or to protect land that is threatened by conversion (Office of Ocean and Coastal Resource Management 2003). Grants commonly support acquisitions for Research Reserves, but any state with a Coastal Zone Management Plan can participate. States seeking funds first develop a Coastal and Estuarine Land Conservation Plan, then submit a grant application for specific projects. Local governments or other governmental agencies can apply for funds through the state's lead agency; non-profit organizations generally cannot receive funds from this program (Office of Ocean and Coastal Resource Management 2003).

The federal program pays up to 50 percent of total costs. The program finances state planning activities as well as land acquisition. Spending for land acquisition was \$15.8 million in Fiscal Year 2002 and \$36.7 million in Fiscal Year 2003.

Examples of projects recently funded through this source in the East include:

New Hampshire: The City of Portsmouth purchased 10 acres along Sagamore Creek for open space and recreation (\$2.0 million).

Rhode Island: The City of Warwick purchased 26 acres on Narragansett Bay for recreation and open space (\$1.9 million).

Mississippi: The state purchased 4.5-mile Deer Island for habitat conservation (\$2.2 million).

Ohio: The state purchased 677 acres along Lake Erie (\$3.0 million).

Ohio: Erie County MetroParks purchased part of a 1,200-acre site for the county park system (\$2.5 million).

Connecticut: The City of Stamford acquired an acre of land along the Mill River for greenway purposes (\$994,000).

South Carolina: The state purchased land at Bonneau Ferry and Cooper River, West Branch (\$9.9 million and \$2.0 million).

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NOAA's Coastal and Estuarine Land Conservation Program aided many eastern states during fiscal years 2002 and 2003, including projects in New Hampshire, Rhode Island, Mississippi, Ohio, Connecticut, and South Carolina.
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For decades, programs administered by the U.S. Department of Agriculture have helped farmers, ranchers, and other private property owners in their science-based conservation practices.
▲

Department of Agriculture (USDA)

The Farm Security and Rural Investment Act of 2002 (Public Law 107-171), known as the Farm Bill, reauthorized and modified a variety of existing programs and initiated several new ones. A few of the programs allow cost-sharing in purchases of easements on private lands; others provide incentives for resource protection in cost-sharing with private landowner management practices. Environmental Defense Center for Conservation Incentives offers a wealth of information about Farm Bill programs through their Farm Bill Tool Kit at <<http://www.environmentaldefense.org/farmbill/home.cfm>>.

Farm and Ranchlands Protection Program

The Farm and Ranch Lands Protection Program (FRPP) provides funds to state, local or tribal entities or non-governmental organizations with existing farmland protection programs to purchase conservation easements or other interests in land for the purpose of protecting soil by limiting nonagricultural land uses. USDA provides up to 50 percent of the fair market easement value, with perpetual easements a priority. The Natural Resources Conservation Service (NRCS) distributes funds to states in block grants based on an analysis of state farmland protection plans submitted by each state to NRCS headquarters.

Farmland protection plans are developed by each NRCS State Conservationist, working with a state technical committee. Agricultural uses eligible for funding are defined by each state's purchase of development rights or agricultural use assessment program. Forestland that is part of an agricultural operation is eligible in most states, and the program

give states the flexibility to work with organizations interested in scenic, wildlife, and open space protection, when compatible with protection of agriculturally productive soils.

Under the 2002 Farm Bill, FRPP was slated to receive \$50 million in Fiscal Year 2002, \$100 million in Fiscal Year 2003, \$125 million in Fiscal Year 2004 and Fiscal Year 2005, \$100 million in Fiscal Year 2006, and \$97 million in Fiscal Year 2007. In Fiscal Year 2003, state allocations ranged from \$0 (Alaska, Arkansas, Hawaii, Mississippi, and Nevada) to \$4,013,900 (Maryland). To learn more, see <<http://www.nrcs.usda.gov/programs/frpp/index.html>>.

Wetlands Reserve Program (WRP)

Under this program, farmers and ranchers can receive up to 100 percent reimbursement for restoring wetlands that previously had been drained or converted to other agricultural uses. WRP offers landowners three options: (1) permanent easements, (2) 30-year easements, and (3) 10-year restoration cost-share agreements. Non-profit organizations can hold easements on enrolled land.

Congressional authorization is by acres enrolled, rather than by dollars. The Farm Bill significantly expanded WRP to help meet the growing interest from landowners in wetlands protection and restoration, lifting the acreage cap to 2.275 million acres. The new legislation also eliminated the 1/3-1/3-1/3 requirement for enrolling lands proportionally in permanent easements, 30-year easements, and restoration cost-share. In Fiscal Year 2003, total federal spending on WRP was about \$260 million, with state allocations ranging from \$35,800 (Connecticut) to \$18,768,300 (Louisiana). Details at <<http://www.nrcs.usda.gov/programs/wrp/>>.



COURTESY OF SCOTT BAUER

Farmland near Klingershtown, Pennsylvania. Numerous programs of the U.S. Department of Agriculture assist farmers with their land conservation efforts.

Grassland Reserve Program (GRP)

The Farm Bill introduced this new program, modeled on the Wetlands Reserve Program, to help landowners restore and protect grassland, rangeland, pastureland, and shrubland. GRP offers producers several enrollment options: permanent easements, 30-year easements, rental agreements (10, 15, 20 or 30 years in duration) and restoration agreements. For permanent easements, USDA makes a payment based on the fair-market value of the property less the grazing value, with lesser payments for term easements and rental or restoration agreements. In Fiscal Year 2003, GRP funds totaled \$49,942,000 nationwide. For more information, see <<http://www.nrcs.usda.gov/programs/?GRP/>>.

Conservation Reserve Enhancement Program (CREP)

This flexible program allows states to submit comprehensive plans to combine state funded programs with the federal Conservation Reserve Program (CRP, see below) to solve a particular natural resource problem. An enhancement program retires agricultural land and replants natural vegetation on that land to help clean up rivers and bays or to recover endangered species. CRP contracts and cost-share assistance are common means of reimbursing the producers who participate. CRP contracts are paid on an annual basis for a limited term and are not perpetual easements.

Easements are also used by some Conservation Reserve Enhancement Programs. Eastern states that fund

easements through CREP programs include: Florida — Everglades and St. Johns Ocklawaha-Indian River Lagoon System; Ohio — Upper Big Walnut, Columbus Water Supply; Wisconsin — Upper Mississippi River Basin, Lake Michigan Basin, Grasslands; Kentucky — Green River and Mammoth Cave system; Iowa — North Raccoon River Watershed; Virginia — Southern Rivers Wildlife Enhancement Project and Chesapeake Bay and Southern Rivers Nutrient/Sediment Reduction Project; North Carolina — Chowan, Neuse, Tar-Pamlico Basins and Lake Jordan Watershed; Illinois — Middle Illinois River; and Maryland — Chesapeake Bay. The state, local, or other partner shares in the enhancement programs would fund the easement portion.

Currently, more than 300,000 acres are enrolled in CREP programs in more than 20 states. A total of \$2.4 billion federal cost-share dollars contributed to enhancement programs nationwide from 1997 through 2002. Spending in Fiscal Year 2003 was \$53.7 million in federal funds, including about \$16.5 million in rent payments, \$4.97 million in incentive payments, and \$32.3 million in cost-share assistance for conservation practices. For details, see <<http://www.fsa.usda.gov/dafp/cepd/crep.htm>>.

Related Farm Bill Funding

Like U.S. Fish and Wildlife Service landowner assistance, the programs that follow do not fund acquisition of land or easements, but rather provide financial assistance to private landowners who manage for wildlife habitat or other environmental values. They are included here because of their potential to help fund practices that might be required by conservation easements, thus enhancing the incentives of landowners to sell or donate such easements.

Wildlife Habitat Incentives

Program (WHIP). This program provides cost-share and technical assistance to landowners who undertake management actions to develop fish and wildlife habitat on their land. NRCS administers the program, working closely with state technical committees and other federal and state agencies. Restoration of nearly any habitat type — aquatic, riparian, wetland, forest, fields, and grasslands — is eligible for WHIP funding, with a special focus on habitat for federally endangered and threatened species. Agreements with landowners typically last 5 to 10 years, but 2002 legislation targets 15 percent of annual WHIP funds for increased cost-share payments to producers who enter agreements of at least 15 years' duration. Under the Farm Bill, WHIP was to receive \$15 million in Fiscal Year 2002, \$30 million in Fiscal Year 2003, \$60 million in Fiscal Year 2004, and \$85 million in each of fiscal years 2005, 2006, and 2007. In Fiscal Year 2003, funds received by states ranged from \$183,300 (Nevada) to \$830,400 (Rhode Island). See <<http://www.nrcs.usda.gov/programs/whip/>>.

Environmental Quality Incentives

Program (EQIP). This program provides technical, educational, and financial assistance for land management practices that benefit wildlife, including improved waste management and reduced using of fertilizers and pesticides. Administered by NRCS, EQIP targets 60 percent of program funds to help farmers address the impacts of manure on water quality and public health. Under the 2002 Farm Bill, funding was scheduled to increase rapidly, from \$700 million in Fiscal Year 2003, 1\$ billion in Fiscal Year 2004, \$1.2 billion in fiscal years 2005 and 2006, and \$1.3 billion in Fiscal Year 2007. State allocations in 2003 ranged from \$1,309,100 (Rhode Island) to

\$57,717,300 (Texas). For more details, see <<http://www.nrcs.usda.gov/programs/eqip/>>.

Conservation Reserve Program (CRP). CRP offers financial incentives to protect highly erodible and environmentally sensitive lands by reducing water runoff and sedimentation through 10- to 15-year contracts with landowners. The program is authorized by acreage enrolled, not by dollars. The 2002 Farm Bill expanded CRP from 36.4 million acres nationwide to 39.2 million acres. Under the 36.4-million-acre cap, 23 million acres were reserved for 10 to 15 years under general CRP, 4 million acres for conservation buffers, and the remaining acres for enhancement programs (see above) and future general sign-ups as existing contracts expire. The program is administered by the Farm Service Agency (FSA). See <<http://www.fsa.usda.gov/dafp/cepd/crp.htm>>.

Conservation Security Program (CSP). Initiated by the 2002 Farm Bill, this program will fund conservation practices through 5- to 10-year contracts with agricultural producers. The program is intended to reward model conservation practices of the most innovative practitioners; program details are still being developed. Funding is authorized at \$3.77 billion over 10 years, with \$369 million allocated to years covered by the 2002 Farm Bill (fiscal years 2003-2007.)

See <<http://www.nrcs.usda.gov/programs/csp/>> for more information.

Forest Land Enhancement Program (FLEP).

Also initiated by the 2002 Farm Bill, this new U.S. Forest Service incentive program for private non-industrial forest landowners replaces two previous forest owner incentive programs: Stewardship Incentive Program (SIP) and Forestry Incentives Program (FIP). Congress authorized \$100 million in national FLEP program funds for fiscal years 2003 through 2007. However, the Forest Service withdrew \$50 million of this amount in Fiscal Year 2003 to cover fire-fighting costs, and it is unknown how much amount will be returned to the FLEP account. To date, FLEP has received only \$10 million for Fiscal Year 2004.

Practices eligible for cost-sharing include: developing Forest Stewardship Plans, reforestation or creating forest land, improving forest stands, agroforestry, improving water quality and protecting watersheds, protecting fish and wildlife habitats, protecting forest health, controlling invasive species, reducing risks from catastrophic wildfires, restoring lands damaged by wildfire or other catastrophic events such as windstorms, and special practices defined by state Forest Stewardship Coordinating Committees. For more information, see <<http://www.fs.fed.us/spf/coop/programs/loa/flep.shtml>>.

Environmental Protection Agency

Clean Water State Revolving Funds

The 1987 Clean Water Act Amendments established the federally funded Clean Water State Revolving Fund (CWSRF) to finance water pollution

abatement projects. The program is administered by states, which also provide a 20-percent match for federal funds. States can set loan terms, with interest rates from 0 percent to market rates and up to 20-year repayment periods. Non-profit organizations as well as state and local governments are eligible for loans. Funds to repay loans can come from development impact fees, drinking water fees, wastewater discharge user fees, recreation fees on protected land, local or state taxes, or memberships and donations to non-profit organizations.

CWSRF loans are made in three program areas: infrastructure investments like wastewater treatment plants that reduce point source pollution (known as Program 212), nonpoint source pollution reduction, and estuary protection. State agencies that administer funds develop an annual Intended Use Plan (IUP) that determines how the federal grant will be spent. This plan derives its priorities from the state Nonpoint Source Management Plan (319 Plan) or a National Estuary Program Comprehensive Conservation Management Plan (CCMP).

Conservationists interested in this source of funding for land protection must relate their proposed purchase to a nonpoint source or estuary related problem discussed in one of these plans. For instance, the state Nonpoint Source Management Plan might mention poor water quality in a particular river system and list acquisition of land and easements in that watershed as an intended strategy to reduce nonpoint pollutants.

There are no federal limitations on use of funds for land protection (R. Caruso, Pers. Comm.). Most states have traditionally prioritized waste treatment plants, with only about 4 percent of funds nationwide allocated to nonpoint source and estuary protection efforts (US EPA 2003). California, however, has used more than \$112 million in CWSRF loans to finance land acquisition.

Ohio: Creative use of Clean Water State Revolving Funds

In Ohio, the state EPA Water Resource Restoration Sponsor Program (WRRSP) addresses funding of nonpoint source water pollution controls through its Water Pollution Control Loan Fund (WPCLF). The fund offers loans to traditional revolving fund borrowers (such as wastewater treatment plants) and includes an option that addresses nonpoint sources of water degradation. If the borrower undertakes habitat protection or chooses to sponsor such a project by another organization such as a local land trust, the loan interest rate will be lowered. The loan can cover the cost of both construction and restoration activities, and WRRSP lowers the interest rate sufficiently to make total principal and interest payments the same as they would have been under the higher interest loan for construction alone.

Ohio EPA provides the following example:

WPCLF Loan Without A WRRSP Project

Borrow \$1 million for a wastewater treatment plant project
At a WPCLF interest rate of 3.80 percent,
total payments will = \$1,436,707

— or —

WPCLF Loan With A \$393,442 WRRSP Project Amount Added

Borrow \$1 million for the wastewater treatment plant project
and \$393,442 for the WRRSP project
Total loan amount = \$1,393,442
Interest rate reduced (repayments equal repayments that would
have been made on the \$1,000,000 loan) — results in an interest
rate of 0.3 percent
An additional incentive reduction of 0.1 percent made to interest rate
Final interest rate = 0.2 percent
Total payments = \$1,422,193
Applicant saves \$14,514 in loan repayments over original
\$1,000,000 loan at 3.80 percent

To be eligible for financing under this program, the protected land must be maintained as a natural area, with no industrial, commercial, agricultural, mining, drilling, filling, excavating, or off-road vehicle activities, and property may not be subdivided. This program has generated more than \$30 million in funding for land protection, with individual project loans of up to \$6 million (US EPA 2002).

In the East, Maryland, Massachusetts, New Jersey, New York, Pennsylvania (pending), Rhode Island, and Virginia have used CWSRF loans for land acquisition (for the complete nationwide list, see US EPA 2003). Two examples from New York illustrate how the CWSRF program is being used to finance land protection. New York's CWSRF program loaned \$75 million to Suffolk County to purchase land in the Pine Barrens Wilderness and Water Protection Preserve on Long Island, with the ultimate goal of protecting 100,000 acres as a state park. The fund also contributed to the New York City watershed protection program (see page 28).

Total federal funding allocated to states by the Clean Water State Revolving Fund program in Fiscal Year 2003 was \$1.3 billion, with states receiving allotments from a minimum of \$6.5 million (Vermont, Delaware, and the District of Columbia in the East) to a maximum of \$146 million for New York. Because this is a loan program, current appropriations are supplemented by funds repaid from past loans. Nationwide, \$4.7 billion in loans were issued from CWSRF in Fiscal Year 2003, at an average interest of 2.2 percent (US EPA, 2003). See <<http://www.epa.gov/owm/cwfinance/index.htm>>.

Drinking Water State Revolving Funds

The 1996 amendments to the Safe Drinking Water Act established a Drinking Water State Revolving Fund (DWSRF), largely modeled on the Clean Drinking Water State Revolving Fund. The DWSRF issues loans to community public water systems for building or upgrading water treatment plants and other water supply construction projects. A state has the option to set aside up to 10 percent of its federal grant for loans to local water systems for the purpose of purchasing watershed land and conserva-



tion easements, although in the first five years of the program only 0.3 percent of program funds went to land acquisition. Eastern states that have used part of their federal grant for land or easements funding include Delaware, Florida, Kentucky, Maine, Maryland, New Hampshire, New York, Vermont, and Virginia.

As with the CWSRF program, states must explain how they intend to use the federal funding under the Safe Drinking Water Act in an Intended Use Plan, submitted annually to EPA. Funds set aside for specific purposes, including land acquisition, must be specifically described in the state's IUP. Before the IUP is submitted to the EPA for approval, states must provide the public with adequate opportunity to review and comment. Through the IUP, states define a priority-setting process to decide

Forest ecosystems harbor the headwaters of many streams and rivers throughout the East and play a major role in providing clean sources of water — for free.

▼
State revolving funds
of the U.S.
Environmental
Protection Agency
have invested
hundreds of millions
of dollars to protect
water sources,
including those
found on forests.
▲

which lands or easements can be purchased. All land and easement purchases must protect public health or enhance the state's compliance with national drinking water regulations.

Loans for land acquisition and conservation easements can only be issued to public water systems. Therefore, local land trusts, community groups, or others interested in easements and land acquisition opportunities should work cooperatively with local water suppliers to request funds from the DWSRF. Loan terms can range between 0 percent and market rate, with up to a 20-year term. "Disadvantaged" systems can receive 30-year loans with up to 30 percent of loan principal forgiven.

Given recent EPA emphasis on filtration for safe drinking water, it may prove difficult to convince local water authorities to take a broader watershed-wide

approach to water quality. See the New York City watershed example (page 28) for an established model.

Each state receives a minimum of 1 percent of the national appropriation available to states. The Fiscal Year 2002 national appropriation was \$850 million; for Fiscal Year 2003, the amount \$845 million. Each state received a minimum of about \$8 million in each of these years. States with greater drinking water needs, according to the Drinking Water Needs Survey, receive more funds. For instance, in Fiscal Year 2003, Florida received \$18,728,100, Georgia \$12,673,200, Massachusetts \$28,614,900, New York \$62,055,500, and Pennsylvania \$25,744,800.

For more information, including how to contact the agency that administers the DWSRF in a particular state, see <<http://www.epa.gov/safewater/dwsrf.html>>.

Department of Transportation (TEA-21)

The Intermodal Surface

Transportation Efficiency Act of 1991 (known as ISTEA, or “ice tea”), and the 1998 Transportation Equity Act for the 21st Century (known as “TEA-21”) provide an important source of federal funds for park and recreation projects. Programs of special interest to conservationists include transportation enhancements, the recreational trails program, and the national scenic byways program. See <<http://www.fhwa.dot.gov/tea21/>> for information on TEA-21.

Transportation Enhancements

This program is designed to strengthen the “cultural, aesthetic, and environmental aspects of the nation’s intermodal transportation system.” Projects may include restoration of historic transportation facilities, bike and pedestrian paths, landscaping and scenic beautification such as the purchase of scenic easements, and environmental mitigation of water pollution from highway runoff.

Authorizing legislation stipulates that 10 percent of federal funds distributed to states through the Surface Transportation Program, plus 1 percent of transit urbanized area funds for areas with populations over 200,000, shall be dedicated to transportation enhancements. In Fiscal Year 2003, \$648 million was available nation-wide for transportation enhancements, with states receiving between \$3 million (Delaware, Hawaii, Maine, New Hampshire, Rhode Island, Vermont, and Wyoming) and \$60 million (California). TEA-21 allows states to transfer some of their TE funds to other programs.

See <<http://www.fhwa.dot.gov/tea21/factsheets/te.htm>> for more information on the transportation enhancements program and the National

Transportation Enhancements Clearinghouse at <<http://www.enhancements.org/>> for examples of projects that have used this funding source.

Recreational Trails Program

This program funds purchase of easements or property for trails, as well as actual trail construction and maintenance and trail-related educational programs. States must establish a state recreational trails advisory committee to administer funds, with representation from both motorized and non-motorized recreational trail users. TEA-21 authorizes \$50 million nationwide per year, of which 30 percent must be used for motorized use, 30 percent for non-motorized use, and 40 percent for diverse trail uses (categories may overlap with the others). Half of available funds are apportioned equally among states, and half are apportioned according to off-road vehicle fuel use. In Fiscal Year 2003, funding to states ranged from a low of \$521,709 for Delaware to a high of \$3,409,930 for California. See <<http://www.fhwa.dot.gov/tea21/factsheets/rec-trl.htm>> for more information

National Scenic Byways Program

Projects funded under this program must protect the scenic, historic, cultural, natural, recreational, and archaeological integrity of a highway and adjacent areas. TEA-21 authorizes a total of \$148 million for technical assistance and grants to states for the purposes of developing scenic byway programs and undertaking related projects along roads designated as National Scenic Byways, All-American Roads, or State Scenic Byways. In Fiscal Year 2003, \$26.5 million was authorized for this program. For more, see <<http://www.fhwa.dot.gov/tea21/factsheets/scenic.htm>>.

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Three programs of the U.S. Department of Transportation aid in land conservation and should be considered as potential funding sources for local and state projects to protect forestland.
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Department of Defense

Legacy Resource Management Program

With about 25 million acres under its management, the U.S. Department of Defense is the third largest federal land management agency. The goal of the Department's Legacy Resource Management Program, established by Congress in 1990, is to protect natural resources on those lands, also allowing intensive use for training and other military purposes. Projects eligible for legacy program funding include regional ecosystem management and

protection of natural, cultural, and historic resources. The highest priority in Fiscal Year 2004 was "readiness and range sustainment" efforts that address encroachment problems stemming from non-compatible development near military bases and training ranges.

Annual appropriations for the program are currently about \$9 million. Legacy staff expect that additional funding will be available under a second program in Fiscal Year 2005 to establish buffer zones.

Proposals may be submitted by private organizations as long as the projects clearly benefit specific military installations.

Although program funds are rarely used for direct land purchase, in Fiscal Year

2002 The Nature Conservancy received support from this source for the North Carolina Sandhills Conservation Partnership (see page 26).

Readiness and Range Preservation Initiative

In 2003, the Department of Defense expressed concern that environmental regulations were hampering the ability of the military to stage realistic training exercises across the country. The 2003 Defense Authorization Act enacted two measures related to land protection, giving the Department the authority to (1) establish open space buffers owned by conservation organizations or state or local governments surrounding military training ranges and (2) convey surplus property (including closed bases) to non-federal owners for conservation purposes.

The Department of Defense Lands Initiative Working Group is developing policies to implement the Department's new buffers program. One obstacle that must be overcome is the current moratorium on acquisition of additional lands by the military. Buffer acquisitions will need to be exempted from the moratorium.

The Department of Defense and potential conservation partners have just begun to develop strategies to put the military's new buffer establishment authority into practice. Information about the Compatible Land Use Partnering Workshop that brought military and conservation organization staffs together to discuss the new program is available through the Defense Environmental Network Information Exchange at <<https://www.denix.osd.mil/denix/Public/Library/Sustain/RRPI/Workshops/rrpi-workshop.html>>.

U.S. Army Teams Up With Conservation

Some managers of military lands view the U.S. Army's Private Lands Initiative as a model for managing encroachment through compatible land-use partnerships. The collaboration between The Nature Conservancy and Fort Bragg is an early example of this approach.

The army uses 140,000 acres of land in and around Fort Bragg in North Carolina's sandhills for training (US Army Environmental Center 2004). Much of this land provides key habitat for the federally listed Red-cockaded Woodpecker. As habitat on surrounding private lands deteriorated over time, the Army found itself managing some of the bird's last refuges.

In 1995, The Nature Conservancy and the Army signed a cooperative agreement to equally co-fund the purchase of land or easements off-base to support recovery of Red-cockaded Woodpecker populations. The Conservancy manages the land, and the Army has access for special training exercises when compatible with woodpecker requirements. The goal is to improve habitat for the species across the landscape and thus reduce restrictions on army training ranges. The North Carolina Sandhills Conservation Partnership now includes state agencies, a local land trust, a scientific institute, and the U.S. Fish and Wildlife Service and taps a variety of funding sources (including the Legacy Resource Management Program described above) to achieve its land protection objectives.

Healthy Forests Reserve Program

Passed in the closing days of the 2003 congressional session, the Healthy Forests Initiative contained a new land protection provision called the Healthy Forests Reserve Program. The major goals of this new program are to promote the recovery of threatened and endangered species, improve biodiversity, and enhance carbon sequestration.

Up to 2 million acres may be enrolled in this new program under one of three models — a 10-year cost-share agreement, a 30-year easement, or an ease-

ment of up to 99 years. Land will be enrolled and managed according to an approved restoration plan. The program allows cost-sharing for easement payments and restoration activities.

The Secretary of Agriculture, in coordination with the Secretary of the Interior and the Secretary of Commerce, will designate forest ecosystems that are eligible for enrollment in the program, which is authorized for fiscal years 2004 through 2008, with an appropriation of \$25 million in Fiscal Year 2004. Because the program is so new, there are no examples of funded projects.



The new federal Healthy Forests Reserve Program has the potential to help protect and restore forestlands through 10-, 30-, and 99-year easements.

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The Wilderness Society and conservation partners identified several federal programs, listed on this page, that might be modified or expanded to provide significant new funding for land conservation.
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Potential for Expanded Federal Funding

Of the federal programs described in this guide that fund land protection, The Wilderness Society and conservation partners have identified several that might be modified or expanded to provide significant new funds for conservation in the eastern states. Ranking criteria follow:

- Total dollars available
- Will fund fee/easement acquisition
- Useful in the East
- Can be focused on priority projects (more flexible than allocation to states by formula)
- Broadly applicable (not solely restricted to special purposes)
- Likelihood of political support from a broad coalition of interests

On this basis, programs that might be expanded, and the actions needed to make them more useful for forest conservation in the East, (aside from simply increased appropriations), are:

1. Land and Water Conservation Fund
 - Increase state-side funding
 - Develop flexibility to allocate federal funding to state projects of national significance
2. Forest Legacy
 - As participation expands to new states, track state-level adherence to national program standards to ensure that funds support protection of key forest values
3. North American Wetlands Conservation Act (NAWCA) grants
 - Work through Atlantic Coast Joint Venture to broaden focus from waterfowl to other migratory birds

4. Endangered Species (Section 6) grants
 - Increase allocation to Recovery Land Acquisition grants (as opposed to Habitat Conservation Plan Land Acquisition, which applies mostly in the West)
 - Change Recovery Land Acquisition from regionally competitive to nationally competitive basis (obtain equitable share of funds for eastern states)
5. Migratory Bird Conservation Fund grants
 - Increase appropriations (beyond current reliance on Duck Stamp funding)
 - Partner with sporting groups for broad political support
 - Work through National Wildlife Refuges to propose expansion of the national refuge system
6. State and Tribal Wildlife grants
 - Participate in state wildlife planning processes to incorporate key land protection priorities in state wildlife plans
 - Advocate within states for increased allocation to land protection
7. Coastal Wetlands Conservation grants
 - Work through Atlantic Coast Joint Venture to broaden focus beyond waterfowl
8. Coastal and Estuarine Land Protection grants
 - Work through the lead state agency to propose projects
 - Propose new Estuarine Research Reserves, where appropriate
9. Transportation Enhancements
 - Develop and publicize pilot projects that use this source to fund scenic easements and land acquisition for off-site mitigation

State and Local Programs

In response to an accelerating loss of open space and the increasing cost of public services needed for a sprawling population, many states and localities have developed programs to fund land conservation. These programs are commonly financed through the issuance of dedicated bonds to invest in land and easement purchases (green infrastructure), much as a state might invest in highway construction or sewage treatment.

In their 2003 book *Land Conservation Financing*, Mike McQueen and Ed McMahon document 25 states that have issued land bonds since 1960, some repeatedly. The authors also list a variety of other sources of state-level land protection funding, including general appropriations (23 states), conservation license plate sales (29 states), real estate transfer tax (14 states), and a smattering of other funding sources, from lotteries to cigarette, gas, and sales taxes and mining severance taxes. The book profiles 8 model state programs and 8 local community programs and outlines steps to initiate a local conservation funding campaign.

In addition, the Trust for Public Land offers assistance to people and organizations that are developing state-level conservation funding campaigns and provides highlights by state at http://tpl.org/tier2_rp2.cfm?folder_id=708.

Three programs not included in the McQueen and McMahon book are summarized below. The first is a classic state land bond program. The second is a system of multiple special-purpose funds, some with dedicated funding. The third is an unusual combination of land protection and affordable housing with a stable funding source tied to its mission.

Maine: Land for Maine's Future

Land protection is a long-term capital investment, analogous to road construction, and requires long-term financing such as is available through bonds.

However, it can be expensive and time-consuming to mount a successful campaign to pass bonds. Maine seems to have overcome that roadblock. The state's Land for Maine's Future Program finances acquisition of public lands for conservation, water access, outdoor recreation, wildlife and fish habitat, and farmland conservation through a combination of bonds and general funds. The program was initially funded through a \$35 million bond issued in 1987. In 1998, \$3 million in general funds were added to the program. Maine passed a second public bond of \$50 million in 1999, with support from nearly 70 percent of voters. The last available dollars from the current bond were allocated in January 2004, and a new bond for between \$100 and \$150 million has been proposed. Since projects require a funding match, state dollars leverage funds from federal, local, and private sources. The use of large-scale easements rather than fee ownership has further stretched state funds.

Only land of statewide significance qualified for funding under the original program. The 1999 legislation expanded the program to include lands of local and regional importance and allowed cooperative projects with local governments and non-profit land trusts. As of January 2004, the program had funded nearly 150 projects in all 16 counties of the state, helping to protect about 200,000 acres.

The program seems to enjoy its widespread support because it purchases only from willing sellers, provides resources to support local priority projects, and usually includes public access in its land protection packages.

An 11-member board administers the program. The board includes 6 citizens appointed by the governor and the commissioners of five state agencies (Conservation, Inland Fisheries and Wildlife, Marine Resources, Agriculture, and the State Planning Office). The

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Many states and local governments fund land conservation, often through bonds to purchase land and easements.
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Board periodically considers proposals from state agencies, municipalities, and land trusts throughout the state.

More information is available from the state planning office at <<http://www.state.me.us/spo/lmf/>>. For an update on the latest campaign, see <<http://www.mainelandbond.org>>.

North Carolina: Three Trust Funds for Land Conservation

North Carolina has established three separate trust funds that support land conservation. Two of them tap the real estate transfer tax, while the third depends on general appropriations. For more information, see <<http://www.cwmtf.net/fundsum.htm> for more information>.

The **Natural Heritage Trust Fund**, first established in 1987, receives funding from the sale of personalized license plates and from 25 percent of state receipts from the deed stamp tax. The program is managed by a Board of Trustees and the Natural Heritage Program in the Office of Conservation and Community Affairs, Department of Environment and Natural Resources. Since 1987, the fund has awarded \$102.7 million for 275 projects that have helped to protect 189,485 acres of land. In the latest funding cycle, 16 applications were received that requested \$17.4 million. Eleven were funded for a total of \$5.5 million.

The **Parks and Recreation Trust Fund**, established in 1993, is financed by 75 percent of the deed stamp tax and is managed by the Board of the Parks and Recreation Authority and the Division of Parks and Recreation in the Department of Environment and Natural Resources. This fund receives about \$23 million each year to purchase land and improve facilities for state and local parks. Since its inception, the fund has added 1,950 acres to local parks and 13,554 acres to the State Park System.

The **Clean Water Management Trust Fund**, established in 1996, is funded by general appropriations and managed by a board housed in the Department of Environmental and Natural Resources. The fund has awarded a total of \$362.7 million through 453 grants for a variety of water protection efforts, including purchase of land and easements. The Clean Water Management Trust Fund and its partners have protected 1,685 miles of riparian buffers and preserved 155,510 acres of land. The state legislature appropriated \$66.5 million in for 2002-2003 and committed to annual funding at \$100 million beginning in 2003-2004.

Vermont: Land Gains Tax and Housing/Conservation Trust Fund

Like many states, Vermont uses a property transfer tax as one source of general revenues. In 1973, the state added a second real estate tax specifically designed to reduce land speculation. This Land Gains Tax is imposed on the gain from the sale or exchange of Vermont land that was held less than 6 years, but does not apply to the first 10 acres beneath or contiguous to the seller's principal residence. Rates increase for land held for shorter periods or that realizes larger gains when sold (Table 3). "Land" includes timber rights that are purchased and sold within 6 years, provided that the underlying land is also sold within 6 years.

TABLE 3.

Vermont Land Gains Tax Rates

Years Land Held	— Percent Gain —		
	0-99%	100-100%	200% or more
Less than 4 months	60	70.0	80
4 months but less than 8	35	52.5	70
8 months but less than 1 year	30	45.0	60
More than 1 year but less than 2	25	37.5	50
More than 2 years but less than 3	20	30.0	40
More than 3 years but less than 4	15	22.5	30
More than 4 years but less than 5	10	15.0	20
More than 5 years but less than 6	5	7.5	10

Fifty percent of the proceeds from this tax (along with other state appropriations) are used to fund Vermont's Housing and Conservation Trust Fund that, like the Land Gains Tax, addresses the impacts of sprawl on the state. The Vermont Housing and Conservation Board (VHCB) administers this fund, making loans and grants to non-profit organizations, municipalities, and state agencies for the purchase of land or conservation easements. The Board also co-holds easements with applicants. Spending falls under four main categories: (1) farmland preservation; (2) recreation land, working forests, and natural areas; (3) significant historic properties; and (4) subsidies for affordable housing.

By tying land conservation to affordable housing, this program addresses the frequent criticism that efforts to secure open space will limit future housing construction and drive up the cost of housing. Because the VHCB provides a stable source of dedicated funding, land trusts such as the statewide Vermont Land Trust have been able to invest in long-term legal and monitoring capacity to make the best use of conservation funds. Permanent funding also means that more funds go directly to land conservation rather than to finance repeated campaigns to pass the next land bond.

For more information, see <<http://www.vhcb.org/>>.

Local Options

This guide concludes its summary of public funding sources with profiles of two new models for local land protection developed by a town in northern New Hampshire and by New York City.

Randolph Town Forest, New Hampshire. Randolph is a town of 341 residents in sparsely settled northern New Hampshire. The region's forests, both public and private, have traditionally provided both industrial wood fiber

and recreational opportunities. The private forestland north of the village of Randolph was long held by the Brown Company, a family owned paper manufacturer with a mill in nearby Berlin. Beginning in the 1980s, a series of sales of both the mill and land left the Pond of Safety tract in the hands of Hancock Timber Resource Group. After severe damage from the region-wide 1998 ice storm, Hancock decided to sell the 13,500-acre tract.

The town's Planning Board anticipated a fiscal burden due to homes sprouting far up the inaccessible slopes. Meanwhile, local members of the Randolph Mountain Club placed high priority on protecting the area's traditional trails that connected with the White Mountain National Forest network, and the Appalachian Mountain Club and Trust for Public Land identified the tract as a critical link between northern and southern units of the White Mountain National Forest that provide both unbroken natural landscapes and recreation corridors.

The Trust for Public Land worked with the town to pull together these diverse interests and multiple funding sources, including significant public investments. The U.S. Forest Service used LWCF funds to acquire 3,255 acres within it's the White Mountain National Forest proclamation boundary. The state tapped \$2.1 million in Forest Legacy funding to buy a conservation easement on 10,192 acres. And New Hampshire's Land and Community Heritage Investment Program (LCHIP) contributed \$250,000.

Because of intense local interest in the property, a determined group of Randolph residents decided to re-invent the town forest on a grand scale. The local Randolph Foundation shouldered the task of raising approximately \$1.5 million to purchase the underlying fee on 10,192 acres to form the Randolph Community Forest. Funds poured in from residents and supporters. Major

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Other towns are
interested in
establishing a
community forest
program modeled
on the success of
Randolph, New
Hampshire.
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grants arrived from the Merck Family Fund, the Open Space Institute's Northern Forest Protection Fund, Davis Conservation Foundation, Moriah Fund, Anna B. Stearns Fund, and the Stanton and Elisabeth Davis Fund of the Northern New Hampshire Foundation.

A special town ordinance established a Forest Management Committee to oversee planning and operations for the new community forest. Rather than face a rising bill for town services, the town now expects to earn enough from timber (and perhaps recreation) revenues to cover the previous property taxes and pay management costs. News has spread, and key visionaries David Willcox, John Scarinza, and Walter Graff frequently advise other towns that want to establish community forests.

Watershed Land Protection, New York City. The Randolph model fits rural areas where reasonable land prices make fund-raising feasible. An urban option for land conservation arises from the need for urban water authorities to ensure high-quality drinking water. The New York City watershed program is an outstanding example of how the protection of urban drinking water supplies can mesh with forestland conservation goals.

The city's watershed encompasses some 1,900 square miles of land in the Catskill Mountains and Hudson River Valley. This area supplies approximately 1.5 billion gallons of water daily to more than 9 million customers in New York City and nearby counties. The Catskill/Delaware Watershed, located approximately 100 miles northwest of New York City, provides 90 percent of the city's drinking water and covers about 1,600 square miles of land in five counties. The Croton Watershed supplies the remaining 10 percent. Land use in both areas affects the quality of source waters and the treatments needed to ensure that tap water in the city is safe to drink.

In 1989, the U.S. Environmental Protection Agency promulgated the

Surface Water Treatment Rule to protect drinking water sources nationwide under the 1986 Safe Drinking Water Act Amendments. The new rules mandated that all surface drinking water sources would have to meet certain water quality standards by June 1993 or be filtered. New York City estimated that it would cost from \$4 billion to \$6 billion to filter the Catskill/Delaware supplies, which would more than double water rates.

The city's Department of Environmental Protection (NYDEP) sought to avoid the costs of filtration by influencing land use across the watershed. The Department's initial 1990 Watershed Protection Plan included revised watershed rules and regulations and a land acquisition plan. In 1991, communities in the watershed opposed to the plan formed the Coalition of Watershed Towns, an organization representing 34 towns, 9 villages, and 5 counties located west of the Hudson River.

Under increasing pressure from both EPA and the watershed towns, New York Governor Pataki convened all the stakeholders in April 1995. Seven months of intense negotiations finally produced an Agreement in Principle that sought to protect the quality of the city's drinking water supply, while supporting the economic vitality and social character of the watershed communities. In 1997, this process culminated in a landmark Memorandum of Agreement for the long-term protection of water quality in the watershed. Under the agreement, the city expects to spend about \$1 billion over the next 10 years to protect water quality through land-based protection, avoiding an estimated \$5 to \$8 billion cost for the construction of a filtration plant. (For more, see <<http://www.ci.nyc.ny.us/html/dep/html/agreement.html>>).

Initially, EPA's directive to New York City emphasized permanent land protection as the preferred means of ensuring water quality. Although subsequent

negotiations added a range of alternative methods to the menu, land and easement acquisition remains a significant strategy. The **Land Acquisition Program** was initiated in January 1997 with funding from bonds issued by the city that are repaid through bills to city water ratepayers. The city has also received assistance in the form of low-interest loans from EPA's Clean Water State Revolving Fund. Beginning with \$250 million for Catskill/Delaware and \$10 million for Croton, the program added \$3.5 million from settlements with another \$75 million likely available in the near future.

Under the Memorandum of Agreement, the city must solicit owners of 355,000 acres of eligible land in the Catskill/Delaware Watershed (approximately 30 percent of the watershed area) and must commit from \$250 to \$300 million to land acquisition. As of fall 2003, the city had spent or committed about \$120 million to purchase more than 49,000 acres in fee. Easements on 5,362 acres (usually purchase of development rights with allowance for farm and forest practices that adhere to best management practices) cost the city an additional \$13 million.

The Agreement allows towns to designate land they consider critical to future development as off-limits for purchase by the city. In addition, the city pays taxes on both property and conservation easements. (Note that some lands trusts believe this sets a negative precedent; New York City is currently the largest taxpayer in the watershed, paying \$70 million annually in local property tax on its lands and easements.)

The **Watershed Agricultural Council** (WAC), formed in 1993, represents the most innovative aspect of the New York City Watershed Agreement. The non-profit WAC uses a voluntary, incentive-based approach in its two key

programs: Watershed Agricultural and Watershed Forestry. Initially, the Watershed Agricultural Program focused on whole-farm planning, landowner education about watershed-friendly practices, and cost-sharing of watershed improvements. In 1998, the Council began purchasing easements on active farmlands (whereas the NYDEP Land Acquisition Program focuses on well-head protection and reservoir buffers) and by 2002 had purchased 3,550 acres in easements with 1,127 acres under contract.

The **Watershed Forestry Program**, like its agricultural counterpart, provides landowner and logger education and cost-sharing to promote practices that protect water quality. It operates on the premise that keeping land forested best assures clean water, and that healthy markets for forest products will help retain forested land use and compete with development. The program's economic action component supports the area's wood-based businesses, including secondary processing of forest products and the development of value-added products. To date, 40 grants have been awarded, for a cost-share investment of more than \$3.2 million (see <www.nycwatershed.org> for more details).

The New York City case demonstrates that a small surcharge to the water bills of millions of water users to finance the protection of a major urban drinking water supply can generate significant funds for land protection. Water companies and utilities have long purchased reservoir lands through eminent domain authorities and established buffers around public water supply reservoirs. The New York City watershed program showcases an alternative that combines diverse approaches across an entire watershed to protect land and the water that flows from it.

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Consensus and
innovation
characterize New
York City's program
to protect the
forested watersheds
that supply the city's
drinking water.
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Appendix A: Helpful Web Sites

USDA Forest Service, Forest Legacy	http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml
U.S. Department of Interior, Fish and Wildlife Service (FWS) Grants	http://faims.fws.gov/DrillDown/search.do
FWS, North American Wetlands Conservation Act Grants	http://northamerican.fws.gov/NAWCA/grants.htm
FWS, Migratory Bird Conservation Fund	http://realty.fws.gov/mbcc.html
FWS, Neotropical Migratory Bird Conservation Act Grants	http://birdhabitat.fws.gov/NMBCA/eng_neo.htm
FWS, Endangered Species Conservation Fund	http://endangered.fws.gov/grants/
FWS, Coastal Program	http://www.fws.gov/cep/cepcode.html
FWS, National Coastal Wetlands Conservation Grants	http://federalaid.fws.gov/cw/cw_jul97.html
FWS, State Wildlife Grants	http://federalaid.fws.gov/swg/swg.html
FWS, Federal Aid in Sportfish Restoration (Dingell-Johnson)	http://federalaid.fws.gov/sfr/fasfr.html
FWS, Federal Aid in Wildlife Restoration (Pittman-Robertson)	http://federalaid.fws.gov/wr/restorin.html
National Fish and Wildlife Foundation	http://www.nfwf.org/
FWS Private Stewardship Grants	http://endangered.fws.gov/grants/private_stewardship.html
FWS Landowner Incentive Program	http://federalaid.fws.gov/lip/lip.html
FWS Partners for Fish and Wildlife	http://partners.fws.gov/
Atlantic Coast Joint Venture	http://northeast.fws.gov/migratorybirds/acjv.htm
National Estuarine Research Reserve Association	http://www.nerra.org/
NOAA, National Estuarine Research Reserve System	http://nerrs.noaa.gov/
NOAA, Coastal and Estuarine Land Conservation Program	http://coastalmanagement.noaa.gov/landconservation.html
Environmental Defense, Center for Conservation Incentives, Farm Bill Tool Kit	http://www.environmentaldefense.org/farmbill/home.cfm
USDA Farm and Ranchlands Protection Program	http://www.nrcs.usda.gov/programs/frpp/index.html
USDA Wetlands Reserve Program	http://www.nrcs.usda.gov/programs/wrp/
USDA Grassland Reserve Program	http://www.nrcs.usda.gov/programs/GRP/
USDA Conservation Reserve Enhancement Program	http://www.fsa.usda.gov/dafp/cepd/crep.htm
USDA Wildlife Habitat Incentives Program	http://www.nrcs.usda.gov/programs/whip/
USDA Environmental Quality Incentives Program	http://www.nrcs.usda.gov/programs/eqip/
USDA Conservation Reserve Program	http://www.fsa.usda.gov/dafp/cepd/crp.htm
USDA Conservation Security Program	http://www.nrcs.usda.gov/programs/csp/
USDA Forest Land Enhancement Program	http://www.fs.fed.us/spf/coop/programs/loa/flep.shtml
EPA Clean Water State Revolving Fund	http://www.epa.gov/owm/cwfinance/cwsrf
EPA Safe Drinking Water Act	http://www.epa.gov/safewater/dwsrf.html
U.S. Department of Transportation, TEA-21	http://www.fhwa.dot.gov/tea21/
U.S. Department of Transportation, National Transportation Enhancements Clearinghouse	http://www.enhancements.org/
U.S. Department of Defense Legacy Resource Management Program	http://www.dodlegacy.org/
U.S. Department of Defense Readiness and Range Protection Initiative	https://www.denix.osd.mil/denix/Public/Library/Sustain/RRPI/Workshops/rppi-workshop.html

Trust for Public Land, Conservation Financing	http://tpl.org/tier2_rp2.cfm?folder_id=708
North Carolina land conservation trust funds	http://www.cwmtf.net/fundsum.htm
Maine State Planning Office, Land for Maine's Future	http://www.state.me.us/spo/lmf/
Maine Land Bond Coalition	http://www.mainelandbond.org
Vermont Housing and Conservation Trust Fund	http://www.vhcb.org/
New York City Watershed Agricultural Council	www.nycwatershed.org
New York City Department of Environmental Protection, Watershed Agreement and Land Acquisition Program	http://www.ci.nyc.ny.us/html/dep/html/agreement.html

Appendix B: Summary of Federal Land Conservation Funding Programs, Fiscal Year 2003

Program	FY2003 Appropriation	Source of Funds	Allocation	Purposes
Interior: LWCF* (Federal and State-side)	\$413 million (\$266 million for FY 2004)	User fees, fuel taxes, offshore oil and gas leases, appropriations	Four federal land agencies; states by formula	Land acquisition for national parks, forests, wildlife refuges, BLM lands and state and local public land
USDA Forest Service: Forest Legacy*	\$68 million (\$71 million for FY 2004)	Appropriations	State Forest Stewardship Coordinating Committees, to US Forest Service, increasingly by earmarks	Easement or fee purchase of forest land threatened with conversion
FWS: North American Wetlands Conservation Act*	\$38 million appropriated, \$66 million total	Fines, fuel taxes, appropriations	National competitive grants, approved by Migratory Bird Conservation Commission, US Fish and Wildlife Service	Acquisition and restoration of wetlands and associated uplands important to migratory birds (including Mexico and Canada)
FWS: Migratory Bird Conservation Fund*	\$47 million	Duck stamps, certain import duties, refuge admissions, other income, and appropriations	Recommendation of Joint Ventures, approved by Migratory Bird Conservation Commission, US Fish and Wildlife Service	Acquisition of land for national wildlife refuges.
FWS: Neotropical Migratory Bird Conservation Act	\$3 million	Appropriations	Fish and Wildlife Service, Division of Bird Habitat Conservation, with assistance from an advisory group	Nearly all outside of U.S.
FWS: Federal Aid in Wildlife Restoration (Pittman-Robertson)	\$179 million	Excise tax on sporting equipment	Allocated to states based on land area and licensed hunters	State wildlife department activities, including state wildlife management areas
FWS: Federal Aid in Sportfish Restoration (Dingell-Johnson)	\$275 million (exclusive of Coastal Wetlands Conservation Grants)	Excise tax on fishing equipment and marine fuels	Allocated to states based on land and water area and licensed fishermen	Fish restoration; public fishing access areas
FWS: ESA Section 6: Recovery Land Acquisition*	\$12.7 million	Appropriations	Regional competitive grants, Fish and Wildlife Service	Acquisition of habitat for endangered species by states
FWS: ESA Section 6: HCP Land Acquisition*	\$51.1 million	Appropriations	National competitive grants, Fish and Wildlife Service	Acquisition of land associated with a habitat conservation plan
FWS: Coastal Program	\$11 million (covers administration as well as projects)	Appropriations	Sixteen regional programs, Fish and Wildlife Service	Land or easements, as well as education and restoration; coordinates funding from various other programs
FWS: Coastal Wetlands Conservation Grants	\$17.3 million	Excise taxes on fishing equipment (~15% of Dingell-Johnson funds)	National competitive grants, Fish and Wildlife Service	Acquisition of land and easements, restoration of coastal wetlands
FWS: State and Tribal Wildlife Grants*	\$65 million, of which \$57.7 million distributed to states	Appropriations	Allocated to states by formula, Fish and Wildlife Service	State fish and wildlife agency programs to benefit wildlife and habitat; may be used to purchase state interests in land

FWS/Private: National Fish and Wildlife Foundation	\$24.17 million from federal agencies plus \$2.7 million other sources	Private donations and appropriations	Dedicated funds for specific grant programs	Individual funds with specific regions and purposes
NOAA: Estuarine Research Reserves	\$27.7 million	Appropriations	Proposals submitted by state to establish new reserve or expand existing reserve	Permanent land base to support coastal and estuarine research and education
NOAA: Coastal and Estuarine Land Conservation Program	\$36.7 million	Appropriations	Theoretically competitive grants through states; currently mostly earmarks	Protection of coastal land and estuaries, especially land threatened by conversion
USDA: Farm and Ranchlands Protection	\$67 million	Appropriations	Allocated to states based on farmland protection plans submitted to Natural Resources Conservation Service	Acquisition of easements to prevent conversion of agricultural land, including forestland when part of a farm parcel
USDA: Wetlands Reserve Program	\$260 million	Appropriations	Individual application through local Natural Resources Conservation Service	Permanent or thirty-year easements or 10-year contracts to restore and maintain wetlands
USDA: Grasslands Reserve Program	\$49.9 million	Appropriations	Individual application through local Natural Resources Conservation Service	Permanent or thirty-year easements, rental agreements and restoration cost- share to restore and protect grasslands and shrublands
USDA: Conservation Reserve Enhancement Program	\$53.6 million federal share (2003 program year)	Appropriations	Administered by Farm Service Agency, dispersed by signed agreement with NRCS to 26 projects in 24 states	Conservation practices, some land or easement acquisition (federal dollars do not fund permanent easements)
EPA: Clean Water State Revolving Fund	\$1.3 billion	Appropriations	Allocated to states based on formula, contact local Clean Water State Revolving Fund agency	Mostly loans for wastewater treatment; can fund non-point pollution reduction and estuary protection, including land acquisition
EPA Drinking Water Revolving Fund	\$844 million (\$800 million allocated to states)	Appropriations	Allocated to states based on Drinking Water Needs Survey, contact local Drinking Water State Revolving Fund agency	Mostly loans for water infrastructure; may also fund acquisition of water- shed land or easements (up to 10% of federal funds)
DOT: TEA-21, Transportation enhancements	\$648 million	Highway Trust Fund (motor fuel and truck taxes)	Allocated to states based on 10% of surface transportation program spending, plus Congressional earmarks	Mitigation of highway construction impacts, scenic easements (land purchase eligible, though seldom used)
DOT: TEA-21, Recreational trails	\$50 million	Highway Trust Fund (motor fuel and truck taxes)	Allocated to states, half by equal shares and half by off-road vehicle fuel use	Purchase of land for trails; trail construction , education
DOT: TEA-21, National scenic byways	\$26.5 million	Highway Trust Fund (motor fuel and truck taxes)	National competitive grants, through Federal Highway Administration	Projects along All-American Roads, National Scenic Byways, or State-des ignated scenic byways
DoD: Legacy Resource Management Program and Readiness and Range Preservation Initiative	\$9 million (likelihood of new funds for RRPI in FY2005)	Appropriations	Proposal submitted in partnership with a military installation	Resource protection connected to military installations, including buffers around military ranges to reduce conflicts with surrounding land uses
Interior: Healthy Forests Reserve Program	\$25 million	Appropriations	National competitive grants, (new program)	Short term agreements or easements up to 99 years for private land that enhances critical habitat

Appendix C: LWCF Projects and State-side Funds, by States in the East, Fiscal Years 2003 and 2004

State	Project	FY2003		Project	FY 2004	
		Federal LWCF Funds	State-side LWCF Funds		Federal LWCF Funds	State-side LWCF Funds (est.)
Alabama	Cahaba NWR	\$3,000,000	\$1,573,233	Alabama National Forests (multiple)	\$750,000	\$1,505,476
				Talladega NF: Pinhoti Trail	\$1,000,000	
Connecticut	(see NH)		\$1,500,655			\$1,433,923
Delaware	Prime Hook NWR	\$1,350,000	\$902,185			\$869,387
Florida	National Key Deer Refuge	\$750,000	\$4,117,184	Timucuan Ecological and Hist. Preserve	\$500,000	\$3,906,846
	Pelican Island	\$1,750,000		FL National Scenic Trails (multiple NF's)	\$3,000,000	
	St Marks NWR	\$2,000,000		Suwannee Wildlife Corridor (multiple NF's)	\$750,000	
	South FL Restoration Grant	\$15,000,000				
	Timucuan Ecological Historic Preserve	\$2,000,000				
	FL National Scenic Trail	\$3,000,000				
Georgia	Savannah NWR-Mulberry Grove	\$2,000,000	\$2,230,995	Chatooga River Corridor (multiple NF's w/ SC/NC)	\$750,000	\$2,129,605
	Chattahoochee NF	\$3,200,000		Chattahoochee NF: Georgia Mts. Riparian Project	\$500,000	
	Multi-Chattooga (GA/SC/NC*)	\$2,000,000				
Illinois	Cypress Creek NWR	\$250,000	\$3,307,788	Shawnee NF	\$500,000	\$3,143,272
	Midewin Tallgrass Prairie (see MN)	\$500,000				
Indiana	Indiana Dunes National Lakeshore	\$250,000	\$1,907,958	Hoosier NF: Hoosier Unique Areas	\$500,000	\$1,821,934
	Hoosier NF	\$1,500,000		Patoka River NWR	\$500,000	
	Patoka River NWR	\$250,000				
Kentucky	Daniel Boone NF	\$2,500,000	\$1,397,173	Daniel Boone NF	\$750,000	\$1,340,962
	Clarks River NWR	\$1,500,000		Clarks River NWR	\$500,000	
Maine	Rachel Carson NWR (see NH)	\$1,500,000	\$931,418	Rachel Carson NWR	\$750,000	\$898,515
Maryland			\$1,898,401			\$1,809,750
Massachusetts	Great Meadows NWR	\$1,600,000	\$2,156,315	Silvio O Conte NWR (also VT, NH)	\$750,000	\$2,052,710
	Parker River NWR (see NH)	\$500,000				

Michigan	Detroit River NWR	\$3,500,000	\$2,787,554	Sleeping Bear Dunes NL	\$1,000,000	\$2,651,675
	Sleeping Bear Dunes NL	\$1,000,000		Great Lakes/Great Lands, multiple NF's	\$1,500,000	
	Huron & Ottawa NFs	\$2,500,000				
	Keweenaw NHP	\$600,000				
Mississippi	Gulf Island NS	\$6,000,000	\$1,156,453	Gulf Islands NS (Cat Island)	\$4,000,000	\$1,113,283
				Gulf Islands NS (Horn Island)	\$1,100,000	
				DeSoto NF	\$360,000	
New Hampshire	Silvio O Conte NFWR (VT/NH/MA/CT)	\$1,000,000	\$960,720	(see MA)		\$925,439
	Great Bay NWR	\$300,000				
	White Mountain NF	\$500,000				
New Jersey	Cape May NWR	\$500,000	\$2,645,707	New Jersey Pinelands Preserve	\$750,000	\$2,514,015
	Delaware Water Gap NRA (See PA)	\$4,000,000		Cape May NWF	\$750,000	
	Great Swamp NWR	\$750,000		Great Swamp NWR	\$750,000	
New York	(see NJ)		\$4,855,591			\$4,602,356
North Carolina	(see VA, GA)		\$2,198,184	Uwharrie NF: Uwharrie Trail	\$500,000	\$2,098,683
Ohio	Ottawa NWR	\$600,000	\$3,080,800			\$2,928,848
Pennsylvania	Valley Forge NHP (see NJ)	\$2,500,000	\$3,324,544	Valley forge NHP	\$5,000,000	\$3,158,174
Rhode Island	RI Refuge Complex	\$2,000,000	\$973,096	Rhode Island Refuge Complex	\$2,000,000	\$936,081
South Carolina	Francis Marion NF (see GA)	\$2,000,000	\$1,487,315	Francis Marion NF	\$1,300,000	\$1,424,179
				Sumter NF	\$1,300,000	
				Waccamaw NWR	\$1,300,000	
Tennessee	Chichamaugua and Chatanooga NMP	\$1,300,000	\$1,793,212	Obed Wild and Scenic River	\$750,000	\$1,714,171
	Chickasaw NWR	\$500,000		Cherokee NF: Tennessee Mountains	\$3,800,000	
	Cherokee NF	\$4,400,000		Chickasaw NWR	\$750,000	
	Lower Hatchi NWR	\$300,000		Lower Hatchie NWF	\$1,800,000	
Vermont	Green Mt NF: Rec & Water Enhancement (see NH)	\$1,750,000	\$827,498	Green Mountain NF (see MA)	\$1,500,000	\$799,586
Virginia	Back Bay NWR	\$1,500,000	\$2,141,830	Shenandoah Valley Battlefields NHD	\$1,000,000	\$2,042,432
	Rappahannock River Valley NWA	\$180,000		Back Bay NWR	\$750,000	
	Richmond NBP	\$2,000,000				
	Shenandoah Valley NHP	\$2,000,000				

West Virginia	Monongahela NF	\$4,000,000	\$1,027,015	Monongahela NF: Beckwith	\$1,800,000	\$989,180
	Gauley River NRA			Canaan Valley NWR	\$600,000	
Wisconsin			\$1,744,518	White Sulphur Springs NFH	\$400,000	\$1,667,759
	Ice Age NST	\$2,000,000		Ice Age NST	\$2,000,000	
	Fairfield Marsh WPA	\$1,000,000		Chequamegon-Nicolet NF Wisconsin Wild Waterways	\$2,000,000	
	Chequamegon and Nicolet NF	\$2,000,000				

Source: www.wilderness.org and www.americantrails.org

Appendix D: Eastern Forest Legacy Projects for 2003 and Proposed for 2004

State	Project Name, 2003	2003 Funding	Project Name, 2004	2004 Funding ^a
AL	Perdido River	\$1,987,000	Mobile Tensaw Delta	\$2,981,000
CT	Stone House Brook Project	\$1,093,000	Peaceful Hill	\$199,000
CT			Nipmuck	\$348,000
DE	Green Horizons, phase 2	\$994,000	Green Horizons	\$1,987,000
GA	Pine Mountain	\$3,974,000	Rocky Creek at Broxton Rocks	\$1,490,000
GA	Sheffield	\$99,000		
IL	Coon Creek Woods	\$94,000	Bryon Rock River	\$1,192,000
IL	Kyte River	\$303,000		
IN	Mt. Tea Ridge	\$1,590,000	Shawnee Hills	\$1,987,000
MA	Eagleville Pines	\$830,000	Belmont Springs	\$1,391,000
MA	Karner Brook Ridge	\$303,000	Bush Hill	\$226,000
MA	Mt. Washington Hi-Rock Camp	\$497,000		
MD	Pintail	\$149,000	Broad Creek	\$994,000
MD	Deer Creek	\$149,000		
ME	Leavitt Plantation	\$596,000	Machias River, phase 1	\$1,987,000
ME	West Branch, phase 2	\$2,484,000	Mt. Blue/Tumbledown, phase 3	\$1,490,000
MN	North Duluth, phase 1&2	\$407,000	Lester River	\$497,000
NC	RPM project	\$1,490,000	Cool Springs	\$1,490,000
NC				
NH	Connecticut Lakes Headwaters	\$7,948,000	Pillsbury/Sunapee Highlands	\$2,514,000
NH			Moose Mountain	\$994,000
NJ	NJ Highlands, Lake Gerard	\$2,981,000	Upper Delaware River Watershed	\$4,868,000
NY	East Branch Fish Creek, phase 2	\$1,490,000	Pochuck Mountain	\$1,292,000
PA			River Hills	\$576,000
RI	Weetamoe Woods, phase 2	\$248,000	Great Grass Pond	\$326,000
RI	DuVal Trail Corridor	\$199,000		
SC	Coastal Forests, Great Pee Dee River, phase 3	\$4,968,000	Cooper River Corridor	\$7,650,000
TN	Anderson - Tully	\$3,477,000	Ray/Gettelfinger	\$994,000
TN	McGlothin tract	\$795,000	Jim Creek Parcel	\$833,000
VA	Romine project	\$596,000	Dragon Run	\$1,987,000
VA	Sandy Point	\$571,000	The Cove	\$994,000
VT	Bull and Sable	\$2,583,000	Chittenden Uplands	\$3,130,000
			Monadnock Mountain	\$497,000
WI	Bad River Headwaters	\$3,428,000	Holy Hills	\$1,987,000
WI	Baraboo Hills	\$994,000		

a The FY2004 amount does not include a .59% rescission that was proposed but not finalized as of this writing.

Sources: USDA Forest Service, Forest Legacy Program Overview <<http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml>> and USDA Forest Service, Northeastern Area, State and Private Forestry, Durham, NH

COVER PHOTOS:

Left: Umbagog National Wildlife Refuge,
New Hampshire. Funds from the federal Land
and Water Conservation Fund helped to
purchase 6,218 acres for the refuge from
Hancock Timber Resource Group.

Photo by Jerry and Marcy Monkman/EcoPhotography.

Top: The Conasauga River, Chattahoochee
National Forest, Georgia. This area was
scheduled for funding from the federal Land
and Water Conservation Fund in 2004.

Photo courtesy of Kathryn Kolb



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