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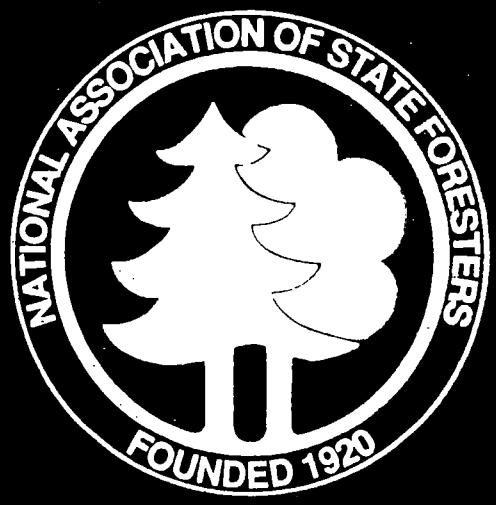
NATIONAL ASSOCIATION OF STATE FORESTERS
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# FORESTRY RESEARCH

## *USDA Forest Service Research*

**Issue**

The National Association of State Foresters play a vital role in transferring technology to America's small, non-industrial private woodland owners, as well as in managing sizable acreage of state-owned forests. To do this effectively, the State Foresters need to have access to current research in order to address today's complex resource issues. There is broad consensus in the forestry community that increased investment in forestry research is needed to ensure the sustainability of forest resource use in the face of increasing demands for all forest products.

**Status**

The USDA Forest Service's Research programs provide critical information about a wide variety of forest conditions, trends, and technologies for forest management and utilization. NASF is particularly interested in the following key areas:

**Forest Inventory and Analysis:** Current information on forests is critical to Federal, State, and local policy makers, as well as to forest managers, forest industries, and landowners. The Forest Inventory and Analysis program can provide up-to-date information about timber supply, wildlife habitat, and a wide variety of other forest resource conditions. It also provides critical information about forest management objectives of other private forest landowners. Relevant decision making requires that this information be updated on a cycle of 10 years or less, depending on the dynamics of change in the forest. The coming fiscal year will present an opportunity to bring most of the country back on schedule with the 10 year cycle. This schedule is critical if forest managers and the public are to make informed decisions about the future of the forests.

**Forest Health Monitoring:** This program provides vital information about forest conditions focusing specifically on forest health and responses to stress (such as acid deposition and climate change). Currently, 14 states are actively participating in the program, which is a partnership between the USDA Forest Service, the States, and the U.S. Environmental Protection Agency. Five additional States (MI, MN, WA, WI, WV) are ready to actively participate in the program in Fiscal Year 1994. NASF's long-term goal is to actively include every state in this program.

**Forest Pests and Diseases:** Research on forest pests and diseases is needed to address continuing and emerging threats to the health of both public and private forests. Biological and silvicultural controls of devastating forest insect pests such as the gypsy moth (including the recently introduced Asian strain), southern pine beetle, pear thrips, and spruce budworm and forest diseases such as oak wilt, dogwood anthracnose and root rot, are badly needed, as is research on the development of pest resistant trees.

**Forest Fire Management:** Forest Service Research is responsible for providing information to all wildland fire managers, including State and local governments. Fire research resources have decreased by about 50 percent over the past 15 years, a period when new challenges have tested those responsible for protecting forests, lives, and property from wildfires. Sound knowledge is needed to make decisions about dealing with wildland fires, particularly in critical areas such as the wildland/urban interface.

**Semiarid Agroforestry:** Dryland agricultural ecosystems present new opportunities to practice conservation forestry. Agroforestry systems stabilize and enhance crop yields while fully protecting soil and water resources under highly variable climatic conditions. The Forest Service's Center for Semiarid Agroforestry in Lincoln, NE, is in its second year of operation, and is serving as a center for research, development and technology transfer involving USDA agencies, universities, and state forestry agencies.

**Threatened, Endangered, and Sensitive Species (TES):** Protection, management, and recovery of threatened, endangered and sensitive species are required by the Endangered Species Act, and several other land management laws. Measures taken to address

the needs of these species can significantly affect forest management decisions. It is important that actions taken to list, protect, and recover these species be based on sound scientific information. Research must meet the needs of both private and public forest landowners to address important forest management issues.

**Forested Wetlands and Riparian Areas:** These areas are important resources and are often critical habitat for wildlife. Wetlands provide valuable wood products, wildlife, and water resources. With an adequate information base, these ecosystems can be properly managed and, where necessary, restored to productivity. Research needs to be intensified in the South and West, and expanded to include the Northeast.

**Reforestation:** Timber and fiber needs of the country are increasing while the land base devoted to timber management is decreasing. One means of increasing forest land productivity is to accelerate the application of cost-effective reforestation techniques. Research needs to be accelerated to develop and test improved methods for nurseries, planting techniques, and site preparation.

**Forest Productivity**: In the future, small, non-industrial private forest landowners must increase forest productivity to meet the nation's demand for wood and fiber. In order for these landowners to make a significant contribution, cost-effective management systems are needed to meet their unique situations. Pursuit of this research is particularly important in light of decreasing timber supplies from federal and other ownerships.

**Urban Forests:** The knowledge needed to manage these unique forests is incomplete. This knowledge is critically needed to assure the success of current intensive tree planting efforts.

**Global Change**: Management decisions for forest and range resources will be affected by new data regarding global change. Without scientific information, policies may be adopted that do not take into account critical long-term forest dynamics.

**Economics and Social Science:** Greater research is needed to understand the economics of forestry, the relation of the forests to local, national, and international economies, and the social importance and effects of forest management decisions.

**Cumulative Watershed Effects:** Forest managers are required by law to make cumulative watershed effects assessments when proposing management activities. Research has been initiated in critical regions of the country to provide the basic information needed for assessment models. An accelerated research program is needed to place these models in the hands of users nationwide in a more timely fashion.

**Objectives/ Benefits**

- Up-to-date inventory information on all the Nation's forest lands
- Expanded Forest Health Monitoring activities
- Pest management strategies and program flexibility to respond to emerging pest and disease problems
- Restoration of fire research funding to historic levels
- Agroforestry systems to improve crop yields and protect soil and water resources
- Up-to-date information on the status, range, and recovery of threatened, endangered and sensitive species
- Management strategies for wetlands
- Techniques for reforestation
- Improved forest management strategies for private landowners
- Techniques for sustaining urban forest resources
- Forest management strategies for mitigating and adapting to global change
- Economic and social effects information to round out management decisions now based entirely on physical and biological information
- Expanded Cumulative Watershed Effects Assessment Models

**The Future**

An investment in forestry research will have positive effects on many resource areas and lower probable future costs associated with managing forest resources:

- Forest inventory cycle of no more than 10 years in every state
- An annual "check-up" on the health of the Nation's forests
- Environmentally safe control of forest insects and diseases

- Effective and lower cost control of potentially catastrophic forest fires
- Sustainable semiarid agroforestry systems
- Avoidance of listing and accelerated recovery of threatened and endangered species with minimized impacts on other resource values
- Maintenance of forested wetland ecosystems
- Effective reforestation and reduced tree mortality
- Increased wood and fiber production from private lands
- Reduced urban energy costs and air pollution; more beautiful cities
- A positive forestry response to global change
- Resource management decisions based on social, biological and physical considerations
- Cumulative effects assessment models that allow agencies to credibly meet legal mandates

**Budget**

**USDA FOREST SERVICE**
**RESEARCH**
**($ millions)**

| | Final FY 93 | Admin FY 94 | NASF FY 94 |
|---|---|---|---|
| **Protection** | 40.8 | 43.2 | 53.1 |
| **Resource Analysis** | 35.0 | 36.5 | 42.4 |
| **Management** | 39.6 | 43.3 | 43.3 |
| **Environment** | 41.8 | 44.8 | 44.8 |
| **Products** | 25.5 | 26.4 | 26.4 |
| **TOTAL** | 182.7 | 194.2 | 210.0 |

**NASF Proposed Increases (Forest Service Research)**
**by budget line item**

| | BY ITEM | TOTAL |
|---|---|---|
| **Forest Protection** | | 12.3 |
| Insects & Diseases | 5.0 | |
| Fire Protection | 7.2 | |
| Agroforestry | 0.1 | |
| **Resource Analysis** | | 7.4 |
| Forest Health Monitoring | 1.7 | |
| Inventory and Analysis | 3.7 | |
| Economics & Policy | 1.0 | |
| Urban Forestry | 0.6 | |
| Rural Development | 0.2 | |
| Wetlands | 0.2 | |
| **Forest Management** | | 3.7 |
| Agroforestry | 0.3 | |
| Forest Management | 2.9 | |
| Wetlands | 0.5 | |
| **Forest Environment** | | 2.3 |
| Threatened & Endangered Species | 1.6 | |
| Wetlands | 0.5 | |
| Cumulative Water. Effects | 0.2 | |
| **Forest Products** | | 0.3 |
| Rural Development | 0.3 | |
| **Total Proposed Increase** | | 26.0 |

NASF Budget Recommendations - Fiscal Year 1994

USDA FOREST SERVICE RESEARCH
($ millions)

| | Final FY 92 | Final FY 93 | Admin FY 94 | NASF FY 94 |
|---|---|---|---|---|
| Protection | 40.8 | 40.8 | 43.2 | 53.1 |
| Resource Analysis | 33.2 | 35.0 | 36.5 | 42.4 |
| Management | 39.2 | 39.6 | 43.3 | 43.3 |
| Environment | 42.7 | 41.8 | 44.8 | 44.8 |
| Products | 25.6 | 25.5 | 26.4 | 26.4 |
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| Inventory and Analysis | 3.7 | |
| Economics & Policy | 1.0 | |
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| Rural Development | 0.2 | |
| Wetlands | 0.2 | |
| **Forest Management** | | **3.7** |
| Agroforestry | 0.3 | |
| Forest Management | 2.9 | |
| Wetlands | 0.5 | |
| **Forest Environment** | | **2.3** |
| Threatened & Endangered Species | 1.6 | |
| Wetlands | 0.5 | |
| Cumulative Watershed Effects | 0.2 | |
| **Forest Products** | | **0.3** |
| Rural Development | 0.3 | |
| **Total Proposed Increase** | | **26.0** |

NASF Budget Recommendations - Fiscal Year 1994
USDA Forest Service State & Private Forestry ($ in thousands)

| | Final FY 93 | Admin. FY 94 | NASF FY 94 |
|---|---|---|---|
| **Forest Health Protection** | | | |
| Federal Lands | | | |
| Forest Health Mgt.(S&TA) | 16,256 | 19,501 | 21,000 |
| [Forest Health Monitoring][1] | 0.0 | [ 945] | [ 1 ,500] |
| Prev. & Suppression | 10,725 | 13,834 | 16,800 |
| [National IPM Initiative][1] | [1,600] | [ 776] | [ 1,600] |
| Special Projects | 3,193 | 3,143 | 3,300 |
| Cooperative Lands | | | |
| Forest Health Mgt. (S&TA) | 5,007 | 5,000 | 5,900 |
| [Forest Health Monitoring][1] | [561] | [ 608] | [ 1,100] |
| Prev & Suppression | 5,424 | 10,763 | 13,600 |
| [National IPM Initiative][1] | [2,000] | [ 1,948] | [2,000] |
| **Subtotal Forest Protection** | **40,605** | **52,241** | **60,600** |
| **Fire Protection** | | | |
| Rural Fire Prev. & Control (RFCP) | 16,885 | 4,148 | 18,000 |
| Mobilization & Preparedness | 0.0 | 0.0 | 5,000 |
| **Subtotal Fire Protection** | **16,885** | **4,148** | **23,000** |
| **Forest Mgt. and Utilization (FMU)[2]** | | | |
| Forest Resource Mgt. | 6,093 | 8,033 | 8,500 |
| Forest Stewardship (TA) | 14,873 | 24,462 | 24,500 |
| Natural Resource Cons. Education | 0.0 | | 2,500 |
| Stewardship Incentives | 17,847 | 25,932 | 26,000 |
| Soil and Water Quality | 0.0 | 0.0 | 4,000 |
| Forest Products, Conservation & Recycling (Wood Utilization) | 959 | 1,500 | 1,500 |
| Timber Bridges | 1,785 | 1,741 | 2,500 |
| Rural Development Thru Forestry | 3,966 | 3,890 | 6,000 |
| Economic Recovery[3] | 4,958 | 4,864 | |
| Old Growth Diversification Projects | 1,487 | 1,510 | 0.0 |
| Econ. Diversification Grants | 542 | 550 | 0.0 |
| Seedlings and Nursery | 2,315 | 2,896 | 2,900 |
| Urban Forestry | 24,787 | 30,000 | 30,000 |
| Center for Semi-Arid Agroforestry | (200)[4] | | 500 |
| **Subtotal FRM** | **79,612** | **105,378** | **108,900** |
| **Special Projects** | | | |
| Forest Legacy | 9,916 | 8,448 | 10,000 |
| Tropical Forestry[5] | 5,503 | | |
| Pres. Commission/Study | 0.0 | 0.0 | 3,400 |
| Pinchot Institute | 198 | 201 | 200 |
| Col. River Gorge/Skamania Lodge | 744 | 2,500 | 0.0 |
| Lake Tahoe | 1,388 | 1,471 | 0.0 |
| Northern Forest Lands | 1,155 | 1,270 | 0.0 |
| Walla Walla Trail | 124 | 0.0 | 0.0 |
| Export Assistance Center | 99 | 0.0 | 0.0 |
| **Subtotal Special Projects** | **19,127** | **13,890** | **13,600** |
| **TOTAL, S&PF** | **156,229** | **175,657** | **206,100** |
| **EMER. PEST SUPPRESSION [6]** | **26,000** | | |

[1] Forest Health Monitoring is included within Forest Health Mgmt. accts. Nat'l IPM included in Prev./ Supp. accts.

[2] NASF displays FMU programs differently than the Forest Service and Congress.

[3] NSAF supports the Economic Recovery Program in the National Forest System budget.

[4] Included within Resource Mgmt. Program line item.

[5] NASF supports the Tropical Forestry Program in the International Forestry budget.

[6] NASF supports this appropriation in the federal and cooperative Forest Health Suppression line items.

# FOREST STEWARDSHIP

*USDA Forest Service State & Private Forestry*

**Issue**

Tremendous demand for commodity and non-commodity forest resources is putting increasing pressure on the Nation's privately owned forest lands to provide a variety of resources -- timber, recreation, fish and wildlife habitat. These demands are only expected to continue to increase in the future. Currently 8 million non-industrial private forest (NIPF) landowners own 59 percent of the nation's timberlands. Traditionally, only 10 percent of these owners have received professional technical assistance. The Forest Stewardship and Stewardship Incentives programs provide NIPF owners with professional expertise to develop long-term management plans for their forest land and financial incentives to implement forest management practices outlined in the Stewardship plan.

President Clinton's Fiscal Year (FY) 1994 budget proposal includes a major initiative -- Trees For the Future -- to reforest non-industrial private forests, to practice good stewardship and to educate the public on the value of natural resources. This initiative would be supported through increases to both Stewardship programs.

**Status**

***Forest Stewardship Program***

The Forest Stewardship Program is entering its fourth year of implementation. Every state has formed a State Stewardship Committee bringing together traditional and non-traditional partners representing a range of disciplines and interests from the public and private sectors including fish and wildlife, soil and water conservation, and outdoor recreation. In addition, each State has developed a comprehensive state resource plan which will ultimately bring a total of 25 million acres of non-industrial private forest lands under stewardship management.

Stewardship will assist individual forest owners in developing comprehensive forest resource plans that will enable them to manage their lands for multiple uses, according to their own goals and objectives while contributing to a healthy ecosystem. More than 43,000 stewardship management plans (approximately 4.2 million acres) have been developed in the first three years (Fiscal Years 1990-1992) of the program. Federal stewardship dollars, which are matched by the states, have been shared and/or matched with additional funds by local agencies and organizations to achieve the objectives of State plans.

***Stewardship Incentives Program***

Landowner sign-ups began in mid-1992 for the Stewardship Incentives Program (SIP), a companion program, which provides cost-share assistance to private landowners to implement a broad range of practices recommended under Stewardship or approved forest management plans. SIP's intent is to provide new opportunities to private landowners to engage in multiple use practices and activities that have not been covered through other cost-share assistance programs.

Landowners with approved Stewardship or forest management plans are eligible to receive up to 75 percent cost-share assistance for practices that include wildlife and fish habitat establishment and improvement, soil and water improvement, forest recreation enhancement, riparian and wetlands protection and management, windbreak enhancement, reforestation, timber stand improvement, resource planning and other practices approved by the State Stewardship Committees.

**Benefits/ Objectives**

- 25 million acres of non-industrial private forest land under stewardship management plans
- Environmental benefits: cleaner air, improved water quality, wildlife habitat, increased public awareness of natural resources and healthier forest ecosystems
- Resource management options for private forest landowners designed to meet their objectives

- Increased productivity of multiple forest resources including: timber, fish and wildlife habitat, soil and water resources, air quality, recreational opportunities
- State Stewardship Coordinating Committees in every state composed
  of members of natural resources agencies and other key interests including industry, environmental/conservation organizations and private landowners
- Comprehensive State Stewardship Plans
- Improved harvesting practices and assured adequate regeneration of harvested stands.

## Budget

The Forest Stewardship and Stewardship Incentives programs are funded as expanded budget line items under the U.S. Forest Service's State and Private Forestry programs. President Clinton's FY 1994 budget recommends increases to both programs to support his Trees For the Future Initiative.

| *USDA Forest Service, S&PF* | FY 93 Enacted | FY94 Admin. ($ in thousands) | FY94 NASF |
|---|---|---|---|
| **Forest Stewardship Program** | **14,873** | **24,462** | **24,500** |
| **Stewardship Incentives Program** | **17,847** | **25,932** | **26,000** |

## The Future

Improved coordination and efficiency will provide comprehensive resource assistance to private landowners for forest land management and assure that the Nation has sustainable resources in the future.

# URBAN & COMMUNITY FORESTRY

*USDA Forest Service State & Private Forestry/Research*

**Issue**

Trees in America's more than 40,000 cities and communities are major capital assets. As the President recognized in his "Vision of Change for America" that accompanied his State of the Union Message to Congress, tree planting and care present opportunities for job creation, environmental restoration, energy and water conservation, recycling, improving air and water quality, environmental education and citizen involvement in community rebuilding.

In addition, urban and community forests provide a multitude of environmental, social and economic benefits to more than 80 percent of the nation's citizens. However, these forests are increasingly being forced to survive under harsh and unnatural conditions. In recent years, the health of these unique forests has dramatically declined and an alarming trend of deforestation has been established. Our nation's cities have 500 to 700 million vacant planting spaces and a backlog of 500 million trees that need immediate maintenance work. It is estimated that only one tree is planted for every four that die or are removed from a community environment.

**Status**

The last three years have been extremely promising for the nation's urban and community forests. Although a working partnership between State Foresters and the USDA Forest Service has provided technical expertise on urban forestry for almost 20 years, existing assistance and research programs have been recently expanded through enhanced funding levels and implementation of the Urban and Community Forestry Act of 1990 (P.L. 101-614, Title XII). Working through State Forestery agencies, the USDA Forest Service has been able to greatly expand the current educational, technical and financial assistance provided to approximately 7,000 communities throughout the nation. Approximately 7,000 communities and 6,700 community action groups received assistance and training in Fiscal Year (FY) 1992.

Urban and Community Forestry Councils have been established in every State representing a broad range of citizens from the government and private sectors concerned with their community forests. Urban forestry coordinator positions have also been established in every State and a majority of the states have created volunteer coordinator positions. A National Urban and Community Forestry Advisory Council was named by the Secretary of Agriculture in March 1992 to assess the needs of urban and community forests and to provide incentives for community tree planting.

These combined efforts have led to the success of the Natural Resource Development Program, a complementary program administered by the U.S. Small Business Administration and delivered through State Foresters. Now in its third year of implementation, the goal is to create jobs by utilizing small businesses in implementing tree planting projects across the country at state and local levels. Approximately $30 million was awarded in the first two years to the 50 states, Washington, D.C., and Puerto Rico. These grants have generated more than $41 million in matching contributions from the states to fund more than 2,600 individual projects. More than 8.8 million tree seedlings have been planted in rural areas and approximately 500,000 saplings throughout cities and communities.

Streets, parks, schools, river corridors, old right-of-ways, and abandoned and degraded lands present additional tree and greenspace opportunities. Tree planting and care can create jobs, paths to vocational training and higher education, and community based development. Tree planting and care work is labor intensive and has multiple effects in communities (e.g., nursery, landscape, tree care firms and garden centers). Expended funds directly benefit and are multiplied in communities.

Trees and forests, as a part of the urban ecosystem, provide many benefits: conservation of energy resources through cooling of the "urban heat island" (which currently saves U.S. consumers over $2 billion/year); reduced dust and air pollution; reduced stormwater runoff, erosion and stream pollution; recycling and water conservation opportunities and technologies; and physiological and psychological health benefits for residents and citizens. Citizen involvement is a key

to success. Tree planting efforts can rekindle a sense of community and lead to other neighborhood self-improvement efforts. Community tree programs provide a way for all citizens to make a difference -- in their environment, in their attitude towards themselves, their neighbors, their community, their economy, and their understanding of the environment.

Research

The USDA Forest Service has established a modest urban forestry research program which is now in its second decade of existence. A recent summit on national urban forestry research needs, mandated by the 1990 Farm Bill (P.L. 101-614, Title XII), identified an extensive list of critical research and educational dissemination needs for the next decade and beyond. More than 100 professional, academic, government, and industry organizations were represented at this summit. An evaluation and ranking of research needs have now identified the most critical research questions that must be addressed.

Benefits/ Objectives

Benefits and objectives are as follows:

- increased green spaces through tree planting and improvement throughout the nation's 40,000 cities and towns;
- job opportunities and training;
- improved long-term care to support the health of urban and community forests;
- involvement and committment of communities on 'hands-on' tree planting projects;
- strengthen research and education programs;
- energy savings/conservation;
- enhanced communities and environment;
- reduction of heat island effect and reduction of atmospheric pollutants;
- improved air quality and noise reduction;
- expanded and new partnerships between Forest Service, state forestry agencies and other professional organization and community groups;
- increased real estate values; and
- develoment of local economies.

Budget

As part of his tree-planting initative -- Trees For The Future -- President Clinton has proosed funding for the Urban and Community Forestry program at its full authorization level of $30 million. NASF endorses this funding level and also supports increased funding for urban forestry research.

| **Urban & Community Forestry** *USDA Forest Service* | **FY 93 Enacted** | **FY 94 Admin.** *($ in thousands)* | **FY 94 NASF** |
|---|---|---|---|
| **State & Private Forestry** | **24,787** | **30,000** | **30,000** |
| **Research** | **2,100** | **2,200** | **2,800** |

The Future

As a result of this expanded effort, healthy and viable community forests throughout the nation's 40,000 towns and cities will evolve as a model of cooperation between federal, State, and local governments as well as the private and non-profit sectors .

# FOREST SOIL & WATER QUALITY PROGRAM

*USDA Forest Service State & Private Forestry/Research*

**Issue**

Forested watersheds have long been recognized as a primary source of high quality water. Water from forested watersheds is often expected to be of the highest quality, and is held to some of the highest water quality standards in the United States. In actively growing or mature forests, water quality problems are virtually nonexistent. The forest ecosystem functions to regulate both the quantity and quality of water flows.

**Status**

When a forest comes under active management, the potential for water quality impacts will increase as a consequence of management activities. Forest management activities, especially logging, are often viewed as a major cause of muddy streams and rivers. Logging is very visible and can contribute to erosion and sediment in streams if proven management practices are not utilized. Proven Best Management Practices (BMP's) have been developed which can effectively control nonpoint source (NPS) pollution from forestry operations.

Congress took the first steps to address NPS pollution with the passage of Section 319 in the Clean Water Act Amendments of 1987. Under this section, States have the primary responsibility for NPS program development and implementation, while EPA retained program approval guidance and oversight. Many of the State forestry agencies have been delegated the major responsibility for controlling silvicultural NPS pollution. Over the past two decades, State forestry agencies have been developing and monitoring the use of BMP's and adjusting them if goals have no been met.

State forestry agencies are uniquely positioned and qualified to provide landowners with the education and technical assistance they need to protect the quality of their forests soils and waters. Each State forestry agency has a grassroots field organization, with intimate knowledge of local conditions and landowners, and which is trained in and devoted to forest resource management and protection.

However, as it is currently structured, federal assistance for the protection of soil and water quality does not sufficiently support State forestry agency efforts to reach and educate the landowning and resource using public. Additional federal funds are needed to establish water, soil, and wetland specialist positions, to develop cooperative studies designed to document the long-term effectiveness of BMPs, and to evaluate the nature of cumulative effects on water quality from normal forestry activities.

The proposed NASF Forest Soil and Water Quality Program would provide federal funding through the USDA Forest Service's State and Private Forestry Program to meet these critical needs. The State Foresters will continue to provide leadership in efforts to improve and accelerate progress in the implementation of forest soil and water quality protection efforts. By using existing field organizations directed by the State Foresters, the effort, time and dollars directed toward these goals will be greatly leveraged.

**Benefits/ Objectives**

- Reduced silvicultural NPS pollution from private forest lands.
- Increased use and effectiveness of BMPs and other soil conservation measures by landowners and loggers on private forest lands.
- Improved soil productivity.
- Expanded use of cumulative effects technology and cooperative procedures for controlling cumulative effects on mixed ownership watersheds.
- Expanded and improved interagency and multistate cooperation and coordination to address NPS pollution control on all forest lands.
- Increased outreach to private forest landowners.
- Expanded research on cumulative watershed effects.

Budget

| | FY 1993 Final | FY 1994 Admin Proposal ($ in thousands) | FY 94 NASF Recommended |
|---|---|---|---|
| *US Forest Service, S&PF* Forest Soil & Water Quality Program: | 0.0 | 0.0 | 4,000 |
| *Forest Service Research* Cumulative Watershed Effects: | 15,800 | 15,800 | 16,030 |

The Future

Effective implementation of the proposed Forest Soil and Water and Quality Program will provide forest landowners with better information about effective means of controlling NPS pollußtion on their lands; forest managers will benefit from the development of a larger and more accurate database on the effectiveness of BMPs and cumulative effects of forest management activities; and the nation as a whole will benefit from the long-term protection of soil and water resources on America's private forest lands.

# NATURAL RESOURCE CONSERVATION EDUCATION

*USDA Forest Service State & Private Forestry*

**Issue**

School teachers, educators, and youth organization leaders across the country are searching for unbiased sources of information on people's interaction and impact on the environment. What do people need to know to make intelligent choices in living an environmentally sensitive life? A focal point for debate is often on how public natural resource should be allocated. As these debates become increasingly complex and polarized, comprehensive understanding and awareness of our natural resources is critical to informed public action. It is apparent that there is a great need for natural resource information to be disseminated widely, but it must also be specifically targeted to different age groups, beginning at a younger age and supported with life-long learning.

Natural resource agencies are in a good position to facilitate this, and States as well as the USDA Forest Service have a long history of leadership in conservation education. Guiding the States and USDA Forest Service in implementing conservation education are specific mandates that include the 1990 Resource Planning Act (RPA) Program, National Environmental Education Act of 1990, Forest Service 1990 Centennial, New Perspectives and the Forest Stewardship Program. Through better coordination between States and the USDA Forest Service, as well as with other partners and agencies, a more comprehensive conservation education program will be possible, helping members of the public make informed personal choices and decisions concerning natural resources.

**Status**

In May, 1990, the USDA Forest Service and the National Association of State Foresters (NASF) created a Natural Resource Education Task Force to develop a conservation education program. Implementation of the Natural Resource Conservation Education Program (NRCEP) is ready to begin at the national, regional and State levels. The program will:

**Objectives**

- provide coordination at the national level for local level implementation;
- strengthen current State, federal and private partnerships and;
- enhance and complement existing environmental education programs and activities as well as build new ones where needed.

At the national level the NRCEP will provide national coordination and accountability, seek partnerships and cost-sharing opportunities, and identify research needs. At the regional and state levels, interdisciplinary strategic plans will be developed which will complement existing environmental education efforts; program priorities will be established; and competitive grants will be awarded. States will provide coordination support for local projects.

**Budget**

The USDA Fiscal Year 1994 budget provides support for the Natural Resource Conservation Education Program to be carried out through the Forest Stewardship Program .

| **Natural Resource Conservation Education** *USDA Forest Service* | **FY 93 Enacted** | **FY 94 Admin.** | **FY 94 NASF** |
|---|---|---|---|
| | *($ in thousands)* | | |
| | 0.0 | 0.0 | 2,500 |

**The Future**

- To increase awareness, knowledge, and appreciation of natural resources;
- To promote critical thinking skills enabling people to recognize and understand the complexity of resource issues and to make choices within social, political, scientific, and economic realities;
- To foster individual stewardship responsibility to conserve, preserve, and wisely use natural resources.

# RURAL FIRE DEFENSE: MOBILIZATION & PREPAREDNESS

*USDA Forest Service State & Private Forestry*
*USDA Farmers Home Administration/*
*Rural Development Administration*

**Issue**

Uncontrolled fire poses one of the greatest threats to rural citizens and to their property. It also has dramatic and far-reaching negative impacts on the health and productivity of state and private forest lands which must be protected and managed for the future. The National Association of State Foresters (NASF) is aggressively promoting the development of a fully-coordinated rural fire response system that is commensurate with values at risk with fire occurrence, buildup and complexity.

**Goal**

A good, cost-effective public policy to invest in a fire protection system based on the principle that maximum prevention affords minimal losses in rural America. Improved capability, efficiency, coordination and mobilization of the Nation's rural firefighting forces will also result in dramatic and lasting effects on fire hazard insurance for rural and rural-urban interface residents and homeowners.

**Status**

Each year an average of 170,000 wildfires burn millions of acres of public and private forest land. Wildfire has a tremendous impact on forest resources and watersheds and often occur in large numbers at a single time and can easily exceed local capabilities to suppress them. Current programs that provide assistance for the protection of nonfederal lands include the Rural Fire Prevention and Control program (RFPC, USDA Forest Service) and the Rural Community and Fire Protection Program (RCFP, USDA Farmers Home Administration).

The bulk of the Nation's rural fire problem occurs on private lands in rural, forested, and wildland/urban interface areas where States have primary responsibility for fire protection. The huge responsibility of readiness and initial fire response depends on limited state fire crews and on an estimated 900,000 private citizens organized into approximately 28,000 individual volunteer fire departments. These private citizens receive no material support yet represent the Nation's first line of defense in coping with fires and with other life-threatening emergencies of all kinds, including natural and man-made disasters. A national commitment to ensure that these volunteers are well-trained, coordinated and equipped will greatly reduce firefighter injuries and deaths. It will also reduce fire losses and overall fire costs across the board. An overall rural community and natural resources protection program will accord the Nation's 28,000 Rural Volunteer Fire Departments (RVFD's) with planning, operations and financial support.

The NASF recognizes that it is cost-effective, public policy to invest in a fire protection delivery system based on the fact that "...strong prevention efforts and coordinated response minimize losses." Balanced "Rural Fire Defense" for the Nation should focus on the following principles:

- prevention and fast initial attack;
- keeping fires small; and
- a strongly maintained national fire fighting force.

**Objectives/ Benefitsp**

The objectives of a Rural Fire Defense program will be to:

- Protect lives, property and natural resources;
- Increase the capability of State and local firefighting forces to respond to requests for fire suppression assistance;
- Improve preparedness, coordination and mobilization of volunteer and municipal fire departments and state forestry agencies in local, regional and national emergencies;
- Provide additional resources for federal wildland firefighting emergencies;

- Provide for the efficient and economic use of Federal/State resources;
- Ensure a sustainable flow of goods and services from rural areas, and;
- Improve the capability of volunteer fire departments and state forestry agencies to cope with the increasing complexities of fire in the Wildland/Urban Interface.

The following programs will accomplish these objectives:

**Rural Fire Prevention and Control (RFPC)** -- Protects natural resources from fire on State and private lands. This is done through emphasized fire prevention efforts and aggressive, initial attack to keep outbreaks small. The NASF recommendation of $18 million will maintain a base level program of Federal assistance to States to help keep fire losses small.

**Fire Mobilization and Preparedness (FMP)** -- Will strengthen the caliber of volunteer, State, municipal and Federal firefighting forces under the National Interagency Incident Management System to deliver a well-coordinated, timely response to the rural fire situation. The NASF recommendation of $5 million will allow for financial assistance to train, cross-train and mobilize the Nation's firefighters for essential public service.

**Rural Community Fire Protection (RCFP)** -- Improves the capability and effectiveness of Rural Volunteer Fire Departments to protect lives and other rural investments. The focus of assistance is organizing new fire departments in unprotected communities, coordinating activities and providing adequate fire and personal safety equipment. The NASF recommendation of $7 million will provide for a low level program with funds being allocated to regions based on need, firefighter safety requirements for protective equipment and clothing and other basic necessities.

**Activities**

Activities of a comprehensive Rural Fire Defense program will be to:

- Provide financial, technical and operational support to the states to develop strong initial attack programs in rural, forested, and wildland/urban zones (RFPC)
- Provide financial, technical and operational support to the approximately 28,000 rural volunteer fire departments (RVFD's) to ensure their continued delivery of rural fire protection and emergency services as the Nation's first line of defense for structural fires (RCFP)
- Provide financial and operational support to the states, the RVFD's to develop effective, cooperative relationships to develop joint training and planning concepts, and to facilitate local, regional, and national mobilization (FMP).

**Budget**

Federal investment in fire prevention, training, coordination and equipment significantly reduces the risk of fire disasters. This reduces the need for large-scale Federal expenditures to control and to mitigate fire disasters. It is estimated that a Federal investment in "Rural Fire Defense" of $1 will produce about $6 in savings. Accordingly, the $31 million proposed investment in Fiscal Year 1993 may save as much as $186 million in reduced property losses and homeowners insurance premiums.

| | 1993 Final | 1994 Rec. Admin ($ in thousands) | 1994 Rec NASF |
|---|---|---|---|
| **Coop. Forest Fire Protection** | 17,000 | 4,148 | 18,000 |
| **Fire Mobilization** | 0.0 | 0.0 | 5,000 |
| **RCFP*** | 3,500 | 4,148 | 7,000 |

* The Rural Community Fire Protection (RCFP) Program is funded through the USDA Farmers Home Administration in the "Agriculture, Rural Development and Related Agencies" Appropriations bill.

# FOREST HEALTH MONITORING

*USDA Forest Service State and Private Forestry/Research*

**Issue**

The health and viability of forest resources is affected by a wide variety of factors, ranging from insects and diseases, atmospheric deposition, meteorological events, human activities and climate change. Although the Forest Service conducts periodic forest inventories and annual pest condition surveys, these activities do not provide timely and focused data collection for the purposes of observing the effects of stresses on forest health. A systematic program of Forest Health Monitoring will allow the Forest Service to meet its responsibility to describe, protect and assess the health of America's forests on a regional and national scale.

**Status**

The USDA Forest Service, in partnership with the States and the U.S. Environmental Protection Agency has designed a national program to annually monitor and report on the health of the nation's forests. The current Forest Health Monitoring (FHM) Program includes 14 states: Alabama, California, Colorado, Connecticut, Delaware, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Vermont and Virginia. This partnership between State and Federal agencies has allowed for the effective use of limited resources to achieve full integration with other data collection activities. The program emphasizes the use of remote sensing in combination with annual visits to permanent sample plots to:

- detect and describe symptoms of changes in forest health (detection monitoring);
- evaluate the role of stress factors in forest health (evaluation monitoring); and
- understand and predict changes and rates of change in forest conditions (ecosystem monitoring)

**Benefits/ Objectives**

Monitoring information on the changing conditions of all the nation's forests will allow for policy direction and management actions to be focused and effective, and allow forest managers to respond quickly when intervention tactics are required.

NASF supports the continuation and expansion of this comprehensive program in Fiscal Year 1994 to carry out planned actions for a 19-state FHM program. The long-term goal for FHM is to include every state as an active participant in this program.

- Detect unexpected changes in forest conditions
- Identify causes of theses changes
- Predict the consequences if the changes continues
- Target forest management decisions

**Budget**

| *US Forest Service* | Final FY 93 | Admin. FY 94 ($ in thousands) | NASF Rec. FY 94 |
|---|---|---|---|
| **Federal:** | | | |
| **Forest Health Mgt.** | **16,256** | **19,501** | **21,000** |
| **[Forest Health Mon.] *** | **[0.0]** | **[ 945]** | **[1,500]** |
| **Cooperative:** | | | |
| **Forest Health Mgt.** | **5,007** | **5,000** | **5,900** |
| **[Forest Health Mon.]** | **[561]** | **[608]** | **[1,100]** |
| **Research** | **1,933** | **1,935** | **3,635** |

**The Future**

The proposed increases for Fiscal Year 1994 will allow the Forest Health Monitoring program to be fully implemented in five additional states (MI, MN, WA, WI, WV), bringing to 19 the number of states involved in the program.

* *Forest Health Monitoring is funded through the S&PF Forest Health Management accts.*

# COOPERATIVE FOREST HEALTH MANAGEMENT: INSECTS & DISEASE

*USDA Forest Service: State & Private Forestry*

**Issue**

The USDA Forest Service cooperates with 50 participating states and territories in providing surveys, technical, suppression, and special project assistance to enhance and maintain healthy forests. Cost-share dollars for these services have been available to the states in various degrees since the mid-1960's. The program has provided enough certainty and flexibility to allow forest managers to address anticipated as well as most unanticipated pest suppression needs.

**Status**

Pest suppression and prevention needs are generally difficult to predict at the time of regular budget planning for federal, state and private forest managers. However, it is possible to anticipate potential outbreaks and needs. Administration funding requests and levels appropriated have been both unpredictable and variable for suppression and prevention activities on cooperative (non-federal) lands to meet anticipated needs and outbreaks; funding levels for the same programs on federal lands have been typically more stable and reliable. Major forest health problems exist and are expected to occur in the future on both federal and non-federal lands that require maximum federal and state support to ensure a coordinated balanced response.

Critical pest problems throughout the country that need to be addressed through this program are: Western spruce budworm and Douglas-fir tussock moth in western mixed-conifer stands; mountain pine bark beetle in the Rocky Mountains; gypsy moth in hardwoods of the Northeast and isolated areas in the west; southern pine bark beetle in the Southeast; spruce beetle in Alaska; sugar maple decline in New England; buck moth on live oaks in New Orleans; and oak wilt disease in central Texas and Minnesota. New pest problems emerging that will need increased future emphasis include pear thrips in New England and dogwood anthracnose in the Southeast.

More emphasis is being placed on prevention strategies in order to reduce the need for crisis suppression projects. Biological suppression methods are and will continue to be the choice in the future. Integrated pest management programs on state and private forest lands are supported by the Cooperative Forest Health program. The Forest Health Monitoring Program, currently underway is designed to provide an annual assessment of the Nation's forests, and to serve as an early warning system for the broader effects of ozone depletion, air pollution and global change.

The National Integrated Pest Management (IPM) initiative is designed to develop and transfer leading-edge pest management techniques; respond to forest insect and pathogen emergencies, and complement the roles of other federal forest pest management agencies. The program will develop and implement pest management and control strategies that are cost-effective, technically sound and environmentally safe.

Other efforts directed towards ensuring the health of the nation's forests include annual forest health monitoring and pest condition surveys as well as periodic inventories to provide timely focused data collection for the purposes of observing the effects of stresses on forest conditions. In combination these programs describe, assess and protect the health of America's forests on a regional and national scale.

Because Congress created a new Emergency Suppression Account in Fiscal Year 1992 Cooperative Forest Health Management (prevention and suppression) was funded at a level not expected to meet anticipated needs. The release of emergency funds was contingent on the declaration of an emergency by the President. NASF and other organizations expressed concerns that the release of these funds in a timely manner would be jeopardized in the ad-

Budget

ministration process and that funds for ccoperative projects would receive a lower priority. Therefore, NASF strongly supports funding for the traditional programs at levels that meet anticipated needs.

| | Enacted FY 93 | Admin. FY 94 ($ thousands) | NASF FY 94 |
|---|---|---|---|
| *USDA Forest Service, S&PF* | | | |
| *Cooperative Lands* | | | |
| Forest Health Mgt. (S&TA) | 5,007 | 5,000 | 5,900 |
| [Forest Health Monitoring]* | [561] | [608] | [1,100] |
| Prevention & Suppression | 5,424 | 10,763 | 13,600 |
| [Integrated Pest Mgt.]* | [2,000] | [1,948] | [2,000] |

* Forest Health Monitoring is included within Forest Health Management accounts; National Integrated Pest Management is included with the Prevention & Suppression Account.

# RURAL DEVELOPMENT THRU FORESTRY

*USDA Forest Service: State & Private Forestry*

**Issue**

Renewable and non-renewable forest resources provide significant opportunities to strengthen local and regional economies where rural economies have not kept pace with national economic growth. Forest resources provide a wide-range of commodity and non-commodity goods and services, incomes and jobs. Used effectively, these resources will ensure that the United States retains its ability to generate better incomes and standards of living Focusing financial and technical assistance to strengthen the economic conditions in rural areas and small communities will serve the good of all the nation.

**Goal**

A balanced and comprehensive Rural Development program will focus on the more complete use of sustainable forest resources to stabilize and improve the economic base of rural communities. Through information assessment, identification of income producing opportunities, business plan development, marketing strategies, applied research, and direct technical assistance, economic revitalization utilizing forest resources can strengthen rural America.

The vision of this program is best achieved through a range of programs and partnerships including the State Foresters, State Rural Development Councils, Governors, Towns and Counties, Conservation Districts, Rural Conservation and Development Areas, and the U.S. Forest Service.

**Status**

NASF's recommended program for Rural Development Through Forestry is accomplished through the U.S. Forest Service State and Private Forestry Rural Development Program. This program focuses on improving the economic vitality of rural areas and communities through a more comprehensive use of forest resources. This improvement includes economic development opportunities through wood products, wildlife, foodstuffs, medicines, scenic quality, recreation and "special" products. Funding for this program provides for demonstration projects; cost-share assistance for special emphasis projects; baseline information to be developed and analyzed; and direct technical assistance to State and local governments.

**Benefits/ Objectives**

Implementation of the program components is expected to strengthen and diversify the economic base in rural areas through the use of renewable natural resources. The following benefits can be anticipated:

- incentives to maintain a stable, productive forest resource base
- creation of jobs, goods and services
- sustained and improved incomes and general well-being
- a sustainable American rural life-style
- private sector investment stimulus
- improved coordination and partnerships among the public and private sectors
- opportunities for appropriate natural resource development
- increased opportunities for under-utilized resources

**Budget**

These programs are funded separately through the U.S. Forest Service State and Private Forestry programs.

| *USDA Forest Service, S&PF* | Enacted FY93 | Admin. FY94 | NASF FY94 |
|---|---|---|---|
| | ($ thousands) | | |
| **Rural Development** | **3,966** | **3,890** | **6,000** |

**The Future**

Sustained economic well-being of rural America is essential to the Nation's growth and prosperity. As the production of forest resource-based goods and services shifts from public lands to state and private lands, minimizing the economic impacts of these shifts and maximizing the economic contributions of the total forest resources economic vitality will be created, especially in rural areas. A balanced Rural Development program can help stabilize and revitalize the communities and areas experiencing the greatest impacts.

# NATURAL RESOURCE DEVELOPMENT (TREE PLANTING) PROGRAM

*U.S. Small Business Administration*

**Issue**

Opportunities for productive forestry-related programs exist and are underway in non-traditional agencies. These programs meet agency goals and missions, such as job creation and training, as well as promote tree planting and sound management throughout the nation's rural and community areas. A successful example is the U.S. Small Business Administration's Natural Resource Development Program which provides jobs and supports small businesses while planting millions of trees across the country.

**Status**

The U.S. Small Business Administration's (SBA) Natural Resource Development Program was authorized in the 1990 Commerce, State, Justice, the Judiciary & Related Agencies Appropriations Act. The Act required that the SBA make grants to, or enter into contracts with, any state for the purpose of contracting with small businesses to plant trees on land owned or controlled by state or local governments. The program provides grant money that generates matching funds from states and localities and succeeds in planting a high number of trees, mainly in urban and community settings.

The program is in its third year of implementation. In the first two years, approximately $30 million has been awarded to the 50 states, Washington, D.C., and Puerto Rico. These grants have generated more than $41 million in matching contributions from the states to fund more than 2,600 individual projects. More than 8.8 million tree seedlings have been planted in rural areas and approximately 500,000 saplings throughout cities and communities.

The Natural Resource Development Program has been well received in the states and local communities. In addition to generating jobs in many communities, the program has stimulated focus on volunteer efforts to plant and care for numerous community trees. This program also complements on-going efforts under the USDA Forest Service Urban and Community Forestry program. The program has been successful in accomplishing the following objectives:

**Benefits/ Objectives**

- job creation and training;
- increased small business opportunities;
- increased tree planting and care in rural areas, cities and communities;
- community involvement and enhancement benefits; and,
- local government coordination and involvement in tree planting and long-term community forestry care.

**Budget**

NASF, with other foresty and tree planting organizations, including the International Society of Arboriculture, the American Association of Nurserymen, and American Forests, supports funding for the SBA tree planting program at $30 million for Fiscal Year 1994.

| | Enacted FY 93 | Admin. FY 94 ($ thousands) | NASF Rec. FY 94 |
|---|---|---|---|
| ***U.S. Small Business Administration*** | | | |
| **Natural Resource Development (tree-planting) Program** | 16,000 | 16,000 | 30,000 |

# FOREST LEGACY PROGRAM

## USDA Forest Service State & Private Forestry

**Issue**

Development and other pressures are increasingly threatening important forest ecosystems with conversion to non-forest uses. Private forest landowners need options and incentives to maintain and manage their forests in traditional stewardship manner.

**Status**

Authorized in the 1990 Farm Bill, the Forest Legacy Program is a conservation easement program aimed at identifying, protecting and managing environmentally important forest lands in traditional uses.

Designed to meet regional and state needs that have arisen in recent years as a result of changing land-use patterns and population pressures, this program will provide alternatives for environmentally sensitive forest lands threatened by conversion to non-forest uses. Voluntary conservation easements would be options available to private landowners. Coordinated program implementation is key for this new program as it faces challenging questions and complex issues.

With funding provided in Fiscal Year 1992 and 1993, implementation of the Forest Legacy Program began in six lead states (New York, New Hampshire, Vermont, Maine Massachusetts and Washington State ) based on program guidelines.

Committees and partnerships have been established in each of the six states to pursue opportunities and to identify potential properties.

Five geographic areas in the state of Washington have been identified for designation as Forest Legacy areas. Washington will coordinate Forest Legacy under the State's Growth Management Act of 1991.

**Budget**

| | Enacted FY 93 | Admin. FY 94 ($ thousands) | NASF FY 94 |
|---|---|---|---|
| ***USDA Forest Service, S&PF*** | | | |
| **Forest Legacy** | **9,916** | **8,448** | **10,000** |

**The Future**

Options for private property owners to protect sensitive private forest land threatened by irreversible development.

# CENTER FOR SEMIARID AGROFORESTRY

*USDA Forest Service: Research/State & Private*

**Issue**

Conservation forestry has a strong role to play in the development of sustainable agriculture land-use systems. These "working trees" provide tree products and at the same time protect, enrich, and sustain vital economic, environmental human, and natural resources. Conservation forestry works by reducing soil erosion, filtering contaminated runoff water, protecting crops, livestock, farmsteads, and roads, conserving water and energy, and enhancing environments for wildlife, people, and communities.

**Status**

The Center for Semiarid Agroforestry Lincoln, Nebraska, was authorized by the Forestry Title of the 1990 Farm Bill (P.L. 101-624). Initial funding was provided for start up activities in Fiscal Year 1992, and partial funding for continuation of programs in Fiscal Year 1993.

The Center's mission is to advance the understanding, acceptance and use of conservation forestry in agricultural ecosystems to provide tree products and at the same time protect, enhance, and sustain vital economic, environmental, human/community, and natural resources.

The Center is a partnership of USDA Forest Service Research and State and Private Forestry. The Research budget will support research to develop improved conservation forestry practices for both rural and community environments. The State and Private Forestry budget will provide technology transfer, demonstrations and applications projects to support the work of natural resource professionals in State Forestry agencies, USDA Soil Conservation Service, Soil and Water Conservation Districts, and other state and federal agencies and organizations.

**Benefits/ Objectives**

Conservation forestry can provide the following benefits:

- reduced soil loss
- improved surface and ground water quality
- improved crop and livestock productivity
- protection of crops, livestock, farmsteads and roads
- improved water use efficiency
- reduced energy costs
- increased highway safety
- improved wildlife habitat
- enhanced landscape diversity and biodiversity
- tree products to diversify rural economies
- mitigation of the impacts of climate changes

The integration of conservation forestry practices into the ongoing effort to develop sustainable agricultural land-use systems will result in complete, diverse ecosystems that are economically and environmentally sound, less dependent on chemical inputs, and provide a high-quality living environment for present and future generations.

**Budget**

| **Center for Semiarid Agrofrestry USDA Forest Service** | **FY 93 Enacted** | **FY94 Admin.** | **FY94 NASF** |
|---|---|---|---|
| | | **($ in thousands)** | |
| **Research** | 1,000 | 1,064 | 1,500 |
| **State & Private** | 200 | 0.0 | 500 |