



PUERTO RICO



State & Private Forestry Fact Sheet

Investment in State's Cooperative Programs:

Programs	FY 2006 Final SPF	FY 2006 Final NFP	FY 2007 Estimate SPF	FY 2007 Estimate NFP
Coop Forest Health Management	101,225	101,225	100,000	100,000
State Fire Assistance	191,937	191,937	200,000	200,000
Volunteer Fire Assistance	39,700	39,700	50,000	50,000
Forest Stewardship Program	188,000	188,000	200,000	200,000
Stewardship Incentives	0	0	0	0
Forest Legacy Program	173,000	57,090	40,000	13,200
Urban and Community Forestry	185,509	185,509	200,000	200,000
Economic Action Programs	0	0	0	0
PNW Assistance Program	0	0	0	0
Forest Resource Information and Analysis	0	0	0	0
Forest Land Enhancement Program	40,000	40,000	0	0
TOTAL	919,937	804,027	790,000	763,200

FY06 includes carryover received

The goal of the cooperative programs is to maintain and improve the health of Puerto Rico's urban and rural forests and related economies. The cooperative programs are administered and implemented through a partnership between the Commonwealth of Puerto Rico, the USDA Forest Service and many other private and government entities. These programs promote the health and productivity of Puerto Rico's forest lands and rural economies. Emphasis focuses on timber and other forest products, wildlife, water resources, rural economies and conservation practices. The goal is to maintain and improve the health of Puerto Rico's urban and rural forests and related economies. These programs:

- **Increase cost effectiveness** through the use of partnerships in delivery,
- **Increase values** through sustained productivity of forests, and
- **Are voluntary**, and use non-regulatory approaches.

KEY ISSUES:

Key issues which Commonwealth and federal programs will address together in the next few years

- Loss of biodiversity from development in the northern karst region.
- Declining water quality and quantity from improper development and water use.
- Lack of proper equipment and training for wildland fire fighting.
- Need for jobs in rural parts of the island.
- Lack of standards for trees in commercial nurseries.
- The increase of commercial, industrial and residential land use needs are generating pressure and conflicting demands over limited resources

State and Private Forestry staff provided technical assistance for grant management and follow up.

Forest Facts and 2006 Accomplishments

SELECTED FACTS		FY 2006 ACCOMPLISHMENTS	
Population	3.9 million	Stewardship Plans Prepared (current year)	19
Acres of Forest Land	1,260,617.9*	Acres Under Stewardship Plans (current year)	267
Acres of NonIndustrial Private Forest Land	1,247,890	Acres Under Stewardship Plans (all years)	3,962
Number of NIPF Landowners	19,951	Multi-resource practices implemented on NIPF - Acres	
Acres of Federal Land Under State Fire Protection		Volunteer Fire Departments Assisted SPF NFP	
Acres of Private Land Under State Fire Protection	2.1 million*	State Fire – Communities Assisted SPF NFP	78 cities
Number of Rural Fire Departments	0	Coop Forest Health – Acres Protected SPF NFP	2.1* million 28,000
Number of Cities and Towns	78	Coop Forest Health – Acres Surveyed SPF NFP	
Number of Communities (Total)	226		
Forest Based Employment	1,541	Forest Legacy Project Acquisition - Acres	3,305.00
Economic Impact of Forestry (by rank)	20	Urban Forestry-Participating communities	226
State Forestry Budget (All Sources)	3.3 million	Urban Forestry –Volunteer Assistance Generated-Days	5,770,150
		EAP-Communitites working under broad-based local strategic plans	
		PNW-Communities working under broad-based local strategic	

* Corrected data based on Forest Inventory and Analysis Factsheet, Puerto Rico 2003, May 2006

Program Highlights:

Urban and Community Forestry:

The Puerto Rico Department of Natural and Environmental Resources Urban and Community Forestry Program Staff attended the 11th Caribbean Urban and Community Forestry Conference, *Islands Forests: The Urban and Natural Interface*, held in St. Croix Virgin Islands. During the conference, representatives of the DNER made presentations in topics related to community involvement, implementation of the U&CF Program in Puerto Rico, fire prevention on the wildland urban interface, VERDOR 100X35, PR Governors Tree Planting and Educational Initiative, and the DNER Wildland Urban Interface Initiative. A total of fifteen DNER employees attended the conference.

The Department of Natural and Environmental Resources with the support of the University of Puerto Rico Extension Service and the International Institute of Tropical Forestry offered a two-day Urban Forestry training session to the 350 staff members of the Urban Forestry and Beautification Departments in the 78 Municipalities of Puerto Rico.

For the second year, *Ciudadanos pro Bosque San Patricio* offered the specialized summer camp for children and adults with special needs. The camp consisted of educational talks about trees, birds, and environmental issues and specialized tours to enjoy the *San Patricio Forest*. A separate training session was offered to blind children and adults about the birds of San Patricio and bird watching.

The Metropolitan University, in cooperation with the Municipality of Caguas and American Forests and a grant from the US Forest Service are working to modify the CITYgreen program to reflect environmental conditions in Puerto Rico. CITYgreen is a computer program that helps citizens understand the valuable ecosystem services that trees provide in the urban environment. The program analyzes the effects of trees on stormwater runoff, air quality, energy savings, carbon storage and tree growth. Information on trees and their effects in the tropical environment will be used to modify the program. A successful conversion of the CITYgreen program will open the door to its use

throughout the tropics. Also, the Metropolitan University continues with the distribution of the books, *Puerto Rico: Towards a Sustainable Development* and *Green Infrastructure*. Both publications are available in hard copy and via internet.

Urban and Community Forestry funding was used to establish a nursery and to support the development of a curriculum in nursery management and basic arboriculture. The training was targeted to troubled youth in Villalba, Puerto Rico who could learn skills associated with running a small business as well as technical skills that could be used to seek immediate employment at a nursery. Certificates have been awarded to the first group of students from local correctional facilities and youth are being recruited for the next class. More advanced training will soon be made available to those holding the first certificate. The grant was awarded to the Puerto Rico Juvenile Corection Department through the Department of Natural and Environmental Resources. .

Cooperative Fire Protection:

“El Caribe” RC&D Area is continuing an educational campaign to prevent wildland fires in the fire prone communities of the southern part of Puerto Rico. A brochure titled “Quema a campo abierto: el humo, sus efectos a la salud y prácticas preventivas en la agricultura” (Wildland fires: the smoke, their effects on human health and preventive practices in the agriculture) is being distribute to these communities as well as educational kits designed by the Council. Extension Service personnel use the kits in educational programs within the communities .

The Puerto Rico Fire Department has a fire prevention initiative with Smokey the Bear and another home grown fire prevention character. They’ve participated in many fairs around the island and dedicated a a section of their website *El Rincón del los Niños* (Kids Corner) to games, songs, and lists of Web resources on fire prevention. (<http://www.bomberos.gobierno.pr/rincon.htm>)

The Puerto Rico Fire Department has five new fire engines to use in areas where wildland fires occur most frequently. This equipment increases the capacity of the Department to control wildland fires thus reducing environmental damages and risks to property.. During the year, the Puerto Rico Fire Department contracted Incident Commend System basic, and intermediate wild land fire training for all of its employees. The emphasis on the program is to have trained fire fighters with proper safety equipment and clothing. Initial attack with aviation resources is being considered for this fire season, along with water resources development and small engine training. For this Fiscal Year the PR Fire Department proposes to purchase a new fire engine. National Fire Program funds are available in both State Fire Assistance and Volunteer Fire Assistance to improve firefighting capability, along with implementing stronger fire prevention.

Landowner Assistance:

Forest Stewardship:

Forest Stewardship planning is being focused on Category I watersheds. These watersheds, the Rio La Plata and Rio Grande de Arecibo, are most in need of restoration. The Río Limón, Río Grande de Arecibo, Carite, and Toro Negro Watersheds are the priority areas attended by the program. The landowners within the Toro Negro/Río Grande de Manatí Watershed have a comprehensive natural resources protection vision and engage other community members in a variety of conservation and community oriented initiatives. The Department of Natural and Environmental Resources Forest Biologists working in those areas are responsible for the technical assistance and the development of Forest Stewardship Plans.

To improve the technical capacity of the technicians the DNER continuous trainings are provided to the technicians.

Casa Pueblo, a community based environmental group, has a comanagement agreement with the Department of Natural and Environmental Resources to manage the Bosque del Pueblo and Olimpia forests. In addition, the group assisted the Puerto Rico Planning Board in the design and implementation of a special conservation ordinance or regulation that declared 10,000 acres in the center part of the island as a conservation district. Casa Pueblo

committed to provide technical assistance to the landowners within the district. Last March 1-5, 2006, Casa Pueblo, PRDNER, and IITF-SPF, sponsored a three day conference that covered topics related to land conservation, watershed management and the Landcare initiative. The participants were mostly landowners within the conservation district and it was a opportunity for them to present their successes and also get new information on conservation issues. Casa Pueblo is a Landcare initiative that has been working with landowners and communities for almost twenty years and is a concept similar to the Australia Landcare Program.

In Puerto Rico, any effort towards the protection, for short and long term, of the environmental, social, and economic benefits related to the forests in Puerto Rico, must consider private forests as a priority. A good plan considers the use and management of private forests and can undoubtedly help satisfy the needs of the island's population for clean water and air, soil conservation, recreation opportunities and at the same time help to conserve the island's biodiversity and ecological integrity. The goals and objectives of the Puerto Rico's Stewardship Program are:

1. Provide technical assistance to non-industrial private forest landowners to enhance sustained long-term forest resource productivity as well as the quality and quantity of water and soil resources and biological diversity through the development and implementation of Forest Stewardship Plan.
 - a. Identify and contact landowners in the critical watershed areas as identified in the Reforestation Guidelines for Puerto Rico.
 - b. Conduct visits to landowners in the critical watershed areas as identified in the Reforestation Guidelines for Puerto Rico.
 - c. Develop Forest Stewardship Plans for interested landowners.

Forest Legacy Program:

The Department of Natural and Environmental Resources of the Commonwealth of Puerto Rico is the legal custodian of the island's forest resources. It has recognized the Forest Legacy Program as an important institutional instrument to cope with the threat of conversion of private forestland to non-forest uses. Powerful economic and social forces are driving development into the islands' private forestlands which today cover roughly 82% of the area. The island residents of the 1940's remember too well the consequences of forest loss. At that time Puerto Rico forest cover dropped to 6% and the island was one of the most eroded regions in the world. Today preliminary unpublished data compiled by the USDA Forest Service seems to indicate a declining tendency in the amount of forest-covered areas in comparison with 1985.

The goal of the Puerto Rico Legacy Program is to protect environmentally important forest areas belonging to private owners that are threatened by conversion to non-forest uses and that meet program eligibility criteria. The program priorities are also being championed by various land trust institutions and other conservation organizations in Puerto Rico. These include:

1. The protection and restoration of forested areas in watersheds developed as sources for public water supply.
2. Buffer zones of existing forest reserves, natural reserves and wildlife refuges.
3. Conservation of forested areas in primary or close to primary conditions.
4. Conservation of bio-diversity and unique features.

The Puerto Rico Forest Legacy Program Areas or Legacy Areas are:

1. Guánica Legacy Area
2. Maricao Legacy Area
3. Quebradillas Legacy Area
4. Caonillas-Dos Bocas Legacy Area
5. La Plata-Coamo Legacy Area
6. Río Grande de Loíza Legacy Area
7. Maunabo Legacy Area
8. El Yunque Legacy Area

Fragile coastal forests, currently severely subjected to development pressures, karsts and Cordillera Central forested areas, rich in environmental resources and particularly valuable for water yield, were the primary targeted areas. Selected Legacy Areas represent a rich and varied assortment of these forest lands and have been delimited to contain identified tracts in private property given very high conservation priority originally by the DNER (the Natural Heritage Division and the Forest Service Bureau), and by the USDA Forest Service and enriched and modified by comments from the public information focus groups and meetings carried out. Area boundaries were defined using existing roads. All tracts to be protected by the Puerto Rico Legacy Program, are included within the specified Forest Legacy Areas.

The Government of Puerto Rico elects the State Grant Option for the implementation of the program. The following activities are eligible uses under the PR-Legacy Program:

1. Purchase lands or interest (conservation easements) in land from willing sellers for inclusion in the Forest Legacy Program;
2. Facilitation of donations of lands or interests in lands to a qualified and will donee for Forest Legacy Program Purposes;
3. Lands or easements purchased by State, Municipal or land trusts are considered part of the Forest Legacy Program by contributing to the minimum 25% non-Federal share of program costs;
4. Zoning, term easements and other incentives or methods may further Forest Legacy goals, but are not part of the Federal Forest Legacy Program. State, Municipal Governments and land trusts may pursue these methods outside of the Federal Forest Legacy Program.

The Puerto Rico Forest Legacy Program continues focusing efforts on the acquisition of properties along the northern karst region near the Río Abajo State Forest. Also, the DNER has been working on the new project for the Southern part of the Island that was approved by the FLP. Funding was allocated to purchase land in the Guánica area nearby the Guánica State Forest, a Natural Biosphere Reserve.

Forest Health Protection:

Prominent forest health problems include hurricane damage, construction damage and insects and diseases. Of special concern is the Palm leaf-skeletonizer, a caterpillar that feeds on the leaves of palms. Forest Inventory on the island was completed in 2003. The UPR Extension Service in Mayagüez continues to implement the program in Puerto Rico compiling information about all pests and diseases identified in the area and providing technical assistance for prevention and control measures.

Economic Action Programs:

Economic Action Program base funding is no longer available for the Puerto Rico area.

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