

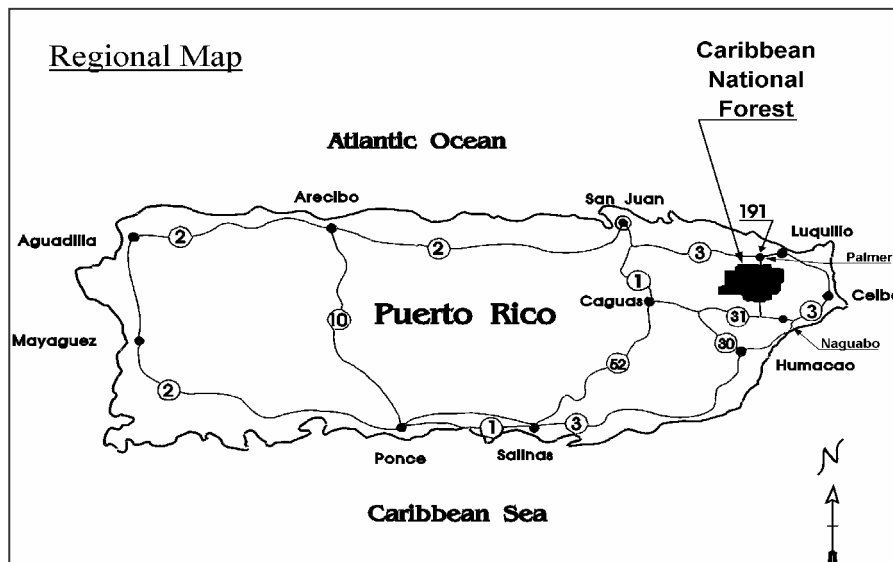
# Forest Supervisor's Certification

I have evaluated the monitoring results and recommendations in this report. I have directed the Forest Planner and Inventory and Monitoring Program Manager to develop an Action Plan to respond to the issues, concerns and opportunities that exist in order to evaluate the monitoring effectiveness. I have considered funding requirements in the budget necessary to implement these actions.

The Revised Forest Plan is sufficient to guide forest management for fiscal year 2008, unless ongoing monitoring and evaluation identify further need for change. Amendments or revisions to the Revised Land and Resource Management Plan will be made accordingly and as outlined by the National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA) requirements.

**Pablo Cruz**

Forest Supervisor



# 2006 Monitoring and Evaluation Report Caribbean National Forest

## Executive Summary

Highlights for Fiscal Year 2006 (FY06):

1. As part of the Executive Branch and under the President's Management Agenda and its Government-wide Initiatives, the agency worked on the following:
  - a) Strategic Management of Human Capital
  - b) Competitive Sourcing
  - c) Improved Financial Performance
  - d) Expanded Electronic Government
  - e) Budget and Performance Integration

Locally we implemented the following:

- a) The unit's web page update and its' translation to Spanish
  - b) Administrative staff realignments due to cost pool (overhead) reductions
  - c) Strategic staff retirement
  - d) Succession Planning
  - e) Business Process Reengineering for Financial Management and Human Resources
  - f) Agency and Local Strategic Plans and Performance Accountability System
  - g) Locally implemented feasibility studies and data calls for A-76
2. Created a safety committee that developed the new Safety Plan.
3. Determined strategies and alternatives for the possibility of losing the Senior Community Service Employment Program.
4. Pursued Forest Name change administratively.
5. Established Gateway Community Councils in Naguabo and Rio Grande.
6. Conducted a Research Management Symposium with the International Institute of Tropical Forestry.
7. Followed agency's Environmental Management System (EMS) strategy, implementation, and financial plan.
8. Partnered with the Puerto Rico Planning Board and Land Use Office working on the Land Use Plan.

9. Partnered with the Southern Center for Wildland-Urban Interface Research and Information to locally work on Urban Interface
10. Partnered with APHIS and the community to work on Exotic and Invasive Species.
11. Continued Puerto Rican Parrot Endangered Species efforts with partners.
12. Managed National Guard agreements at Camp Santiago.
13. Worked on Timber Demo with Research, and State & Private.
14. Completed the Mass Transit feasibility study.
15. Administered the new Aviary and the Sabana Picnic Area construction contracts.
16. Developed the Wild and Scenic River Plan and its Environment Assessment.
17. Conducted Forest Wilderness training.
18. Conducted a Lands Summit.
19. Developed LEI strategies and agreements for support for holidays and high visitation periods.
20. Determined administrative support options for LEI.
21. Explored Ecological Markets opportunities with the WO Legislative Affairs, the Regional Office, and the Southern Research Center.

## **Introduction**

The Caribbean National Forest (CNF) annually monitors and evaluates its programs and projects to determine progress toward achieving Revised Forest Plan goals, objectives, and standards and guidelines.

The approved Caribbean National Forest Revised Land and Resources Management Plan (Revised Forest Plan) was formally released to the public July 11, 1997. The appeal period extended from July 11 through October 14, 1997. No appeals of the Revised Forest Plan were received. Three Forest Plan Amendments were completed to-date.

This 2006 report is structured to correspond with the monitoring direction in Chapter 5 of the Revised Forest Plan. Information for each monitoring element includes: desired condition(s); parameters to measure progress toward those conditions; and results of monitoring of these parameters during fiscal year 2006.

Monitoring and evaluation is an ongoing process, documented through annual reviews by the Forest Supervisor and Forest staff. Monitoring indicates whether management direction in the Revised Forest Plan is being effectively carried out and points out needed modification of that direction. It also shows whether effects of implementing the Forest Plan are occurring as predicted; whether the application of management area prescriptions responds to public issues and management concerns; and the costs of implementing the Forest Plan.

## Soil and Water

Highlights for Fiscal Year 2006 (FY06): Strengthened public awareness of water resource management by working with 1) the United Nations United Nations Hydrology for Environment, Life and Policy Initiative, 2) working with PR Department of Natural Resource Ranger Corps, 3) celebrating World Water Day, and 4) filing a complaint at the US Army Corps of Engineering for dredging of Rio Mameyes.

## Description of the Soil and Water Environment

The forest continued to restore from significant changes to soil and water resources as described in the Land and Resource Management Plan (LRMP) Final Environment Impact Statement (FEIS) that occurred On September 15, 2004 as Tropical Storm Jeanne passed over the island of Puerto Rico.

## Watershed Condition

Forest watershed condition improved in Rio Mameyes and Rio Blanco Watersheds. The Forest continued treatment of landslides surveyed on September 2004.

The following table summarizes the number of landslides and affected areas as of October 1, 2005. The final inventory resulted in the following:

October 1, 2005. The final inventory resulted in the following:	<b>FY 2005 Number of Landslides</b>	<b>FY2005 Affected Area (Acres)</b>	<b>FY2006 Number of Landslides</b>	<b>FY2006 Affected Area (Acres)</b>
<b><i>WATERSHED</i></b>				
Rio Blanco	6	11	2	8
Rio Mameyes	17	17	0	0
Rio Espiritu Santo	5	5	0	0

Rio Sabana	3	3	0	0
Rio Fajardo	1	5	0	0
TOTALS	20	24	2	8

The project received \$27,587 for improvements.

## Water Quantity

Quantitative in stream flows were not established in FY 06. Flow regimes considered during plan development were not modified. Water resource use remained the same since no intakes were upgraded. No management events in FY 06 altered the amount of water flowing from the Forest as stated in the plan. Annual stream flow data (cubic feet/second) was:

Rio Mameyes at Sabana	78.8	(Water Year 2004)
Rio Mameyes at Mameyes	118.6	(WY 1984)
Rio Espiritu Santo near Rio Grande	83.8	(WY 2000)
Rio Blanco near Florida	122.8	(WY 122.8)

## Water Quality

A Water Quality Monitoring Plan was completed in FY 05. The plan called for establishment of 6 permanent monitoring sites on Río Mameyes, Río Espiritu Santo, Río Sabana, Río Fajardo, Río Pitahaya (Río Chiquito) and Río Blanco. The Forest delayed plan implementation until 2008. The Forest collaborated with National Science Foundation Biocomplexity Project. Preliminary results indicate no negative effects on water quality from the recreational activities at Puente Roto (Rio Mameyes), Rio La Mina, and Rio Fajardo.

During FY 06, constructions the Sabana Picnic Site and Jimenez Parrot Aviary did not result in sediments discharge to streams due to effective contract inspection (Forest Service Engineer) and utilization of recommended soil and water conservation practices. The total sediment yield (tons/year) was estimated at 11 for road reconstruction and picnic area. The total sediment yield (tons/year) was estimated at 22 for building site, access road and deposit site.

## Monitoring Conclusions

### *Are projects complying with design, LRMP and NEPA?*

Project compliance with design, LRMP, and NEPA was evaluated in the Sabana Picnic Area and Jimenez Aviary construction. Technical inspections by the Ecosystem Management Team Leader, and Field Technicians occurred during the 2<sup>nd</sup> year of

construction. The Aviary Project is located in the Rio Espiritu Santo Watershed. The Sabana Project is located within the Rio Blanco Watershed. A major factor that affects water quality of the Rio Blanco watershed is sedimentation.

“Best Management Practices” as defined in the Standards and Guidelines for the Revised Forest Plan, were utilized as mitigation measures to reduce the potential for increased sedimentation and help stabilize current sources (Sabana Picnic Area FEIS, 2003). Project monitoring activities included evaluation on the implementation and effectiveness of the FEIS mitigations during construction. Implementation monitoring was conducted by site visual inspections. Effectiveness monitoring was conducted by visual inspections of nearby streams. Both projects complied with NEPA.

### *Are we following S & Gs?*

The use of Standard and Guides can be evaluated in Jimenez Aviary and Sabana River Recreation Area construction conducted by contractors. The Caribbean National Forest Revised Land and Resource Management Plan (LRMP) places the Sabana River Recreation area within Management Area 2 (Developed Recreation) and the Jimenez Aviary within Management Area 1 (Administrative Site) after a Caribbean National Forest Plan amendment. Some of the LRMP goals and standards required to the Aviary project were listed in the FY 05 Monitoring and Evaluation Report. During the 2<sup>nd</sup> year of construction, the following standard and guidelines were evaluated:

1. Re-establish vegetation on disturbed areas or exposed soil to prevent erosion and sedimentation using native vegetation.
2. Use only native vegetation or exotic species already established in the area for landscaping, rehabilitation or stabilization.
3. Use retention structures as needed to retain any possible movement of soil. These may include gabions, erosion control mat and silt fences. These structures will remain in place until the soil becomes stabilized and re-vegetated.

Four field inspections were conducted by the Biological Technicians and Natural Resources Team Leader. The Jimenez Aviary Construction represents an example of compliance with standard and guidelines.

Some of the LRMP goals and standards evaluated at the Rio Sabana Picnic Site Construction were:

1. Limit clearing of vegetation to the minimum required for the project. Require contractors to prepare and implement an erosion and sediment control plan.
2. Keep machinery out of stream channels. Require that vehicle maintenance occur at least 100 feet from streams, and preferably off the Forest.
3. Use only native vegetation or exotic species already established in the area for landscaping, rehabilitation or stabilization.

Three field inspections were conducted by the Field Technicians. The Jimenez Aviary

Construction represents an example of compliance with standard and guidelines.

***Is Soil and Water DFC met?***

*Desired Condition:* Watershed condition is restored, enhanced, or maintained.

*Measurement:* Sediment losses from treated vs. non-treated areas; assessment of vegetative cover.

*Results:* The Forest's watershed condition and water quality, adversely affected by September 2004 Tropical Storm Jeanne Event improved after restoration of 8 acres. Vegetative cover of approximately 85% was achieved during the second year. The Sabana Picnic Site and Aviary Site Constructions did not alter watershed characteristics.

*Desired Condition:* Water quantity and quality are adequate to support healthy populations of aquatic animals. Stream flows are not reduced below natural minimum flows.

*Measurement:* Water quantity and quality at permanent gauging stations. Review of USGS data for Rios Mameyes, Rio Blanco, Sabana and Espiritu Santo Rivers.

*Results:* Suspended sediment discharge averages 21.8 tons/day for Rio Icacos. Suspended sediment discharge averages 15.12 tons/day for Rio Mameyes.

*Measurement:* Project or on-site assessment of water quantity and quality factors.

*Results:* A review of an Environmental Assessment from the Puerto Rico Electrical and Power Authority was conducted for sediment removal on the Rio Blanco Dam. The project plan will not affect stream flows. In addition, a complaint was filed at the U.S. Army Corp of Engineers due to dredging operations in Rio Mameyes. A field inspection demonstrated changes to micro-habitats, but no reduction in natural flows occurred.

*Desired Condition:* Water used and development is balanced

*Measurement:* Determine amount and location of water extracted for consumptive use.

*Results:* The estimated amount of water extracted for consumptive use remains the same as stated in the 2005 Monitoring and Evaluation Report.

No additional special use permits for intake facilities were received.

***Are soil and water resources goal and objectives met?***

*Forest Plan Goal:* Cooperate with research scientist to develop best management practices for watershed protection.

*Results:* Support to the research community was provided to University of Puerto Rico Hydrology for the Environment, Life and Policy Project (<http://luquillohelp.upr.edu/environment.htm>). The Forest collaborated in two project meetings. A community session was held with municipal, environmental, and community leaders of Rio Grande. Discussion focused on water resource management, Wild and Scenic Rivers, Wilderness designation, and condition of Rio Espiritu Santo estuary.

In addition, the Forest celebrated World Water Day with a seminar held at the Inter American University-Fajardo Campus. A panel of resource specialists presented management aspects as part of the United Nations Agenda.

*Forest Plan Goal:* Emphasize watershed improvement activities in areas of highly erosive soils and areas of concentrated recreation use.

*Results:* Watershed improvement needs activities were focused on these areas through Tropical Storm Jeanne Recovery Project. Four technical input sessions were conducted as part of the Wild and Scenic River Plan and Environmental Analysis development.

## **Water Resource Management Conclusions**

The overall conclusion is that the Forest continues to manage water resources as an emphasis items. Watershed management operations decreased to normal levels due to closure of storm recovery. Human resources were reduced after completion of the Hydrologist Trainee program. Water remained an issue for FY 06 period. Forest water resource management activities need to concentrate efforts in quantification of resource data, development of quantitative in stream flows, and continued support to the complexity water quality research.

## **Wildlife and Fisheries**

Highlights for Fiscal Year 2006 (FY06): The Forest focused its resources on Puerto Rican parrot recovery at El Yunque, establishment of a second wild population in Rio Abajo State Forest, and conducting aquatic stream surveys.

## **Wildlife and Fisheries**

*Desired Condition:* The Puerto Rican Parrot Population remains stable or increases.

*Measurement:* 1) Successful nesting attempts indices of the wild population.  
2) Sustain the number of active breeding parrot nests.

*Results:* A coordinated U.S. Fish and Wildlife Services index on the Caribbean National Forest (CNF) involving two other agencies to conduct population estimates and provide protection for the last wild flock.



CNF personnel constructed two (2) new artificial/natural cavities and improved seven (11) nests for the recovery effort. The CNF also constructed one (1) new lookout platform and improved 3 platforms to support the continuing index process. Access to the parrot nesting area and points of interests is a concern that the CNF met, improving approximately three (3) miles of existing trail with long-lasting results.

<b>Summary of Puerto Rican Parrot Recovery From 1990 to 2006</b>																	
<b>Year</b>	<b>90</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>00</b>	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>05</b>	<b>06</b>
<b>Successful Nesting Attempts</b>	1	5	6	6	6	5	3	3	4	2	5	5	2	5	5	3	5
<b>Total Young Produced in the Wild</b>	2	8	10	13	13	14	7	7	10	3	13	14	2	5	7	5	4
<b>Young Fledged into the Wild</b>	2	7	11	15	14	15	8	7	9	3	7	5	1	4	7	4	8

A release of Puerto Rican Parrots (PRP) occurred was planned during FY 06. The activity was scheduled for November 2006. The plan is to establish a second population of parrots in the wild is still in the planning process between the U.S. Forest Service, U.S. Fish and Wildlife Service and the Puerto Rico Department of Natural Resources. The Rio Abajo State Forest was selected for the release. Forest Service personnel lead habitat improvement activities which included condition inventory, nest site selection, trail and management access opening, predator survey, integrated pest management, installation of artificial nests in preparation for the November 2006 release.



Rio Abajo release cage. (Note parrot in the center of picture)



Parrot artificial nest.

*Desired Condition:* Sharp-shinned and Broad-winged hawk populations are increasing.

*Methodology:* Point Counts.

*Results:* No Sharp-shinned or Broad-winged hawks were observed in either of the indices. In FY 06 no specific raptor survey was conducted.

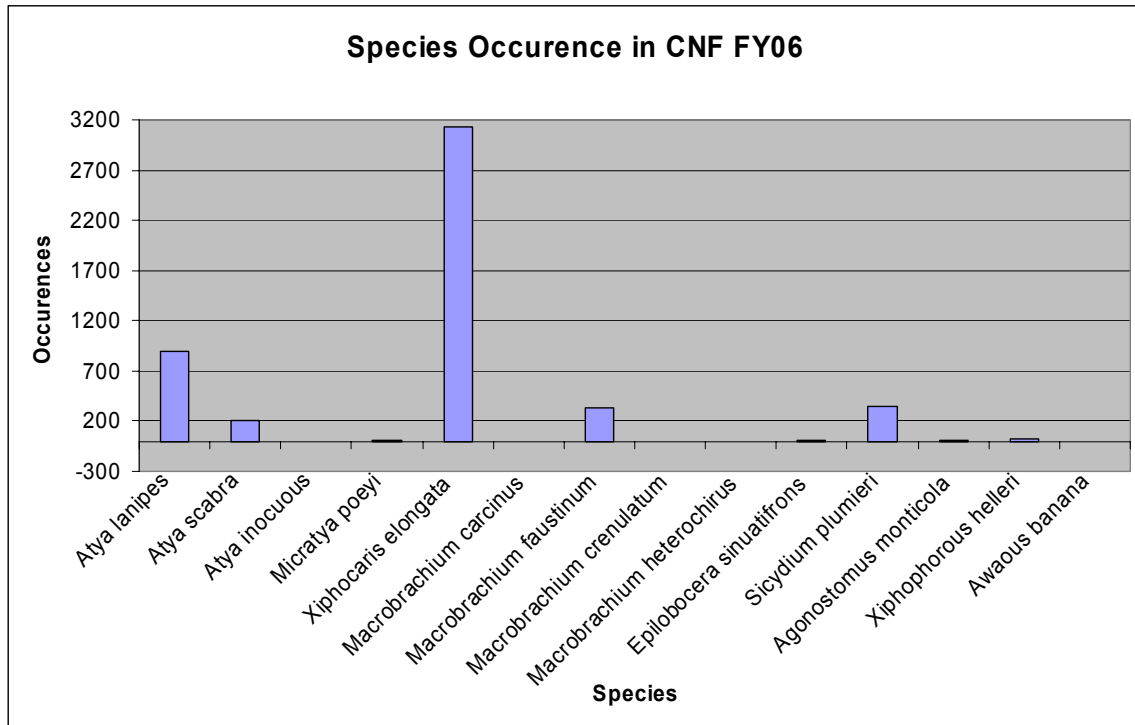
Most of the raptors are included in the breeding bird survey or Christmas counts. No count was conducted for this species specifically. The endangered species raptors have simply not been observed, but that is not stating they are not on the Forest.

*Desired Condition:* Sustain a healthy and robust aquatic ecosystem on the Forest. Monitoring any potential barriers to migration of fish or crustaceans.

*Measurement:* Electro-fishing and snorkel stream surveys developed by the Center of Aquatic Technology Transfer to establish data for aquatic species and habitats. Annual monitoring of selected stream reaches.

*Results:* The CNF accomplished a total of 7.0 miles of streams surveys. Stream surveys focus on habitat availability, while electrofishing centered on species occurrences.

The enclosed table shows dive count results for FY 06.



## Integrated Pest Management

*Objective:* Identify forest pest problems through routine observations. Implement control in an integrated pest management approach.

*Results:* Vegetation surveys around the periphery and main corridors of EYNF for the presence of the Pink Hibiscus Mealy bug was negative during FY06 monitoring periods. The Forest implemented animal control in recreation and parrot habitat areas.

The Forest initiated a mongoose removal program on recreational areas. The Forest has defined “problem” animals as individuals that appear to have become habituated to seeking food from humans. During half of fiscal year 06, 48 mongooses were removed from Palo Colorado Picnic Area, Caimitillo Picnic Area and Catalina Service Center.

The honeybee is an introduced species, which can be undesirable in developed recreation areas and is a major problem for the Puerto Rican parrot recovery effort. The recent arrival in Puerto Rico of the more aggressive Africanized honeybee has made the

problem more acute. Six bee traps baited with attractant pheromones are placed around parrot nests and in high human-use areas in order to intercept swarms. Monitoring of bee activity indicates that bee populations are highly variable from year to year.

Other pest management activities related to parrot recovery included control of rats and pearly-eyed thrasher management. The thrasher is a competitor of the parrot, and a potential predator of parrot nestlings. Thrasher management strategy consists of providing them two (2) nest boxes near parrot nests so that thrashers don't try to usurp the larger cavities the parrots need, while also establishing a territory around the nest they defend against other thrashers. A total of 4 nest boxes were installed in FY 06.

Many exotic animal species (in addition to honeybees and mongoose) have become established in Puerto Rico, posing varying degrees of threat to native species island-wide and within the Forest. For example the common iguana, *Iguana iguana*, of Central and South America, has become very common in coastal Puerto Rico. Populations appear to be stable within the Forest; during 2006, two (2) individuals were identified as nuisance. Contrary to previous indications, it now appears that the iguana is capable of nesting within the Forest. Five visual identifications were made on La Coca Waterfall. Possible effects on native species remain unknown.

## **Rare Plants**

*Desired Condition:* Populations of proposed, endangered, threatened, and sensitive species (PETS) are stable or increasing.

*Measurements:* Surveys of known populations every two years during flowering and fruiting seasons. Conduct reconnaissance for new populations.

*Results:*

- Populations of sensitive species are increasing by means of introduction to the field (EYNF) of generated seedlings at the nursery.
- Reconnaissance surveys have not produced new populations of PETS during FY06 and all known populations of PETS are stable.
- Two seedling of *Callicarpa ampla* (produced by air layering) were incorporated to the surroundings of the *Callicarpa* present at El Portal to initiate a population.
- Collected more than a 100 fruits of *Callicarpa ampla*, seeds were cleaned, dried and storage for future germination efforts.



Callicarpa air layering.

*Desired Condition:* Recovery goals for proposed, endangered and threatened (PET) species are met.

*Measurements:* Surveys of known populations every two years during flowering and fruiting seasons. Conduct reconnaissance for new populations.

*Results:* Recovery goals are continuously in process. Actively for *Styrax portorricensis*, *Pleodendrom macrantum* and *Callicarpa ampla*.

## **Primary Forest**

*Desired Condition:* Primary forest in all four-forest types is protected. Acreage of primary forest is not reduced.

*Measurement:* Visual inspection of primary forest to determine acres altered by trail construction or other development.

*Results:* No trail construction occurred in primary forest during 2006.

## **Sustainable Forest Benefits**

### **Lands and Special Uses**

*Desired Condition:* Landlines around all National Forest system property are established to standard within 10 years. Established landlines are maintained every 5 years.

*Measurement:* Miles of landlines established and maintained.

*Results:* Regular funding for landline maintenance continues to be very limited. No boundaries were maintained during FY2006.

A three-day Lands Symposium was held on the Forest in December 2005 including participation from Resident Commissioner Luis Fortuno and Senator Mel Martinez of Florida along with local political contacts, key government organizations and land conservation organizations such as Conservation Trust of PR, Trust for Public Lands and the Nature Conservancy. The Regional Office Lands Director and Lands Program Manager also participated. One day was devoted to presentations and discussions followed by a field trip to discuss issues on the ground.

Documents were finalized for the transfer of 9 acres of land adjacent to Forest boundaries from the US Marshals Service to the USDA Forest Service.

*Desired Condition:* Special use permittees comply with all provisions of their permits.

*Measurement:* Special use permits compliance inspections and administered to standard

*Results:* Long-term (more than one year) special use permits issued or administered in FY 2005 included:

- 29 outfitter/guide
- 1 organization camp
- 2 water diversion/pipelines
- 1 road right-of-ways
- 20 research
- 7 communication facility sites
- 1 electrical transmission line
- 4 recreation residences
- 1 food service concession

Temporary permits of less than one year issued or administered in FY2006 include:

- 3 research permits
- 14 filming/photography permits
- 14 recreation/group events

Approximately 43% of these permits were administered to standard in 2006 which means permits were in compliance and rental fees were collected, facilities or programs were inspected and insurance requirements were met.

A NEPA study was conducted for the renewal of a temporary permit for the Puerto Rico

Aqueducts and Sewer Authority (PRASA) which operates water storage and diversion systems on the Forest. Efforts will continue in FY 2007 towards issuing a long term permit to PRASA.

A NEPA analysis was completed for upgrading the septic system at the Elisa Colberg Girl Scout Camp. A permit amendment was completed in July 2006. Monitoring of the project will take place in FY 2007.

Recreation resident permit holders were notified of new Cabin User Fee Fairness Act (CUFFA) regulations which will include a re-appraisal of recreation residences on the Forest.

Special Use staff participated in an interagency committee to help develop best management practices for tour operators and land management agencies in Puerto Rico working with the Puerto Rican Association of Education and Interpretation (APIE) and the PR Tourism Company on this effort. Forest Service presented information at the APIE's Tour Guide Congress/training in February 2006.

The Forest hosted programs for several tourism related conferences on the Forest in FY 2006 including the PR Tourism Company, Caribbean Media Exchange, Caribbean Tourism Organization's conference on sustainable tourism and the National Association of Interpreters during FY2006. These conferences were coordinated under special use permits.

## **Scenery Resource**

*Desired Condition:* Visual quality of communications sites improves from Maximum Modification toward Visual Quality Objective (VQO) Modification.

*Measurement:* Visual inspection to determine progress toward desired visual quality objective.

*Results:* No impacts suffered or improvements achieved to VQO during FY 2006.

## **Transportation System**

*Desired Condition:* The Forest's road system is maintained to standards to serve public demand for access, to meet management needs, and to protect resources in a cost-effective manner.

*Measurement:* Miles of road by maintenance standards. Annual inspection

*Results:* There was an improvement on roadside maintenance on roads under the jurisdiction of the Puerto Rico Department of Transportation (PRDOT). Roadside vegetation is now kept at levels that provide for adequate sight distances.



A total of 11.3 miles of Forest Service Roads were inspected and 4 miles maintained to standard.

The Forest awarded a contract for repairs to forest roads and parking damaged by Storm Jeanne in September 2004. Work started at the end of the fiscal year and continued into FY 2007.

The Federal Highway Administration (FHWA), Eastern Federal Lands Highway Division (EFLHD) worked on the engineering design to stabilize the 0.5 acre slide on PR 9966 within ½ km west of the new aviary site. Funding for the project (\$1.6 Million) was obtained from the Emergency Relief for Federally Owned Roads (ERFO) program. The road remained closed to prevent vandalism and trash dumping and for safety reasons throughout FY 2006.

The Puerto Rico Highway & Transit Authority (PRHTA) awarded and administered a contract for an Alternatives Study to investigate the feasibility of an Alternate Transportation Mode (ATM) to serve the PR 191 recreation corridor as recommended by the previous *Transportation and Access Study for the Caribbean National Forest* completed in FY02. The study was scheduled to be completed by the end of FY06 but it was delayed into early FY07. The Puerto Rico Resident Commissioner in U.S. Congress earmarked \$2.5 Million under the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)* for the implementation of the system.

## **Administrative Sites**

*Desired Condition:* Administrative sites are safe, esthetically pleasing and are universally accessible.

*Measurement:* Annual OSHA inspection.

*Results:* Safety inspections were performed on all occupied administrative sites. The Catalina Service Center site and all buildings were operated and maintained to Forest Service Safety and Health standards throughout the year.

## **Recreation**

*Desired Condition:* A wide range of recreation opportunities is provided. Heavily used undeveloped sites are developed. A variety of trail opportunities is provided with adequate safe parking in trailheads.

*Measurement:* Developed site capacity (persons at one time or “PAOT”). Miles of trail constructed, re-constructed, and maintained to Forest Service standards. Use levels (thousands of recreation visitor days or “MRVD”).

*Results:* The developed sites capacity during FY 2006 was 1,498 PAOT. The offered

Forest capacity was 514,046 PAOT-Days of which 375,000 were managed to standard.

The National Visitor Use Monitoring (NVUM) was conducted throughout FY 2006. This is a survey conducted by the Forest Service every 4 yrs to assess the number of visitors to each national forest, the recreation experiences they seek, and the quality of their experience. The following are significant facts in the 2006 NVUM:

- 1,189,700 National Forest Visits estimated
- Visitors are 51.3% males and 48.7% females
- Over half (50.5%) of survey respondents were of Spanish, Hispanic, or Latino ethnicity
- Fifty Seven percent (57%) of visitors come from mainland USA of which 55% come from the North East region, 37% are residents of Puerto Rico, 5 % from foreign countries, and 1% of unknown origin.
- The most popular activities that visitors come to the Forest for are; in order of preference: viewing natural features, hiking/walking, viewing wildlife, and driving for pleasure.
- Visitors expressed a high level of satisfaction. All visitor satisfaction categories ranked between 4.4 and 4.9 on a scale of 1 to 5.

For a full text of the 2006 NVUM visit our web site at [http://fsweb.nris.fs.fed.us/products/Human\\_Dimensions\\_NVUM/HD-NVUM\\_12/index.shtml](http://fsweb.nris.fs.fed.us/products/Human_Dimensions_NVUM/HD-NVUM_12/index.shtml) or write to:

Blanca Ruiz  
El Yunque National Forest  
HC01, Box 13490  
Rio Grande, PR 00745-9625

The conditions at El Portal Rain Forest Center continued to be excellent with no accumulation of deferred maintenance as a result of ongoing preventive maintenance and landscaping contracts.

The Forest received \$249,000 as an earmark by the Puerto Rico Resident Commissioner for the reconstruction of the 2.5 miles Rio Sabana trail. A contract for clearing the trail after 35 yrs of being closed including downed timber and debris from several major storms including Hurricanes Hugo in 1989 and Georges in 1998 was prepared and awarded in July 2006. Work started in September 2006 and continued into FY 2007.

Five miles of recreation trails received maintenance. Six miles were operated to standard throughout FY06.

*Desired Condition:* Forest visitors enjoy safe and enriching environmental and recreational experiences.

*Measurement:* Evaluation of recreation use and facilities to determine if ROS objectives are met. Customer surveys.

*Results:* Visitation registered at El Portal during FY2006 was 182,498 people. This includes 94,885 customers brought to the Forest by outfitters that check in at El Portal but not necessarily enter El Portal. The Forest Visitor fees collected, under the Recreation Enhancement Act, in FY2006 were \$454,037. This is a slight decrease (3.7%) from FY 2005 when \$471,476 was collected.

Ninety five percent of the fees collected still remain on site to be used for fee collection services, maintenance, and improvement of facilities and services.

The Forest Adventure Program, which provides guided hikes by trained Forest Service interpreters continued in FY 2006 with 3480 customers served and revenues of \$13,426. This is a slight increase (7%) vs. the FY05 level of \$12,559.

## **Wilderness**

*Desired Condition:* Wilderness protects the largest remaining example of Puerto Rico's original forest. Primary forest, dwarf forest and rare plants and animals are protected. Opportunities for primitive recreation experiences and solitude are provided.

*Measurement:* Limits of acceptable change analysis. Customer survey.

*Results:* Wilderness values were not altered during 2006.

The Caribbean National Forest Act of 2005 (S 272, HR 539) became Public Law 109-18 on December 1, 2005. This law established the 10,000-acre El Toro Wilderness on the CNF. It is the first tropical forest wilderness in the National Wilderness Preservation System.

A Wilderness Awareness Workshop presented by the Arthur Carhart National Wilderness Training Center was held on the Forest during March 1-2, 2006 with the participation of all Forest personnel that will be engaged in wilderness management and partners and collaborators that operate within or around wilderness boundaries.

## **Wild, Scenic, and Recreation Rivers**

*Desired Condition:* River segments eligible for Wild, Scenic, or Recreation (W/S/R) designation are managed to retain the attributes that qualify them for such designation.

*Measurement:* Proposed management practices are evaluated as part of project planning process. Visual confirmation that Visual Quality Objectives (VQO) of preservation is met for segments eligible for Wild and Scenic designations, and VQO of retention is met for segments eligible for Recreation designation.

*Results:* The Rio Mameyes is designated as a wild river for 2.1 miles, as scenic river for

1.4 miles, and as recreation river for 1.0 miles for a total of 4.5 miles. The Rio De La Mina is designated as a recreational river for 0.9 miles and as scenic river for 1.2 miles for a total of 2.1 miles. The Rio Icacos is designated a scenic river for 2.3 miles. River corridors retained the qualities that qualified them for designation. The Forest continued work on the Comprehensive River Management Plan and Environmental Assessment (EA) for the plan during FY 2006.

## **Research**

*Desired Condition:* Research conducted on the Forest continues to contribute to improve management. Completed studies do not preclude future studies in the same area.

*Measurement:* Assessment in annual IITF report.

*Results:* Following are some of the research findings that are applied in management.

- There is a close relationship between the research program and the management of the Caribbean National Forest in the issue of water management. Scientists from the Forest Service, the University of Puerto Rico, and several mainland universities (such as the University of Georgia) collaborate in the LTER Program to better understand the structure and functioning of aquatic ecosystems in the National Forest. These include rivers, creeks, wetlands, and other specialized aquatic habitats in the forest (such as tank bromeliads). This research allows forest managers to allocate water for permits, understand how water extractions might impact aquatic biodiversity, protect sensitive species, and monitor these resources over the long-term. The research has resulted in specialized designs for water extraction, designation of critical rivers as wild and scenic, monitoring of harvesting of river decapods, and other. Thanks to this close relationship, the rivers and creeks of the CNF are among the best understood and managed in the Island.
  
- Another application of some of the research findings are being used for Wildlife Management. IITF Researchers have been monitoring bird populations in the CNF/LEF for many years. Some of these monitoring counts have sampled populations of concern such as the Elfin Woods Warbler, Broad-winged Hawk, and Neotropical migrant birds. Dr. Arendt has been conducting point counts surveys in various parts of the CNF since at least since Hurricane Hugo (1989) and this is the longest set of data available for bird populations in the forest. These point counts are general counts which include all birds and have the potential to monitor species of concern. Preliminary analyses show changes in Elfin Woods Warbler populations, the results are disclosed in the Wildlife section of this report. Dr. Arendt is completing a statistical analysis and summary of the monitoring work to date that will be translated into a manuscript for publication. Analysis of the monitoring program at this stage will allow us to identify potential population trends, which will be useful to CNF managers, and will allow us to determine if we are using the best sampling design, which might be modified for

our future surveys in the CNF.

- Christmas Bird Counts have been conducted in the CNF/LEF for the past thirteen years and as time goes on will provide a measure of population trends in the forest. However, data gathered in the Christmas bird counts are more variable than those from point counts and do not have the precision of the point counts for detecting population trends.

## Heritage Resources

*Desired Condition:* All potentially significant heritage resources are protected.

*Measurement:* Inspection of projects during implementation, where surveys detected presence of potentially significant heritage resources. Inspection of known heritage sites every two years, where projects are not occurring.

*Results:* Six ongoing projects were reviewed, inspected and monitored for potential impacts to heritage resources. No heritage sites were adversely impacted by management activities during FY 2006. No undertaking resulted in the discovery of unanticipated archaeological property. Over 15 significant heritage sites on the Forest were monitored, including visits to prehistoric petroglyph sites and historic structures. One historic structure was vandalized and the damage to this government property was investigated by the Forest's Law Enforcement unit.

Submitted a multi-property nomination entitled the *Puerto Rico Forest Reserves New Deal Multiple Property Study* to the State Historic Preservation Office for inclusion on the National Register of Historic Places (NRHP). The nomination focuses on 1930's Civilian Conservation Corps properties located on public forests throughout the island, including over thirty historic properties on the Caribbean National Forest.

Throughout the Forest an additional 50 acres was intensively investigated in conjunction with other on-going projects; no new archaeological sites were discovered this year. One historic site, Stone House, located along PR 191, was stabilized by repairing its rock-work exterior which was leaking. The Heritage component of the INFRA database, which includes information on historic properties, was updated, and the data backlog from prior years was significantly reduced.

As part of the NEPA process provided input on the Heritage component of the Forest's Land Management Plan Amendment, the Baño de Oro Rehabilitation Project Environmental Assessment, the Wild and Scenic Rivers Comprehensive River Management Plan; and participated in the El Toro Wilderness Area planning strategy meetings.

Implemented the Memorandum of Understanding as part of the NEPA process for the new Puerto Rican Parrot Aviary; including executing a Stage III Mitigation Plan to

mitigate adverse impacts to two significant historic properties. This year, the second of the two properties determined eligible for the NRHP was affected -- the CCC-era Mameyes-Rio Blanco PR191. Per the MOU, excavation of the utility trench was monitored, but no unanticipated archaeological finds were made; representative sections of the trench were documented using profile drawings and photographs.

At the Society for American Archaeology annual meetings held in San Juan, P.R., the Forest's Heritage staff participated in a Rock Art symposium, and presented a paper entitled *Out of the Woods: 25 years of USDA Forest Service Heritage Resource Management in Puerto Rico*, which describes the development of the Heritage Program on the Caribbean NF.

CNF continues to lend support to the Puerto Rico Army National Guard by conducting a multi-year archaeological properties survey of the Camp Santiago Training Center in Salinas, P.R.

## **Law Enforcement**

*Objectives:* The main objective of the El Yunque NF, Law Enforcement and Investigations Division personnel is to ensure the public and employee safety while providing protection of Forest Resources, Cultural Resources, Wildlife and Property. Communication between Law Enforcement, the public and all other FS employees is vital for the LE program to meet its objectives.

*Results:* During the 2006 period, El Yunque NF's law enforcement officers in conjunction with Rangers, of the Puerto Rico's Department of Natural and Environmental Resources, assisted in the decrease of crimes in the Forest. They also, offered assistance on the protection of dignitaries visiting the Forest. Around 205 Warnings, 239 Incidents, and 324 Violation Notices were issued, investigated, and reported in the Law Enforcement and Investigations Managements Attainment Reporting System. Also, investigation assistances has been offered to other federal, municipal and State agencies such as the US Fish and Wildlife Service, National Park Service, NOAA, Puerto Rico Police Department, Rio Grande Municipal Police and the Natural Resources Rangers Corps. Also, citations for simple marijuana possession, dumping, public nudity and others were issued during this period. A series of assistance in Search and Rescue incidents was also offered during this period. Assistance in "dead bodies" investigations was offered to local authorities. Assistance with Criminal Background Checks was also offered to state, municipal and other federal law enforcement agencies.

## **Fire and Other Emergencies**

*Objective:* The Plan has no objectives for fire. Evidence indicates that fire was not a natural part of the Forest's ecology, although limited areas of the Forest with non-native vegetation can occasionally support limited fire activity during periods of drought. The forest is tasked to support major fire suppression efforts and other emergency responses on mainland forests.

*Results:* No fires occurred on the Forest in FY 2006. The program focused on training and building capacity this year. To that end, three people were sent to the Southern Regional Fire Training Center in Mississippi to complete a course certifying them to become instructors. Courses were offered in Dispatch Recorder and ROSS, enabling us to increase available resources in dispatch. One trainee went on to become fully qualified within two months, bringing our total number of dispatch recorders to 4. Three new squad bosses were certified. Nine type 2 crews were deployed, including two to assist the National Park Service in their Hurricane Katrina recovery efforts at the Gulf Islands National Seashore in Mississippi. Eleven dispatch recorders were dispatched, as well as one Forest Protection Officer. We also dispatched a Medical Unit Leader and Supply Unit Leader this year. The Forest leads the Multi Agency Coordination Group and coordinated the annual MACG meeting in April. The group is comprised of federal land management agencies with interest in risk management

## **Business Operations**

### **Finances**

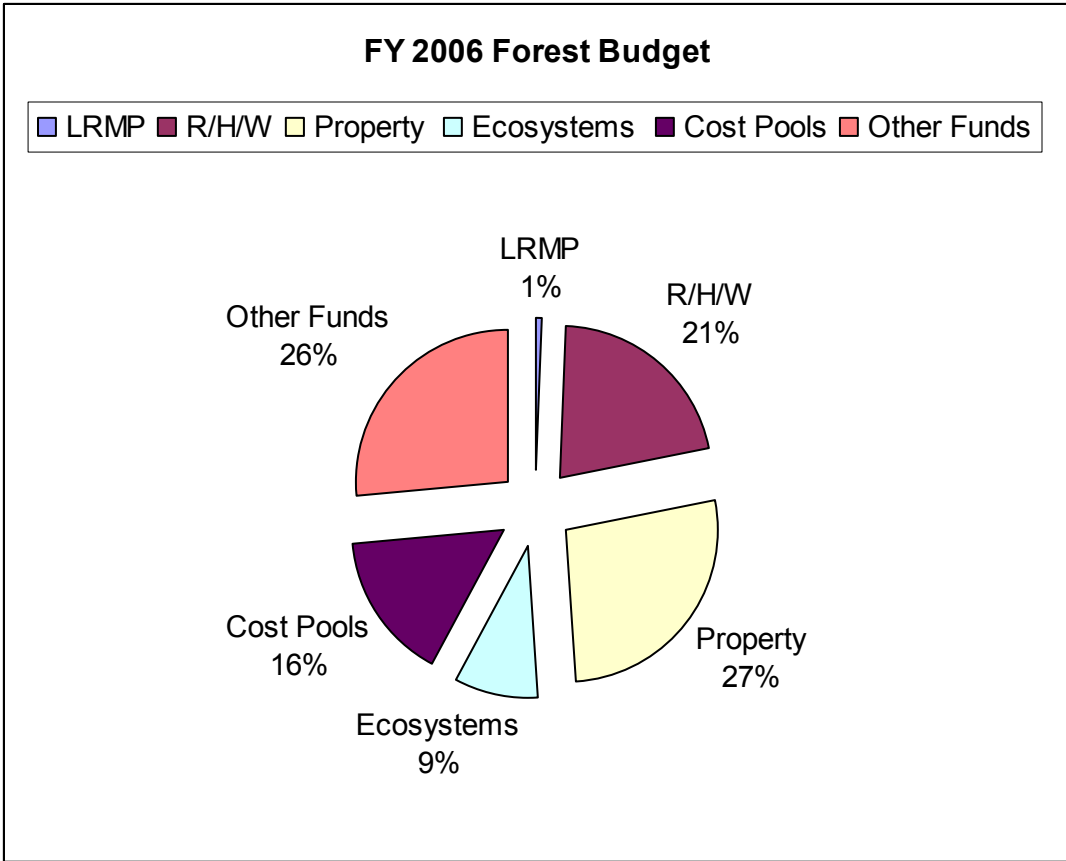
The Forest worked with an approximate of 4.8 million dollars during fiscal year 2006. This amount includes \$ 407,164 for the Senior Community Service Program, \$ 505,000 in fee collection for recreation areas, and \$ 802,253 from Cooperative Work and services provided to Federal Agencies through agreements. The highest Congressional allocation of \$1,035,435 was received for Recreation, Heritage and Wilderness Management. The lowest Congressional Allocation of \$ 2,000 was received for Hazmat Coordination. We received authority to spend \$ 32,500 in donations.

**Following is a Table with Forest Program totals:**

<b>Forest Programs</b>	<b>FY 2006 Budget (\$)</b>
Land Management Planning	25,000
Landownership Management	41,639
Recreation/Heritage/Wilderness	1,035,435
Site Specific Special Fund	505,000
Facility Capital Improvement & Maintenance	305,467
Roads Capital Improvement & Maintenance	90,000

Trails Capital Improvement & Maintenance	323,863
Roads and Trails for States	20,052
Hazmat Coordination	2,000
Land Acquisition	18,422
Quarters Maintenance	500
Wildlife Management	132,868
Vegetation & Watershed Management	100,695
Inventory and Monitoring	148,500
Forest Fire Management	40,614
Forest Health Funds	5,000
Direct, Support, and Indirect Costs (Cost Pools)	766,055
Law Enforcement	0
<b>Total Appropriations</b>	<b>\$3,561,110</b>
Federal Highways Administration Expense	3,500
Federal Highways Emergency Relief	52,741
Cooperative Work	13,000
External Reimbursable	802,253
Senior Community Service Employment Program	407,164
<b>Total Funds for FY06</b>	<b>\$4,839,768</b>





**Personnel**

Permanent Employees .....	37 (includes two seasonal)
Temporary Employees .....	10
Senior Community	
Service Employees (SCSEP) .....	85
Volunteers .....	469
Youth Conservation Corps (YCC).....	8

**Youth Conservation Corps (YCC)**

The Youth Conservation Corps (YCC) provides employment for 15 to 18 year-old youths to help them develop an understanding and appreciation of Forest Health and Management. Eight young adults participated in the YCC program during fiscal year 2006, four young women and four young men.

Youngster this summer worked with Eco-System team in the Caribbean National Forest. Their work load was divided between Watershed Improvement, Heritage and Biology doing fisheries, monitoring parrot recovery program. They worked in the Watershed improvement program in the restoration of 10 landslides where they used special

techniques such as: matting and mulching. In the Heritage resource program performed work conducting Archeological surface survey and shovel testing of an “Old Spanish Gold Mine”, in an attempt to find cultural material. In Wildlife, they conducted fisheries monitoring five selected sites, and also worked for the closing of five Parrot’s nests. They also helped installing “no fishing” signs in some Forest stream.

Their value was appraised at 29,497 dollars and 2,174.5 accumulated hours rendered.

## **Senior Community Service Employees (SCSEP)**

The Senior Community Service Employees Program provides part-time enrollment for work experience and job training opportunities for low-income individuals. Our seniors are one of the Forest's most valued human resources. Their many contributions include providing information and interpretation to Forest visitors, recreation site and trail maintenance and construction, and clerical support.

They are productive and reliable individuals that enjoy the great outdoors and want to continue to work.

We are in the process of rearranging and trying to strategize as what measures to take to better educate employers and participants to obtain unsubsidized employment.

This year’s value of seniors work was appraised at 639,770 dollars and provided 67,977 hours of labor, 37.77 person years.

## **Volunteers**

In 2005 volunteers contributed labor with an estimated value of 63,783 dollars. Four hundred and sixty nine volunteers assisted with trash removal, interpretive programs, trail maintenance, wildlife habitat improvement and monitoring, and clerical support. They divided as follows: 68 males and 90 females under 18 years of age; 127 males and 141 females between 18-54 years old; and 21 males and 22 females over 55 years old. They accomplished \$63,783 appraised dollar value and 5,154.5 accumulated hours.

The annual Clean-up Day is one activity that the community as well as the agency looks forward to. It is rewarding to participate with a diversity of age groups and the incredibly amount of enthusiasm, energy and sense of accomplishment demonstrated during this volunteering one-day activity. This year’s theme “Let’s maintain the Forest Clean with “I Clean,” I Clean is the translation for the organization that hosts our annual clean up day activity.

## Monitoring and Evaluation Interdisciplinary Team

<b>M&amp;E Team Member</b>	<b>M&amp;E Data Analyzed</b>	<b>Position</b>
Carolyn Pabon	Forest Planning, M&E report coordinator and editor, Business Operations Team Leader (AO), External Coordination, and Labor Management.	Forest Planner and Administrative Team Leader
Manuel Ortiz	Recreation, Land and Special Uses, Wilderness, Wild & Scenic Rivers, Primary Forest, Scenery Resource, and Infrastructure.	Customer Service and Property Management Team Leader
Pedro Rios	Watershed, Wildlife and Fish, Rare Plants, Pest Management, Heritage Resources, and Emergency Response.	Ecosystem Management Team Leader
Jose Ayala	Law Enforcement	Patrol Captain