

Annual Report Fiscal Year 2006



Annual Report of the Arkansas Forestry Commission Fiscal Year 2006

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Arkansas Forestry Commission

Mission Statement

In cooperation with the University of Arkansas system, the U. S. Department of Agriculture, and Arkansas landowners, The Arkansas Forestry Commission will protect and develop the forest resources of Arkansas by preventing and suppressing wildfires, monitoring and promoting forest health, encouraging reforestation and forest resource stewardship, and gathering and disseminating forest resource information.

Administration

The Administration Section of the Arkansas Forestry Commission (AFC) provides support services for the day to day operation of the agency. These services include Personnel Management, Fiscal Management, Poison Springs State Forest, and Conservation Education.

Personnel Management

The Personnel Department is responsible for employment procedures, recruitment, employee benefits, time data entry, payroll processing, workers compensation claims, training, and safety. The Personnel Department staff works with AFC employees on a myriad of day to day assists to facilitate a productive work environment.

The Arkansas General Assembly authorized 329 regular positions for FY-06 with an average of 311 positions filled.

Safety is a topic on every staff meeting agenda in addition to routine tailgate sessions and local AFC unit safety meetings. Inspection of personal protective equipment (PPE) worn by AFC firefighters is done in conjunction the Protection Department equipment inspections. The AFC works with the Arkansas Department of Labor to assure that all buildings and contents meet building and shop safety requirements.

Training

The AFC began agency block training in 2004 and continued with the concept in FY-06. Each October two weeks are scheduled for employee training. Two weeks of Wildland Fire Training are scheduled in May, and some AFC employees attend additional training that will benefit the AFC.

The AFC co-hosted the Arkansas Wildland Fire Academy May 15-26, 2006. Four hundred twenty-four Four hundred twenty-four attended one or more wildland fire training class at the second annual Fire Academy. Participants came from 15 different states and represented 52 agencies and organizations. Ninety-four AFC employees attended the Academy as students or instructors. AFC employees received more than 5000 man hours of wildland fire/law enforcement training for just AFC employees out of more than 20,000 man hours of wildland fire training. The Academy was evaluated as a success and the 2007 Academy is scheduled for May 14-25.

In 2006 as a result of directives from the Department of Homeland Security all AFC emergency response personnel completed the IS-700 National Incident Management

Table 1: Training Courses Conducted in FY-06

S-336-Fire Suppression Tactics	S-590-Advance Fire Behavior
Fire Suppression/Behavior	Red Card
FR-101	FI-110-Fire Cause Determination
Red Card Refresher Training	ATV Training/Malvern
2006 Wildland Fire Academy	S-290 Re-testing
S-390 Re-testing/Malvern	FR-101 Basic Orientation
First Aide	S-190
I-100	Arkansas Prescribed Burn School
Forester/Ranger III Training	Ranger II Training
Basic Fire Aide Training	IS-700 National Incident Management System (NIMS)
IS-800 National Response Plan	ICS-300-400 Intermediate Incident Command System

System (NIMS) course. Approximately 250 employees completed the four hour on-line NIMS class. Homeland Security directives also require AFC supervisory personnel to take the IS-800 National Response Plan and the ICS 300/400-Incident Command System courses by September 2007.

During 2006 the AFC issued National Wildland Coordinating Group (NWCG) fire qualifications cards (Red Cards) to 87 employees and cooperators: 49 to AFC employees and 38 to cooperators. Most cooperators were firemen from different fire departments or employees of Arkansas State Parks. These cooperators attended a minimum of 32 hours of wildland fire training, and attend an annual eight-hour refresher training on safety and standards of behavior. They must also pass an arduous physical fitness test in order to receive their annual Red Cards. The Red Cards are used to track proof of fire qualifications for individuals that take emergency response assignments out of the state of Arkansas.

This was a busy fire year with fire season starting in January and lasting until early October. AFC employees and cooperators responded to wildfire emergencies in the following states: Oklahoma, Texas, Kansas, Louisiana, Mississippi, Florida, Washington, Idaho, California, Montana, Nevada, Colorado, Oregon, Wyoming, and New Mexico. In 2006 employees served as Firefighters, Squad Bosses, Crew Bosses, Dozer Bosses, Dozer Operators Strike Team Leaders, Helicopter Crew Members, Helicopter Managers, Safety Officers, Staging Area Managers, Base Camp Managers, Facilities Unit Leaders, Equipment Managers, Air Tanker Base Managers, Air Attack Group Supervisors, Air Support Group Supervisors, Aircraft Loaders, Mixmasters, Radio Operators, Resource Unit Leaders, Demobilization Unit Leaders, Emergency Medical Technicians, and Dispatch Recorders.

Poison Springs State Forest

Forest Management

Poison Springs State Forest (PSF) is a demonstration forest located in western Ouachita and eastern Nevada counties. PSSF provides the AFC with yearly revenue while demonstrating different forest management techniques to private nonindustrial landowners.

When the AFC purchased PSSF in 1957, the 19,942 acre forest had 20,240,000 board feet of pine and 10,303,000 board feet of hardwood. The AFC has cut timber every year since 1957. Today PSSF is 17,500 acres and has over 80 million board feet of pine and about 9.5 million board feet of hardwood.

The AFC used timber sale proceeds to make annual payments to the U.S. Forest Service until the land was paid for. Today timber sale proceeds pay operations and salary expenses and provide the AFC revenue for general operations. The AFC has never used any general revenue to pay for or to operate PSSF. The AFC places timber sale proceeds in excess of expenses and operations into a trust fund for capitol equipment purchases.

Product	Volume	Value
Pine Sawtimber	2,099(mbf)	\$842,102
Hardwood Sawtimber	68(mbf)	13,600
Misc. and Salvage		27,568
<u>Non-timber income</u>		<u>965</u>
Total		\$884,234

Fiscal Year 2006 pine stumpage prices on PSSF

were close to the past five-year average. Conditions were dry and there was not much premium for wet-weather logging availability. during FY-06 there were six bid sales worth \$883,269.

Public Use

Arkansans use PSSF for camping, hunting, hiking, horseback riding, and sight seeing. The AFC requires a permit for camping on PSSF. Most permits are issued for the October and November deer seasons. More than 2,000 hunters and recreationists made reservations for PSSF's primitive campsites during the year.

Fiscal Management

The Fiscal Office is responsible for accounting, building maintenance, funds, management, inventory, and purchasing.

The AFC receives funding from two special revenue sources: Timber Severance tax and the Fire Protection tax. Revenue from these two taxes accounted for almost one-half of the AFC's receipts. The primary wood processor pays the Timber Severance tax on a weight basis. Net Timber Severance tax receipts to the AFC in FY-06 were \$4,154,652.

Owners of forested land pay the Fire Protection tax at the same time they pay their Real Estate tax to county government, In FY-06 Fire Protection tax receipts amounted to \$2,064,266.

Conservation Education

The Conservation Education office supports other AFC programs by developing written materials for AFC personnel to use in promoting forestry and fire prevention, developing educational material for use in Arkansas schools, and providing other assistance as needed.

During FY-06 the Conservation Education office again placed an emphasis on environmental education for schools and on landowner education. AFC foresters assisted the Arkansas Forestry Association (AFA) in conducting a series of landowner workshops.

The AFC worked with AFA and other agencies to present a week-long teacher conservation workshop at the University of Arkansas-Monticello. Participating teachers study all aspects of the environment and are able to earn three graduate credits.

Table 3: AFC Revenue for FY-06

Revenue sources	Amount
General Revenue	\$6,781,656
Severance Tax	4,154,652
Fire Protection Tax	2,064,266
Federal Reimbursement	4,868,993
State Forest	874,918
Nursery	1,272,717
M&R	55,377
Misc. & Beginning Fund Balance	272,487
Transfer to Trust Fund	(599,859)
Reclaim Year End Balance	(2,339)
Total	\$19,742,869

Table 4: AFC Expenditures for FY-06

Operating Expenditures	Amount
Personnel & Salary Benefits	\$12,412,054
Maintenance & Operations	3,642,236
Grants	1,071,681
Overtime	69,683
Travel	53,668
Professional Contracts	542,562
Capitol	959,400
Data Processing	4,500
Improvement Tax	16,046
Uniform Allowance	49,999
Marketing and Redistribution	53,969
Federal Initiative Program	178,901
Total	\$19,054,701

Table 5: Information and Education accomplishments

Accomplishments	Amount
Arbor Day Activities	
Educational Curriculum Development	30
Exhibits/County Fairs/Festivals	131
Field Demonstrations	40
Literature Distributed	65,473
Newspaper Articles	319
Presentations to Civic Groups	72
Presentations to Schools	139
Radio Programs Presented	27
Speeches Prepared	18
Television Programs Presented	18

Forest Resource Protection

The Arkansas Forestry Commission is responsible for the protection of 18,790,000 acres of non-federal forestland in Arkansas. The Forest Resource Protection division manages five program service areas to provide resource protection to the forested and rural areas of the State. These are: Fire Protection, Aviation, Communications, Law Enforcement and Rural Fire Protection.

Fire Protection

Foresters and Rangers in the nine districts are involved daily in one or more of the four key activities of fire protection: prevention, pre-suppression, detection, and suppression.

The AFC has 98 firefighting units made up of a dozer and transport truck. These dozers are used to cut a firebreak to stop any on-going fire. During FY-05 the Arkansas Forestry Commission was able to purchase one new transport truck, and one new John Deere, JD 550, bulldozer which was equipped with an environmental cab for added protection for the operator.

The AFC has experienced a substantial loss of forest industry wildland fire suppression crews in the last seven years. In early 2000 there were approximately 70 initial attack frontline forest industry fire suppression crews and tractors available to respond to wildland fires. Currently forest industry has 23 fire suppression crews and tractors. These are not initial attack crews and tractors. They are industry contractors or industry owned equipment that are used in other forest management work. This is a tremendous loss of fire suppression resource in Arkansas.

Improvement in fire protection is often hard to measure considering the many variables that influence yearly fire occurrence and fire behavior. The standard measurement of fire protection is the number of fires suppressed and acres burned. The 2,216 fires AFC firefighters suppressed during calendar year 2005 was well above the five-year average of 1,651 fires. The total acres burned in 2005 was 34,396 this was also well above the five-year average of 21,835 acres. The average size fire for 2005 was 15.52 acres, down from 16.33 acres in 2004.

Incendiary burning is Arkansas's leading cause of wildfires. During

Table 6: Comparison of 2005 fires with that of past 5 years:

Year	Number of Fires	Area Burned (Acres)	Average Size (Acres)	Percent of Protected Acres
2000	2,705	34,717	12.8	0.17
2001	1,371	14,681	10.7	0.07
2002	1,199	14,351	11.9	0.07
2003	1,620	23,279	14.3	0.12
2004	1,356	22,145	16.33	0.12
5yr avg	1,651	21,835	13.23	
2005	2,216	34,396	15.52	

Table 7: Fires and Acres Burned by Cause 2005

Cause	Number of Fires	Percent of Total	Acres Burned	Percent of Total
Incendiary	841	38.0	19,493	56.7
Debris Burning	719	32.4	6,801	19.8
Smokers	23	1.0	205	0.6
Railroad	39	1.8	289	0.8
Campfire	29	1.3	545	1.6
Equipment Use	166	7.5	2,176	6.3
Children	39	1.8	191	0.6
Lightening	120	5.4	2,254	6.6
Miscellaneous	240	10.8	2,442	7.1
Total	2,216	100.0	34,396	100.0

Calendar year 2005 incendiary fires accounted for 40.9 percent of Arkansas's wildfires and 56.7 percent of the total acres burned.

Fire Lane Construction

Fire lane construction is a pre-suppression service provided to landowners for a fee. Upon receiving an application from a landowner, the AFC will build or maintain fire lanes for \$60.00 per hour. This is the total charge for a tractor-plow, two men and transportation. During FY-05 the AFC completed 187 fire lane construction projects, constructing 180 miles of fire lane and completing 19 miles of fire lane maintenance.

Aviation

The Aviation department supports each of the nine AFC districts through aerial fire detection, timber damage surveys, insect and disease surveys, and cooperates with other state and federal agencies. The Aviation department operates 15 aircraft statewide and employs six full-time pilots. Extra-help pilots are used to supplement personnel during periods of high fire danger. All AFC pilots hold at least a commercial certificate with an instrument rating.

The AFC's fleet of aircraft consists of six state owned and nine federally owned fixed wing aircraft. Two Aero Commander twin engine aircraft are utilized for an air attack role and thirteen single engine aircraft are utilized for fire detection, surveys and other forestry related needs. All AFC aircraft are maintained to FAA standards and avionics are upgraded as technology advances. Logbooks, maintenance records, general condition, and appearance of all aircraft are routinely and thoroughly examined to maintain a high standard of safety. During FY-06 AFC aircraft flew 4,934 hours detecting fires, insects, and for other forestry related purposes.

Communications Unit

To dispatch fire crews the AFC operates 46 communications towers and 12 base stations. A project to convert from wideband technology to narrowband is underway. To date six districts have been converted and the remaining three will be completed by the end of 2006. The AFC also operates nine AWIN base stations installed in district offices and two additional units located in the AFC dispatch center.

The AFC dispatch center provides 24 hour seven days a week point of contact for the public, AFC firefighters, volunteer fire fighter operations and federal agencies. Two state-wide telephone WATTS lines are in place for reporting Wildfires and Prescribed Burns. The dispatch center dispatches full-time for AFC Districts 4, 5, and 6. During nights, weekends and holidays, the center dispatches all districts. The new Computer-Aided Dispatch (CAD) system is in full operation. This system allows better coordination of firefighting efforts through a better understanding of land ownership, better coordination of resources, and faster translation of latitude and longitude to legal descriptions for dispatching purposes. New forest fire reporting software is being developed to allow trending and other advanced techniques. The dispatch center provides fire weather forecasting to give fire suppression and prescribed burning personnel the latest weather information to manage a prescribed burn or wildfire.

Rural Fire Protection

The Rural Fire Protection Program of the AFC continues to grow in popularity with Arkansas fire departments. Rural Fire Protection provided services to every county in the state this past year and requests for assistance continue to increase. Requests for assistance far exceed the AFC's supply of equipment.

During FY-06 the Rural Fire Protection Program accomplished the following:

- Retrofitted 96 vehicles, 5 in minority communities. These are Federal Excess vehicles that are painted and equipped to fight fires. The work is done in the Rural Fire Shop at Greenbrier and consists of installing tanks, pumps, and other equipment.
- Financed 27 municipal type fire trucks, 11 in minority communities.
- Loaned \$456,544 to 34 communities for the purchase fire-fighting apparatus and equipment.
- On June 30, 2006 communities owed the AFC \$ 436,471.82.
- Sold \$251,212.14 worth of equipment to volunteer fire departments.
- Acquired and received 189 vehicles through the Federal Excess Personal Property program.
- Placed 93 vehicles in communities so those communities could build their own fire trucks.
- Fabricated and placed 19, 2000-Gallon tankers in communities for water supply.
- Financed and installed three compressed-air foam systems on vehicles for use in fighting brush fires.
- Presented 41, four-hour wildland fire suppression classes to 366 fire departments. The trainers certified 1,031 students. Sixty-one minority fire departments were represented at the courses.
- Presented 36 eight-hour wildland fire suppression classes to 318 fire departments. The trainers certified 1,045 students. Twenty-nine minority fire departments were represented at the courses.
- Presented 29 ICS/I-100 classes to 304 fire departments. The trainers certified 802 students. Thirty minority fire departments were represented.
- Disposed of 126 Federal Excess vehicles through GSA sales and donation to State Agency for Federal Excess Property.
- Helped organize eight new fire departments.
- Received 1,279 requests for assistance.
- Presented 23 programs regarding the Rural Fire Protection Program.
- On July 1, 2006 The Rural Fire Protection Program had \$ 17,717.47 worth of new equipment on hand and \$5,220.00 in painted trucks available for volunteer fire departments to purchase.

Law Enforcement

The AFC has four Forest Investigators and thirteen District Law Enforcement Officers. The District Law Enforcement Officers are Rangers and Foresters who must handle their regular duties and conduct law enforcement as an additional duty. Arkansas Code Annotated §20-22-301 gives the AFC the authority to enforce the State's laws pertaining to unlawful dumping, timber theft, forest fires, and logging equipment theft and vandalism. Unlawful dumping, timber theft, woods arson, and equipment theft and vandalism have long been problems for Arkansas's forest landowners and loggers. The AFC has aggressively sought prosecution of violators to deter such crimes. Rangers with law enforcement responsibility are required to take 16 hours of law enforcement training each year, the district law enforcement officers and the investigators are required to attend 40 hours of training. AFC Law Enforcement Officers and Investigators worked 142 dumping cases, 130 timber theft cases, 156 fire cases, and 8 equipment vandalism cases for a total of 436 cases in FY-06.

Forest Resource Management

Non-industrial private forest landowners (NIPFL) own 59 percent or 10.8 million acres of Arkansas's timberland. The AFC works with these landowners to encourage sound forest management practices on their timberland. Sound forest management practices insure the sustainability of Arkansas forest for future generations. These practices will enhance economic, recreational, wildlife, soil and water conservation, and aesthetic values. The AFC also works with forest industries, universities, private forest consultants, and other government natural resource agencies to manage and sustain Arkansas forests.

The AFC is involved in a tree breeding and testing program to improve the genetic quality of pine, Cherrybark oak, and Nuttall oak. The improved trees are better quality and provide quicker economic returns to landowners. The AFC's Bacuum Nursery provides seedlings for afforestation, reforestation, and for special school or urban tree planting projects.

The AFC administers the Forest Stewardship Program and is involved with several other programs that promote and provide cost-share incentives to NIPFL for tree planting. The AFC works with NIPFL, industry, and government landowners to promote the use of best management practices (BMPs) to reduce soil erosion and maintain water quality. The AFC continually monitors the economic and aesthetic losses caused by forest insects and diseases, and informs forest and urban landowners how to control these pests. The AFC provides technical assistance and grants to Arkansas communities for urban planning and tree planting projects. The Forest Inventory and Analysis (FIA) program for the AFC collects data which provides information about forest growth, damage, mortality, health, and land use trends.

Forest Management Assistance

During FY-06 AFC County Foresters and Rangers accomplished the following:

- Assisted 4,654 landowners on 94,466 acres.
- Prepared or revised 1,357 forest management plans covering 117,784 acres.
- Provided timber marketing assistance to three landowners on 40 acres.
- Selectively marked for harvesting 80 acres of timberland for three landowners.
- Provided planting inspections for 609 landowners that planted pine and hardwood seedlings on 24,735 acres.
- Performed seedling survival checks for 469 landowners covering 18,781 acres.
- Prescribed burned 18,614 acres for site preparation, fuel/hazard reduction, or wildlife habitat enhancement purposes for 347 landowners.
- Referred 158 landowners to forest consultants and vendors on 14,735 acres.
- Provided 23 assists to forest landowner associations and related organizations.
- Conducted 40 forestry field demonstrations for landowners.
- Inspected or re-inspected 177 Tree Farms covering 50,645 acres.

Conservation Reserve Program (CRP)

CRP began in March 1986 and was designed to retire erodible cropland from agricultural production and to conserve soil. From 1986 to 2006 landowners enrolled more than 175,000 acres in the CRP.

In FY-06 the AFC prepared or revised 73 CRP forest management plans on 2,582 acres. During the fiscal year 42 landowners planted pine trees on 1,529 acres and nine landowners planted 130 acres in hardwood trees.

For certain practices, such as Vegetative Cover for Established Trees, Riparian Buffer, Wetland restoration and Bottomland Timber Establishment on Wetlands, landowners may enroll in CRP on a continuous basis. During FY-06 the AFC wrote management plans for 330 landowners. These landowners planted 1,110 acres of pine seedlings and 11,992 acres of hardwood seedlings.

Forest Stewardship Program

Under the Forest Stewardship Program landowners are able to have a management plan developed for more than one thing. Landowners choose a primary goal and at least one secondary goal. They may choose to manage for any of the following: wildlife, recreation, soil and water conservation, agro-forestry, or timber. Professionals in the various natural resource disciplines collaborate in writing the management plan. In FY-06 AFC and other professionals wrote a total of 217 Stewardship Plans comprising 45,385 acres. Since the inception of the Forest Stewardship Program in 1991 approximately 3,400 landowners received Forest Stewardship Plans covering about 600,000 acres.

When a landowner has obtained a Forest Stewardship Plan for their property and has made sufficient progress toward implementing the plan's recommendations, then he/she can be certified as a Forest Steward. Upon certification the landowner receives a Forest Stewardship sign, to be displayed on his/her property, recognizing the property as being managed with good stewardship principles. In FY-06 the AFC certified 74 landowners as Forest Stewards comprising 19,091 acres. To date Arkansas has approximately 450 Forest Stewards owning approximately 120,000 acres. During FY-06 the AFC re-inspected eight certified Forest Steward landowners to determine if the property was being maintained under the Forest Stewardship Program guidelines.

In order to be able to write Forest Stewardship Plans Consultant and AFC Foresters must receive training. During FY-06 five AFC personnel and four Consultant Foresters received stewardship program training.

Forest Land Enhancement Program

The Forest Landowner Enhancement Program (FLEP), created by the 2002 Farm Bill, is designed to enhance and sustain long-term productivity of timber and non-timber resources. Under FLEP afforestation, reforestation, forest stand improvement, agro-forestry, wildlife habitat improvement, forest health, and practices to improve seedling growth or survival are eligible for cost-share assistance. Best Management Practices to reduce erosion and protect water quality during timber harvesting are also eligible for assistance.

The AFC received \$441,000 in FY-06 to distribute to NIPFLs. Landowners and AFC Foresters and Rangers accomplished the following during FY-06:

- Prepared or revised 73 management plans on 2,582 acres.
- Assisted 39 landowners who planted tree seedlings on 1,370 acres,
- Four landowners completed timber stand improvement practices on 53 acres,
- Ten landowners completed wildlife enhancement practices on 250 acres, and
- Five landowners completed forest health improvement practices on 310 acres.

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP), reauthorized in the 2002 Farm Bill, promotes agricultural production and environmental quality as compatible national goals and provides a voluntary conservation program for farmers and ranchers. EQIP offers financial and

technical help to assist eligible participants install or implement structural and/or management practices on eligible agricultural land.

A portion of the state allocated EQIP funds are dedicated to forestry practices. These practices include firebreaks, prescribed burning, fencing, forest stand improvement, invasive species control, tree planting for forest diversity, tree planting for recovery from natural disasters, water bars, stream crossing structures, culverts, seeding and stream bank stabilization.

EQIP offers contracts to provide incentive payments and cost-share assistance to implement conservation practices. Approved activities are carried out according to an EQIP plan of operations developed in conjunction with the producer. The plan identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to Natural Resource Conservation Service (NRCS) technical standards adapted for local conditions.

In FY-06 AFC accomplishments in EQIP are as follows:

- Assisted 992 landowners on 35,248 acres.
- Prepared/revised 184 management plans on 14,419 acres.
- Inspected plantings on 117 landowner properties comprising 2,945 acres.
- Conducted prescribed burns on 55 tracts totaling 2,876 acres.
- Constructed 34 firebreaks which covered more than 37 miles.

Wildlife Habitat Incentives Program

The Wildlife Habitat Incentives Program (WHIP) is a voluntary program, re-authorized under the 2002 Farm Bill, for landowners who want to develop and improve wildlife habitat on their property. Program administration of WHIP is provided under the NRCS. WHIP provides cost share assistance to landowners who are unable to meet the specific eligibility requirements of other USDA conservation programs.

In FY-06 AFC accomplishments in WHIP are as follows:

- Wrote 18 management plans for WHIP practices on 1,850 acres.
- Conducted 15 prescribed burns on 920 acres.
- Assisted forty-six landowners on 2,029 acres.

Wetlands Reserve Program

The Wetlands Reserve Program (WRP) provides landowners cost-share funds and/or land payments to restore wetlands. Wetlands converted to cropland prior to December 23, 1985 are eligible for the WRP. The WRP is administered by the NRCS. The AFC assisted NRCS in checking seedling survival rates on 32 tracts of property covering 5,139 acres.

Resource Conservation and Development

Resource Conservation and Development (RC&D) funds Arkansas receives encourages private forest landowners to use sound forest management techniques and conservation practices on their property.

Under the auspices of RC&D the AFC held limited resource landowner workshops to encourage these landowners to manage their property, seek professional advice, and to take advantage of available cost-share programs. During FY-06 AFC personnel attended eight landowner meetings. A total of 538 people attended these meetings.

Urban and Community Forestry

The Urban and Community Forestry (U&CF) Program is designed to assist communities, non-profit organizations and educational institutions with the necessary tools, information and technology to promote forest stewardship in their communities. Engaging these groups helps build program capacity and encourages urban forestry at the local level. To meet the growing demand for technical assistance, the AFC provides assistance through urban forestry representatives from each of the nine AFC districts. These representatives work closely with the staff urban foresters and with their communities, schools and various organizations to increase public awareness of the value of community trees. Technical assistance and educational services help improve standards for urban forestry management and involve tree protection for water quality and wildlife habitat, land use planning for greener neighborhoods, and proper planting and care by municipal employees, contractors and volunteers.

The U&CF program provides grants to communities for projects and programs that promote sustainable community forestry. Thirty-seven communities and organizations received U&CF grants totaling \$213,059. The following are examples of projects receiving grants:

- The University of Arkansas Fort Smith and the City of Fort Smith hired and are sharing a full-time city forester.
- The Community Action Program of Central Arkansas worked with low-income families to strategically plant trees to help cool their homes while reducing energy consumption.
- The Fayetteville Natural Heritage Association partnered with the Nature Conservancy to set up a mapping system to help identify green space in and around the City of Fayetteville that will provide multiple benefits such as water quality protection and recreational opportunities.
- Eight schools participated in the Shade Trees on Playgrounds program and each received five shade trees for their sunny playgrounds. The schools also received curriculum on the benefits of trees.

AFC continues to partner with the Arkansas Urban Forestry Council (AUFC). The Council has over 125 members statewide and works with communities to promote tree care. The AUFC held its 15th annual conference “Trees: the Oldest New Thing in Storm Water Management” in Fayetteville. Several mayors joined in a panel discussion to discuss how their communities address storm water runoff and watershed protection with trees. The Council also held two regional tree care workshops. More than 150 people attended the two workshops.

The AUFC held an Arborist Service Day at the Conway Human Development Center. Fifteen volunteers provided thousands of dollars in tree care service through tree climbing and bucket trucks.

Urban and Community Forestry highlights for FY-06:

- Provided 364 technical assists to communities for projects such as tree planting and pruning.
- Provided 231 assists to communities for 1754 specific tree requests.
- Donated more than 33,000 volunteer hours for tree programs and projects across the state.
- Certified the highest number of new Tree Cities in the nation during the fiscal year. Arkansas now has 33 communities proudly displaying Tree City USA entrance signs.

Forest Inventory

The Forest Inventory and Analysis (FIA) program in Arkansas collects research data from permanent plots located throughout the state. There are 5,734 plots in the state and each plot is

revisited every five years. The data gathered from these plots provides information about forest growth, damage, mortality, health, and land use trends.

The Arkansas FIA program consists of eight Forest Inventory Specialists and one Forest Inventory Coordinator. Normally it takes three to five hours for an Inventory Specialist and an assistant to complete data collection on a given plot. A Quality Assurance/Quality Control Forest Service employee checks 8% of all plots to insure data accuracy. An Inventory Specialist must maintain an 87% average or above on these checks.

During FY-06, the inventory crew completed the first re-measure panel of the new cycle (2005 – 2010). In addition to the work in-state, some inventory crew members participated in the Mississippi forest survey to determine how much timber damage Hurricane Katrina caused. During the work year the AFC, FIA crew gathered data from 1,089 plots across the state. The Quality Assurance/Quality Control grading average for the Arkansas FIA program is 95%.

Forest Legacy

In October 2005 the USDA Forest Service approved the Arkansas Assessment of Need (AON) making Arkansas an active participant state in the Forest Legacy Program. The AON represents a justification why Arkansas needs the Forest Legacy Program and designates where it should be implemented in the State. Subsequent to the AON approval, Arkansas submitted The Moro Big Pine conservation easement project.

The Moro Big Pine project is a 16,000 acre conservation easement in Calhoun County owned by Potlatch Forest Holdings, Inc. The conservation easement, purchased by the State of Arkansas, protects the forested area from conversion to non-forest uses into perpetuity, guarantees public hunting/outdoor recreation on the tract, and allows continued traditional forest management for forest products vital to the local economy. The conservation easement is valued at approximately \$7,000,000. Arkansas requested \$2,950,000 from federal FY-07 Forest Legacy funds. The Moro Big Pine project was recommended in the President's Budget to receive \$500,000. Funding will be dependent on Congressional approval of the FY-07 budget.

In April 2006 the AFC and the Arkansas Chapter of the Appraisal Institute sponsored a two day course on Uniform Appraisal Standards for Federal Land Acquisitions. Very few Arkansas appraisers were qualified according to the Forest Legacy guidelines to perform appraisals that could be used to implement Forest Legacy Program. A total of 52 people attended the course. Of the 52 attendees, 35 were licensed appraisers in Arkansas. The ground work is set for Arkansas to move forward in the Forest Legacy Program.

Forest Health

The AFC Forest Health Program provides technical assistance to AFC personnel and landowners in the prevention, detection, evaluation, and suppression of forest insects and diseases.

Southern Pine Beetle

The AFC continued to participate in the south-wide southern pine beetle (SPB) pheromone trap survey. Trapping results, which predicted a low or stable population, proved to be accurate. As a result detection flights only surveyed a little more than 4 million acres for SPB.

The Southern Pine Beetle Prevention and Restoration Program continued to grow. The AFC funded 155 regular projects on 7,056 acres for \$600,000 and 73 thinning projects on 3,902 acres

for \$250,000. This compares to 121 projects covering 5,753 acres funded for \$444,093 in FY-05 and 21 projects covering 1,730 acres for \$175,667 in FY-04.

Gypsy Moth

The AFC supports the State Plant Board in its effort to detect and eradicate the gypsy moth. The Forest health office distributed 25 gypsy moth traps to each District. District personnel placed the traps at various locations throughout the District. The AFC did not catch any moths in its traps.

Forest Health accomplishments During FY-06 are:

- Collected 23 samples for the Sudden Oak Death Survey from 30 sites. All samples were negative.
- Rated 135 stands on 20,450 acres for SPB hazard
- Assisted the Arkansas Heritage Department with the Invasive Species Program
- Surveyed approximately 1,444,000 acres for hardwood defoliators
- Prepared 79 insect or disease evaluations on 2,277 acres
- Assisted 78 other landowners with forest health issues
- Prepared and distributed one TV spot
- Presented forest health training to 18 field staff personnel

Tree Improvement

The AFC in association with the Western Gulf Forest Tree Improvement Program (WGFTIP) continues to improve the genetic quality of plant material available for reforestation in the Western Gulf region. The AFC sells pine seedlings produced from seed with the highest possible genetic gain. Only the best clones in AFC's loblolly and short leaf pine seed orchards are being harvested.

Tree Improvement Accomplishments for FY-06 are divided into two categories: Cone and Seed Collection and Breeding Program Advancement.

Cone and Seed Collection

The AFC harvested 364 bushels of genetically improved loblolly cones, which produced 577.76 pounds of seed, or 1.59 pounds of seed per bushel. Average genetic gain of the 364 bushels is 31 percent. Therefore the pine seedlings that Baucum Nursery will be lifting at the end of 2006 and beginning of 2007 will provide Arkansas landowners with an average genetic gain of 31 percent.

The second harvest of our new genetically improved shortleaf orchard yielded 18 bushels of cones and 17.29 pounds of seed or 0.96 pounds of seed per bushel.

The AFC is working with the USDA Forest Service to manage a twenty acre Cherry Bark Oak seed orchard and a thirteen acre Nuttall Oak seed orchard in the St. Francis National Forest.

Program Advancement

The future of the AFC tree improvement program is its breeding, testing and orchard establishment. The tree improvement staff has aggressively pursued their objectives and during FY-06 accomplished the following:

- Cleared 64 acres of ground at AFC's Baucum Nursery, which was not suitable for nursery production, for Improved Nuttall Oak, Improved Willow Oak and Improved Water Oak

seed orchards as well as demonstration/seed production areas of all other oak species produced at Baucum Nursery.

- Made the final crosses for a breeding program which utilizes the best performers within AFC..
- Used 83 pollination bags to control pollinate 404 flowers. The AFC uses a mix of average pollen from Arkansas and Oklahoma to pollinate all second generation flowers.
- Measured two fifteen-year old; one, five-year old; and one, three-year old loblolly pine tests for volume data.
- Measured one, ten-year old nuttall oak test for volume data
- Measured one,one-year old loblolly pine test for survival
- Measured a total of 11,104 trees from six tests

Reforestation

Baucum Nursery sold and distributed 5,581,499 hardwood seedlings and 5,791,000 pine seedlings to Arkansas landowners during FY-06. Forest industry utilized approximately 500,000 pine seedlings. Private non-industrial landowners utilized the remainder of the pine and hardwood seedlings. Most of the non-industrial pine and hardwood seedlings were planted under the WRP, EQUIP, CRP, WHIP, FLEP, Southern Pine Beetle Prevention Restoration, Partners for Wildlife and Conservation Technical Assistance Programs. The AFC collected \$1,260,669 in revenue from the sale of seedlings.

AFC personnel distributed 47,000 pine seedlings and 30,075 hardwood seedlings to schools, city and county governments, churches, and other non-profit organizations for Arbor Day, Earth Day, and other informational and educational purposes.

Construction of a new Baucum Nursery office was completed during the fiscal year. Revenue from the sale of seedlings made this project possible.

Nursery employees completed all necessary cultural practices to insure top quality seedlings. Fertilizers were applied per soil test results. Soil fumigation was done and herbicides were applied to prevent and control weeds, diseases, and insects. Approximately one hundred tons of soil amendments plus cover crops on layout fields were used to maintain soil productivity.