



ARKANSAS FORESTRY COMMISSION

2009 ANNUAL REPORT

ANNUAL REPORT OF THE ARKANSAS FORESTRY COMMISSION FISCAL YEAR 2007

Governor of ArkansasMike Beebe
State Forester..... John T. Shannon

Board of Commissioners

Allen Bedell
Chairman
Hot Springs

Robert Parkes
Vice Chairman
Dover

Steve Anthony
Bearden

James Carr
Searcy

Tom Curtner
Newport

Jerry T. Davis
Little Rock

Gary Easterling
Huntsville

Mary Elizabeth Eldridge
Arkadelphia

Don Nelms
Fayetteville

AFC 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.



TABLE OF CONTENTS

Administration	4
Personnel Management.....	4
Fiscal Management	7
Outreach.....	7
Conservation Education.....	9
Poison Springs State Forest.....	9
Forest Resource Protection.....	10
Fire Protection.....	10
Communications	12
Aviation.....	12
Dispatch Center	12
Law Enforcement.....	12
Fire Weather and Controlled Burning.....	13
Arkansas FireWise	13
Rural Fire Protection	14
Forest Resource Management.....	15
Forest Management Assistance.....	15
Forest Stewardship Program	16
Conservation Reserve Program.....	16
Forest Land Enhancement Program	16
Wildlife Habitat Incentives Program.....	16
Wetlands Reserve Program.....	16
Environmental Quality Incentives Program.....	17
Urban and Community Forestry.....	17
Forest Inventory & Analysis.....	17
Tree Improvement	19
Reforestation	19
Forest Legacy	20
Forest Health.....	20
Water Quality Management	21

ADMINISTRATION

The Administrative office 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.



4TH ANNUAL WILDFIRE ACADEMY

The Arkansas River Valley Wildland Fire Academy is held in May each year on the campus of Arkansas Tech University in Russellville. The AFC cohosts this two-week academy, the main training method used to provide AFC employees required wildland firefighting training. The classes are developed and approved by the National Wildfire Coordinating Group (NWCG). Instructors must complete a 40-hour instructor training class and have qualified field experience in the courses they instruct.

In 2008, approximately 326 firefighters representing more than 15 federal and state agencies and Native American Indian tribes

Personnel Management

The Human Resources (HR) Department is responsible for employment procedures, recruitment, employee benefits, time data entry, payroll processing, workers compensation claims, training and safety. HR staff assist AFC employees to facilitate a productive work environment.

The Arkansas General Assembly authorized 329 regular positions for Fiscal Year 2008. An average of 320 of those positions were filled.

Safety is stressed to all AFC employees. 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 worn by AFC firefighters is reviewed in conjunction with Protection Department equipment inspections.

The AFC works with the Arkansas Department of Labor to ensure that all buildings and contents meet building and shop safety requirements.

Continued on page 5

WILDFIRE ACADEMY
 CONTINUED FROM PAGE 4

attended the 4th Annual Interagency Wildland Fire Academy. One hundred AFC employees participated as students or as part of the training cadre. Many firefighters completed the training and responded to emergency wildfire assignments in both Texas and California a few days later.

For the first time, AFC employees were able to complete basic NWCG courses using distance learning methods. Students were allowed to complete the classroom instruction at their office, at

EMPLOYEE DEVELOPMENT SUMMARY

HR processes all training requests and maintains copies of individual training records. Other departments also provide and report training that occurs within their respective department. This training may or may not be specific to each department. Training conducted in 2008 used methods ranging from the traditional classroom method to field demonstrations to hands on or practical to distance/on-line self study training. The AFC incorporates training based on the directives of the Department of Homeland Security (DHS), including the following classes:

All field employees — IS-700 National Incident Management System (NIMS); ICS-100 Orientation to Incident Command (ICS); and ICS-200-Introduction to Incident Command (ICS) All Field Employees.

Foresters and Ranger IIIs — IS-800 National Response Plan; and ICS-300-Intermediate Incident Command.

Staff and District Foresters — ICS-400-Advance Incident Command.

All employees with emergency response duties remain in compliance with training directives of the DHS. DHS training available through distance/on-line self study training include:

- IS-700 National Incident Management System (NIMS)
- IS-800 National Response Plan
- ICS-100 Orientation to Incident Command
- ICS-200 Introduction to Incident Command System
- DHS classroom training with simulated exercise:
- ICS-300 Intermediate Incident Command
- ICS-400 Advanced Incident Command

AFC employees attend ICS-300 and 400 courses through sponsorship of the Arkansas Department of Emergency Management (ADEM). Training acquired at locations throughout Arkansas allow the AFC to meet and work with our emergency response partners from around the state. In the past three years, more than 100 AFC employees completed the ICS-300 classroom training. Top level supervisors in the AFC are required to pass ICS-400.

Employees are also required to attend training provided by the Department of Finance & Administration (DFA) Inter-Agency Training Program (IATP). In 2008, 42 employees participated in seven IATP courses. Ninety-seven employees were certified in First Aid/CPR training to maintain their biannual certification requirements.

In late September and October, training for AFC employees becomes more job specific. New field employees spend one week learning dozer safety, operations, and maintenance; chainsaw safety and use, and ATV rider safety. Employees with one year

Continued on page 6

their own pace. They then participated in a day of field exercises where they were given additional classroom tests, as well as several hours of hands-on training.

These demonstration classes were carefully screened to ensure employees were learning all the skills necessary to remain safe while on the fireline, while allowing the AFC to save money in training expenditures. The AFC plans to continue this method of training in 2009.

Table 1. Additional Training <i>The following is additional training provided to Forestry Commission employees and cooperators across Arkansas. This training represents approximately 26,000 classroom hours.</i>		
Date	Training	# Attending
Jan. 2	FR-101 Basic Orientation (D7)	8 AFC/4hrs
Jan. 8	FR-101 Basic Orientation (D2)	1 AFC/4hrs
Jan. 10	FR-101 Basic Orientation (D5)	9 AFC/4hrs
Jan. 14-18	S-215 Fire Operations in Urban Interface	1 AFC/28hrs
Jan. 15	S-390 Instructor/KY Fire Academy	1 AFC/32hrs
Jan. 13-17	S-330 Strike Team Leader/OK City	2 AFC/24hrs
Jan. 23	Fire Shelter Training (Train the Trainer)	11 AFC/4hrs
Jan. 29	Fire Refresher Training (Mt. Harbor)	15 AFC/6hrs
Jan. 30	FR-101 Basic Orientation (LR)	9 AFC/4hrs
Jan. 31	FR-101 Basic Orientation (Stamps)	10 AFC/4hrs
Feb. 4-7	S-304 Human Resource Specialist (Atlanta)	1 AFC/32hrs
Feb. 19-29	Adv. National Fire Danger Rating (Tucson)	1 AFC/80hrs
Feb. 26	FR-101 Basic Orientation	3 AFC/4hrs
Feb. 27	Aviation Cooperator Training (Clarksville)	3 AFC/8hrs
Feb. 28	Helicopter Refresher Training (Mt. Ida)	2 AFC/8hrs
Feb. 28	S-190, S-130, I-100 Field Exercise (Malvern)	12 AFC/40hrs
Mar. 1	S-190, S-130, I-100 Field Exercise (Fayetteville)	5 AFC, 7 Coop./40hrs
Mar. 5-6	S-212 Wildfire Power Saws (Stamps)	12 AFC/16hrs
Mar. 18	Pack Test (N. Little Rock)	8 AFC, 3 Coop./2 hrs
Mar. 20	Pack Test (West Fork)	12 AFC, 10 Coop./2hrs
Apr. 3	Fire Academy Planning Meeting	3 AFC/8hrs
Apr. 16	FR-101 Basic Orientation (Little Rock)	6 AFC/4hrs
Apr. 22	Pack Test (N. Little Rock)	15 AFC/2hrs
Apr. 23	Pack Test (Petit Jean State Park)	3 AFC, 10 Coop./2hrs
Apr. 24	Pack Test (Springdale)	15 AFC, 15 Coop./2hrs
Apr. 29	Red Card Refresher Training (N. Little Rock)	30 AFC & Coop./8hrs
Apr. 30	Red Card Refresher Training (Fayetteville)	29 AFC & Coop./8hrs
May 2	2008 Fire Academy Instructor Meeting	5 AFC, 15 Coop.

Continued on page 6

EMPLOYEE DEVELOPMENT SUMMARY CONTINUED FROM PAGE 5

of employment attend classes such as tree identification, insect and disease problems, map and compass reading, and wildland fire cause determination. Supervisors and advanced employees receive training in GPS, ArcView mapping, urban forestry, Best Management Practices, and Forest Management Plan preparation.

AD TRAINING – U.S. FOREST SERVICE (USFS)

The following training classes were attended by AFC employees and/or agency cooperators either as students or instructors. The cost of their travel, meals and lodging was paid under the USFS AD training program. To receive the training, employees must be available to participate in emergency response assignments outside of their normal work area.

- National Fire Danger Rating-Tucson, AZ
- Medical Unit Leader Training-Missoula, MT
- Air Tanker Base Manager Training-Tucson, AZ
- Human Resource Specialist-Atlanta, GA
- Fire Business Management-Russellville, AR
- Facilitative Instructor Training-Boulder, CO
- Instructor California National Guard-Sacramento, CA
- S-390 Instructor-KY-TN Fire Academy- KY
- GIST Training-Shepherdstown, WV

A conservative estimate of the cost of this training, paid by USFS, is \$14,000.

NATIONAL INTERAGENCY FIRE AND DISASTER RESPONSES

AFC employees and cooperators responded to wildfires and emergency response assignments outside of Arkansas in 2008. Texas and California were two states that experienced a significant number of wildfires this past year. Most of the assignments to Texas during 2008 were the result of activation of the Southeast Forest Fire Protection Compact. AFC employees on detail under the Compact fight out-of-state fires were on state time and as state employees. Expenses to the AFC are reimbursed from the state that needed assistance. Other fire responses require employees to use their annual leave or compensatory time in order to participate.

For 2008, the AFC issued Fire Qualification Cards better known as “Red Cards” to 57 AFC employees and 45 cooperators. The cooperators that participate are largely from paid or volunteer fire departments across Arkansas. These individuals met the physical fitness requirements as well as training and experience required for national certification to fill a variety of fire positions. These positions included the following: Dozer Boss, Dozer Operators, Strike Team Leader Dozers, Task Force Leader, Safety Officer, Firefighter, Squad Boss, Crew Boss, Base Camp Manager, Emergency Medical Technician & Paramedics, Incident Commander-4, Timber Faller, Information Officer, Mixmaster, Ramp Manager, Air Tanker Base Manager, Fixed Wing Parking Tender, Fire Training Instructors, Helibase Manager, Helicopter Manager, Air Tactical Group Supervisor, Engine Operator.

Employees and cooperators were assigned to positions on incidents based on their current NWCG qualifications.

Table 1 continued. Additional Training

Date	Training	# Attending
May 6	ATV Rider Safety Training (Monticello)	8 AFC/4hrs
May 8	ATV Rider Safety Training (Malvern)	12 AFC/4hrs
May 12-23	2008 Wildland Fire Academy (Russellville)	100 AFC, 228 Coop.
Jun. 16-20	RX-410 Fire Effects (Russellville)	2 AFC, 1 Coop./32hrs
Jun. 23-27	S-190, S-130, I-100 (Camp Robinson)	2 AFC, 12 Coop./40hrs
Jul. 9-11	S-212 Wildfire Power Saws (Clarksville)	10 AFC/16hrs
Aug. 13-19	S-190, S-130, I-100 (Sacramento, CA)	2 AFC/120 Coop.
Sep. 4	FR-101 Basic Orientation (Little Rock)	6 AFC/4hrs
Sep. 8	S-190, I-100 (Little Rock)	2 AFC, 10 Coop./6hrs
Sep. 22-26	RX300 AR-Prescribed Burn School	14 AFC, 30 Coop./32hrs
Oct. 1-2	Ranger I Training (Ferncliff)	26 AFC/16hrs
Oct. 2	ATV Rider Safety Training (Ferncliff)	7 AFC/4hrs
Oct. 3	S-190, S-130, I-100 Field Exercise	7 AFC/40hrs
Oct. 6-10	M-410 Facilitative Instructor Training (Fort Smith)	3 AFC/32hrs
Oct. 14	FO-125 BMP Training	10 AFC/6hrs
Oct. 20	FO-125 Forest Management Plan (Ferncliff)	12 AFC/12hrs
Oct. 22	FR-312 Urban Forestry Training (Ferncliff)	12 AFC/8hrs
Oct. 27-30	Ranger II Training (Ferncliff) Tree ID, Insect & Disease, GPS, Basic Surveying, Fire Cause Determination, Forest Management	31 AFC/40hrs
Nov. 12-14	S-359 Medical Unit Leader Training (Missoula, MT)	1 Coop./24hrs
Nov. 17-21	P-301 Fire Prevention Training (St. Louis, MO)	1 AFC/40hrs
Dec. 8-10	S-212 Wildfire Power Saws (Mt. Pine)	15 AFC, 11 Coop./16hrs
Dec. 9-11	S-212 Wildfire Power Saws (Western Grove)	12 AFC/16hrs
Dec. 11	FR-101 Basic Orientation (Western Grove)	7 AFC/4hrs
Dec. 9-11	Air Tanker Base Manager Training (Tucson, AZ)	1 AFC, 1 Coop./24hrs

Participation in National Incidents by AFC employees or cooperators

California: Power Fire, East Basin Complex, Hells Half Complex, Yuba River Complex, Yuba River Complex, Iron Complex, Canyon Complex, SHF-June Lightning, JNC FEMA ESF-4 Support.

Texas: West Texas Fires, Texas Winter Fires, and Roswell Tanker Base.

Florida: Mustang Fire-Everglades National Park and Lake City Tanker Base.

Georgia: South Cut Fire

Virginia: South One Fire.

Fiscal Management

The Fiscal Office is responsible for accounting, building maintenance, funds management, inventory, and purchasing. The AFC receives funding from special revenue sources — timber severance tax, the forest fire protection tax, as well as revenue from the sale of tree seedlings and timber harvested on Poison Springs State Forest.

The timber severance tax is paid by the primary wood processor on a weight basis. Owners of forested land pay

Revenue Sources	Amount
General Revenue	\$7,614,210.00
Severance Tax	\$3,664,535.15
Fire Protection Tax	\$2,103,883.62
Federal Reimbursement	\$5,100,732.61
State Forest	\$1,175,747.95
Nursery	\$789,359.80
M&R	\$37,667.25
Misc. & Beginning Fund Balance	\$8,024,789.46
Transfer to Trust Fund	(\$178,683.33)
Reclaim Year End Balance	(\$10,510.76)
Total	\$28,321,731.75

the forest fire protection tax at the same time their real estate tax is paid to the county.

The revenue generated from these taxes accounted for approximately 20 percent of the AFC's total receipts. The net timber severance tax receipts in fiscal year 2008 were \$3,664,535.15. Tax receipts from the forest fire protection tax amounted to \$2,103,883.62.

Operating Expenditures	Amount
Personnel & Salary Benefits	\$13,139,675.77
Maintenance & Operations	\$3,826,857.03
Grants	\$967,312.11
Overtime	\$77,392.21
Travel	\$56,000.00
Professional Contracts	\$477,253.17
Capitol	\$5,734,086.12
Data Processing	\$4,500.00
Improvement Tax	\$16,046.00
Uniform Allowance	\$49,111.30
Marketing & Redistribution	\$18,234.63
Federal Initiative Program	\$179,410.51
Total	\$24,545,878.85

Outreach

The Outreach Technician works with partners to conduct non-traditional outreach sessions at African American churches and other community centers. As a result, the AFC served 259 minority landowners in 2006 and 886 minorities in 2007 (African American, Hispanic, Native American and Asian American.)

Modifications have been made to the AFC's accomplishment reporting system to enable program administrators to accurately capture assistance to minorities. Field personnel have made significant improvements in providing Outreach staff reports of projects with minorities.

In August, the Outreach Coordinator served in a U.S. Department of Agriculture focus group at the Outreach Best Practices Workshop in Washington, D.C. While there, she also participated in the 5th Annual Partnership meeting.

Each year, the Outreach Technician and Outreach Coordinator attend a spring and fall College Career Day and Teacher Education Fair at the University of Arkansas at Pine Bluff. Students seeking employment information, or wanting information about our programs and services can stop by the exhibit, and a follow-up letter is sent to all students who provide resumes. They are also added to the distribution list for all AFC vacancy announcements.



Pictured are: (from left) John T. Shannon, State Forester; Evette Dixon, Outreach Coordinator; and Paul Watkins Jr., Outreach Technician.

USDA/NRCS TWO CHIEFS' PARTNERSHIP AWARD

The AFC was presented with the United States Department of Agriculture (USDA) Forest Service and Natural Resource Conservation Service (NRCS) Two Chiefs' Partnership Award on Sept. 9, 2008. The award was given in recognition of the collaborative outreach to limited resource and minority forest landowners in Arkansas. The Two Chiefs' Partnership Award recognizes outstanding partnerships in forest conservation work among Conservation Districts, State Foresters, the Forest Service and NRCS.

2008 OUTREACH HIGHLIGHTS

Forest Management

- 20 people attended the First Outreach & Urban Forestry Workshop in Brinkley.
- 260 people attended the Landowner meeting in Magnolia.
- 15 people attended the Landowner meeting in Marvell.
- 50 people attended the Landowner meeting in Hope.
- 50 people attended the 52nd Rural Life Conference.
- 80 people attended the Wildlife Management and Living with Trees Workshop at Garvan Woodland Garden in Hot Springs.
- Forestry Contest – 12 high schools participated with a total of approximately 100 students in attendance. Winner of contest received a \$4,000 scholarship (Columbia Christian Academy, Warren High, Rison High, Harmony Grove High, Hermitage High, Wickes High, Sparkman High, Smackover High, Taylor High, Magnolia High, Drew Central, and Camden Fairview High).

School Programs/Career Days

- Sparkman - worked with approximately 14 students.
- Fordyce – conducted PLT and fire prevention program for approximately 174 students.
- Forrest City – worked with approximately 25 students.
- J.E. Wallace Elementary – worked with approximately 92 students.
- Field Day at Garvan Woodland Gardens – worked with 38 social and physically disadvantaged children from south Arkansas. For many it was their first exposure to an outdoor classroom.
- Chicot Primary - 700 students in attendance.
- University of Arkansas at Pine Bluff
- University of Arkansas Community College, Morrilton
- Northwest AR Community College, Bentonville
- Eastern Arkansas Community College, Forrest City
- Ouachita Technical College, Malvern
- Southeast AR Community College, Helena

Urban Forestry

- Arbor Day tree planting ceremony at Dumas.
- Tree giveaway at Arbor Day in Benton with approximately 100 people in attendance.
- 50 people attended a tree giveaway at Arbor Day in Arkadelphia.
- Tree giveaway at 4-H in Holly Springs and Sparkman.
- Urban Forestry Coordinator wrote and submitted an article on the Shade Trees on Playgrounds (STOP) program to Minority Landowner Magazine to be published in its special Urban Forestry Issue.

Forest Protection

The Rural Fire Protection Program (RFP) for the Forestry Commission worked with several minority volunteer fire departments during the past year.



The Urban Forestry Program recently planted trees at George Washington Carver Elementary in Little Rock as part of the Shade Trees on Playgrounds (STOP) program.

- RFP hosted a mini-conference in Wickes for volunteer fire departments.
- Two trucks were delivered to Highland VFD to replace trucks damaged by a tornado.
- RFP assisted Holly Spring volunteer fire departments (VFD) with a \$2,500 grant for firefighting equipment, and provided them with a 2500 PSI Pump.
- The communities of Paris (pop. 3,622), Cotton Plant (pop. 875), Grassy Knob (pop. unknown), Melbourne (pop. 1,684), Monticello (pop. 9,355), and Fairview (pop. unknown) received fire trucks at no cost to them. This is made possible through the Department of Defense Firefighting Program as an effort to better enable communities to suppress wildfires.
- RFP awarded interest-free loans of up to \$15,000 to the following minority volunteer fire departments to help them purchase firefighting equipment:
 - ◊ Manning Rural VFD – 18 HP CET Pump
 - ◊ Heafer E. Black Oak – 1977 Chevrolet Pumper
- Law Enforcement assisted 30 minorities (black males, black females, white females, and a Hispanic male) with timber theft complaints, illegal dumping, and equipment vandalism on a total of 1,634 acres.
- Arkansas FireWise USA has assisted four minority communities in earning Firewise Communities/USA recognition.

Conservation Education

The Conservation Education office supports other AFC programs by developing educational and promotional materials and media outreach.

In late July and early August, AFC crews were fighting numerous wildfires on a daily basis. In order to raise public awareness of the situation, the Conservation Education office worked with media outlets in central Arkansas, providing daily fire occurrence updates, wildfire prevention tips, as well as opportunities for behind-the-scene stories of how the agency fights wildfires.

On August 16, nine AFC employees aided in a Smokey Bear appearance at McCain Mall in North Little Rock. This appearance was one stop of a nationwide Radio Disney tour that partnered with Ad Council to unveil the new "Get Your Smokey On" Smokey Bear ad campaign.

Conservation Education staff worked with the Arkansas Famous and Historic Tree Program committee and the Secretary of State Historian to develop a forestry exhibit



AFC Information Officer Jerry Lambert teaches students at College Station Elementary in Little Rock about ecosystems by conducting the PLT Web of Life lesson.

at the State Capitol; provided assistance for the AFA Teacher Conservation Tour in Monticello, and the Water-Rama educational event hosted by Lake Dardanelle State Park and US Army Corps of Engineers at Old Post Park in Russellville.

Conservation Education also works with district and county offices to provide environmental education and landowner education programs. In 2008, County

personnel:

- Hosted 116 booths at County Fairs or festivals;
- Had 204 newspaper articles printed;
- Made 78 presentations to civic groups;
- Conducted 780 programs at schools throughout the state;
- Conducted 91 school presentations using Project Learning Tree (PLT) lesson plans;
- Participated in 12 radio interviews;
- Prepared 23 speeches; and
- Participated in 14 television interviews.

Poison Springs State Forest

Forest Management

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

When the AFC purchased PSSF in 1957, timber sale proceeds were used to make annual payments to the U.S. Forest Service until the original land purchase was paid in full.

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 19,839 acres and has more than 85 million board feet of pine and approximately 10.5 million board feet of hardwood.

A land transaction completed in September 2007 added 2,367 acres to the PSSF. The purchase was made possible through the grant funds provided by the Natural & Cultural Resources Council.

Today timber sale proceeds pay operation and salary expenses and provide the AFC revenue for general

Product	Volume	Value
Pine Sawtimber	3,028 (mbf)	\$1,036,429.69
Hardwood Sawtimber	243 (mbf)	\$48,600.00
Misc. & Salvage		\$37,527.59
Non-timber income		\$105.00
	Total	\$1,122,662.28

operations. The AFC has never used any general revenue to pay for or operate PSSF. The AFC places timber sale proceeds in excess of expenses and operations into a trust fund for capitol equipment purchases.

Fiscal Year 2008 pine stumpage prices on PSSF were somewhat lower than the five-year average. There were six bid sales, and timber sold in FY-08 totaled \$1,085,029.69.

Public Use

Arkansans use PSSF for camping, hunting, hiking, horseback riding, and sightseeing. The AFC requires a permit for camping on PSSF. Most permits are issued for the October and November deer hunting seasons. More than 2,000 hunters and recreationists made reservations for PSSF's primitive campsites in 2008.

FOREST RESOURCE PROTECTION

The AFC is responsible for the protection of 15.91 million acres of non-federal forestland in Arkansas. The Forest Resource Protection division manages five program service areas to provide resource protection to forested and rural areas of the state — Fire Protection, Aviation, Communications, Law Enforcement and Rural Fire Protection.



Fire Protection

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

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 846 fires suppressed by AFC firefighters during calendar year 2008 were well below the 5-year average of 1,775 fires. Total acres burned in 2008 was 10,636, also well below the 5-year average of 28,823 acres. The average size fire for 2008 was 12.5 acres; the average size was down from the 2007 average of 14.01 acres.

Continued on page 11

Table 5. Comparison of 2008 fires with 5-year average

Year	No. of fires	Area Burned (Acres)	Average Size (Acres)	% of Protected Acres
2003	1,620	23,279	14.3	0.0012
2004	1,356	22,145	16.33	0.0012
2005	2,216	34,396	15.52	0.0018
2006	2,461	47,172	19.16	0.0025
2007	1,222	17,123	14.01	0.0009
5 yr avg	1,775	28,823	15.9	0.00114
2008	846	10,636	12.5	0.0006

FOREST PROTECTION

CONTINUEU FROM PAGE 10

Debris burning and arson fires are Arkansas's leading causes of wildfires. During calendar year 2008, debris burning accounted for 37.1 percent of Arkansas wildfires and 29.7 percent of the total acres burned, while incendiary fires accounted for 31.9 percent of Arkansas's wildfires and 46.4 percent of the total acres burned.

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 per hour — the total charge for a tractor-plow, two men and transportation. During fiscal year 2008, the AFC completed 171 fire lane construction projects, for a total of 113 miles, and conducted 33 miles of fire lane maintenance.

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 ongoing wildfire. During fiscal year 2008, AFC was able to purchase eight

TORNADO RECOVERY

Between January and May, the state of Arkansas experienced 68 tornadoes. Following many of these storms, AFC personnel were called upon to assist first responders by clearing roadways in order to gain access to the most damaged areas, and organizing incident command centers to coordinate emergency response efforts.

In the small community of Appleton, one resident was killed, and two others injured following a tornado on Jan. 7. AFC personnel in Pope county worked with volunteer firefighters, emergency medical services and law enforcement to gain access to homes damaged by the EF2 tornado. Beginning with the initial dispatch at 8:32 a.m., the Appleton Volunteer Fire Department used a brush truck, received through the AFC Rural Fire Protection Program, for 10 to 12 hours each day for more than week to clear roadways and remove trees from homes. The truck had been equipped with pole pruners, chainsaws and backpack blowers purchased with a mitigation grant from the AFC FireWise program to be used for wildfire mitigation projects.

On Feb. 5, 12 tornadoes formed across the state – the most devastating of which was an EF4 tornado that stayed on the ground for more than two hours and traveled 121.84 miles. Over three days, approximately 30 AFC crews in and nearby affected counties worked in the devastated communities to provide any assistance needed – from clearing roadways to removing debris in public areas.

On May 2, AFC crews were dispatched throughout the day as 14 tornadoes touched down between 8:15 a.m. and 6:52 p.m.



Earle, home to approximately 3,000 Arkansans, suffered extensive damage from an EF3 tornado on May 2. According to Crittenden County OEM Coordinator Ronny Rogers, the tornado damaged 98 homes with approximately 55 of those homes destroyed or uninhabitable.

Crews from the AFC, National Guard Units from Jonesboro and Camp Robinson, the Crittenden County Road Department, the City of Earle, the Arkansas Highway Department and two private contractors converged on the area May 21. AFC personnel cut down trees along roadways for crews to haul to a central location.

The AFC continued to provide assistance by giving away free bare-root seedlings around the state. Eight events were organized throughout the state with the help of the Sierra Club, Wal-Mart and local civic clubs and tree boards. State Forester John Shannon, along with city officials, organized a ninth giveaway in Cammack Village. County foresters contacted a number of affected forest landowners, and publications and web links, including a consulting forester directory and income tax information, were posted to the AFC homepage.

In an effort to determine the impact these storms had on forest landowners in Arkansas, personnel flew over the numerous tornado paths. The AFC has estimated 37,348 forested acres were damaged by these storms, for an approximate value of \$29,535,824.

Table 6. 2008 Fires and Acres Burned by Cause

Cause	No. of Fires	% of Total	Acres Burned	% of Total
Arson	270	31.9	4,940	46.4
Debris Burning	314	37.1	3,160	29.7
Smokers	6	00.7	13	00.1
Railroad	10	01.2	277	02.6
Campfire	5	00.6	12	00.1
Equipment Use	67	07.9	453	04.3
Children	9	01.1	33	00.3
Lightning	67	07.9	1,152	10.8
Miscellaneous	98	11.6	596	05.6
Total	846	100	10,636	100

new transport trucks and nine new dozers (six John Deere 550s and three John Deere 450s). Each dozer is equipped with an environmental cab for added protection for the operator.

Communications

To dispatch fire crews, the AFC operates 46 communications towers and 12 base stations. A project to convert from wideband technology to narrowband has been completed statewide.

The AFC also operates 9 AWIN base stations installed in district offices, and two additional units located in the 24-hour AFC Dispatch Center. Mobile AWIN radios have been installed in the vehicles used by AFC Law Enforcement officers, District Foresters, and County Foresters. An additional 53 AWIN radios were purchased in 2008 through grant money, and were installed in all County Ranger vehicles, for a total of 135 AFC AWIN radios.

The AFC has also moved closer to achieving the ability to provide statewide dispatching from the 24-hour Dispatch Center located in Malvern. In 2008, the AFC was transferred ownership of a strategic communications tower at Bismarck Mountain. Control radios and a digital microwave radio link were purchased, installed and interconnected to the dispatch center, thus providing radio access to six of the nine AFC districts. In 2009, the remaining three districts will be accessed through Radio over Internet Protocol technology.

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. Aviation operates 16 aircraft statewide and employs six full-time pilots. Extra help pilots are used to supplement during periods of high fire danger. All AFC pilots hold at least a commercial certificate with an instrument rating.

In 2008, the AFC acquired a single engine Piper Lance through the Federal Excess Property Program. The acquisition of this aircraft brings the total number of aircraft to 16. The AFC's fleet of aircraft consists of six state owned and 10 federally owned fixed wing aircraft. Two Aero Commander twin engine aircraft are used for an air attack role, coordinating our air tanker suppression aircraft, and 14 single engine aircraft are used for fire detection, surveys and other forestry related needs.

All AFC aircraft are maintained to FAA standards and upgrades to avionics are completed as technology advances. Logbooks, maintenance records, general condition, and appearance of all aircraft are thoroughly and routinely examined to maintain a high standard of safety. During 2008 the AFC aircraft flew 1,372 hours detecting fires, insects, and for other forestry related purposes.

Dispatch Center

The AFC Dispatch Center provides 24/7 point of contact for the public, AFC firefighters, volunteer firefighter operations and Federal agencies. Two statewide telephone WATTS lines are in place for reporting wildfires and controlled burns. The dispatch center dispatches full time for AFC Districts 4, 5, and 6. The center dispatches all districts during nights, weekends and holidays.

The AFC has upgraded the Computer-Aided Dispatch (CAD) system to ArcView 9. This system allows for improvement in firefighting efforts through a better coordination of resources, and faster translation of latitude and longitude to legal descriptions for dispatching purposes.

Law Enforcement

The AFC has four Forest Investigators and 13 District Law Enforcement Officers. The District Law Enforcement Officers are Rangers and Foresters that handle their regularly assigned duties as well as enforcement of forestry-related laws.

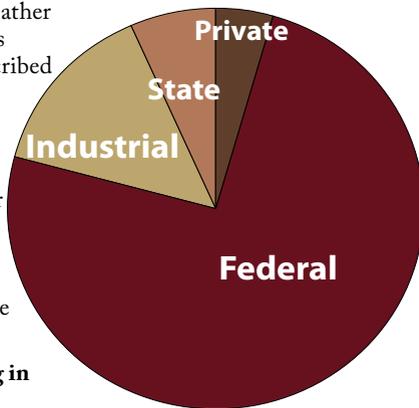
Arkansas Code Annotated 20-22-301 gives the AFC the authority to enforce the state's laws pertaining to unlawful dumping, timber theft, forest fires and logging equipment theft and vandalism. Unlawful dumping, timber theft, woods arson, and equipment theft and vandalism have long been problems for Arkansas's 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. District law enforcement officers and investigators are required to attend 40 hours of training.

In 2008, AFC worked 84 dumping cases, 121 timber theft cases, 65 fire cases, and 12 equipment vandalism cases. In addition, they worked several internal and theft of AFC property for a total of 282 cases.

The AFC obtained 10 woods arson convictions including \$200,000 in restitution paid to landowners and \$731.30 in fines in 2008. The AFC also obtained several timber theft convictions involving more than \$600,000 in restitutions paid to landowners that lost timber.

Fire Weather and Controlled Burning

The AFC Fire/Weather Supervisor maintains information on prescribed burns to meet the new voluntary smoke management guidelines, and provides fire/weather forecasts to give personnel the latest weather information to manage a prescribe burn or wildfire



Controlled Burning in Arkansas for 2008

Controlled burns (otherwise known as prescribed burns) are conducted by a wide variety individuals and agencies on a daily basis. In 2008, 2,521 controlled burns were recorded for 282,913 acres. The various agencies that report these burns are put into one of four categories: Private, Federal, Industrial or State.

- The private sector conducted 1,135 controlled burns in 2008 for 13,335 acres.
- Federal agencies conducted 327 controlled burns in 2008 for 211,125 acres.

Table 7. Percentages and average control burn size by District

	Avg. Size (Acres)	% of Total
District 1	44	4.72
District 2	257	16.37
District 3	136	1.49
District 4	44	6.04
District 5	41	13.19
District 6	450	38.66
District 7	324	13.41
District 8	66	1.43
District 9	45	4.69

- The industrial sector conducted 762 controlled burns in 2008 for 40,176 acres.
- State agencies conducted 297 controlled burns in 2008 for 18,137 acres.

Arkansas FireWise

Arkansas FireWise is a wildfire mitigation program. FireWise staff work with fire departments and community leaders to teach fire safety in the wildland/urban interface.

Participating communities are eligible for grants to be used for the purchase of equipment for fuel reduction projects, such as chainsaws and pole pruners, etc. In 2008, Arkansas FireWise issued \$55,000 in grants to purchase mitigation equipment. Grants totaling \$20,000 were awarded to fire departments for conducting risk assessments, and \$9,500 in grants was awarded to renewing communities.

Arkansas leads the nation with 80 nationally recognized FireWise Communities/USA. In 2008, 52 new communities were recognized while 28 communities renewed with the program. Arkansas FireWise recognized 24 new Firewise Communities/USA, eight fifth-year communities and twelve Arkansas State Parks at a recognition ceremony at Mount Magazine State Park. The program celebrated its 100th certified community with Lake Hamilton Fire Department on Oct. 4, and added 38 new communities to the roster from Ashley County, making it the first Firewise county in the United States.

Arkansas FireWise also conducted wildfire risk assessment training for over 100 fire departments, 35 AFC County Foresters and Rangers, and 15 state parks.

Dr. Kelly Hurt, Arkansas FireWise Consultant, presented at the National Firewise Conference in Tampa Bay, Florida with his program "Holiday Island, Five Years Later



Arkansas FireWise Coordinator David Samuel presents Lake Hamilton FireWise Board Chair Matt Simpson with the community's Firewise Communities/USA highway sign. Lake Hamilton was the 100th community in Arkansas to earn National Firewise Communities/USA recognition since the program's inception.

Rural Fire Protection

The AFC's Rural Fire Protection Program (RFPP) continues to grow in popularity with fire departments in Arkansas. Services were provided to every county in the state between July 1, 2007-June 30, 2008. Requests for assistance continue to increase, far exceeding the supply of equipment.

During fiscal year 2008 RFPP aided in the organization of three new fire departments, received 624 requests for assistance, and presented 15 programs about the program. On July 1, 2008, RFPP had \$64,789 worth of new equipment on hand and \$11,567 in painted trucks for purchase by volunteer fire departments, bringing the total value of inventory to \$76,356.

The following are accomplishments of RFPP for the year:

Firefighter Act Program

- 222 vehicles received, for a total acquisition cost of \$12,924,693.39.
- 150 vehicles were placed in communities for the purpose of building their own fire trucks.
- Four vehicles were placed for AFC use.
- 12 2000 gallon tankers were fabricated and placed in communities for water supply.
- 15 vehicles were repaired, retrofitted with water units and financed for brush fire use.

Federal Excess Property Program (FEPP)

- 10 vehicles, 6 fire boats and 1 aircraft were acquired. The acquisition cost for the vehicles was \$182,346.98; \$103,590.00 for the boats; and \$324,436.98 for the aircraft.
- 10 FEPP vehicles were placed in communities for the purpose of building their own fire trucks.
- 1 FEPP vehicle was placed in an AFC District for use by personnel.
- 5 FEPP boats were placed in communities.
- 2 compressed air foam systems were financed and installed on vehicles for brush fire use.



The Fire Show was held on October 25, 2008, which was attended by approximately 750 firefighters, from 186 volunteer fire departments throughout the state.

- 182 vehicles were disposed of through GSA sales and donation to state agencies for Federal Excess Property.

Rural Fire Protection Loans

- 14 municipal-type fire trucks were financed for communities.
- 25 loans for \$245,435.38 were made to communities for the purchase of firefighting equipment and apparatus.
- The Fiscal Year-End Loan Balance (June 30, 2008) was \$475,201.27. This represents the amount of money owed to the AFC by communities on the two-year and three-year interest free loans.
- Cash sales for equipment purchased by volunteer fire departments totaled \$333,802.81.

Wildland Fire Suppression Training

- 68 Wildland Fire Suppression classes were presented to 611 fire departments, certifying 2,167 firefighters.
- 47 ICS/I-100 classes were presented to 341 fire departments, certifying 967 students.

Volunteer Fire Assistance Act Grants

- RFPP assisted 230 communities with 50/50 matching grants, distributing \$ 214,460.

FOREST RESOURCE MANAGEMENT

Forest Resource Management is responsible for implementation of the following programs: Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), Forest Stewardship Program (FSP), Forest Land Enhancement Program (FLEP), Wildlife Habitat Incentives Program (WHIP), Wetlands Reserve Program (WRP), Water Quality Management, Forest Health, Southern Pine Beetle Prevention and Restoration Program (SPBPRP), Forest Inventory & Analysis, Tree Improvement, Reforestation and Urban and Community Forestry.



Forest Management Assistance

Non-industrial private forest landowners (NIPFL) own a 58 percent, or 10.7 million acres, of Arkansas's timberland. The AFC works with these landowners to encourage sound forest management to ensure the sustainability of Arkansas forests for future generations. These practices enhance economic, recreational, wildlife, soil and water conservation, and aesthetic values. The AFC also works with forest industries, universities, private forest consultants, and other natural resource agencies to promote the sustainability of Arkansas's forests.

The AFC is involved in a tree breeding and testing program that improves the genetic quality of Arkansas tree species such as pine, Cherrybark oak and Nuttall oak. The improved trees provide better quality and quicker economic returns to Arkansas NIPFL owners.

The AFC Baucum Nursery provides seedlings for afforestation, reforestation, and school or urban tree planting projects.

The AFC administers the Forest Stewardship Program and is involved with many 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 (BMP's) to reduce soil erosion and water degradation, and 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 that provides information about forest growth, damage, mortality, health, and land use trends.

Forest Stewardship Program

The Forest Stewardship Program (FSP) provides an opportunity for non-industrial private forest landowners (NIPFL) interested in managing their property for wildlife, recreation, soil and water conservation, agro-forestry or timber purposes to receive a Forest Stewardship Plan listing recommendations from natural resource professionals. These recommendations when carried out will not only enhance the multiple resources on their property in their lifetime, but benefit future generations. In 2008, 332 Stewardship Plans were written/revised for 50,218 acres. Approximately 4,000 landowners have obtained Forest Stewardship Plans since the inception of the program in 1991. These properties include approximately 680,000 acres of non-industrial private forestland in Arkansas.

When a landowner has obtained a plan for their property and has made sufficient progress toward implementing the plan's recommendations, he/she can be certified as a Forest Steward. Upon certification, the landowner receives a Forest Stewardship sign to be displayed on the property. Seventy-four landowners, (whose properties include a total of 35,971 acres) received certification in 2008. Sixty-eight re-inspections of previous Forest Steward certified landowners were made on 16,474 acres to determine if their property was being maintained under the program guidelines. In total, Arkansas has approximately 850 Forest Stewards owning an estimated 200,000 acres.

Five AFC employees and two consulting foresters received stewardship program training in 2008. This training allows these individuals to write stewardship plans for eligible landowners.

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 Program. WRP is administered by the Natural Resources Conservation Service (NRCS). AFC assisted NRCS in checking seedling survival rates on 11 tracts, comprising 1,228 acres.

Wildlife Habitat Incentives Program

The Wildlife Habitat Incentives Program (WHIP) is a voluntary program for landowners wishing to develop and improve wildlife habitat on private land. The 2002 Farm Bill reauthorized WHIP as a voluntary approach to improving wildlife habitat. Program administration of WHIP is provided under the Natural Resources Conservation Service. By targeting wildlife habitat projects on all lands and aquatic areas, WHIP provides cost-share assistance to conservation minded landowners unable to meet the specific eligibility requirements of other USDA conservation programs.

AFC provided 18 management plans on approximately 1,850 acres to NIPFLs to accomplish WHIP eligible practices. AFC personnel conducted seven prescribed burns for landowners on an estimated 454 acres. In total, 54 landowners were assisted on 5,833 acres in 2008.

Table 8. 2008 County Forester and Ranger Forest Management Assistance Accomplishments

Assistance Provided	No. of Assists	Acres
Landowner assists	3,297	109,876
Prepared/revised forest management plans	1,294	103,699
Timber marketing assistance	2	--
Selectively marked for harvesting	17	537
Planting inspections for tree seedlings	589	20,254
Seedling survival checks	609	24,975
Control burns for site prep, fuel hazard reduction or wildlife habitat	177	8,164
Referrals to forest consultants and vendors	307	38,903
Assists to forest landowner associations/ related organizations	2	--
Forestry field demonstrations	28	--
Inspected or re-inspected properties enrolled in Tree Farm System or Forest Stewardship program	529	125,841

Conservation Reserve Program

The Conservation Reserve Program (CRP) began in March 1986, and was designed to retire erodible cropland for agricultural production and conserve soil. For the program years of 1986 to 2008, trees have been planted on more than 190,000 acres of erodible agricultural land.

The AFC prepared or revised 41 management plans on CP3 (pine planting) and CP3A (hardwood planting) practices that provided forest management recommendations for regular CRP on 1,983 acres. During 2008, there were two farms comprising of 39 acres planted in pine trees and 19 farms comprising 618 acres planted in hardwood trees.

In 2008, Continuous sign-up practice accomplishments of CRP consisting of CP11-Vegetative Cover for Established Trees, CP22-Riparian Buffer, CP23/23A-Wetland Restoration, and CP31-Bottomland Timber Establishment on Wetlands were popular with Arkansas landowners. Unlike the usual CRP, landowners can make applications for eligible cropland or pastureland at any time during the year. In addition, AFC wrote management plans for 262 landowners that resulted in the planting of 533 acres of pine seedlings and 6,527 acres of hardwood seedlings in continuous sign-up practices.

Forest Land Enhancement Program

The Forest Landowner Enhancement Program (FLEP) has not been renewed in the 2008 Farm Bill. FLEP was created by the 2002 Farm Bill that provided technical and cost-share assistance to private non-industrial landowners to conduct eligible conservation practices under specific guidelines. From 2006 to 2008, the AFC received \$125,000 to distribute to NIPFL applicants for cost-share practices covered by FLEP.

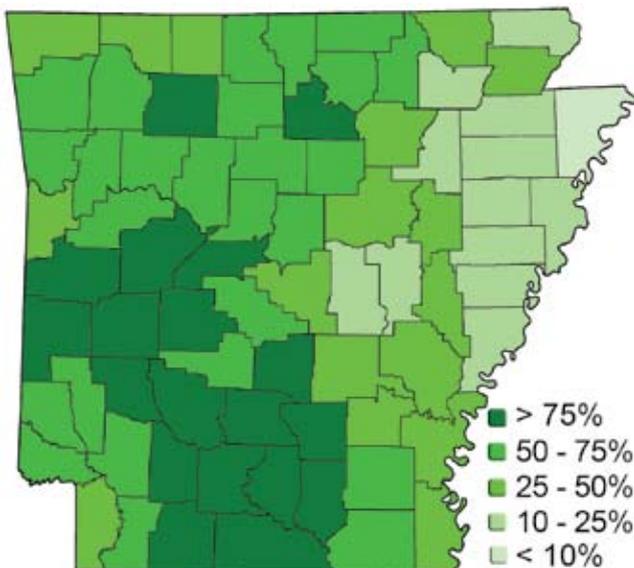
Twenty-seven landowners had management plans prepared or revised on 1,249 acres. Tree planting was completed by 14 landowners on 526 acres; one landowner completed timber stand improvement practices on 138 acres; two landowners completed wildlife enhancement practices on 94 acres, and two landowners completed fire lane construction on their property. These practices were checked for program compliance by AFC personnel.

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) was reauthorized in the 2002 Farm Bill to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants with installation or implementation of structural and management practices on eligible agricultural land.

EQIP addresses private, NIPFL natural resource concerns. A portion of the state allocated EQIP funds are dedicated to forestry practices to address forest protection, forest health, and forest water quality. Eligible Forest practices include firebreaks, controlled 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.

FOREST DISTRIBUTION



Forest Inventory

The Forest Inventory and Analysis (FIA) program in Arkansas continues to collect research data from 5,734 permanent plots located throughout the state. Each site is revisited every five years, providing information about forest growth, damage, mortality, health and land use trends.

In Fiscal Year 2007, the inventory crew completed the third remeasure panel of the new cycle (2005 – 2010), gathering data from 1,147 plots across the state. The Quality Assurance/Quality Control grading average for the Arkansas FIA program is 96 percent.

Plans are to maintain an 87 percent or above grading average, and collect 20 percent of all plots annually, completing the entire state every five years.

EQIP offers contracts to provide incentive payments and cost-share funds to implement conservation practices. EQIP activities are carried out according to an environmental quality incentives program plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address resource concerns. The practices are subject to NRCS technical standards adapted for local conditions.

In 2008, 1,145 landowner assists were provided on 57,183 acres. AFC prepared or revised 150 management plans on approximately 10,261 acres for NIPFLs to implement EQIP eligible practices. Planting inspections were accomplished on 186 landowner properties comprising 4,861 acres. Controlled burns were performed on 28 tracts totaling 1,491 acres. Twenty-four firebreaks, totaling more than 20 miles, were installed or maintained for landowners.

Forest Facts

Arkansas's forests cover 18.5 million acres or 54 percent of the state. During the 50s and 60s, Arkansas lost nearly 20 percent of its forestland. Since 1978, forestland has increased by more than 1 million acres.

The Southwestern, Ozark and Ouachita regions contain 89 percent of the forestland in the state. The most heavily forested county in the state is Dallas County (92 percent). The least forested is Mississippi County (5 percent).

Urban and Community Forestry

The Urban and Community Forestry 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 aids in encouraging urban forestry at the local level. To meet the growing demand for technical assistance, the AFC provides assistance through urban forestry representatives from the nine AFC districts. These representatives work closely with staff urban foresters and their communities, schools and various organizations to increase public awareness of the value of community trees. Technical assistance and educational services improve standards for urban forestry management and involve tree protection for water quality and wildlife habitat, land use planning for greener neighborhoods, and proper tree planting and care by municipal employees, contractors and volunteers.

The AFC is concerned about the impact urban development and associated land use changes are having on the sustainability of Arkansas's natural resources, climate change and our economic future. The Urban and Community Forestry program works to address these issues at the landscape level to help mitigate potential negative impacts from growth. Personnel are identifying important working forests so they can be conserved through thoughtful growth and best management practices while increasing canopy cover. Funds are available for projects in communities through the Urban and Community Forestry grant program.

Continued on page 18



A Willow Oak is planted in Archey Fork Park in Clinton as part of a ReLeaf project held Nov. 7. An Arbor Day ceremony was held, during which lunch was provided and more than 100 trees were given to individuals throughout the county.

URVAN FORESTRY CONTINUED FROM PAGE 18

Through the grant program an inventory was recently performed to identify those areas in and around Jonesboro which possess ecological and aesthetic values that should be considered for conservation. The Nature Conservancy used aerial photography and GIS data layers of Craighead County to identify and rank them based on characteristics determined by a Science Advisory Council. The Council consisted of representatives of the City of Jonesboro and City Council; the Arkansas State University Ecotoxicology Research Facility, Soil & Water Conservation Department and the Water Resource Engineering Department; the Arkansas Forestry Commission; and Arkansas Game and Fish Commission. The ranking characteristics included the presence and quality of riparian or wetland areas, large forested areas, and the diversity of land features which may enhance habitat. The assessment has become part of the Master Land-Use Plan and was presented to the community at a public meeting and specifically to developers at the Jonesboro Green Development workshop, also funded by the grant. The goal was to encourage developers to think in terms of sustainable development in future land-use planning.

Another issue for the urban forestry program is the impact of natural disasters such as ice storms and tornadoes on our community forests. In 2008, the AFC partnered with the Arkansas Urban Forestry Council (AUGC), a non-profit organization that assists with program delivery and expands outreach at the local level. Two Arkansas ReLeaf projects were conducted in the communities of Clinton and Dumas who were impacted by tornadoes. Other partners involved in the projects are the Van Buren Conservation District, Dumas Chamber of Commerce, Chesapeake Energy Corporation and the Delta Area Community Foundation. Both projects included a tree giveaway to local residents, as well as tree plantings in area parks.

Urban and Community Forestry highlights for 2008:

- 939 assists were provided to communities, organizations, schools and homeowners for projects such as tree health problems, planting and pruning projects, organizing a tree or beautification committee, discussing tree management in parks, tree inventories, workshops and organizing Arbor Day ceremonies.
- More than 31,185 volunteer hours were donated for tree programs and projects across the state.
- Arkansas had the nation's highest number of new Tree Cities USA recognized for the third year in a row, and now 53 communities are proudly displaying Tree City USA entrance signs.

CLINTON RELEAF PROJECT

The Arkansas Urban Forestry Council in partnership with the City of Clinton, Van Buren Conservation District and the AFC participated in a tree giveaway at Archey Fork Park on Nov. 7. The project was funded by a donation from the Chesapeake Energy Corporation. "The purpose of the Arkansas ReLeaf program is to assist communities impacted by natural disasters", said Patti Erwin, of the Urban and Community Forestry Program. "This Arkansas ReLeaf Project was planned to assist the City of Clinton and the surrounding communities in recovering from tree loss caused by the February 5th tornado". Past projects include Disaster Tree Restorations in Arkadelphia and suburban Little Rock, Haskell, Cherry Hill and Dumas. These communities all lost trees due to tornadoes.

The project was kicked off by an Arbor Day Ceremony with the Mayor reading a proclamation declaring Nov. 7th as Arbor Day. A large willow oak, donated by Shaw's Landscaping and Nursery, was planted in the park.

Citizens who were affected by the tornado were eligible to receive free trees and lunch at Archey Fork Park. AFC employees Scottie Youngblood and Mike Curtis cooked more than 100 hamburgers. Representatives from all the agencies along with Chesapeake Energy Corp. gave out more than 100 trees to citizens from throughout the county.

Individuals that picked up their trees shared how important their trees were to them; how they had helped cool their homes in the summertime, provided habitat for wildlife and brought beauty to their surroundings.



Randy O'Neal, Reforestation Foreman, demonstrates how to graft hardwood seedlings to teachers attending the AFA Teacher Conservation Workshop.

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 shortleaf pine seed orchards are being harvested.

Tree Improvement accomplishments for fiscal year 2008 are divided into two categories: Cone and Seed Collection and Breeding Program Advancement.

Cone and Seed Collection

- The AFC harvested 281.5 bushels of genetically improved loblolly cones, which produced 362.78 pounds of seed, or 1.29 pounds of seed per bushel.
- Average genetic gain of the 281.5 bushels is 39 percent. Therefore, the pine seedlings that Baucum Nursery will be lifting at the end of 2008 and beginning of 2009 will provide Arkansas landowners with an average genetic gain of 39 percent.
- The fourth harvest of our new genetically improved shortleaf orchard yielded 40 bushels of cones and 40.7 pounds of seed or 1.02 pounds of seed per bushel.
- The AFC is working with the USDA Forest Service to manage a 20-acre Cherrybark Oak seed orchard and a 13-acre Nuttall Oak seed orchard in the St. Francis National Forest.

Breeding 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 to accomplish the following:

- Continued grafting, and designed the layout for our new 64-acre hardwood seed orchard at AFC's Baucum Nursery. Species that will be included in seed orchard areas are improved Nuttall Oak, improved Willow Oak and improved Water Oak, as well as demonstration/seed production areas of all other oak species produced at Baucum Nursery.
- Continued grafting to fill all 710 positions on 14.67 acres for two improved loblolly pine seed orchards.
- Used 179 pollination bags to control pollinate 1,568 flowers.
 - ◊ polymix crosses = 79 bags with 506 flowers
 - ◊ pedigree crosses = 73 bags with 737 flowers
 - ◊ wood quality crosses = 27 bags with 325 flowers
- Established one Cherrybark oak progeny test, 5 loblolly pine block plots.
- Measured four, 15-year-old; and three, 5-year-old-year Loblolly pine tests for volume data.
- Measured one, 15- year-old; and one 10-year-old Nuttall oak test for volume data
- Measured one, one-year old loblolly pine test and one Cherrybark oak test for survival.
- Measured a total of 17,896 trees from 11 tests.



Reforestation

Baucum Nursery sold and distributed 4,036,200, hardwood seedlings and 4,404,000 Pine seedlings to Arkansas landowners during fiscal year 2008. Private landowners purchased all of the hardwood and most of the pine. The majority of pine and hardwood seedlings were planted under federal cost-share programs which include EQIP, CRP, WHIP, SPBPRP, Partners for Wildlife and Conservation Technical Assistance Programs.

The AFC distributed 20,500 pine seedlings and 31,500 hardwood seedlings to non-profit organizations, schools, city and county governments and churches for Arbor Day, Earth Day, and other information and education purposes.

Nursery employees completed all necessary cultural practices to ensure top quality seedlings. Fertilizers were applied per soil test results. Soil fumigation was completed and herbicides were applied to prevent and control weeds, diseases and insects. Approximately 50 tons of soil amendments plus cover crops on layout fields were used to maintain soil productivity.

Forest Legacy

In 2008, one Forest Legacy project proposal was submitted for the fiscal year 2010 grant request cycle. The project is named Maumelle Water Excellence (MWE) and is located in west Pulaski County. Through fee title acquisition, the MWE project protects pristine oak gum bottomlands/cypress breaks, and pine oak hickory uplands along 3.6 miles of Big Maumelle River. Central Arkansas Water will hold title.

The MWE project is a critical link for creating a riparian corridor along the short five miles between two major public lands. The project is part of an 804.66-acre sod farm owned by a private investment group, and the 397.5 acres eligible for Forest Legacy Funding reflects the forested portion of the land. The open sod farm will be purchased separately, and plans are ensure water quality conservation measures are implemented, and forests established using Carbon Credit programs. A Center of Excellence will be established to educate the public on water quality conservation techniques. The acquisition will protect forests vital to Central Arkansas' drinking water quality, provide public access for hiking, fishing and hunting (including youth/archery opportunities), protect endangered species habitat, implement Arkansas's Wildlife Action Plan, and provide conservation education; all within 14 miles of the state capitol. The Forest Legacy funding request is \$3.58 million.

Forest Health

The AFC Forest Health Program provides technical assistance to AFC personnel and landowners regarding 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. No beetles were caught (same results as 2007) As a result, detection flight were conducted on slightly more than 400 thousand acres with no spots detected.

The Southern Pine Beetle Prevention & Restoration Program continued strong. In 2008, 231 planting projects on 9,842 acres and 85 thinning projects on 3,576 acres were funded for \$850,000. In fiscal year 2007, 206 regular projects on 10,039 acres and 94 thinning projects on 4645 acres were funded for \$900,000. In fiscal year 2006, 155 regular projects on 7,056 acres were funded for \$600,000 and 73 thinning projects on 3,902 acres were funded for \$250,000. Fiscal year totals were 121 projects covering 5,753 acres were funded for \$444,093. Fiscal year 2004 totals were 21 projects on 1,730 acres were funded for \$175,667.

Gypsy Moth

The AFC supports the State Plant Board in its efforts to detect and eradicate any gypsy moth infestations within the state. Twenty-five gypsy moth traps were distributed to each district and placed at various locations within each district. No moths have been caught in any of the 4,500 plus traps anywhere in the state in the last 3 years.



Habitat for the endangered Red Cockaded Woodpecker is one of the benefits made possible through the Moro Big Pine Project. Teachers from across the state were able to view the banding of woodpecker chicks.

Congress approved a \$2.192 million fiscal year 2008 grant for the Moro Big Pine Project, a 15,923-acre conservation easement in Calhoun County. The authorization to spend the funds locally was obtained from the Arkansas legislature. In January 2009, the conservation easement was transferred to the Arkansas Game and Fish Commission and the Arkansas Natural Heritage Commission to be held jointly.

Invasive Species

The Invasive Species Program was not funded last year, but all remaining funds have been allocated The Arkansas Natural Heritage Commission is the major participant with a major project to control invasive species in some of their natural areas.

Emerald Ash Borer came to the forefront as an invasive threat due to its rapid spread of approximately 500 miles in only 6 years, confirmed in Southeastern Missouri late in the year. The Arkansas Plant Board, USDA Animal & Plant Health Inspection Service (APHIS), the AFC and several other agencies began the process of drafting an invasive species response plan that will be adaptable to any invasive species.

Other Forest Health accomplishments:

- Rated 93 stands on 7,263 for SPB Hazard potential.
- 11 insect or disease evaluations were prepared.
- 564 landowner assists were recorded.
- Prepared 64 news articles and had twelve articles 201 printed.
- Presented 14 TV programs.
- 25 field staff personnel received Forest health training during the annual ranger training session.

In general, insect and disease conditions were normal; no extensive outbreaks of any pest were reported. Variable Oakleaf Caterpillar populations built-up north and west of Little Rock and east of Conway. Eastern Tent Caterpillar numbers were abundant in the spring. Fall webworm peaked as usual. Light pine sawfly numbers were noted in Dallas County. *Ips* beetle populations were below normal.

Water Quality Management

Implementation of voluntary forestry Best Management Practices (BMP) is the primary means of protecting water quality during forestry operations. The AFC is the designated management agency for the silvicultural (forestry) section of the Arkansas Water Quality Plan.

The AFC has a full-time BMP Coordinator and one BMP Specialist dedicated to the Best Management Practices Program.

Present AFC responsibilities for the plan include six areas of concern: BMP training and education for landowners, loggers, and foresters; biennial monitoring of BMP implementation on silvicultural sites throughout the state; resolution of timber harvesting/water quality complaints; cooperation, coordination, and participation with other state and federal agencies concerning water quality in silviculture; participation in the Environmental Protection Agency's (EPA) non point source pollution 319(h) grant program; and effectiveness monitoring.

BMP Training and Education of Landowners, Loggers, and Foresters

- Conducted **26** technical BMP training sessions, training **1,008** loggers and company foresters for private industry - Potlatch Corporation, Domtar Industries Inc., Weyerhaeuser Corporation, Plum Creek Timber Co., Deltic Timber Corp., Green Bay Packaging Inc., Evergreen Industries, John Hancock Company, as well as providing training for the ATPA logger training program.

- Hosted AFC BMP booth and training sessions for landowners and loggers at the In-woods Expo in Hot Springs.

- Conducted **7** non-technical landowner training sessions, training **572** landowners.

- Provided a combined forest landowner/logger training session at the Cossatot Forestry Field Day held in Wickes, and a landowner workshop at the University of Arkansas Experiment Station in Hope. Both of these programs were conducted with the UofA Extension Service.

- Conducted two breakout sessions at the Teddy Reynolds Landowner Conference at Magnolia and the AWAG/Stream team Landowner Conference held at Little Rock.

- Conducted AFC "in-house" BMP training for 16 Foresters and County Rangers at a training academy held at Ferncliff.

- Provided dozer training for 23 AFC Rangers, instructing operators in-classroom and out in the field on how to construct water diversion devices (water-bars/rolling-dips/wing-ditches) when building fireline.

- For the first time, the AFC provided two courtesy exams to logger/landowners, one in Baxter County the other in Saline County. On both occasions BMP staff were assisted by AFC field personnel where they provided site specific BMPs to be implemented and closeout instructions. BMP staff provided on-ground flagging of SMZ, road location, and landing location to the loggers. Both were very appreciative and felt it made their job easier and saw the benefit toward water quality.

Biennial Monitoring of Silvicultural BMP Implementation

- Surveyed the implementation of voluntary forestry BMPs on 274 tracts totaling 24,230 acres. These sites were selected from a pool of 3,339 candidate sites by aerial flights using a digital



BMP Coordinator Arnold Hameister conducts dozer training for 23 AFC Rangers, instructing operators on how to construct water diversion devices when building fireline.

sketch map. The overall BMP implementation on the sites monitored was 86 percent.

- Evaluated the general effectiveness of BMPs as applied operationally in the field.

- Determined the need and direction of the forest BMP education and outreach programs.

- The sixth monitoring report is on the AFC web site.

Resolution of Logging Complaints

- BMP staff responded to and resolved 11 statewide complaints, and have mitigated 10. This was accomplished by working directly with the landowner/logger and the local AFC Forester and County Ranger. At no time has the AFC had to invoke the Inconsistent Practices Committee or the Arkansas Department of Environmental Quality.

Cooperation with Other Agencies and Groups

- Participated in all of the ADEQ's Arkansas Watershed Advisory Group (AWAG) meetings and spoke at the annual conference.

- Participated in Non-Point Source meetings with the Arkansas Natural Resources Commission (ANRC) and EPA. Gave quarterly, annual and final reports.

- Participated in six meetings with the Arkansas Forestry Association's (AFA) Forest Practices Group

- Attended and gave an AFC BMP report at four Ouachita Timber Producers Meetings.

- Attended Cooperative Extension Service Forestry Meeting.

- Attended regulation hearings at ADEQ.

- Attended one Bayou Bartholomew watershed meeting at Pine Bluff

- Participated in ADEQ and AFC joint meeting to discuss forestry water quality complaints.

- Participated in two Central Arkansas Water meetings.

- Participated in the SGSF Water Resource's Committee

Continued on page 22

WATER QUALITY MANAGEMENT
CONTINUED FROM PAGE 21

Managers Conference in North Carolina.

- Participated in two Arkansas Rural Water Association meetings and gave presentation at one.

Federal 319 Grants

- Submitted quarterly, annual and final status reports to ANRC 319 Grant. These reports were accepted and the grant was completed in September for ANRC and EPA.

- Submitted a new grant to ANRC and EPA and was awarded approval for \$430,000.00 over 3 years starting in October 2008.

BMP Effectiveness Monitoring

- Completed program's objective in proving the effectiveness of implementing BMPs through biological assessment of macroinvertebrate populations in streams adjacent to forestry operations. The entire assessment report is on the AFC web site.



Twenty-three AFC Rangers were provided field training on how to construct water diversion devices when building fireline.

A LOOK FORWARD

As we begin 2009, the Arkansas Forestry Commission continues to strive to protect and develop the forest resources of Arkansas. AFC personnel will continue to provide assistance to Arkansans to ensure their forests will be healthy and productive for generations to come.

For more information about the AFC and its programs or to obtain assistance, contact your local AFC office. Contact information can be found online at www.arkansasforestry.org/districts/district_map.html, or by calling (501) 296-1940.





Arkansas Forestry Commission

3821 West Roosevelt Road

Little Rock, AR 72204

(501) 296-1940

Fax: (501) 296-1949

www.arkansasforestry.org

The Arkansas Forestry Commission offers its programs to all eligible person regardless of race, color, national origin, sex, age, or disability; and is an Equal Opportunity Employer. To file a complaint, contact the Title VI Coordinator at (501) 296-1943.