

## **Addendum**

### **NATIONAL PRIORITIES SECTION (including implementation accomplishments)**

#### **STATE OF ARKANSAS 2015**

The 2008 Farm Bill, under Title VIII – Forestry, amends the Cooperative Forestry Assistance Act of 1978, to include the requirement that each state develop a long-term, state-wide assessment and strategies for forest resources. These assessments and strategies are to focus on three national priorities:

- Conserve and Manage Working Forest Landscapes for Multiple Values and Uses
- Protect Forests from Threats
- Enhance Public Benefits from Trees and Forests

Arkansas’s plan was developed with a comprehensive team of stakeholders to address cross-boundary, landscape scale actions that would be the most efficient activities to address issues of concern recognized in the assessment phase of its Forest Action Plan.

This addendum to the FAP serves as a record of activities taken by all Arkansas stakeholders to address strategic actions taken as part of Arkansas’s Forest Action Plan and to incorporate the National Priorities into Arkansas’s FAP.

## **1. Conserve Working Forest Landscapes**

***ISSUE ADDRESSED: Water Quality and Quantity***

***Goal 1: Protect and enhance water quality through forest conservation.***

**Objective 1.1:** Identify watersheds where continued forest conservation and management is present or where restoration or protection improve a water source.

**Strategy 1.1.1:** Improve BMP implementation on all ownerships.

**Strategic Action:** Continuing education of the forestry community is the driving force in maintaining a successful rate of BMP implementation. The statewide assessments provide valuable information that direct training efforts for all ownership classes. The 2011 BMP Implementation Survey report showed significant increase in overall BMP rate from 86% to 89% and an increase in all ownerships.

**Strategy 1.1.2:** Educate Non-Industrial Private Landowners about BMP Implementation Survey.

**Strategic Action:** The AFC conducted 31 landowner workshops with over 900 participants. Workshop partners included Arkansas Cooperative Extension Service, Arkansas Forestry Association, and the Arkansas Timber Producers Association. The AFC partners with the Arkansas Timber Producers Association every other year in the In-Woods Forestry Exposition and provides BMP awareness to all ownerships. The event reaches between 2500 and 3000 loggers, foresters, landowners and their families.

**Strategy 1.1.3:** Educate landowners about available cost shares.

**Strategic Action:** Explanation of cost share programs are part of all trainings. The AFC partnered with the Natural Resources Conservation Service & Arkansas Game & Fish Commission to offer two BMP training sessions every other year to 135 District Conservationist, technicians, and Private Lands Biologist.

**Objective 1.2:** Educate public to identify and conduct activities to restore and protect Watersheds.

**Strategy 1.2.1:** Address issues through employing the use of properly managed forests across all ownerships in the state.

1. Avoid impairments to water quality and quantity by implementing voluntary Best Management Practices.
2. Ensure maximum participation in cost-share programs, even by those with income limitations.
3. Educate residents, contractors, and property owners about the benefits of buffers along waterways, not only for the individuals directly affected but also the public.
4. Protect habitat for aquatic vertebrates, invertebrates, and plant communities, many of which are endangered or threatened.

5. Address fragmentation and parcelization, which threaten water quality when forest land is converted to non-forest uses because of economic pressure.

6. Protect priority areas in Arkansas that benefit from forested waterways.

such as:

- a. Karst features associated with the Ozark Mountains.
- b. Forested riparian zones or streamside management zones.
- c. Priority watersheds critical to public drinking water supplies.
- d. Aquatic life.
- e. Threatened and endangered species

**Strategic Action:** The BMP Coordinator provided training to 123 landowners at two Arkansas Forestry Association Tree Farm meetings and four Cooperative Extension Landowner works shops with 105 people attending. The AFC attended and participated with organizational meetings for four watershed groups that are developing EPA watershed plans. The AFC has also partnered with Central Arkansas Water to develop BMP demonstration areas. The BMP Coordinator provided training at five different Arkansas River Clean up days to a total of approximately 250 participants. The AFC has developed a Karst BMP fact sheet and brochure for in the Karst region of the State.



BMP Coordinator Arnold Hameister teaching at a logger workshop.



BMP Coordinator Arnold Hameister discusses harvest planning at a logger workshop.

***Goal 2: Continue to provide high quality training and educational opportunities both to general forest stakeholders as well as to specific groups.***

**Objective 2.1:** Identify specific regions, woodland practitioner groups, and BMP categories that are in most need of targeted training.

**Strategy 2.1.1:** Identify groups, regions, and categories of BMPs that are in need of improvement.

**Strategic Action:** The BMP Coordinator used the 2011 statewide BMP implementation assessment to show areas of deficiencies in ownership, region, AFC districts, and BMP categories to provide more effective and targeted training.

**Objective 2.2:** Continue to provide both technical and non-technical educational and training platforms for woodland practitioners and landowners.

**Strategy 2.2.1:** Promote BMP implementation in the Arkansas Logger Education and Training Program.

**Strategic Action:** The BMP Coordinator, in the past five years, conducted 76 technical BMP training sessions instructing 2,652 loggers and company foresters

throughout Arkansas. The workshops were held with the Arkansas Timber Producers Association (ATPA).



BMP Coordinator training for NRCS, landowners and loggers.

**Strategy 2.2.2:** Increase awareness of the Courtesy Exam Program.

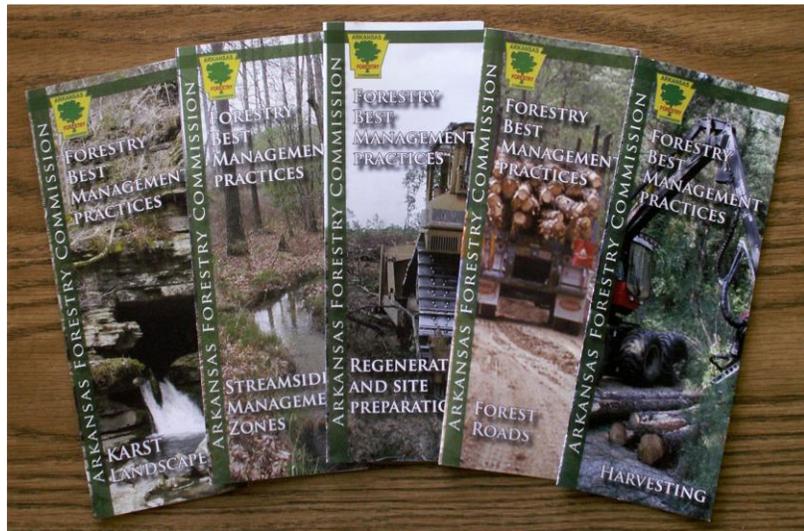
**Strategic Action:** In the last five years BMP Coordinator held 16 courtesy exams in 11 counties with 238 participants. Courtesy exams provide an opportunity for Water Quality staff to meet with landowners, foresters and loggers and discuss BMP implementation in the field. Manuals, brochures, and fact sheets are provided to participants to assist in instruction.



BMP Coordinator on Courtesy Exam in Nevada County.

**Strategy 2.2.3:** Develop and disseminate fact sheets, brochures, and other non-technical materials to landowners.

**Strategic Action:** The BMP Coordinator has developed 15 factsheets and 5 BMP brochures in the five year period.



A sampling of AFC BMP Fact sheets and brochures.

**Strategy 2.2.4:** Continue to evaluate and update/revise the Arkansas BMP Guidebook as necessary.

**Strategic Action:** The AFC BMP coordinator works with the Arkansas Forestry Association's BMP Task Force to evaluate old and new BMPs and their effectiveness as they relate to the state's BMP Guidebook. For example, new Karst BMPs have been promoted through BMP training with fact sheets and brochures.

**Strategy 2.2.5:** Improve the access to BMP information and resources through the restructuring of the water quality portion of the AFC website.

**Strategic Action:** The AFC has constructed a webpage on the AFC site dedicated to BMPs and water quality.

**Goal 3: *Serve as the primary contact and mediator of complaints resulting from the potential adverse effects of silvicultural practices on water quality.***

**Objective 3.1:** Maintain the current memorandum of understanding with the Arkansas Department of Environmental Quality (ADEQ) concerning the handling of complaints of degradation of water quality by forestry operations.

**Strategy 3.1.1:** Include ADEQ and industry representatives on complaint site visits.

**Strategic Action:** AFC received 98 complaints in the last five years, 53 of which were valid. All 53 valid complaints were resolved with the inclusion of landowners, loggers, foresters and ADEQ field inspectors.

**Goal 4: *Serve as the primary AFC contact for Arkansas Watershed Advisory Group (AWAG) quarterly meetings and other State and Federal groups.***

**Objective 4.1:** Maintain a presence at AWAG to provide awareness and promote the use of BMPs.

**Strategy 4.1.1:** Participate in quarterly meetings and annual conference.

**Strategic Action:** The AFC participated in ADEQs Arkansas Watershed Advisory Group (AWAG) meetings and annual conference until it disbanded. The AFC is still involved with ADEQs Watershed Outreach and Education Program as well as participates in Arkansas Rural Water Association meetings.

**Strategy 4.1.2:** Participate in local watershed meetings.

**Strategic Action:** The AFC BMP Coordinator meets with both impaired and watersheds containing surface drinking water supplies to provide technical and non-technical training as well as input into their EPA watershed plan.

**Objective 4.2:** Participate in the Arkansas Natural Resources Commission and EPA annual 319 H grant recipient meeting.

**Strategic Action:** The AFC BMP Coordinator participated in all Arkansas Natural Resources Commission (ANRC) and EPA annual meetings. The AFC also partnered with TX, LA, and OK to host a semi-annual Four State BMP meeting that includes the region 6 EPA as well as ANRC.

**Strategy 4.2.1:** Be informed of current regulatory and water protection needs.

**Strategic Action:** The BMP Coordinator attended 12 conferences and meetings a year related to current water protection topics.

**Strategy 4.2.2:** Be proactive in adopting and revising the current BMPs to meet the present water quality issues.

**Strategic Action:** The BMP coordinator meets quarterly with the Arkansas Forestry Association's BMP task force which includes representatives from ADEQ, ANRC, AFA, ATPA, University of Arkansas at Monticello, Forest Industry, forest landowners, The Nature Conservancy, and U.S. Forest Service.

**Goal 5: *Continue to assess BMP implementation statewide through an unbiased examination of harvesting operations.***

**Objective 5.1:** Maintain funding for the Arkansas BMP Implementation Survey.

**Strategy 5.1.1:** Use the EPA 319 Grant Program as the primary source of funding for the BMP Implementation Survey.

**Strategic Action:** AFC used EPA 319 grant funds to conduct the 2011 BMP Implementation survey, the results of which were printed and also can be found on the AFC website.

**Objective 5.2:** Perform the BMP Implementation Survey in a scientifically grounded manner.

**Strategy 5.2.1:** Use most efficient means to identify tracts for survey.

**Strategic Action:** The AFC conducted its seventh survey according to the publication "Silviculture Best Management Practices Implementation Monitoring, a Framework for State Forestry Agencies", adopted in 1996. To reduce the bias



**Strategic Action:** The AFC was awarded an EPA 319 grant in 2015 which will be used to conduct Arkansas's 8th BMP survey the results of which will be published in 2017-18.

**Objective 7.2:** Seek other funding sources for additional programs.

**Strategy 7.2.1:** Maintain and build relationships with partners to stay abreast of potential grant opportunities.

**Strategic Action:** The AFC was awarded a competitive grant from the U. S. Forest Service which was used to create demonstration areas to use on landowner tours and workshops.

**Strategy 7.2.2:** Provide resources such as portable bridges for skidding logs across creeks.

**Strategic Action:** The BMP coordinator, through a U.S. Forest Service competitive grant purchased two portable bridges for stream crossings. The bridges have been used in demonstration workshops as well loaned to local loggers.



AFC portable bridge in use.

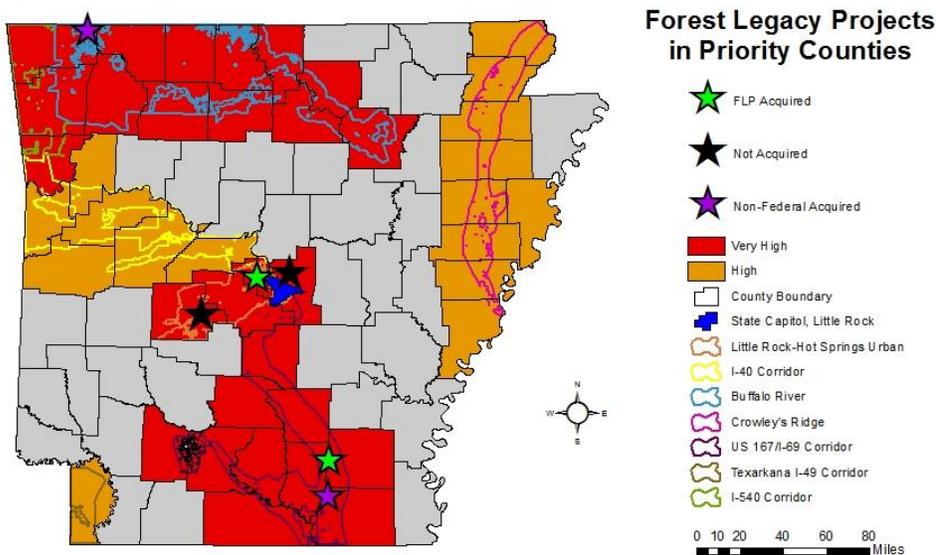
**ISSUE ADDRESSED: Forest Fragmentation/Parcelization/Changing Ownerships**

**Goal 1: Protect forests from harm.**

**Objective 1.2:** Identify and reduce threats to fragmentation and parcelization.

**Strategy 1.2.5:** Promote Forest Legacy Program within Forest Legacy Areas.

**Strategic Action:** The Arkansas Forest Action Plan identified 26 counties containing Forest Legacy Areas that are very high priority. From 2010 until 2015, Arkansas submitted six project proposals comprised of multiple tracts totaling 14,088 acres to the National Review Panel for funding consideration; all projects are in the very high priority counties. The project proposals are as follows: Devil’s Eyebrow, Hot Springs Recharge, Longview-Saline, Maumelle Water Excellence, Pine Flatwoods Recovery Initiative, and the Wye Mountain Headwaters. From these projects, the State acquired three tracts totaling 2,993 acres that were funded in part by the Forest Legacy program. The State acquired two tracts from the six proposed projects, totaling 3,916 acres, using non-federal funds. In addition, one tract of 937 acres is ranked in a position on the FY 2016 President’s List that will likely result in Congress approving Forest Legacy funds for acquisition. The project locations are shown on the map below.



***Conserve Working Forest Landscapes implementation focus for the next five years.***

- Complete the 8th BMP Implementation Survey.
- Work with the Drinking Water Utilities and forest stakeholders to establish an effective working group to accomplish successful projects that would benefit both groups.
- Continue to build strong working relationship with impaired watershed groups.

- Continue to focus on the 26 very high priority counties that contain Forest Legacy Areas. The Hot Springs Recharge Area within the 26 very high priority counties is a very sensitive area with national implications. Hot Springs National Park's existence is threatened by impermeable surface development in a recharge area that was positively defined by a scientific study. The State will submit Forest Legacy project proposals as land is acquired through a third party non-profit organization.

***Conserve Working Forest Landscapes data needs or new issues revealed since the FAP was completed (to inform future updates).***

- Near real time satellite imagery to collect sample sites for BMP implementation survey.

## **2. Protect Forests from Harm**

***ISSUE ADDRESSED: Wildfire Management***

***Goal 1: Improve public and inter-agency cooperation in wildfire awareness, prevention and mitigation.***

**Objective 1.1:** Increase community awareness at a basic level for the threat of a wildfire event.

**Strategy 1.1.1:** Promote the development and application of the Firewise Program and Firewise strategies to fire departments.

**Strategic Action:** Arkansas Forestry Commission (AFC) continues to build the Firewise program by developing new CWPPs by working in communities with fire departments. Communities with CWPPs have increased from an average of 41 per year to 84 per year for the year 2010 through 2014.

**Objective 1.2:** Reaffirm and expand partnerships with mutually invested agencies.

**Strategy 1.2.1:** Continue to work with the agencies and other cooperators to reduce wildfire risk, educate and train the public, and provide safety, counsel and support.

**Strategic Action:** AFC worked with many communities by conducting 59 Firewise training sessions for Fire Departments (volunteer or paid), community

leaders, and federal and state partners in recognizing wildfire risk through risk assessments and mitigation project training.

**Objective: 1.3:** Promote wildfire awareness, ownership and training to Arkansas Homeowners.

**Strategy 1.3.1:** Create homeowner investment in Community Wildfire Protection Plans (CWPPs) through participating Firewise fire crews, AFC personnel and other civic and community organizations.

**Strategic Action:** Increased from a total of 166 in 2009 to 280 completed (statewide) CWPPs in 5-year period from 2010 through 2014.

**Strategic Action:** Increased from a total of 105 certified Firewise communities from 2009 to a total of 151 completed (statewide) CWPPs in 5-year period from 2010 through 2014.

**Strategy 1.3.2:** Provide essential fire training per Arkansas state legislation to fire departments through Firewise training and training sponsored by AFC (the 8-hour Arkansas Wildland Fire Suppression Course).

**Strategic Action:** AFC conducted an average of 62 Wildfire Suppression Courses training 7,766 firefighters from Fire Departments (volunteer or paid), community leaders, and federal and state partners teaching how to recognize wildfire risks through risk assessments and mitigation project training.

## ***Goal 2: Increase Fire Protection Capacity.***

**Objective 2.1:** Provide increased preparedness and wildfire suppression capacity to combat wildfires in areas with heavy fuel loading.

**Strategy 2.1.1:** Utilize Southern Wildfire Risk Assessment Portal (SouthWRAP), CARS list and other resources to identify fire departments in high-risk areas to target through Firewise training, application and Risk Assessment completion

**Strategic Action:** AFC is transitioning over to Southern Wildfire Risk Assessment Portal to provide risk assessment data to VFDs, state and federal agencies and other partners.

**Strategy 2.1.2:** Maintain and enhance initial attack capabilities through the Single Engine Air Tankers (SEATs), VFDs, upgraded fire suppression equipment, and communication system.

**Strategic Action:** To improve and provide better communication between dispatch and fire suppression crews AFC upgraded 35 of our 52 statewide repeaters and replaced all of its 280 handheld and 325 mobile radios between 2010 and 2014. Renewed Annual contract for Single Engine Air Tankers providing additional fire suppression resources.



Radio technician installing radios in AFC dispatch center.

**Objective 2.2:** Train, equip, and support volunteer fire departments in essential wildfire suppression, strategies and mitigation practices. Additionally, provide fire crews with wildland fire suppression equipment (including trucks, hoses, Personal Protective Equipment, shovels, rakes, etc.).

**Strategy 2.2.1:** Provide cooperators and fire departments training in wildfire suppression through the 8-hour wildland fire suppression training, including additional pertinent training.

**Strategic Action:** AFC conducted an average of 62 Wildfire Suppression Courses training 7,766 VFD firefighters (volunteer or paid), community leaders, and federal and state partners teaching how to recognize wildfire risks through risk assessments and mitigation project training.

**Strategy 2.2.2:** Administer Federal Excess Personal Property (FEPP), Department of Defense Firefighter Program (DOD/FFP), and Volunteer Fire Assistance (VFA) programs to train, equip, and support fire Departments.

**Strategic Action:** AFC Rural Fire Program (RFP) provided 187 pieces of FEPP equipment for \$4,315,245.49 and 30,871 pieces of FFP equipment for \$56,422,007.46 to VFDs between 2010 and 2014.



Curtis VFD receives Firewise recognition in Clark County.

**Strategic Action:** AFC utilized the DODFFP program to upgrade their fire suppression fleet with 8 dozer transports and 1 brush /pumper unit.

**Strategic Action:** AFC upgraded their fire suppression fleet by replacing 25 transport/dozer units over the 5 – year period from 2010 through 2014.

**Objective 2.3:** Continue development and presentation of long-term wildfire prevention and preparedness messages.

**Strategy 2.3.1:** Provide public messaging about safety practices including those that focus on burning debris, landscaping and construction checklists, appropriate fire scene mop up, agency notification process, homeowner mitigation strategies, etc.

**Strategic Action:** AFC hired a PIO who provides PR messaging utilizing social media such as Facebook and Twitter addressing wildfire prevention and preparedness and other AFC goals.

**Strategy 2.3.2:** Alongside gaining interest and investment, provide for the safety of emergency responders and members of the general public during wildfire events by implementing strategies from NIMS, ICS, NWCG, and other relevant safety systems in community and emergency training

**Strategic Action:** AFC is NIMS compliant and provides training to key personnel in NIMS, NWCG, and requires basic ICS courses to all emergency response employees.

**Goal 3: Continue improving, implementing and funding technology for agency resources that enhance wildfire detection and suppression.**

**Objective 3.1:** Determine current and predicted weather conditions throughout the year.

**Strategy 3.1.1:** Maintain and update Remote Automated Weather Stations (RAWS).

**Strategic Action:** AFC upgraded their 6 weather stations to current specification during the 5 year period 2010 through 2014. AFC fire weather analyst provides up to date fire weather forecast to fire suppression crews and partners during fire seasons.

**Objective 3.2:** Continue the maintenance and development of a computer-aided dispatch program.

**Strategy 3.2.1:** Continue training and updating personnel in programming and operation for the AFC 24-hour computer-aided dispatch center.

**Strategic Action:** AFC continues to operate and maintain a 24 hour Central Dispatch Center. Central Dispatch Center receives reports of wildfires and emergency incidents and dispatches appropriate resources.



AFC dispatch center.

**Objective 3.3:** Continue the maintenance and development of a computer-aided fire reporting program.

**Strategy 3.3.1:** Track fire occurrence and cause to create a long-term understanding of fire hazards and potential across the state. As a part of this understanding, wildfire personnel can pinpoint high-occurrence fire areas to provide focus toward greater area training, awareness and preparedness.

**Strategic Action:** AFC Central Dispatch Center dispatches, monitors, and records fire occurrences and causes each year. Arkansas recorded an average number of 1,766 fires per year reported and suppressed in Arkansas averaging 27,872 acres each year with an average size of 15 acres per fire during the period between 2010 and 2014.

**Objective 3.4:** Staff and improve the 24-hour central dispatch site.

**Strategy 3.4.1:** Inform the public of the 24-hour point of contact for wildfire reporting and retain a trained and prepared response staff within the dispatch center.

**Strategic Action:** Provides a 1-800 number publicly utilizing social media and other material handouts to report wildfires and other emergency incidents.

**Objective 3.5:** Maintain and improve the aviation program.

**Strategy 3.5.1:** Ensure training and checkpoints to keep all agency aircraft in airworthiness condition.

**Strategic Action:** Installed an aviation tracking system and upgraded emergency locator transmitters (ELTs) in all the AFC aircraft in 2014. All AFC aircraft meet FAA maintenance requirements.



AFC plane used for aerial detection of wildfires.

**Strategy 3.5.2:** Continue training qualified pilots for the aerial detection of wildfires in all AFC aircraft.

**Strategic Action:** The Aviation department employs an Aviation Manager and three full time pilots. Extra help pilots are utilized during periods of high fire danger. All pilots possess a minimum of a Commercial Pilot Certificate with Instrument privileges and 500 hours of flight time. All AFC pilots and extra-help pilots receive extensive wildfire detection training.

***Goal 4: Enhance and improve the wildfire law enforcement program.***

**Objective 4.1:** Provide increased fire investigation and law enforcement training for AFC investigators.

**Strategy 4.1.1:** Offer FI-110 and FI-210 fire investigation courses as part of agency-wide Opportunities.

**Strategic Action:** All AFC fire investigators attended the FI-210 and the Annual Refresher Law Enforcement Courses during the 5 year time period between 2010 and 2014. An additional 25 students from other State agencies and Federal agencies were trained during this same period.

**Strategy 4.1.2:** Send selected investigators to enhanced training through the Arkansas Law Enforcement Training Academy.

**Strategic Action:** AFC conducted 65 fire investigation and law enforcement training sessions with a total of 791 students during the 5 year time period between 2010 and 2014.

***ISSUE ADDRESSED: Forest Fragmentation/Parcelization/Changing Ownerships.***

***Goal 1: Protect forests from harm.***

**Objective 1.1:** Conserve forests through active forest management.

**Strategy 1.1.1:** Promote afforestation or reforestation.

**Strategic Action:** The benefits of afforestation and reforestation are promoted through landowner assists and educational programs. Since July 1, 2010 there has been 11,544 non-industrial private landowners receive assistance from AFC personnel and 14,650 have attended educational programs.

**Strategy 1.1.2:** Educate landowners about the financial benefits of active management.

**Strategic Action:** A total of 14,650 people participated in landowner educational programs. Participants receive information concerning such topics as the financial benefits of active forest management and how to sell your timber.



Selling your timber workshop.

**Strategy 1.1.3:** Promote SPB program for first-time commercial thinning

**Strategic Action:** Landowners who receive a Forest Management plan are encouraged to enroll in the SPB program if applicable to their property.

**Strategy 1.1.4:** Provide incentive for landowners to actively manage forests, such as group certification through, SFI, FSC or other certifying entity.

**Strategic Action:** The AFC's Forest Stewardship Program conducts a certification process for participating landowners. These certified Forest Stewards receive various awards of recognition, there have been 253 certified since July 1, 2010. Many of these Forest Stewards are SFI certified.

### ***ISSUE ADDRESSED: Forest Health/Invasive Species***

***Goal 1: Develop and make available tools, training and public awareness campaigns for SPB prevention and suppression in South Arkansas.***

**Objective 1.1:** Increase public awareness of SPB and how to prevent and/or control Infestations.

**Strategy 1.1.1:** Provide SPB information to media outlets including AFC website; provide workshops for landowners and forestry professionals.

**Strategic Action:** Information shared on as-needed basis with media outlets. Information posted on website details SPB presence annually.

Workshops/training were held to inform landowners and forestry professional. New fact sheets being prepared in 2016 for public distribution.

**Objective 1.2:** AFC personnel need basic knowledge of SPB detection and management.

**Strategy 1.2.1:** Provide SPB identification and management training to AFC field Personnel.

**Strategic Action:** Site visits and in-person training conducted on an as-needed basis. Training to a larger audience of AFC personnel is planned for 2016 and later years.

**Strategy 1.2.2:** Provide SPB southwide predictions to Arkansas's registered foresters.

**Strategic Action:** Predictions remained low and required no notifications.

**Objective 1.3:** Deliver information and federal cost shares when available for the prevention of SPB infestations.

**Strategy 1.3.1:** Focus SPB prevention priorities in high-hazard areas using protocols developed by USFS FHTET.

**Strategic Action:** Funding from the SPB Prevention Program was allocated to counties within the traditional destructive range of SPB in Arkansas. In 2015, the funding was focused further by allocating funds to AFC districts weighted on their total acreage of SPB hazardous stands.

**Strategy 1.3.2:** Continue to promote SPB Prevention Restoration Project; give high priority to thinning.

**Strategic Action:** Thinning is a strong focus of the program. The program provides cost-share incentives for thinning projects on more than 1,500 acres each year. In light of lessening award totals, in 2015, stricter guidelines were enforced to encourage fund allocation for thinning at-risk stands.

**Objective 1.4:** Monitor SPB activity and predict pending SPB beetle outbreaks in South Arkansas.

**Strategy 1.4.1:** Conduct spring SPB survey to predict SPB trends, following the southwide protocol.

**Strategic Action:** Nine traps used annually, increased to 17 traps in 2015. Trap data submitted annually to SPB DataPortal (online database created by the Forest Service, Forest Health Technology Enterprise Team) and the SPB Prediction Survey. SPB/clerid numbers indicated low risk of SPB outbreak.



Funnel trap used in SPB survey.

**Strategy 1.4.2:** Conduct annual 25% SPB detection flights in alternating counties over the traditional range of the SPB in South Arkansas.

**Strategic Action:** At least 25% of the traditional range of SPB was aerially surveyed between 2010-2013 (5,700,865 acres). No flights conducted in 2014, and one flight equating to less than 25% (392,624 acres) was conducted in 2015. SPB detection flight coverage will increase substantially in 2016.



Ips beetle damage in western Arkansas.

**Strategy 1.4.3:** Contribute to development and implementation of SPB detection, ground check and control reporting system.

**Strategic Action:** In 2015, AFC began taking necessary steps toward obtaining a new tablet-based sketchmapping tool. This tool, when implemented in 2016, will streamline the chain of events related to aerial survey, i.e., detection to ground check and reporting.

**Strategy 1.4.4:** Follow up on reports received from the public, forest industry, other agencies and the USFS.

**Strategic Action:** No reports of SPB activity reported. Some pine dieback investigated, but culprit was always Ips beetles and other secondary pine beetles.

**Objective 1.5:** Implement an effective SPB suppression program when an SPB outbreak occurs.

**Strategy 1.5.1:** Implement 50% detection flights in counties in outbreak area, 25% in all traditional counties. Conduct flights every four weeks during beetle season.

**Strategic Action:** Flight frequency declined on account of negligible SPB risk. No SPB outbreaks were predicted or detected from 2010-2015. Traditional surveys over no less than 25% of traditional range will continue.

**Strategy 1.5.2:** Provide literature outlining recommended control techniques to Landowners.

**Strategic Action:** Not needed to mitigate damaged between 2010 and 2015.

**Strategy 1.5.3:** Download detection data directly from GPS to AFC and cooperators.

**Strategic Action:** Not needed to mitigate damages from 2010 to 2015. Prepared to supply GPS data and maps of affected tracts if/when a situation arises.

**Objective 1.6:** Cooperate with universities, State entomologists in other states and the USFS to develop and field test new approaches to control.

**Strategic Action:** A large professional network is in place to share the latest SPB information and control. New control measures that are practical to the current forest industry are being discussed. The Arkansas strategy will likely reflect the practices developed and tested by Forest Health Protection personnel on Mississippi SPB outbreaks from 2013 to present.

**Objective 1.7:** Strengthen the monitoring and reporting of native insect pests, which may outbreak periodically.

**Strategy 1.7.1:** Send seasonal information to field personnel to increase awareness of native pest conditions.

**Strategic Action:** Information is shared via email, phone calls, and social media resources when needed. Starting in 2015, with the help of the Public Information Coordinator, current events related to forest health can be shared with AFC personnel through a “Weekly News Update.”

**Strategy 1.7.2:** Follow up on general public, other agency and industry reports of insect Activity.

**Strategic Action:** Reports investigated by AFC personnel and the Forest Health Specialist. 241 separate landowner assists were reported from 2010 to present.

**Strategy 1.7.3:** Report all insect activity of more than 40 acres to the USFS.

**Strategic Action:** Accomplished to a greater degree in 2015 with the submission of GIS shapefiles that document mortality and defoliation of multiple insect and disease agents.

**Goal 2: *Detect, monitor, prevent and control invasive, nonnative forest insects.***

**Objective 2.1:** Monitor the presence of invasive, nonnative forest insect pests.

**Strategy 2.1.1:** Increase public awareness for prevention and detection of invasive insect pests.

**Strategic Action:** Don't Move Firewood (DMF) campaign was integrated into the AFC's message about preventing the introduction and spread of invasive forest insects. 15,000 copies of the DMF bulletin were distributed in 2011. A DMF radio spot was played on the SEC Coach's radio program each week during the 2012 college football season. Three highway billboards displayed the DMF message for over four months in 2013.

**Strategy 2.1.2:** Prepare and distribute information on the invasive insect pests.

**Strategic Action:** Information was provided via media releases in regards to emerald ash borer in 2015, and these led to television spots and newspaper articles.

**Strategy 2.1.3:** Increase collaboration among stakeholders involved with invasive Insects.

**Strategic Action:** Continued cooperation with the CAPS group and academia strengthened work related to invasive insects.

**Objective 2.2:** Build cooperation with other agencies and organizations.

**Strategy 2.2.1:** Contribute to preparedness plan invasive insects.

**Strategic Action:** In 2014, AFC was a key cooperator in the response plan following the detection of emerald ash borer in Arkansas. Quarantine regulation boundaries and detection methods were influenced by AFC involvement.

**Strategy 2.2.2:** Continue to represent the AFC on the Cooperative Agricultural Pest Survey (CAPS) Committee.

**Strategic Action:** AFC is an active participant in Arkansas's CAPS Committee each year.

**Strategy 2.2.3:** Continue to cooperate in the Early Detection Rapid Response program and Gypsy Moth trapping program.

**Strategic Action:** AFC participated in the gypsy moth trapping program annually. Each year, more than 300 gypsy moth traps are placed and collected by AFC personnel.

**Strategy 2.2.4:** Conduct field studies to increase knowledge of distribution, biology, and seasonal habits of invasive insect pests.

**Strategic Action:** In 2015, the Forest Health Specialist focused time and resources to understanding the newly infestation of emerald ash borer in Arkansas. AFC cooperated with the AR State Plant Board, university extension service, and academia to gather information on its range and seasonal habits in Arkansas.

**Goal 3: *Take a leadership role in the detection, prevention and management of invasive plants affecting forests and woodlands in Arkansas.***

**Objective 3.1:** Monitor the presence of invasive, nonnative forest plant pests in Arkansas.

**Strategy 3.1.1:** Increase public awareness of invasive plants affecting forests and Woodlands.

**Strategic Action:** AFC personnel were trained in the identification of invasive plants.

**Strategy 3.1.3:** Collaborate with other state agencies and organizations involved with invasive plants.

**Strategic Action:** Federal cost-share funding was subawarded to the Arkansas Natural Heritage Commission (ANHC) in 2011 to remove invasive plants from the Cove Creek Natural Area and develop displays to educate visitors about the importance of invasive plant removal. The project was completed in 2013. A second subaward was granted to ANHC in 2015 to continue invasive plant removal on Cove Creek and begin work in the Devil's Knob/Devil's Backbone Natural Area.

**Strategy 3.1.4:** Support the detection and reporting of invasive plant species.

**Strategic Action:** AFC has agreed to assist and report invasive plants of concern to the Arkansas State Plant Board, e.g., cogongrass is considered a serious invasive plant that must be detected and reported.

**Objective 3.2:** Contribute to efforts to eradicate invasive plants on public and private lands.

**Strategy 3.2.1:** Continue to represent AFC on CAPS and other groups involved in invasive species detection and control.

**Strategic Action:** The AFC Forest Health Specialist has served as a member of the Arkansas CAPS group annually. Detection and monitoring of cogongrass and Chinese tallow tree were communicated to the group as high priority.

### ***Protect Forests from Harm implementation focus for the next five years.***

- Continue to develop and promote prescribed fire as a mitigation and management tool.
- Continue to provide wildfire suppression training for fire departments, other partners and AFC personnel.
- Continue to mitigate the wildfire threat to homeowners by providing a viable Firewise program.
- Continue to develop and promote SouthWrap.
- Continue to provide Law Enforcement training for AFC personnel.
- Continue to increase wildfire suppression capacity and firefighter safety by upgrading wildfire suppression equipment and replacing open cab dozers with environmental cab dozers.
- Upgrade radio communications to meet P25 requirements and expand coverage as needed.

- Upgrade communication and dispatch consoles at central dispatch center to comply with upcoming digital requirements utilizing most current technology.
- Continue to upgrade aviation fleet to meet detection needs and FAA maintenance and upcoming digital communication requirements.
- Maintain high priority for acquiring and providing federal excess equipment and property to volunteer fire departments and AFC to mitigate the fire risk and provide for improved and efficient fire protection.
- Increase the use of aerial SPB detection surveys, and expand the purpose of detection flights to include the identification of other mortality and defoliation damages.
- Create an Arkansas SPB Strategic Plan to address the modern difficulties associated with controlling future SPB outbreaks.
- Produce a new Arkansas Forest Health Field Guide that will aid AFC personnel and the public with identifying insects, diseases, and invasive plants in the field.
- Increase the information exchange associated with invasive plants. Inform the public of current and future threats, and provide recommendations to prevent invasive plant establishment.

***Protect Forests from Harm data needs or new issues revealed since the FAP was completed (to inform future updates).***

- Upgrade communications to meet P25 requirements and digital mandates.
- Increase wildfire suppression capacity of AFC and other partners because of the loss of forest industry firefighting units.
- Increase prescribed fire capacity.
- Upgrade Automatic Dependent Surveillance Broadcast (ADS-B) tracking system in aviation fleet to meet FAA mandate.
- Strengthen the AFC's ability to respond to emerging issues, i.e., known range of invasive plants, keys to identify invasive plants, recommended control measures, etc., by collecting more data and information on invasive plants.
- Further develop the AFC's Fire & Activity Reporting System to include tools for reporting forest health activity.

### **3. Enhance Public Benefits from Trees and Forests**

***ISSUE ADDRESSED: Increase and Enhance the Benefits of Working Forests***

***Goal 1: Ensure that partners and the public view the Forest Stewardship Program as the go-to program for private forest management planning.***

**Objective 1.1:** Engage each primary partner, at least once a year, in a substantive discussion about Forest Stewardship program implementation.

**Strategy 1.1.1:** Hold annual meetings of the FSC, where issues and roles are discussed.

**Strategic Action:** The FSC met annually to discuss roles and issues concerning the Forest Stewardship Program.

**Objective 1.2:** Engage traditionally underserved groups and landowners.

**Strategy 1.2.1:** Work closely with AFC communications and conservation education program to create marketing material that piques the interests of nontraditional nonindustrial private landowners (NIPF).

**Strategic Action:** On May 29, 2015 four AFC personnel attended the Heirs' Property and Forestry Forum in Little Rock, AR. One AFC employees continues to meet with an Heirs Property Working group.

**Objective 1.3:** Build on existing partnerships and create new ones with stakeholder Organizations.

**Strategy 1.3.1:** Develop MOUs and Contribution Agreements or create new ones with partner agencies such as NRCS, Tree Farm Program, and Arkansas Urban Forestry Council (AUFC).

**Strategic Action:** The AFC continues to work closely with the NRCS, the Tree Farm Program and AUFC including annual contribution agreements with the NRCS and annual grant award to the AUFC.

***Goal 2: Ensure that the Forest Stewardship Program remains relevant and useful to nonindustrial private landowners and the forest resource.***

**Objective 2.1:** Ensure that the Forest Stewardship Program is useful to NIPF landowners.

**Strategy 2.1.1:** Forest Stewardship Plans are up to date and relevant to meet landowner needs statewide.

**Strategic Action:** During the first five years of the Forest Action Plan, the Stewardship Program completed 1,287 new or revised Forest Stewardship Management Plans, this equates to 207,193 acres owned by non-industrial private landowners. During this period there were 380 recertifications.

**Strategy 2.1.2:** Work with partner agencies and programs such as NRCS and Tree Farm system to develop Forest Stewardship management plans that are useful to all partners.

**Strategic Action:** The Forest Stewardship Program maintains working relations with the NRCS and Tree Farm system. The Forest Stewardship Coordinator is a member of the Tree Farm Committee.

**Strategy 2.1.3:** Continue to recognize landowners as Certified Stewards when status is obtained.

**Strategic Action:** During the five year period, 253 landowners became Certified Forest Stewards. In order to be certified, the landowner must be actively implementing the current Forest Stewardship Management Plan. Each Forest Steward received various recognition awards.

**Strategy 2.1.4:** Explore possibilities for expanding market opportunities for Certified Stewards, such as forest certification systems and biofuel and carbon Markets.

**Objective 2.2:** Ensure that landowners have access to AFC field staff and contractors.

**Strategic Action:** AFC maintained a list of Arkansas registered consulting foresters and forestry vendors on its website.

**Strategy 2.2.1:** Continue to work with county landowner associations and Arkansas Forestry Association to host workshops and field tours about forestry practices.

**Strategic Action:** The AFC continues to work with county landowner associations and the AFA. The AFC has participated in numerous workshops and field tours such as the Tree Farm tours, annual Arkansas Forestry Association meetings, and various landowner workshops.

**Strategy 2.2.3:** Continue to maintain an online, searchable database of forestry service providers.

**Strategic Action:** The AFC continues to maintain the online searchable database for forestry service providers which can be found at: <http://forestry.arkansas.gov/DirectorySearches/Pages/default.aspx>



**Goal 3: Ensure that the Forest Stewardship Program remains relevant and useful as a statewide program.**

**Objective 3.1:** Continue to strive for a well-funded program.

**Strategy 3.1.1:** Work with Region 8 (R8) and the Washington office of the USFS to ensure equitable funding formulas for Arkansas.

**Strategic Action:** The AFC Forest Stewardship coordinator attended periodic southern region conference calls as well as attended 2 national Forest Stewardship meetings.

**Strategy 3.1.2:** Continue to submit project proposals when competitive funding is Available.

**Strategic Action:** The AFC has applied and been awarded the Shortleaf Pine Restoration grant and participated in 2 "Two Chief's" awards as partners delivering technical assistance.

**Strategy 3.1.5:** Build partner support for the Stewardship program locally and nationally by demonstrating results quantitatively and telling success stories qualitatively.

**Strategic Action:** There are a total of 838,868 acres covered by current Forest Stewardship Management Plans. The owners of these properties each have a plan which provides guidance on how to reach their individual objectives while conserving and protecting the forests. The Forest Stewardship accomplishments are reported nationally through SMART and SMART/ar.

**Objective 3.2:** Coordinate efforts between AFC, NRCS, and other state headquarter Offices.

**Strategy 3.2.2:** AFC will continue as a member of the forest working group of the State Technical Committee.

**Strategic Action:** AFC had representatives attend every State Technical Committee meeting in the last 5 years as well as Forestry and Wildlife working groups.

**ISSUE ADDRESSED: *Climate Change***

**Goal 1: *Identify, manage, and reduce threats from climate change.***

**Objective 1.1:** Improve air quality.

**Strategy 1.1.1:** Manage and restore forests to mitigate and adapt to climate change.

**Strategic Action:** Four low impact development grant projects involved restoring urban forests located in gray infrastructure settings. AFC partnered with communities and non-profits to initiate reforestation plans. Staff regularly partnered with other agencies and organizations to demonstrate management techniques and provides examples of projects implemented across the state.

**Strategy 1.1.2:** Strategically plant urban trees to create cooling effect.

**Strategic Action:** The Shade Trees on Playgrounds program has been implemented in more than 35 schools with over 175 trees planted. AFC partnered with the Arkansas Urban Forestry Council through the Arkansas ReLeaf program to plant trees in parks and give away thousands of trees to citizens to replant around their homes after natural disasters.



STOP tree planting at an elementary school.

**Strategy 1.1.3:** Engage public in environmental stewardship activities.

**Strategic Action:** AFC worked with neighborhood and homeowner associations to promote making natural resource management a priority in their communities. The Shade Trees on Playgrounds program has involved more than 5,000 students and teachers in planting trees. AFC personnel have participated in over 200 Arbor Day celebrations involving the planting of trees in communities.

**Strategy 1.1.4:** Promote policies to address mitigation of tree/canopy loss.

**Strategic Action:** Several regional workshops have been offered to landscape architects, engineers, city planners and landscape architecture students that cover topics such as: tree preservation techniques, working with ordinances and using the correct trees to enhance environmental benefits. Additionally, when AFC has conducted tree inventories and canopy assessments, the data is provided to communities to assist them with improving their tree management programs.

**Strategy 1.1.5:** Encourage analysis of existing forests to help determine management needs.

**Strategic Action:** AFC performed more than 25 tree inventories for community parks and developed management plans including environmental services data. AFC funded a grant for a research project on 387 acres on Mount Kessler in Fayetteville which resulted in the creation of an outdoor study area within minutes of the University of Arkansas and area schools.

**Strategy 1.1.6:** Promote canopy goals in communities.

**Strategic Action:** The cities of North Little Rock, Fayetteville, West Memphis, Bentonville, and Little Rock established new canopy goals based on the information collected from Urban Tree Canopy Assessments.

**Strategy 1.1.7:** Assist communities with tree assessments and analysis.

**Strategic Action:** Tree canopy assessments for all public and private trees within the city limits of North Little Rock, Fayetteville, West Memphis, Little Rock and Bentonville were accomplished. Smaller assessments were performed by AFC staff in community parks, state parks, cemeteries and on college campuses.

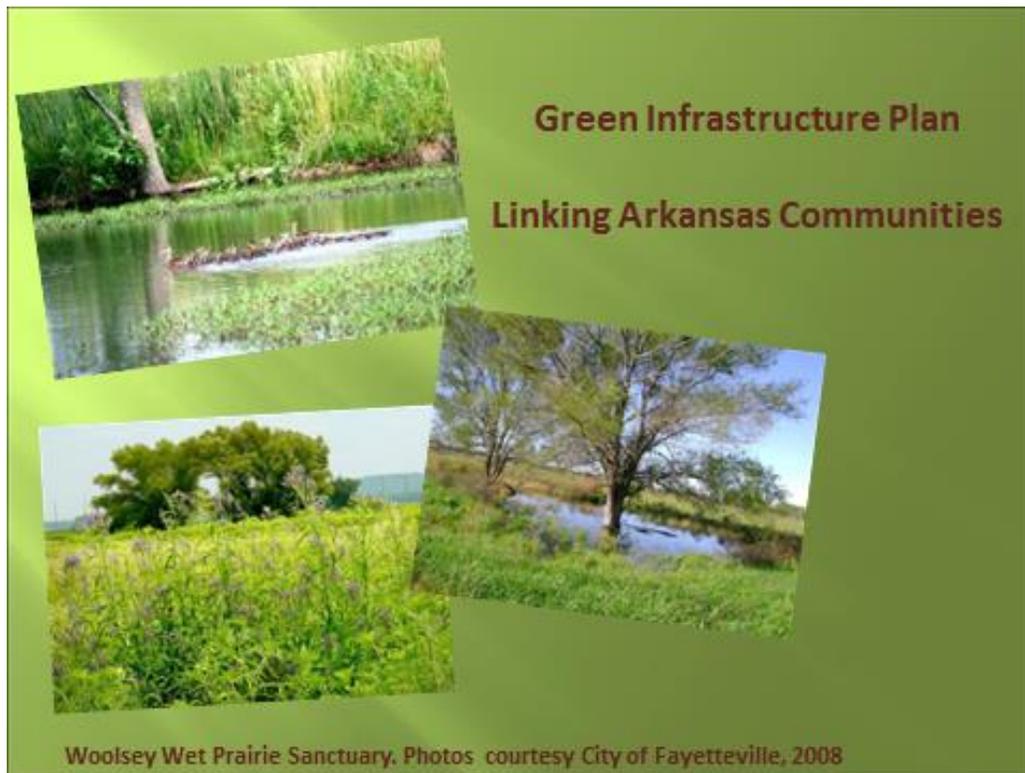


- # Urban Heat Island
- # Air Quality
- # Wildlife Linkages
- # Energy Conservation

**Objective 1.2:** Restore and manage open spaces in urban and urbanizing areas.

**Strategy 1.2.1:** Encourage green infrastructure planning and implementation.

**Strategic Action:** A Green Infrastructure Plan for Northwest Arkansas is being incorporated into the Razorback Greenway; a 36 mile trail system between Fayetteville and Bella Vista. Another green infrastructure plan is currently being developed for the City of Hot Springs. Four green infrastructure workshops were held across Arkansas with approximately 75 total attendees. Seventy Green Infrastructure manuals have been provided to various community representatives.



**Strategy 1.2.2:** Promote regional planning between communities.

**Strategic Action:** Through a partnership of AFC, the Fayetteville Natural Heritage Association and the Beaver Water District, a Green Infrastructure Plan for Northwest Arkansas was developed and includes ten communities and the Ozark St. Francis National Forest. A presentation titled “Green Infrastructure Planning: Linking Arkansas’ Communities” has been given across the state at various seminars and conferences.



Hot Spring in Hot Springs National Park.

**Strategy 1.2.3:** Promote Forest Legacy Program in WUI.

**Strategic Action:** Out of the six Forest Legacy project proposals submitted during the review period, Arkansas submitted four that are located in significant WUI areas: Devil's Eyebrow, Hot Springs Recharge, Maumelle Water Excellence, and the Wye Mountain Headwaters. These projects restore and protect open spaces near the largest population and population growth areas respectively in the State: Little Rock/Hot Springs and the Fayetteville/Springdale/Rogers metropolitan areas. As added benefits, the Maumelle Water Excellence, and the Wye Mountain Headwaters protect a drinking water source that supplies water for 400,000 people. The Hot Springs Recharge project protects the Hot Springs National Park springs from flow disruption due to impermeable surface type development.

**Strategy 1.2.4:** Provide guidelines for green space development and management to communities and nonprofits.

**Strategic Action:** Several regional workshops related to developing and managing green space have been provided across the state as well as follow up training regarding next steps in the planning process. More than 120 training sessions related to urban forest management have been conducted. Additionally, AFC has a an Urban Forestry column in Arkansas Municipal

League's monthly publication *City and Town* which has a distribution of approximately 7,000 city officials.

***Enhance Public Benefits from Trees and Forests implementation focus for the next five years.***

- Increase the number of landowners participating in the Forest Stewardship program.
- Ensure Forest Stewardship Plans are up to date and relevant to meet landowner needs statewide.
- Build partnerships in the public and private sector to influence and increase outreach for conservation efforts.
- Promote the use of low impact development techniques in communities.
- Cultivate capacity building at the state and local level through professional development and programs.
- Promote regional planning using GI tools and other land use resources.
- Encourage urban forest management strategies.
- Assist communities with tree assessments and analyses.
- Build capacity to prepare for and respond to natural disasters affecting urban forests including restoration efforts.
- Improve public awareness of the role trees have in community sustainability.
- Be proactive in forest health management.

***Enhance Public Benefits from Trees and Forests data needs or new issues revealed since the FAP was completed (to inform future updates).***

- Utilize Forest Inventory and Analysis data to better understand the changes affecting Arkansas's forest, such as fragmentation, parcelization and changing ownerships.
- Incorporate strategies to address urban forests impacted or threatened by pests, invasives and natural disasters.
- Promote green infrastructure research and tools to advance water quality improvement in urban areas.
- Encourage the use of new programs that are available to promote energy conservation with trees.
- Advocate using avenues available for repurposing urban wood waste.