Ouachita National Forest

Monitoring and Evaluation Report
for
Fiscal Year 2007
October 1, 2006 - September 30, 2007

100 Years of Caring for the Land and Serving People

The Ouachita National Forest celebrated the forest centennial in 2007. The Ouachita National Forest, originally called the Arkansas National Forest, was created through an executive order issued by President Theodore Roosevelt on December 18, 1907.

At first, the Arkansas National Forest consisted solely of reserved public domain lands (part of the Louisiana Purchase) south of the Arkansas River. The 1911 Weeks Law, which authorized Federal purchase of forest lands in the eastern part of the United States, was later used to add thousands of acres of cutover or farmed out lands to the national forest. The largest increases in national forest ownership occurred from 1933 to 1941.

In April 1926, President Coolidge changed the name of the Arkansas National Forest to the Ouachita National Forest. He also proposed expanding the national forest and fulfilled this proposal in December 1930 by extending the Ouachita National Forest into Oklahoma.

Today, the Ouachita National Forest consists of nearly 1.8 million acres located in thirteen Arkansas counties and two Oklahoma counties. It is the largest and oldest national forest in the Southern Region of the United States. The Forest includes 60 recreation areas, 6 wilderness areas, 2 national wild and scenic rivers, 700 miles of trails, several scenic byways, many special interest (botanical, scenic) areas, abundant historic and prehistoric resources, and habitat for nine federally listed and hundreds of other plant and animal species. It also provides timber and other forest products to the Nation; offers diverse hunting and fishing opportunities; and is the source of high quality drinking water for hundreds of thousands of people in Arkansas and Oklahoma.

Fiscal Year 2007
Monitoring and Evaluation Report for the Land and Resource Management Plan

Ouachita National Forest

Arkansas Counties:
Ashley, Garland, Hot Spring, Howard, Logan, Montgomery,
Perry, Pike, Polk, Saline, Scott, Sebastian, Yell

Oklahoma Counties:
Leflore, McCurtain

United States Department of Agriculture
Forest Service
July 2008

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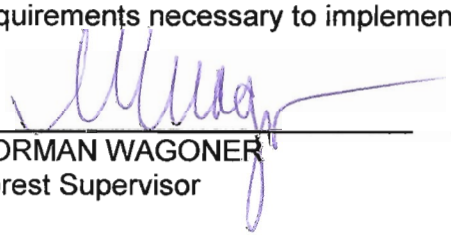
Forest Supervisor's Certification

I have evaluated and endorse the monitoring results and recommendations presented in this Monitoring and Evaluation Report (M&E Report). This is the second M&E Report for the 2005 Revised Forest Plan (Forest Plan), effective December 2005. Monitoring and evaluation are important tools in determining if management direction contained in the 2005 Forest Plan is effective in achieving the desired conditions for the Ouachita National Forest, if program priorities and objectives are being accomplished, and if the Plan standards (design criteria) adequately guide project implementation. This and future M&E Reports will contribute to Comprehensive Evaluation Reports to be issued every five years.

I have directed that the actions necessary to respond to the recommendations in this report be implemented. I have considered funding requirements necessary to implement these actions.



7/7/08

NORMAN WAGONER
Forest Supervisor

Date

Fiscal Year 2007
Monitoring and Evaluation Report for the Land and Resource Management Plan

Ouachita National Forest

Introduction

The 2005 Land and Resource Management Plan (Forest Plan) for the Ouachita National Forest provides broad, strategic direction for managing the land and its resources. The Forest Plan direction provides a framework to guide future management decisions and actions. Over time it is necessary to assess progress toward achieving the desired conditions, meeting the objectives, and adhering to the design criteria in the Forest Plan. A cycle of adaptation is formed when management direction in the Forest Plan is implemented, reviewed, and then adjusted in response to knowledge gained through monitoring and evaluation. Monitoring is conducted by Forest Service resource specialists; Forest Service research scientists; universities; state, federal, and resource agencies; and other cooperators. Persons who contributed data, assisted in compilation of data, or helped to prepare this Monitoring and Evaluation Report (M&E Report) are listed in Appendix A.

Purpose of the Monitoring and Evaluation Report

The 2005 Forest Plan was completed under the 1982 National Forest Management Act planning regulations (36 CFR 219). These regulations specify that forest plan "implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied. Based upon this evaluation, the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revisions, or amendments to the forest plan as are deemed necessary." Thus, the purpose of the M&E Report is to identify needed changes to management on the Ouachita National Forest (Ouachita NF) utilizing the results of monitoring and evaluation. The M&E Report combines the results of the evaluations that occur throughout the year into a summary document. Based on the data gathered during monitoring, trends can be established and management corrections made, as necessary. Monitoring helps to track progress toward achievement of Desired Conditions (Plan, pages 6 - 43) and Plan Objectives (Plan, pages 58 - 69); implementation of Design Criteria (Plan, pages 73 - 122); and occurrence of environmental effects as predicted. Monitoring indicates whether Ouachita NF management is addressing plan priorities. The evaluation of monitoring results allows the Forest Supervisor to initiate actions to improve compliance with management direction where needed, improve cost effectiveness, and determine if any amendments to the Forest Plan are needed to improve

resource management. About every five years, all of the information collected in the M&E reports is accumulated into a comprehensive evaluation report that results in periodic updates of the Forest Plan.

Organization of the Monitoring and Evaluation Report

The Monitoring Report is structured similarly to the Forest Plan because the M&E Report evaluates implementation and effectiveness of the Forest Plan. The Monitoring Report is prefaced by a Summary of the four main parts to the Report. Monitoring of desired conditions, including actions, outcomes, or resources to be measured and the frequency of measurement and reporting, is included in Part 1 of the Plan and in the M&E Report. Performance indicators to be monitored against Forest Plan objectives, including the frequency of measurement and reporting, are presented in Part 2 of the M&E Report. Project-level adaptation, triggered by reviews of selected projects, is focused on the effectiveness of project design criteria and is presented in Part 3 of the M&E Report. Part 4 of the M&E Report contains specific recommendations for the next fiscal year (FY).

Monitoring and Evaluation Report Summary

Part I: Desired Conditions

Monitoring of desired conditions allows the Ouachita NF to accumulate data annually that are then used to establish trends and assess progress towards achievement of the desired condition statements set out by the forest plan. Through repeated measurement, trend lines may be established and used to determine if programs should be adjusted or if changes in Forest Plan direction are needed. Annual monitoring results are reported each year in the M & E Report and every five years a comprehensive review is conducted. Monitoring of desired conditions for terrestrial ecosystems; riparian and aquatic ecosystems; proposed, threatened, endangered and sensitive species; geologic resources; landownership pattern; heritage resources; public use and enjoyment; facility operation and maintenance; commodity, commercial, and special uses; and fire (community protection and safety) for FY 2007 are summarized below.

Desired Conditions for Terrestrial Ecosystems

- The Ouachita NF continues to transition to new vegetation inventory databases and activity tracking systems that will allow monitoring and analysis of the effects of fire and silvicultural treatments to the vegetation communities.
- Silvicultural treatments were applied to 14,800 acres within the Pine-Oak Forest ecosystem, 319 acres within the Pine-Oak Woodland ecosystem; and 2,231 acres within the Shortleaf Pine, Bluestem Grass ecosystem.
- Salvage occurred on 69 acres within the Pine-Oak Forest ecosystem and 915 acres of the Pine-Oak Woodland ecosystem.
- The prescribed fire program was very productive. A total of 159,701 acres had a fire influence on the Ouachita NF. These fires include prescribed fires as well as wildland fires.

Desired Conditions for Riparian and Aquatic Ecosystems

- A total of 45 acres of watershed improvement and maintenance was accomplished.
- Three streams were monitored for the presence of herbicides below treated stands. Lab results indicate that the presence of herbicides was insignificant for all sites.

Desired Conditions for Wildlife and Fish Habitat

The following habitat improvements were accomplished:

- 212 waterholes constructed
- 158 nest boxes installed
- 54 roads closed (54.52 miles)
- 4,557 acres of midstory reduction completed
- 1,474 acres of overstory mast development for wildlife stand improvement
- 61,299 acres treated with prescribed fire for wildlife stand improvement
- 51 acres of seeding/planting
- 33 permanent openings created
- 28 temporary openings created
- 429 acres of openings rehabilitated
- 65 lake fish attractors created
- 13 stream miles of fish passage restored
- 1,302 acres of fishing pond/lake enhancements completed
- There were 4,363 acres of early successional habitat created through timber regeneration harvest methods and wildlife habitat improvement. This is up from the 2,602 acres created in FY 2006 but falls short of the 5,500 acres needed to meet the Plan requirements.

- Mast Capability – Hardwoods greater than 50 years old are used to determine hard mast capability. There were 474,384 acres of hardwoods greater than 50 years old in 2007, compared to 468,172 acres in FY 2006, an increase of 6,212 acres.
- Acres in Mature Hardwood Forest – Hardwoods greater than 100 years old are used to meet these criteria. In 2007, there were 130,343 acres greater than 100 years old compared to 51,873 acres in FY 2006. This is an increase of 78,470 acres over the previous year.
- Acres in Mature Pine Forest – Mature pine forest consist of pines greater than 80 years old. In 2007, there were 495,176 acres of pine forest greater than 80 years old compared to 547,523 acres in FY 2006. This is a decrease of 52,347 in this category.

- **Terrestrial Management Indicator Species (MIS) Population Trends**
  - Deer: Deer harvest data indicate an increasing harvest in the counties encompassed by the Forest with the highest harvest year in FY 2006. Based on annual spotlight survey data collected between 1990 to present, average deer density has varied from 29 deer per square mile in 2001, to 65 deer per square mile in 2007. The average density for the Forest for all years is 46 deer per square mile. These data indicate that deer density on the Forest has an increasing trend.
  - Northern Bobwhite: In the period between 1990 and 2007, birds heard per stop have varied from a high of 1.2 birds per stop in 1992 to a low of 0.5 birds per stop in 1999, 2000, and 2001. Over this 17 year period, the Ouachita region averaged 0.5 birds per stop per year. Northern Bobwhite call counts per stop, Landbird point data, and the trend in early seral habitat creation indicate a slight increase in Northern Bobwhites. The weak increasing trend for the Ouachita NF may be attributable to the aggressive prescribed fire and thinning programs which are providing habitat improvements.
  - Eastern Wild Turkey: Over the past decade, the number of turkey poults per hen has varied from a low of 1.45 poults per hen in 1993 to a high of 3.7 poults per hen in 1997. In 2007, there were 1.9 poults per hen which is slightly greater than the previous two years but less than that of the past decade. The 2007 habitat capability can support over 18,000 turkeys which is an improvement over FY 2006; however, factors other than habitat are apparently involved. The Arkansas Game and Fish Commission (AGFC) considers turkey in a downward trend and have modified seasons to improve the situation.
  - Red-cockaded Woodpecker: The Red-cockaded Woodpecker data for FY 2007 indicated 103 adult birds and 67 fledglings compared to 88 adult birds and 49 fledglings in FY 2006. Over the past decade, the number of active territories and the number of adult birds are both showing an increasing trend.
  - Pileated Woodpecker: Analysis shows that the current habitat capability would support 14,647 birds, which exceeds the 2005 Forest Plan bird population objectives of 11,265 (USDA Forest Service, 1995). Ten years of Landbird monitoring data on the Ouachita NF show an overall increasing trend for Pileated Woodpecker. The Pileated Woodpecker and its habitat appear to be secure within the Ouachita NF.
  - Scarlet Tanager: Ouachita NF Landbird point data, Breeding Bird Survey data, and Habitat capability data all support an increasing trend for the Scarlet Tanager. The Scarlet Tanager appears secure on the Ouachita NF and within its overall range.

- Prairie Warbler: The Breeding Bird Survey data indicate a significant declining trend of negative 4.08 percent for 1966 – 2006 for the Ozark-Ouachita Plateau as well as a 1.9 percent decline throughout its range survey-wide. Although it has been declining, the population viability on the Ouachita NF should not be threatened. Increases in thinning and prescribed fire in the pine and pine-hardwood types especially that associated with approximately 200,000 acres of Shortleaf-bluestem ecosystem restoration will benefit Prairie Warbler populations by improving habitat.

- **Ponds, Lakes, and Waterholes MIS Population Trends**
  - Bluegill: Bluegill catch for FY 2007 was the third lowest since 1991. As sampled, bluegill populations across the Ouachita NF are at suitable and sustainable levels and their viability is not in question.
  - Largemouth Bass: The largemouth bass catch rate in 2007 sampling was the fourth lowest in 17 years of sampling. As sampled, largemouth bass populations across the Ouachita NF are at suitable and sustainable levels and their viability is not in question.
  - Redear Sunfish: The redear sunfish catch in 2007 was the third highest annual catch over the past 17 years. As sampled, the redear sunfish populations across the Ouachita NF are at suitable and sustainable levels and their viability is not in question.
- **Stream and River MIS Population Trends**
  - There are 21 management indicator species of fish associated with stream and river habitat. Monitoring for 12 species is conducted every five years utilizing a Basin Area Stream Survey. Data for the Johnny and channel darters are collected annually.
  - The trend line for Johnny darter counts for the past ten years is non-significant but counts for this species were the fourth highest.
  - The trend line for channel darter counts is barely statistically significant and it indicates a slight downward trend. However, 2007 channel darter counts were the sixth highest in the 10 years of permanent transect counts.

Desired Conditions for Proposed, Endangered, Threatened, and Sensitive (PETS) Species

- Red-cockaded Woodpecker: The Red-cockaded Woodpecker data indicated 103 adult birds and 67 fledglings compared to 88 adult birds and 49 fledglings in FY 2006. Over the past decade, the number of active territories and the number of adult birds are both showing an increasing trend.
- Harperella: Seven sites were monitored: one site on Rainey Creek, four on Irons Fork Creek, and two on Fiddler Creek. All seven sites occupied areas similar to previous years, and population numbers were estimated to be similar to those in previous years. All sites were healthy and had an abundance of flowering and fruiting individuals. One small subpopulation of harperella was damaged by off-road vehicle(s) at a low water crossing on Fiddler Creek.
- Leopard Darters: Based on the counts at the 17 permanent monitoring sites snorkeled during the summer of 2007, leopard darter counts were the fourth highest (annual pooled count per minute) since the use of permanent monitoring sites began in 1998. Leopard darter counts in FY 2007 were three times greater than the counts in FY 2006.
- Bald Eagle Nests: The Ouachita NF had one active Bald Eagle nest.
- Bear Den Cave Monitoring for Indiana Bat – Surveys at Bear Den Cave did not find Indiana bats using this winter hibernaculum in 2007.

- American Alligator: Surveys of the American alligator on the Oklahoma Ranger District located 8 alligators, down from 12 sighted during FY 2006.
- American Burying Beetle: Two American burying beetles (ABB or Nicrophorus americanus) were caught during 920 trap nights.
- Federally Listed Freshwater Mussels: Freshwater mussel surveys, including surveys for federally listed species, were conducted in the Caddo, Saline, South Fork Ouachita, and Ouachita river systems, in conjunction with USFWS and AGFC revealing severe declines forest-wide in species diversity and abundance.

R8 Sensitive Species and Species of Viability Concern and Habitat

- Rich Mountain Slit-mouth Snail: Six, thirty-minute surveys (3 hours) were conducted at each of six sites over three days in 2007. Live snails were found at all six sites with a total of 15 snails found.
- Endemic Salamanders: During FY 2007, biologists from New York and Oklahoma, assisted by AGFC, collected salamander specimens to identify and define species and species boundaries within the *Plethodon ouachitae* complex which includes the Caddo Mountain, Rich Mountain, and Fourche Mountain salamanders, using modern DNA sequence techniques. This work is essential in order to determine the true endemic plethodontid salamander diversity and its distribution in the Ouachita Mountains of Arkansas, and should be finalized during FY 2008.

Desired Conditions for Geologic Resources

- Potential threats from geologic hazards to human life, natural resources, or financial investment remain low on the Ouachita NF in both Arkansas and Oklahoma.

Desired Conditions for Landownership Pattern

- There were 65.0 miles of landline location or maintenance accomplished on the Ouachita NF, compared to 52.58 miles of landline location maintenance during FY 2006.
- A total of ten encroachments were resolved.
- There were 120 acres of land purchased.
- There were 3,978 acres of lands exchanged (To Proponent, 556; to FS, 3,422).
- A 9.98 acre administrative site in Heavener, OK was sold.

Desired Conditions for Heritage Resources

- The Ouachita NF received 610 hours of volunteer help to clean, document, sort, and catalog archeological collections in the Supervisor's Office. This volunteer help is valued at $9,768.
- Twenty-one archeological and historic sites were revisited by heritage staff to reassess their conditions.
- One archeological site, near Shady Lake, was formally evaluated for eligibility for inclusion on the National Register.
- Archeological survey was undertaken on 22,460 acres during the year as a part of Section 106 activities. As a result, 82 archeological sites were found and documented.
- The 2007 To Bridge A Gap conference was well attended and included representatives of many Tribes, several Northern, Southern, and Eastern National Forests, and Regional Offices in the Southern and Northern Regions, as well as representatives from the Washington Office.

Desired Conditions for Public Use and Enjoyment

- Recreation: 99 of the 118 recreation sites were maintained to standard in 2007.

- Conservation Education Presentations: At least 110 programs or presentations were offered.
- Landscape Management: The Forest exceeded the base requirement of having 55 percent of the projects undertaken within a High Scenic Integrity Objective (SIO) area attaining the High SIO, 70 percent of projects undertaken within a Moderate SIO area attaining the Moderate SIO rating, and 100 percent of projects located in Low SIO areas attaining the Low SIO rating.
- Law Enforcement: Ouachita NF Law Enforcement personnel spent approximately 177 days in support of various details away from their home units. These details included security details, fire severity patrols, and large group gatherings. On the Forest, a total of 285 Federal Violation Notices, 436 State Violations, 370 Warning Notices, and 610 Incident Reports were issued.

Desired Conditions for Facility Operation and Maintenance

- Facility Administration: Ouachita NF facility inventory included 356 buildings that are categorized as follows: Existing; Operational or Existing; or Abandoned. Nearly 87%, or 309 were rated good or fair, leaving 47 facilities rated poor. The majority of buildings rated "poor" are at Camp Ouachita which is undergoing renovation.
- Transportation System: 550 miles of road were operated and maintained to meet objective maintenance levels and classes
- Transportation System: 4.28 miles of local roads (8 roads) were constructed and added to the system
- Transportation System: 34.20 miles of local roads were reconstructed and 6.44 miles of arterial/collector roads (4 roads) were reconstructed.
- Transportation System: There were 12.30 miles of road removed from the system.

Desired Conditions for Commodity, Commercial, and Special Uses

- Special Uses: There were 506 special use authorizations
    - 317 for roads
    - 58 for water lines, electric, and telephone utilities
    - 11 for research or resource surveys
    - 24 for dams and reservoirs
    - 60 for communication uses,
    - 7 recreation uses
    - 7 agricultural uses
    - 7 community uses
    - 15 miscellaneous uses.
- Minerals and Energy Development: 640 minerals cases were administered.
- Livestock Grazing: The demand for grazing is still in decline on the Ouachita NF, and it is expected that this trend will continue. There are 16 range allotments involving 201,675 acres and 15 permittees active on the Ouachita NF.
- Firewood: There were 1,299 cords of firewood sold.

Desired Conditions for Fire (Community Protection and Safety)

- Wildland Urban Interface (WUI): 83,136 acres of hazardous fuel treatments were accomplished by prescribed fire with most of these acres being in the WUI area.
- Wildfires: During FY 2007, 68 wildfires affected 14,347 acres on the Ouachita NF. Of the total number of fires, 20% were lightning-caused, and 29% of the total acres affected by fire were a result of these natural ignitions. Arson accounted for 34% of all fires and about 6% of the total acres burned. Other causes of wildfires include escapes from

debris burning (15%), campfires (7%), equipment (1%), railroads (12%), and other miscellaneous causes (11%).

- Wildland Fire Use (WFU): The second WFU project undertaken by the Ouachita NF was completed on the Jessieville/Winona/Fourche Ranger District cluster and included 3,481 acres. The WFU projects are naturally ignited fires (lightning) managed for resource benefits (rather than implementing a full suppression response). Completion of this project brings the average of WFU on the Ouachita NF to one per year.
- Condition Class: Over 150,000 acres were likely to have changed condition class, i.e. lowered, as a result of fuels mitigation and related activities. Prescribed fire treatments that lowered condition class included 83,000 acres specifically designed to reduce hazardous fuels and 68,000 acres treated with prescribed fire to address other resource benefits, e.g., wildlife, non-native invasive weed control, etc.

Part 2: Objectives

Part 2 of the 2005 Forest Plan contains the strategic direction to be followed in order to move toward desired conditions. Restoring and maintaining healthy and productive ecosystems, providing high-quality recreation opportunities, protecting air quality, and providing clean water, appealing scenery, forest products, and economic opportunities to communities that rely upon the Ouachita NF are the highest priorities under the 2005 Forest Plan. The following is a summary of monitoring findings associated with implementation of the objectives and strategies of the 2005 Forest Plan during FY 2007.

- Prescribed Fire: A total of 145,354 acres of prescribed fire was accomplished that included all areas such as site prep, wildlife habitat improvement, and hazardous fuels reduction treatments.
- Water: The Basin Area Stream Survey (BASS) was conducted in cooperation with the Southern Research Stations Center for Aquatic Technology Transfer (CATT) during FY 2006. Data from the nine watersheds surveyed under BASS will be analyzed during FY 2008. The FY 2006 survey provided data for over 48,000 acres or 46 miles of stream, including 17 sites on 15 streams that were monitored extensively.
- Soil: There were 45 acres of soil and water improvement accomplished.
- Watershed Improvement: The Ouachita NF exceeded the objective of completing 40 acres of watershed improvement actions per year by accomplishing 45 acres of watershed improvement or maintenance. The FY 2007 work included 35 acres of watershed improvement through normal project work and 10 acres of watershed improvement by restoring a tornado area that was harvested as a salvage operation. Most of the normal project restoration work involved stabilizing gullies and abandoned roads.
- Air: There is no obvious trend for average and median exceedence for all years with data. There seem to be seasonal fluctuations with the summer and fall having the most concentrations of PM 2.5.
- Recreation Sites: There were 99 of 118 recreation sites (91%) maintained to standard.
- Improve Accessibility: The north shore camp loop of the Cedar Lake Recreation Area was improved for accessibility.
- Designate a System of Roads and Trails: The Forest worked with the public to identify potential routes for designation for public use by motorized vehicles. Seven Open Houses were held in May and June of 2007, and extended office hours were offered on July 10 and 12, 2007. The Ouachita NF also established a website for the public to review maps. Work continued to update the GIS roads/trails layer as well as INFRA.

- Recreational Fishing Opportunities: Fishing recreational opportunities are being protected, enhanced or maintained by monitoring of bass and sunfish spawn with supplemental stocking requested from the state as needed, structural habitat improvements (fish attractors/cover), fertilizing and liming to increase productivity and reduce excessive aquatic vegetation, access improvements and annual to biannual electrofishing to monitor the adult fish populations of Ouachita NF lakes and select ponds. Annual channel catfish stocking is occurring in most managed recreational fishing waters in close coordination with the fish and game agencies of each state.
- Wilderness: There were 64,469 acres of wilderness area administration accomplished.
- Upgrade Public Facilities to Architectural Barriers Act (ABA) Standards: No projects were accomplished in 2007.
- Transportation Plan: Much of the work to complete the Transportation Plan is included in on-going work for travel analysis and will be completed with publication of the Motor Vehicle Use Map (MVUM). Updating County Road Cooperative Agreements is on-going.
- Roads Decommissioned: There were 12.3 miles of road decommissioned.
- Aquatic Organism Passage: Five crossings were retrofitted for passage or replaced with fish friendly designs to restore fish passage to 13 miles of streams.
- Timber Volume Sold: There were 206,356.58 hundred cubic feet (ccf) of timber sold.
- Fuels Treatment: Over 83,000 acres were treated in high priority areas.
- Hazardous Fuel Reduction: Hazardous fuel treatments met the Plan objective of between 50,000 to 100,000 acres per year. There were 83,136 acres of hazardous fuel treatments accomplished by prescribed fire.

Part 3: Design Criteria

- One Implementation Monitoring review was accomplished during FY 2007. The Implementation Monitoring Report is included in its entirety in Appendix E of this M&E Report.

Part 4: Recommendations

- The Recommendations Section reports on progress and accomplishments on recommendations made in the FY 2006 Monitoring Report and also presents action items to be accomplished during FY 2008. Action items identified for FY 2008 are summarized below.

    - Vegetation Inventory Databases and Activity Tracking Systems: Supplement data from FSVeg and FACTS with data from TIMS, GIS data on Management Areas and fire databases to track landscape level accomplishments.

    - Forest Fuels: Implement the newly developed monitoring protocol utilizing GIS mapping to track fuel treatment accomplishments accurately in high priority areas.

    - Implement the Travel Management Rule: Continue to work with the public to refine a system of roads, trails, and areas for public motor vehicle access. The Forest will complete an environmental review and develop the preferred action alternative during FY 2008.

    - Wilderness Surveys for Non-native Invasive Species: Initiate surveys for non-native invasive species in wilderness areas (to be completed by 2010).

- Wilderness Management Plans: Complete the updates of wilderness management plans. Priority plan elements will be those that are in the Chief's 10-Year Wilderness Challenge.

- Energy Upgrades: Continue work initiated during FY 2007 to identify needed energy efficiency upgrades and complete work where feasible.

- Basin Area Stream Survey: During FY 2008, complete the analysis of data collected during the FY 2006 Basin Area Stream Survey and report results on data from the nine watersheds surveyed under BASS.

- Management Indicator Species (for stream and river aquatic habitat): During FY 2008, analyze data for stream and river MIS species for changes in aquatic habitat conditions.

- Endemic Salamanders: Complete work to identify salamander diversity and distribution in the Ouachita Mountains of Arkansas.

- Forest Overview of Heritage Resources: Complete the Forest Overview of Heritage Resources.

Part 1 – Desired Conditions

Desired conditions describe how the Forest is expected to look and function in the future when management direction in the Forest Plan has been successfully implemented. Desired conditions are described using the ecological, economic, and social attributes that characterize or exemplify the outcomes of land management. The degree to which the Forest achieves the desired conditions is monitored. Monitoring of desired conditions allows the Ouachita NF to accumulate data annually that are then used to establish trends and assess progress towards achievement of the desired condition statements set out by the Forest Plan. Through repeated measurement, trend lines may be established and used to determine if programs should be adjusted or if changes in Forest Plan direction are needed. Desired conditions are not commitments and may be achievable only over the long term. Annual monitoring results are reported each year in the M & E Report and every five years, a comprehensive review is conducted. This section of the M & E Report is structured similarly to the Forest Plan and annual monitoring results are reported for terrestrial ecosystems; riparian and aquatic ecosystems; proposed, threatened, endangered and sensitive species; geologic resources; landownership pattern; heritage resources; public use and enjoyment; facility operation and maintenance; commodity, commercial, and special uses; and fire (community protection and safety).

Terrestrial, Riparian, and Aquatic Ecosystems (including Air Quality) Desired Conditions

Ecological systems recognized within the Ouachita NF are divided by terrestrial community types and riparian and aquatic community types. In this M&E Report, progress toward the desired conditions for terrestrial communities is presented first, followed by discussions of riparian and aquatic communities.

Terrestrial Ecosystems

The desired condition for terrestrial ecosystems is a mix of closed-canopy forest, intermittent-canopy woodlands, and open prairie and glade conditions. Forest and/or woodland systems may be dominated by pine, oak, or pine and oak species together. Non-forested systems are primarily dominated by grasses, forbs, and shrubs. Fire, thinning, and other vegetation management practices are used to help sustain the balance of structural and compositional diversity needed to support healthy populations of native plants and animals while maintaining the productivity of the land. There are ten terrestrial community types (including three subsystems):

Terrestrial Communities

- Ouachita Shortleaf Pine-Oak Forest and Woodland, comprised of:
  - Ouachita Shortleaf Pine-Oak Forest
  - Ouachita Shortleaf Pine-Oak Woodland
  - Ouachita Shortleaf Pine-Bluestem (Red-cockaded Woodpecker Habitat)
- West Gulf Coastal Plain Pine-Hardwood Forest
- Ouachita Dry-Mesic Oak Forest
- Ouachita Mesic Hardwood Forest
- Ouachita Montane Oak Forest
- Ouachita Dry Oak Woodland
- Ouachita Novaculite Glade and Woodland
- Central Interior Highlands Dry Acidic Glade and Barrens
- Central Interior Acidic Cliff and Talus
- Calcareous Prairie

Ouachita Mountains and West Gulf Coastal Plain-Habitat Diversity, Old Growth and Shortleaf Pine-Bluestem Restoration Emphasis Communities

The following tabulation contains a summary of desired conditions by community type.

Desired Conditions by Community Type	
Ouachita Shortleaf Pine-Oak Forest	
% Canopy Closure	**>** 70
Vertical Structure	6-14 % in grass/forb or seedling/sapling/shrub condition and 60-90 % in the mature forest condition
Fire Regime	At least 50 % of the spatial extent of the pine-oak forest is treated with prescribed fire every 5-7 years with an occasional growing season fire
Old Growth Characteristics	Old growth pine-oak forests will develop naturally in a range of patch sizes within research natural areas (MA 4), riparian areas (MA 9), wilderness (MA 1), portions of semi-primitive areas (MA 17), and other parts of the Ouachita NF outside the "lands suitable for timber production" in MAs 14, 15, and 16
Ouachita Shortleaf Pine-Oak Woodland	
% Canopy Closure	**<** 60
Vertical Structure	6-14 % in grass/forb and seedling/sapling/shrub and 60-90 % in the mature woodland condition
Fire Regime	Prescribed fire is applied to at least 50 % of this community every 3-5 years, with an occasional growing season fire
Old Growth Characteristics	Small, medium, and large patches of old growth pine-oak woodlands will develop on at least 79,000 acres (MA 21), well distributed across the Ouachita NF
Ouachita Shortleaf Pine-Bluestem (includes Red-cockaded Woodpecker Habitat)	
% Canopy Closure	40-60
Vertical Structure	3-8.3 % in grass/forb and seedling/sapling/shrub and 60-90 % in the mature woodland condition
Fire Regime	Prescribed fire is applied to at least 50 % of this community every 3-5 years with an occasional growing season fire
Old Growth Characteristics	Small to medium sized patches of old growth pine-bluestem woodland will develop within at least 24,000 acres of MA 22
West Gulf Coastal Plain Pine-Hardwood Forest	
% Canopy Closure	**≥** 70
Vertical Structure	6-14 % in grass/forb and seedling/sapling/ shrub and 60-90 % in the mature, fire-maintained forest condition
Fire Regime	Prescribed fire is applied to at least 50 % of this community every 3-5 years with an occasional growing season fire
Old Growth Characteristics	Old growth conditions will develop and go through regeneration cycles naturally on most of the acres in the West Gulf Coastal Plain pine-hardwood forest community, which are represented by small and medium patches
Ouachita Dry-Mesic Oak Forest	
Vertical Structure	4-10 % in grass/forb and seedling/sapling/ shrub and 60-90 % in the mature forest condition
Fire Regime	Prescribed fire is applied to at least 50 % of this community every 5-7 years with an occasional growing season fire
Old Growth Characteristics	Old growth conditions will develop and go through regeneration cycles naturally on most of the acres in the dry mesic oak forest community, which is represented by the complete range of patch sizes

Are landscape-level and stand level composition and structure of these major forest communities within desired ranges of variability?

The Ouachita NF is currently in the transition phase of *converting* to the new vegetation inventory databases and activity tracking systems, Natural Resource Information System: Field Sampled Vegetation (FSVeg) and Forest Service Activity Tracking System (FACTS). These databases are not currently populated sufficiently to adequately answer this question.

Report acres of vegetation management treatment accomplished in FY 2007, including regeneration harvests, and acres treated with prescribed fire in cool season and in growing season. At five-year intervals, progress toward the desired conditions of appropriate vertical structure/age classes, canopy closure, and fire regime will be evaluated.

The Ouachita Shortleaf Pine-Oak Forest and Woodland, the Ouachita Shortleaf Pine Bluestem, West Gulf Coastal Plain, and the Ouachita Dry-Mesic Oak Forest vegetation communities in Management Area 14 are classified as 'suitable' for timber harvesting activities and are managed to progress toward the desired conditions for MA 14. Excluding the prescribed fire program achievements, the 2007 reports from the Timber Information Manager (TIM) program in conjunction with the Forest Service Activity Tracking System (FACTS) reflect an estimate of activities that occurred within these communities, as depicted in the following table.

Table 1. Silvicultural Activity by Community Type

FY 2006 Ouachita NF Management Activities Accomplished	Pine Oak Forest	Pine Oak Woodland	SLP Bluestem	Dry-Mesic Hardwood
	# Acres	# Acres	# Acres	# Acres
Clear-Cut (native species restoration)	74	0	0	0
Even-age Management – Shelterwood	1,075	24	195	0
Even-age Management – Seedtree	1,095	408	205	0
Commercial Thinning	11,963	432	1,302	0
Uneven-age Management – Group Selection	1,135	477	0	0
Uneven-age Management – Single Tree Selection	1,042	563	0	0
Timber Stand Improvement	5,823		1,005	177
Salvage	80	915	0	0
2007 Ouachita NF Management Activities Accomplished	**Pine Oak Forest**	**Pine Oak Woodland**	**SLP Bluestem**	**Dry-Mesic Hardwood**
	# Acres	# Acres	# Acres	# Acres
Clear-Cut (native species restoration)	0	0	0	0
Even-age Management – Shelterwood and Modified Seedtree	4,078	0	285	0
Commercial Thinning	7,657	319	1,946	0
Uneven-age Management – Group Selection and Single Tree Selection	3,065	0	0	0
Timber Stand Improvement	907	0	2,081	0
Salvage	69	0	0	0

The prescribed fire program was very productive in FY 2007, exceeding FY 2006 accomplishments by nearly 100,000 acres. As shown in the following tabulation, a total of 159,701 acres were influenced by fire on the Ouachita NF. These fires include prescribed fires as well as wildland fires.

Prescribed Fire Program by Purpose (acres)					
Fiscal Year	**Fuel Reduction**	**Wildlife**	**Site Prep**	**Wildland Fire**	**Ouachita NF Total**
2006	36,855	5,760	478	23,185	66,278
2007	83,136	61,299	919	14,347	159,701

During FY 2007, 155,200 of these acres treated with fire were mapped and available for analysis. Over 4,000 acres are not spatially represented due to existing mapping protocols. During FY 2008, additional work will be initiated to change mapping protocols to reflect all acres treated with prescribed fire. The number of acres and percent of the communities including riparian and rare upland communities were calculated. These acres were treated with either wildland fire or prescribed fire. As shown in the following tabulation, the pine-oak forest, short-leaf pine/bluestem grasses, and dry-mesic hardwood communities are very close to if not well within the range of the desired fire regimes. The pine-oak woodland community is still outside the range of the desired fire regime, but was considerably improved over FY 2006.

Ouachita NF Community	**Pine Oak Forest**	**Pine Oak Woodland**	**SLP Bluestem**	**Dry-Mesic Hardwood**
Annual Desired Range	7-10%	15-33%	15-33%	7-10%
Percent treated with fire in FY 2006	4%	3%	5%	5%
Numbers of Acres per Community FY 2006	29,568	8,235	7,717	11,196
Percent treated with fire in FY 2007	6%	6%	26%	6%
Numbers of Acres per Community FY 2007	46,238	15,412	51,617	12,736

Ouachita Mountains and West Gulf Coastal Plain-Rare Upland Ecosystems

The following tabulation contains a summary of desired conditions by community type.

Desired Conditions by Community Type (Ouachita Mountains and West Gulf Coastal Plain-Rare Upland Communities)	
Ouachita Mesic Hardwood Forest	
% Canopy Closure	Mostly closed canopy
Vertical Structure	0.5-5 % in grass/forb and seedling/sapling/shrub and 80-98 % in the mature forest condition
Fire Regime	Infrequent fire
Old Growth Characteristics	Old growth conditions will develop and go through regeneration cycles naturally on most of the acres in mesic hardwood forests, which are represented by small to medium patches on the Ouachita NF
Ouachita Montane Oak Forest	
Vertical Structure	Stunted, oak-dominated system
Fire Regime	Occasional prescribed fire
Old Growth Characteristics	Old growth will develop and go through regeneration cycles naturally on most of the acres in the Ouachita montane oak forest, which is represented by small and medium patches
Ouachita Dry Oak Woodland	
% Canopy Closure	40-80 %
Vertical Structure	4-10 % in grass/forb seral stage and 60-90 % in the mature woodland condition, as defined by abundant herbaceous groundcover
Fire Regime	At least 50 % of the dry oak woodland community is treated with prescribed fire every 5-7 years, with an occasional growing season fire included
Old Growth Characteristics	Old growth conditions will develop and go through regeneration cycles naturally on most of the acres in the dry oak woodland community, which is represented by small to medium patches
Ouachita Novaculite Glade and Woodland	
Vertical Structure	Open glade structure
Fire Regime	50 % of the novaculite glade and woodland community is treated with prescribed fire every 3-5 years with an occasional growing season fire included
Old Growth Characteristics	Old growth conditions will develop and go through regeneration cycles naturally, supplemented by prescribed fire, in all the acres of this community, which occurs in small patches
Central Interior Highlands Dry Acidic Glade and Barrens	
Vertical Structure	Open glade structure
Fire Regime	50-85 % of the dry acidic glades and barrens system and a 100-meter buffer are treated with prescribed fire every 5-10 years, including an occasional growing season fire
Old Growth Characteristics	Old growth conditions will develop and go through regeneration cycles naturally, supplemented by prescribed fire, in all the acres of this community, which occurs in small patches
Central Interior Acidic Cliff and Talus	
Vertical Structure	Open, rocky, herbaceous-dominated system with sparse woody vegetation
Fire Regime	Occasionally influenced by natural or prescribed fires
Calcareous Prairie	
Vertical Structure	Open, fire-maintained grassland with sparse to absent woody vegetation
Fire Regime	50 % of the calcareous prairie system and a 100-meter buffer are treated with fire every 3-5 years including an occasional growing season fire

Report any maintenance and restoration treatments. At five-year intervals, evaluate progress toward achieving the desired fire regime.
Restoration and/or maintenance of the rare upland communities primarily consists of an appropriate fire regime. These communities are generally small, patchy inclusions within large landscape scale fire-treated areas. These communities require a range of fire frequency from 50 percent of the community treated with fiare every 35 years on average for mesic hardwoods, to 50 percent treated with fire every 3-10 years for the others.

The Ouachita NF generally applies fire to the mesic hardwoods lightly or avoids firing them; they are not, however, excluded from larger landscape areas treated with fire. The montane oak and cliff and talus communities are primarily edaphically maintained, but are also not excluded from large landscape scale areas treated with fire. The other rare upland communities are treated within the scope of the landscape fire-treated areas and all communities are outside the range of the desired fire regime. Eighty-five percent of the Calcareous Prairie community was successfully treated with prescribed fire in FY 2007.

The following tabulation shows the percentage of the community to be treated with prescribed fire each year to achieve desired conditions and then shows actual accomplishments for FY 2007 and for comparison purposes, accomplishments in FY 2006. The fire program on the Ouachita NF in FY 2007 was much improved from FY 2006, when rainy weather greatly influenced the number of days with suitable characteristics to ignite prescribed fire.

Ouachita NF Community	Mesic Hardwood	Montane Oak	Dry Oak Woodland	Novaculite Glade & Woodland	Glades & Barrens	Cliff & Talus	Calcareous Prairie
Desired Condition % or Frequency	<3%	N/A	7-10%	10-15%	7-10%	N/A	Once every 3-5 years
Percent treated with prescribed fire FY 2006	2%	3%	<1%	8%	1%	17%	0
Percent treated with prescribed fire FY 2007	2%	3%	5%	5%	3%	10%	85%
Acres treated with prescribed fire FY 2006	712	309	84	139	50	851	0
Acres treated with prescribed fire FY 2007	766	371	296	85	121	577	249

Riparian and Aquatic Ecosystems Desired Conditions

The desired condition for riparian and aquatic-associated terrestrial communities (within designated Streamside Management Areas) is high water quality, undiminished soil productivity, stable streambanks, and high-quality habitat for riparian-dependent and aquatic species. Properly functioning systems support healthy populations of native and desired non-native species.

Desired Conditions for Riparian and Aquatic Ecosystems **Ouachita Ponds, Lakes, and Waterholes**
Ouachita Mountain Forested Seep: The desired condition for this system is a largely undisturbed, mature community with a protective buffer 100 feet from the seep boundaries. Old growth seep communities develop and regenerate naturally in relatively small patches.
Ouachita Riparian: The desired condition for this system is a largely undisturbed, mature or old growth community with intact hydrologic functions and processes within a minimum protective buffer of 100 feet on each side of perennial streams and 30 feet on each side of defined channels. Water quality is good to very good and riparian vegetation remains intact during and after vegetation management activities, such as harvesting, prescribed fire, road or fireline construction, and pesticide application.
West Gulf Coastal Plain Small Stream and River Forest: The desired condition for this system is a largely undisturbed, mature or old growth, closed-canopy forest shaped by intact hydrologic functions and processes within a minimum protective buffer of 100 feet on each side of perennial streams and 30 feet on each side of defined channels.
South-Central Interior Large Floodplain: The desired condition for this system is a largely undisturbed, mature or old growth, closed-canopy forest shaped by intact hydrologic functions and processes within an appropriate Streamside Management Area.
West Gulf Coastal Plain Wet Hardwood Flatwoods (Red Slough): The desired condition over much of the area is an intact marsh ecosystem with some reestablishment of a bottomland hardwood forest. Recreation opportunities, particularly Watchable Wildlife, abound, and native biodiversity potential is maximized.
Ouachita Rivers and Streams: The desired conditions for Ouachita rivers and streams are good to excellent water quality, site productivity, channel stability, intact riparian vegetation, sustainability of the sport fisheries, and connectivity of habitats for riparian-dependent species. Aquatic ecosystems function properly and support aquatic biota commensurate with the associated ecoregion. Permanent roads within the SMAs will be minimized but may occur at designated crossings and designated access points. Movement of fish and other aquatic organisms in otherwise free-flowing perennial streams and other streams are not obstructed by road crossings, culverts, or other human-caused obstructions. These desired conditions are achieved through designation of Streamside Management Areas (SMAs) and the implementation of the management standards associated with them.
Ouachita Ponds, Lakes, and Waterholes: The desired condition for unstocked ponds and waterholes is habitat suitable for amphibians and other wildlife and a source of water for upland wildlife species. The desired conditions for fishable waters are high-quality angling opportunities and good to excellent water quality, site productivity, associated vegetation, and habitat for associated riparian and aquatic dependent species.

Integrate the results of all monitoring information into a paragraph for each of the above seven riparian and aquatic ecosystems that describes the status and trend in aquatic habitat conditions associated with that system. Include discussions of plant and animal species supported by the specific system.

Report lake, pond, stream, and river surveys; amphibian surveys; water chemistry data; and habitat enhancement activities such as liming, fertilizing, and adding fish structures accomplished in FY 2007. When a forested seep or community associated with streams, rivers, or lakes occurs within an area affected by a management project that is reviewed as part of an Implementation Monitoring Review (IMR), compliance with all applicable standards will be reviewed. Basin Area Stream Surveys will be conducted periodically (typically on a five-year cycle). At five-year intervals, evaluate the desired condition status of this habitat.

How many acres of watershed improvement or maintenance have been accomplished?
The Ouachita NF exceeded the objective of completing 35 acres of watershed improvement actions per year by accomplishing 45 acres of watershed improvement or maintenance. The FY 2007 work included 35 acres of watershed improvement through normal project work and 10 acres of watershed improvement by restoring a tornado area that was harvested as a salvage operation. Most of the normal project restoration work involved stabilizing gullies and abandoned roads.

Report the results of monitoring 10% of herbicide application projects for detectable presence in water and any herbicide application in Streamside Management Areas or on dam faces.

Three streams were monitored for the presence of herbicides below treated stands. This is an ongoing monitoring program where ten percent of areas treated with herbicides are monitored for off-site movement. Three sites were monitored (Caddo/Womble – 2 and Mena/Oden – 1). Lab results indicate that the presence of herbicides was insignificant for all sites.

Wildlife and Fish Habitat Desired Conditions

Wildlife and Fish Habitat Desired Condition
Habitat conditions sustain healthy populations of native and desired non-native wildlife and fish species. Wildlife habitat functions are sustained or improved, including primary feeding areas, breeding areas, and migration corridors. Reintroduction of extirpated species is given serious consideration when proposals originate from or have strong support from the appropriate state and federal fish and wildlife agencies. Fishable waters support high-quality angling opportunities. Vegetation conditions reflect the desired conditions described for each system in the previous section. Habitat conditions are stable or improving over time as indicated by the status of management indicator species. Movement of fish and other aquatic organisms are not obstructed by road crossings, culverts, or other human-caused obstructions.

What key habitat improvements have been accomplished? Annually report the measures (numbers or acres) for each activity.

Activity	FY 2006	FY 2007
	Acres or Units	
Waterholes Developed	57	212
Nest Boxes Installed	402	158
Roads Closed	22	54
Acres of Midstory Reduction Completed	7,715	4,557
Acres of Overstory Mast Developed for Wildlife Stand Improvement	1,600	1,474
Acres Treated with Prescribed Fire for Wildlife Stand Improvement	5,760	61,299
Acres Seeded/Planted	54	51
Permanent Openings Created	9	33
Temporary Openings Created	31	28
Openings Rehabilitated	955	429
Snag/Log Developed	26	0
Lake Fish Attractors Installed	16	65
Stream Fish Structure/Fish Passage Restored	53	13*
Fishing Pond/Lake Constructed	0	0
Fishing Pond/Lakes Enhanced/fertilized, limed, etc.	970	1,281

* 13 miles of stream fish structure/ fish passage restoration result from 5 crossings retrofitted for passage or replaced with fish friendly designs.

Management Indicator Species Desired Conditions

Maintenance and improvement of habitat for management indicator species (MIS) are encompassed by objectives, design criteria, and Management Area allocations; however specific information for each of the species is collected and reported in this M&E Report. The following table includes the 31 MIS for the 2005 Forest Plan. MIS are divided into three categories: Terrestrial MIS; Pond, Lake and Waterhole MIS; and Stream and River MIS. There are seven terrestrial MIS, three pond, lake and waterhole MIS, and twenty-one stream and river MIS, as identified and listed in Table 2 below. In addition to the pond, lake, and waterhole MIS species, additional monitoring for white crappie, gizzard shad, and threadfin shad was conducted due to angler interest, concern over species expansion, and concern over species introduction, respectively. Monitoring methodologies, identification and interpretation of trends, and the implications for Ouachita NF management are reported in this section.

Table 2. Management Indicator Species, Ouachita NF

Common Name	Scientific Name
Terrestrial MIS	
Northern Bobwhite	Colinus virginianus
White-tailed deer	Odocoileus virginianus
Eastern Wild Turkey	Meleagris gallapavo
Red-cockaded Woodpecker	Picoides borealis
Pileated Woodpecker	Dryocopus pileatus
Scarlet Tanager	Piranga olivacea
Prairie Warbler	Dendroica discolor
Pond, Lake and Waterhole MIS	
Bluegill	Lepomis macrochirus
Largemouth bass	Micropterus salmoides
Redear sunfish	Lepomis microlophus
Stream and River MIS	
Yellow bullhead	Ameiurus natalis
Central stoneroller	Campostoma anomalum
Redfin darter	Etheostoma whipplei
Green sunfish	Lepomis cyanellus
Longear sunfish	Lepomis megalotis
Pirate perch	Aphredoderus sayanus
Central stoneroller	Campostoma anomalum
Creek chubsucker	Erimyzon oblongus
Green sunfish	Lepomis cyanellus
Longear sunfish	Lepomis megalotis
Central stoneroller	Campostoma anomalum
Johnny darter *	Etheostoma nigrum
Orangebelly darter	Etheostoma radiosum
Redfin darter	Etheostoma whipplei
Northern studfish	Fundulus catenatus
Northern hog sucker	Hypentelium nigricans
Green sunfish	Lepomis cyanellus
Longear sunfish	Lepomis megalotis
Striped shiner	Luxilus chrysocephalus
Smallmouth bass	Micropterus dolomieu
Channel darter *	Percina copelandi

**Glover & Mtn. Fork Rivers only*

Terrestrial Management Indicator Species (MIS)

For Terrestrial Management Indicator Species, what key successional stage or seral condition improvement activities have been accomplished?

Early Successional Habitat or Early Seral Acres (created and maintained): The 2005 Forest Plan defines early successional habitat as grass/forb or shrub/seedling vegetative conditions in open or semi-open areas (i.e., with little tree canopy coverage). These conditions are newly established primarily through forest regeneration activities, particularly even-age timber harvest and thinnings followed by an appropriate fire regime. During the 2005 Forest Plan Revision, analysis of the availability and condition of early successional habitat was found to be in fair-to-good condition forest-wide, based on overall availability and the Forest fire regime.

For monitoring purposes, the following ratios are used to represent acres of early successional habitat created by timber harvest type: seedtree, 1:1; shelterwood, 1:1; and group selection, 7:1. Early seral habitat consisting of herbaceous understory is prevalent and maintained within thinned stands with a frequent to moderate fire regime, particularly the pine-oak woodland and pine-bluestem woodland communities. For acres in a woodland condition a formula of 1:0.8 is used to calculate early seral habitat. The ratio yields the following: each acre of seedtree and shelterwood management is calculated to produce approximately one acre of early successional habitat and seven acres of group selection management is calculated to produce approximately one acre of early successional habitat. For every acre in woodland condition, 0.8 acres of early seral habitat are assumed because maintenance of the woodland condition by frequent fire provides herbaceous understory.

Vegetation communities that, through naturally limiting factors such as elevation, rainfall, aspect, slope, and/or thin soils, maintain primarily an early successional condition include acidic cliff and talus, acidic glades and barrens, and novaculite glade and woodland. Montane oak naturally provides a high elevation shrub condition. Herbaceous groundcover and shrubby vegetation cover the calcareous prairie and are interspersed throughout dry oak and pine-oak and pine-bluestem woodlands with a frequent fire regime. A frequent to occasional fire treatment is essential to discourage the woody encroachment and to maintain the early successional condition within these systems.

A number of species are dependent upon early seral habitat. Habitat carrying capacity is influenced by the amount of prescribed fire and early seral habitat created. The 2005 Forest Plan objective is to create 5,500 acres of grass/forb (early seral) habitat per year, and 2,602 and 4,363 acres were created in FY 2006 and FY 2007, respectively, through even-age silvicultural methods. These reported acres do not reflect the thinned (9,922) and woodland acres treated with prescribed fire that also provide herbaceous understory.

Since 1993, the year with the lowest level of early seral habitat created, this habitat type is showing a slight improvement over the long term. Under 2005 Forest Plan implementation, early seral habitat should continue to increase and then stabilize at approximately 50,000 to 60,000 acres after ten years (FEIS 2005, p175). The creation of early seral habitat as shown in Figure 1 shows a slight increasing trend overall; however, there will be a lag time between guidance established in the 2005 Forest Plan and the creation of additional early seral habitat. In the meantime, increases in thinning and prescribed fire, especially associated with some 200,000 acres of shortleaf pine-bluestem grass ecosystem restoration, will benefit species dependent on early seral habitat such as white-tailed deer, Northern Bobwhite and Prairie Warbler.

Herbaceous understory is prevalent and maintained within thinned stands with a frequent to moderate fire regime, particularly the pine-oak woodland and pine-bluestem woodland communities; however, early successional acres created by fire have not previously been recorded in monitoring reports. During FY 2007, 67,029 acres in woodland condition were treated with prescribed fire (51,617 acres of shortleaf pine-bluestem and 15,412 acres of pine-oak woodland) providing 53,623 acres of early seral habitat in addition to the acres created during regeneration harvests. For consistency in reporting, these acres are not shown in Figure 1 below.

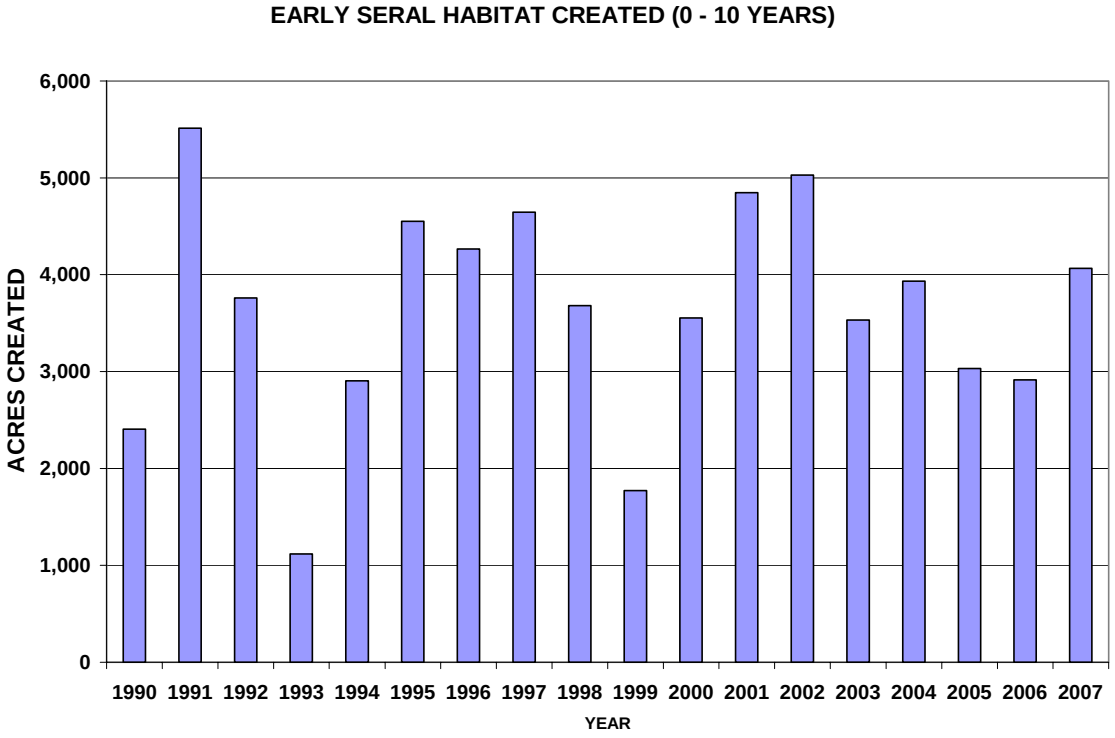


Figure 1. Acres of Early Successional Habitat Created by Year 1990 - 2007

Habitat Capability Model

Table 3. Forest Habitat Capability for Terrestrial Management Indicator Species, FY 2007 with Comparison to FY 2005 and FY 2006

Terrestrial Management Indicator Species	Actual Habitat Capability, FY 2005	Actual Habitat Capability, FY 2006	%Difference FY 2005 vs FY 2006	Actual Habitat Capability, FY 2007	%Difference FY 2006 vs FY 2007	%Difference FY 2005 vs FY 2007
Deer	58,395	50,840	- 13	51,898	+ 2	- 12
Turkey	18,461	17,601	- 5	18,316	+ 4	- 1
Northern Bobwhite	65,002	62,571	- 4	69,349	+ 10	+ 7
Pileated Woodpecker	17,842	17,371	- 2	14,647	- 18	- 8
Prairie Warbler	90,313	85,691	- 5	93,830	+ 9	+ 4
Scarlet Tanager	90,583	86,455	- 5	85,046	- 2	- 6

Mast Capability – Hardwoods greater than 50 years old are used to determine hard mast capability.

	FY 2005	FY 2006	FY 2007
Mast Capability (Acres)	433,250	468,172	474,384
Change from Previous Year (Acres and %)	N/A	+35,000 + 8	+>6,000 + 1
Change from 2005 (Acres and %)	N/A	+35,000 + 8	+>41,000 + 9

Acres in Mature Hardwood Forest – Hardwoods greater than 100 years old are used to measure these criteria.

	FY 2005	FY 2006	FY 2007
Mature Hardwood Forest (Acres)	50,959	51,873	130,343
Change from Previous Year (Acres and %)	N/A	+>900 + 2	+78,500 + 251
Change from 2005 (Acres and %)	N/A	+>900 + 2	+79,400 + 255

Acres in Mature Pine Forest – Mature pine forest consist of pines greater than 80 years old.

	FY 2005	FY 2006	FY 2007
Mature Pine Forest (Acres)	435,112	565,683	495,176
Change from Previous Year (Acres and %)	N/A	+130,600 + 30	-73,500 - 12
Change from 2005 (Acres and %)	N/A	+130,600 + 30	+ 60,100 + 14

Population Trends, Terrestrial MIS

Report acres of regeneration harvest under irregular shelterwood or irregular seedtree system per year; acres of mature pine-oak forest.
There were 4,363 acres of early seral habitat created by regeneration harvest methods, compared to 2,602 acres in FY 2006.

White-tailed deer (Odocoileus virginianus)
The white-tailed deer is a management indicator species (MIS) that was selected to help indicate the effects of management on meeting the public hunting demand (USDA Forest Service 2005, Final EIS Page 165). In the 2005 Forest Plan, the desired habitat condition is to sustain healthy populations of native and desired non-native wildlife and fish species.

Data sources: Data sources and monitoring techniques for this species include deer spotlight survey counts (Urbston 1987), harvest and population trend data from the Arkansas Game and Fish Commission and Oklahoma Department of Wildlife Conservation, CompPATS deer habitat capability model, and acreage of early successional habitat created by year.

Deer Population Trends: Based on annual spotlight survey data collected between 1990 to present, average deer density has varied from 29 deer per square mile in FY 2001 to 65 deer per square mile in FY 2007. Figure 2 displays deer per square mile by year. The average density for the Forest for all years is 46 deer per square mile. These data indicate that deer density on the Forest has an increasing trend.

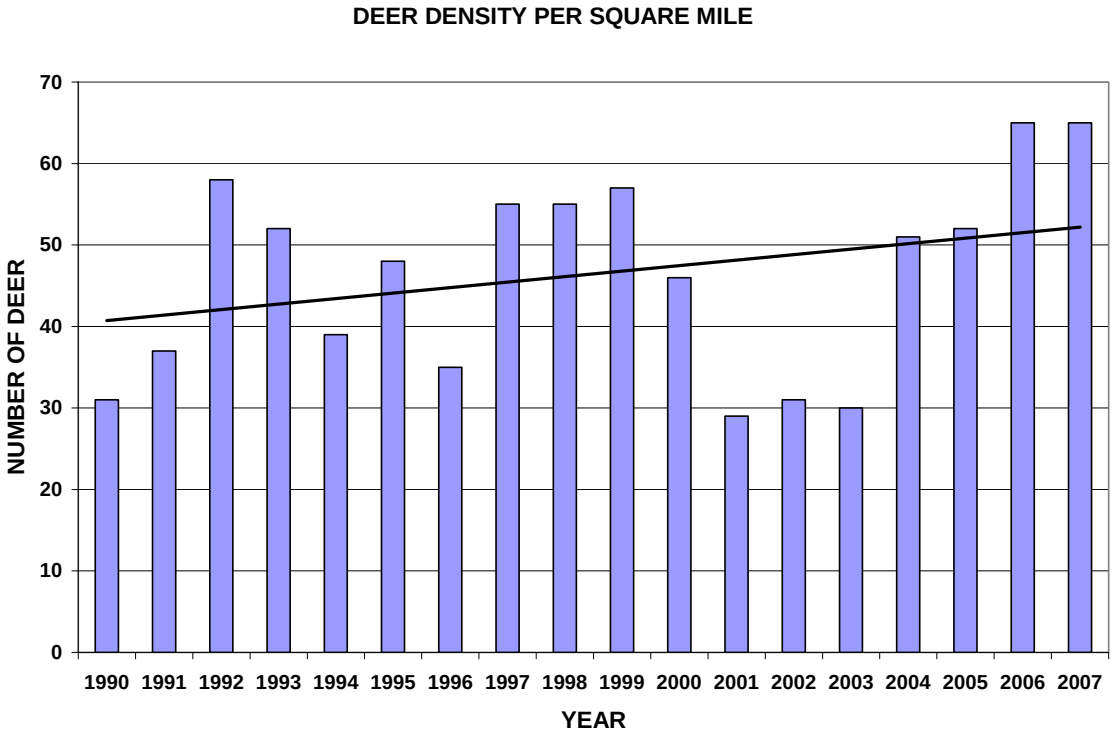


Figure 2. Ouachita NF Deer per Square Mile FY 1990 – 2007 Based on Deer Spotlight Data

Deer harvest data also indicate an increasing harvest in the counties encompassed by the Forest with the highest harvest year in FY 2006. Deer harvest has increased from a low of 4,995 in 1994 to over 20,000 in FY 2006. Deer harvest can be a relative indicator of deer abundance; however, the influence generated from changes in hunting regulations and harvest limits cannot be determined. Figure 3 shows Ouachita NF deer harvest by year from FY 1990 – 2006. These data are provided by the Arkansas Game and Fish Commission and the Oklahoma Department of Wildlife Conservation. Complete data for FY 2007 will not be available until June 2008 and are, therefore, not reflected in the figure.

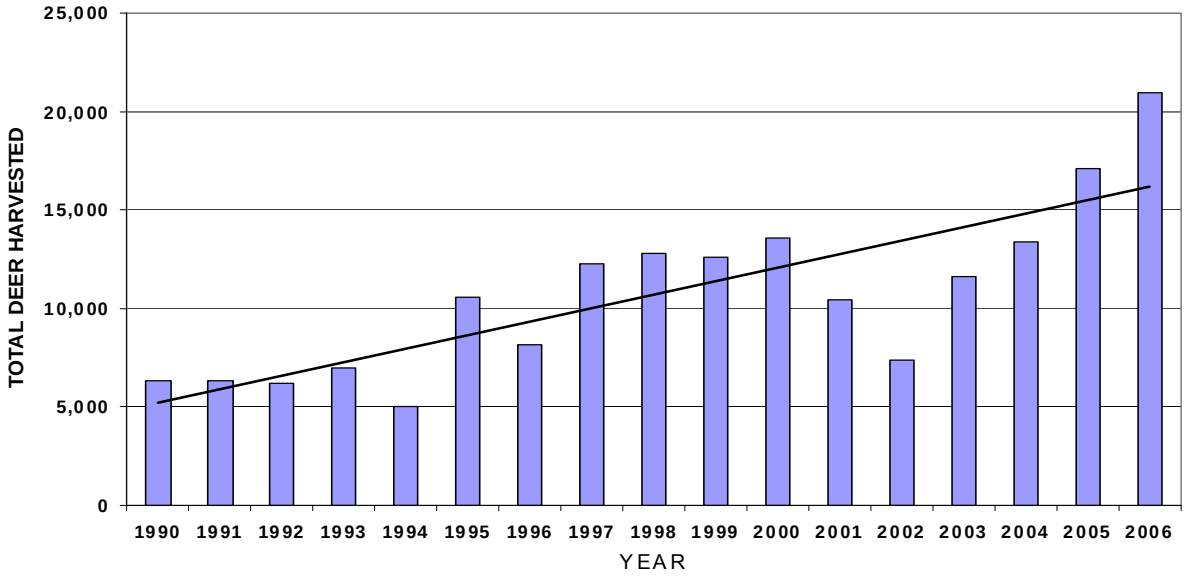


Figure 3. Ouachita NF Deer Harvest by Year from FY 1990 - 2006

Modeling habitat capability using the CompPATS model and vegetative data from the Field Sampled Vegetation (FSVeg) is a way of evaluating the ability of the existing habitat to support deer. The estimated habitat capability for deer for fiscal years 1994-2007 is shown in Figure 4. Habitat carrying capacity is influenced by the amount of prescribed fire and early seral habitat created. The long term habitat capability is showing a downward trend.

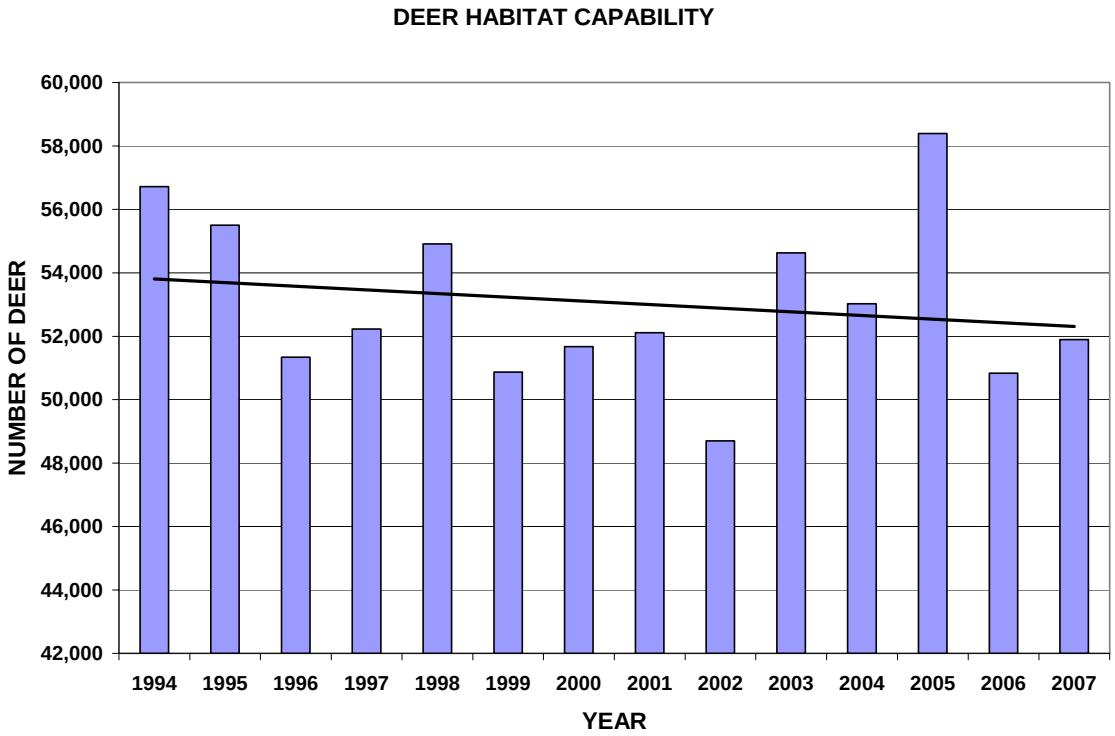


Figure 4. Ouachita NF Deer Habitat Capability by FY 1994 - 2007

The Final Environmental Impact Statement for the 2005 Forest Plan (September 2005) indicates in Table 3.59 (page 166), a desired terrestrial habitat capability to support an average of 13.7 deer per square mile after 10 years. This is calculated on a land base of 1,780,101 acres for a habitat capability that would support 38,105 deer. The habitat capability as estimated by CompPATS exceeds the 2005 Forest Plan projections for every year in the period 1994-2007, but is showing a slight decline trend, though not a significant one. The deer spotlight survey and deer harvest data indicate increasing deer density. The creation of early seral habitat as shown in Figure 1 shows a slight increasing trend overall. The 2005 Forest Plan objective is to create 5,500 acres of grass/forb habitat per year, and 2,602, and 4,363 acres were created by regeneration harvests in FY 2006 and FY 2007, respectively.

Interpretation Of Trends: The slight decline in the habitat capability for deer as estimated by CompPATS is probably related to the decrease in the acres in grass/forb habitat (forest types ages 0-10 years) preferred by deer. The acres of created early successional habitat have not met the desired levels but did show an increase in FY 2007.

For deer, the CompPATS model places a greater value of early successional habitat and gives lesser value to habitat created by thinning and prescribed fire. In contrast to the declines in even age regeneration cutting, the acres of thinning and prescribed fire have increased. In view of the deer population and harvest indicators, deer are not yet declining with the habitat capability.

Implications for Management: Deer are widespread, abundant and the habitat capability still remains above the Plan projection. There are no indications of a need for adjustments in current management practices.

Northern Bobwhite *(Colinus virginianus)*

The Northern Bobwhite is a Management Indicator Species for the Ouachita NF. It was selected to help indicate the effects of management on meeting public hunting demand, and to help indicate effects of management on the pine-oak woodland community (Final EIS, Revised Land and Resource Management Plan, page 165, Sept. 2005).

Data Sources: Data sources and monitoring techniques for this species include Northern Bobwhite call counts; data collected on Breeding Bird Survey (BBS) routes, FY 1966 to 2006 (Sauer et al. 2007); the CompPATS Habitat Capability Model; and the Ouachita National Forest Landbird monitoring data collected from 1997 – 2007. Data collected using call counts are presented as birds heard per stop. In the 2005 Forest Plan, the population objective for the Northern Bobwhite is an average of 36.6 birds per square mile (FEIS page 166, September 2005).

Population Trends: In the period between FY 1990 and FY 2007, birds heard per stop have varied from a high of 1.2 birds per stop in 1992 to a low of 0.5 birds per stop in 1999, 2000, and 2001 (Figure 5). Over this 17 year period, the Ouachita region averaged 0.5 birds per stop per year. This average exceeds the average for all other regions in Arkansas. In contrast, the decade prior to FY 1990 when the Forest had more and was actively creating more early successional habitat, the Ouachita NF averaged 1.3 birds heard per stop. Data are indicating a slight increasing trend for the current evaluation period, but calls per stop are lower than they were prior to FY 1990.

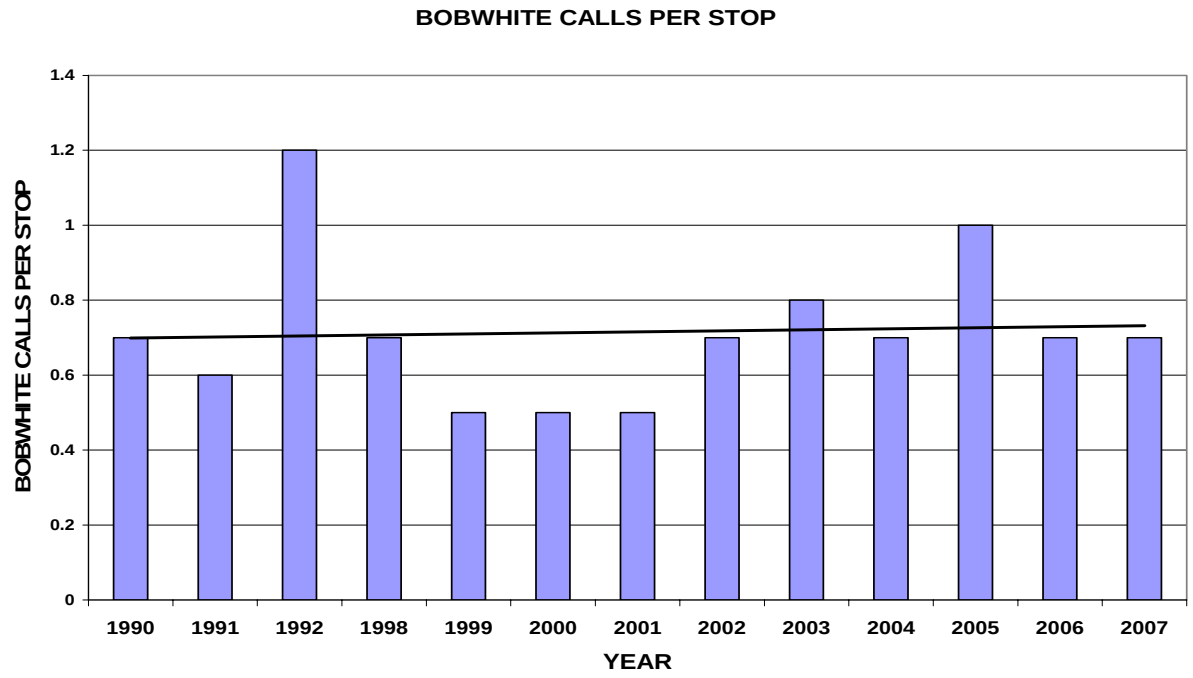


Figure 5. Ouachita NF Northern Bobwhite Call Counts – Birds per Stop for Data Years FY 1990 - 2007

Since FY 1997, the Forest has been conducting bird surveys on over 300 Landbird monitoring points. Northern Bobwhite data recorded through these surveys indicate an increasing trend in birds detected over this 10 year period (Figure 6).

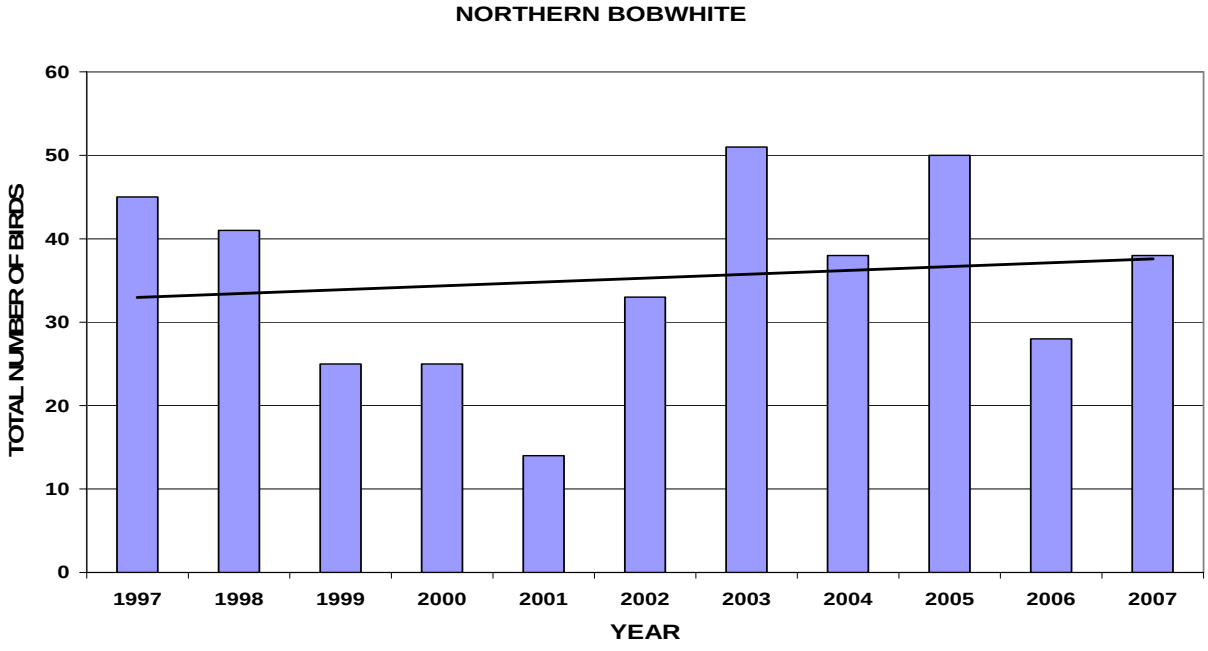


Figure 6. Northern Bobwhites detected on Landbird survey points, Ouachita NF, FY 1997 – 2007

The CompPATS, habitat capability estimate for the Northern Bobwhite, has declined steadily (Figure 7), and although the creation of early successional habitat is higher in 2007 than in 2006, this habitat creation has not yet reached the 2005 Forest Plan objective of 5,500 acres per year.

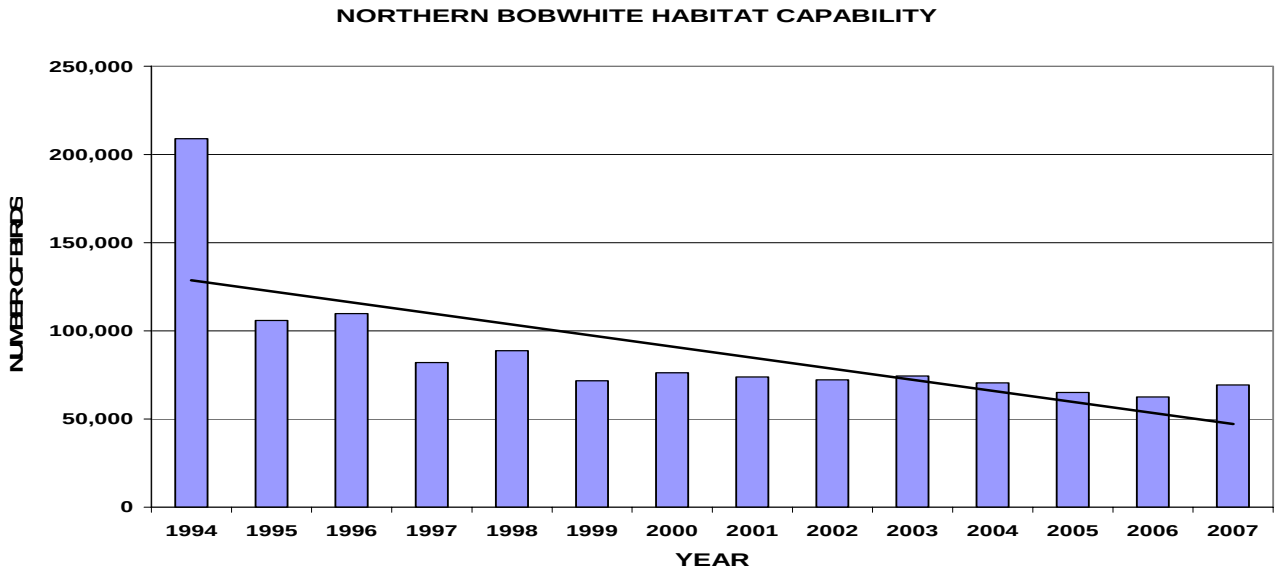


Figure 7. Northern Bobwhite Habitat Capability FY 1994 – 2007, for the Ouachita NF

Breeding Bird Survey data (Figure 8), collected over the past 40 years (1966 through 2006), indicate a -3.5 % decline for the Ozark – Ouachita Plateau, a -3.0% decline for Arkansas, and a -3.0 % decline range-wide (Sauer et al. 2007). Data for the more recent time period of 1980–2006 show a greater Northern Bobwhite decline of -4.5 % for the Ozark – Ouachita Plateau.

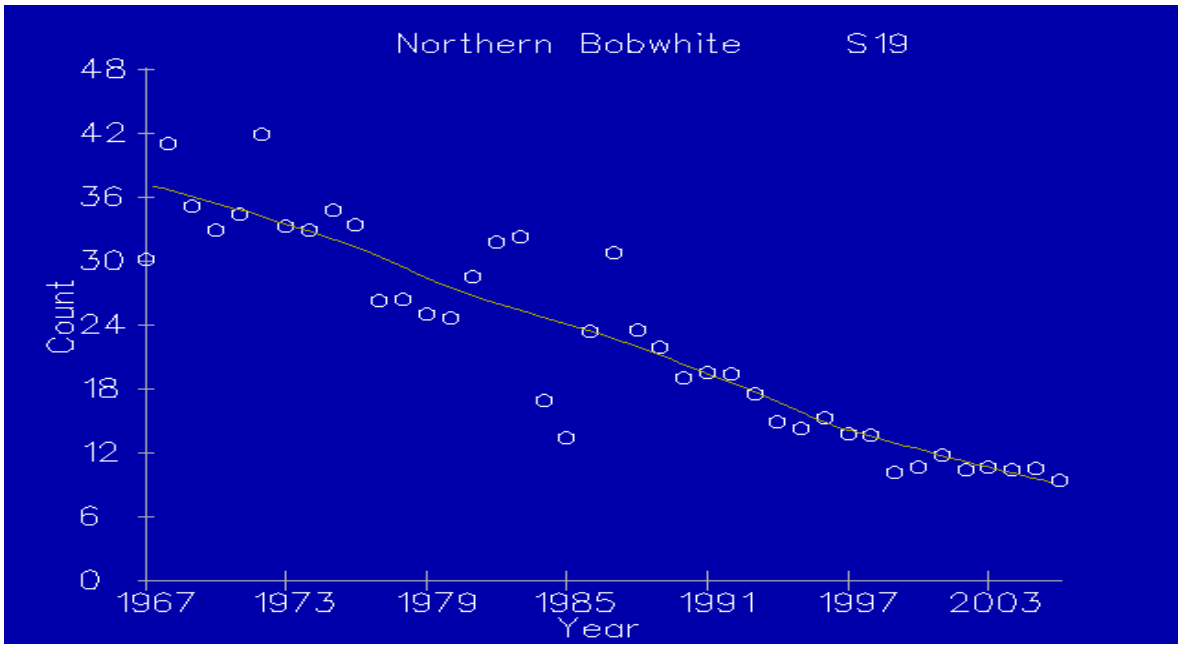


Figure 8. Northern Bobwhite Breeding Bird Survey trend data FY 1966 – 2006 for the Ozark – Ouachita Plateau.

Interpretation of Trends for Northern Bobwhite: Northern Bobwhite call counts per stop, Landbird point data, and trend in early successional habitat creation all indicate a slight increase in Northern Bobwhites. The habitat capability model for Northern Bobwhites and the Breeding Bird Survey indicate not only declining habitat capability for the Ouachita NF, but a declining population trend for the Ozark – Ouachita Plateau region as well. Regional and range-wide declines are primarily attributed to the loss of habitat on private and agricultural lands and changes in agricultural practices. The weak increasing trend for the Forest may be attributable to the aggressive prescribed fire and thinning programs which are providing habitat improvements.

Implications for Management: The Northern Bobwhite population viability on the Ouachita NF is not expected to be threatened. This trend is expected to improve through implementing the 2005 Forest Plan. The decline in habitat capability is partially due to a failure to produce the amount of early seral habitat (5,500 acres) each year envisioned by the Forest Plan. There will be a lag time between guidance established in the 2005 Forest Plan and the creation of additional early seral habitat. In the meantime, increases in thinning and prescribed fire, especially that associated with some 200,000 acres of shortleaf pine-bluestem grass ecosystem restoration, will benefit Northern Bobwhite populations by improving habitat.

Eastern Wild Turkey *(Meleagris gallopavo)*

The Eastern Wild Turkey is a Management Indicator Species (MIS) selected to indicate the effects of management on meeting public hunting demand (USDA Forest Service. 2005 Final EIS. Page 165).

Data Sources: Sources of data include turkey poult surveys, spring turkey harvest data, Breeding Bird Survey data (Sauer et al. 2007), habitat capability modeling using CompPATS and Landbird point survey data. In the 2005 Forest Plan, the minimum population objective is 3.3 turkeys per square mile (9,177 turkeys) after 10 years and 3.9 per square mile at 50 years (USDA Forest Service. 2005 Final EIS. Page 166). Habitat capability for 2007 is estimated at 18,316 turkeys.

Eastern Wild Turkey Population Trends: Over the past decade, the number of turkey poults per hen has varied from a low of 1.45 poults per hen in FY 1993 to a high of 3.7 poults per hen in FY 1997 (Figure 9). In 2007 there were 1.9 poults per hen which is slightly greater than the previous two years but less than that of the past decade. There is a recognized turkey downward trend at this time.

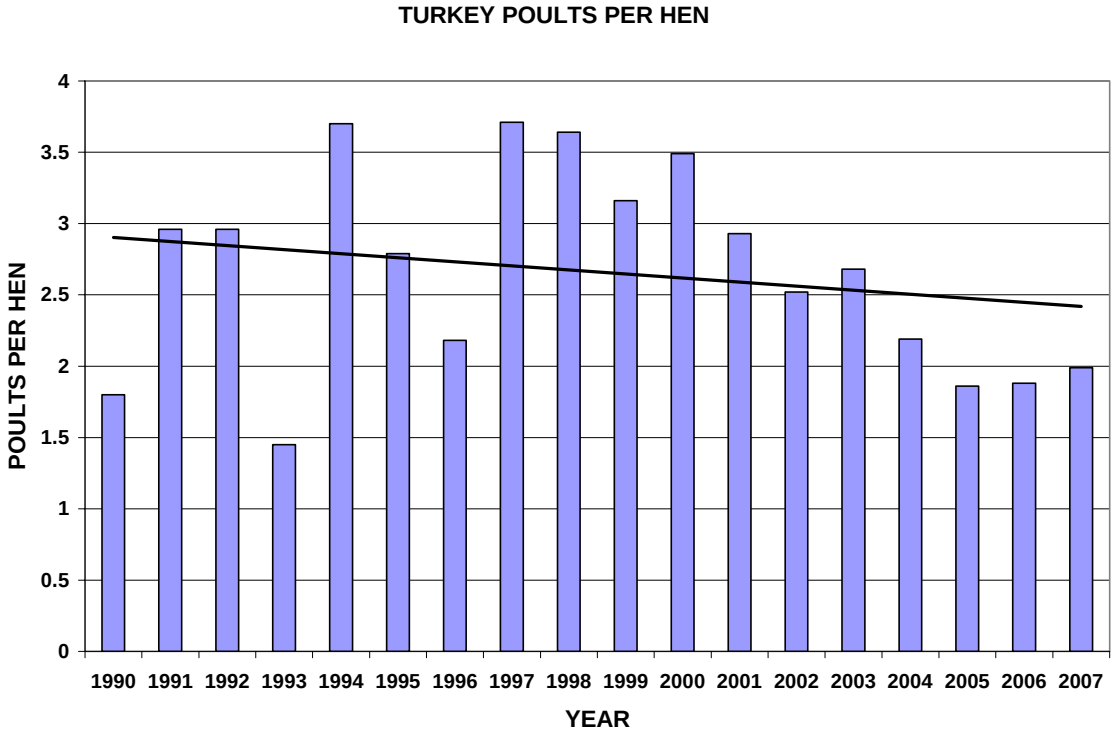


Figure 9. Eastern Wild Turkey Poults per Hen, Ouachita NF, FY 1990 – 2007

Spring turkey harvest has increased from low of 1,631 birds in FY 1993 to high of about 4,017 birds in FY 2003 and declined to 2,163 in FY 2007 (Figure 10).

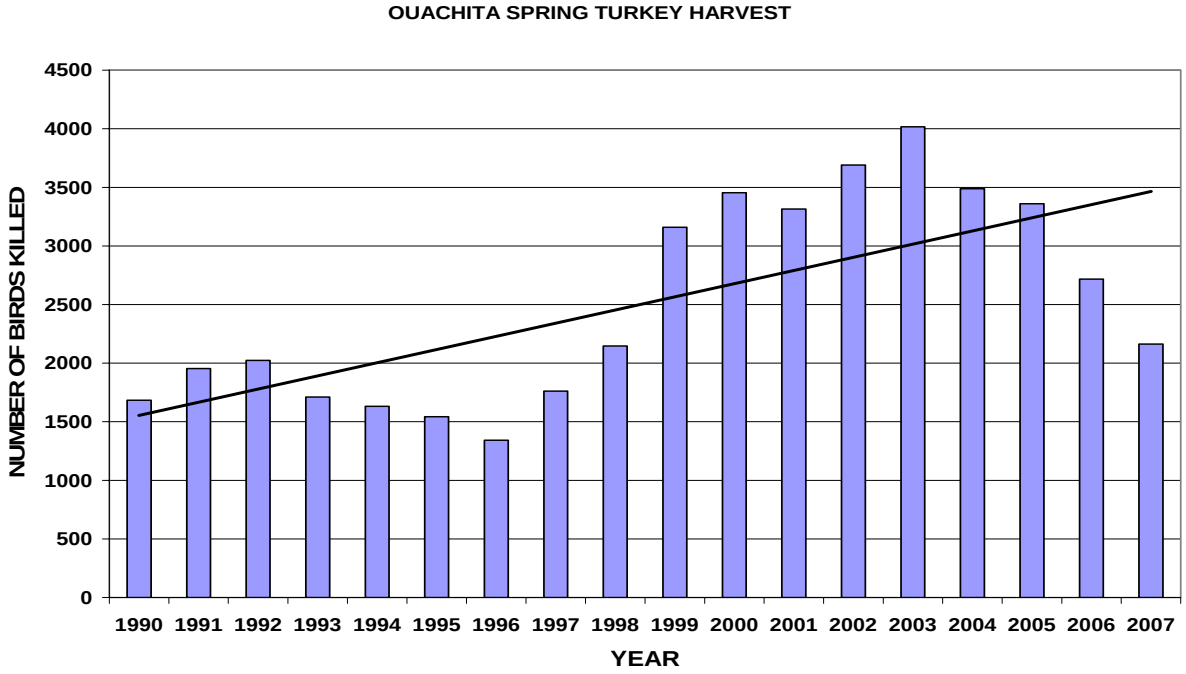


Figure 10. Eastern Wild Turkey Spring Harvest FY 1990 – 2007, Ouachita NF

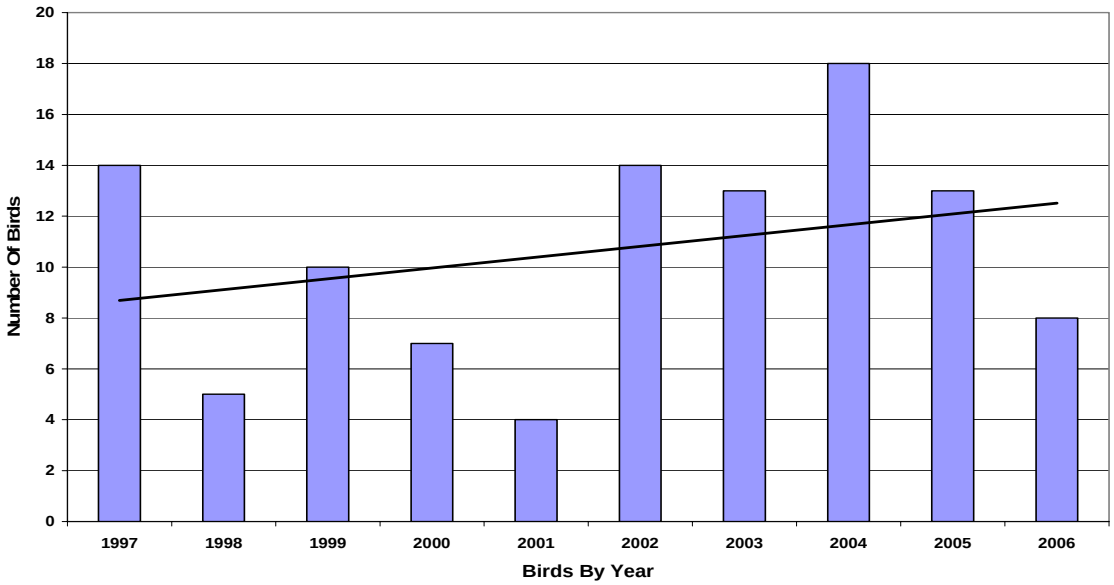


Figure 11. Eastern Wild Turkey Detected on Landbird Points, Ouachita NF, FY 1997 – 2007

The wild turkey trend detected on the Forest Landbird point surveys is similar to the drop in harvested birds but statistically showing a stable trend over the past decade.

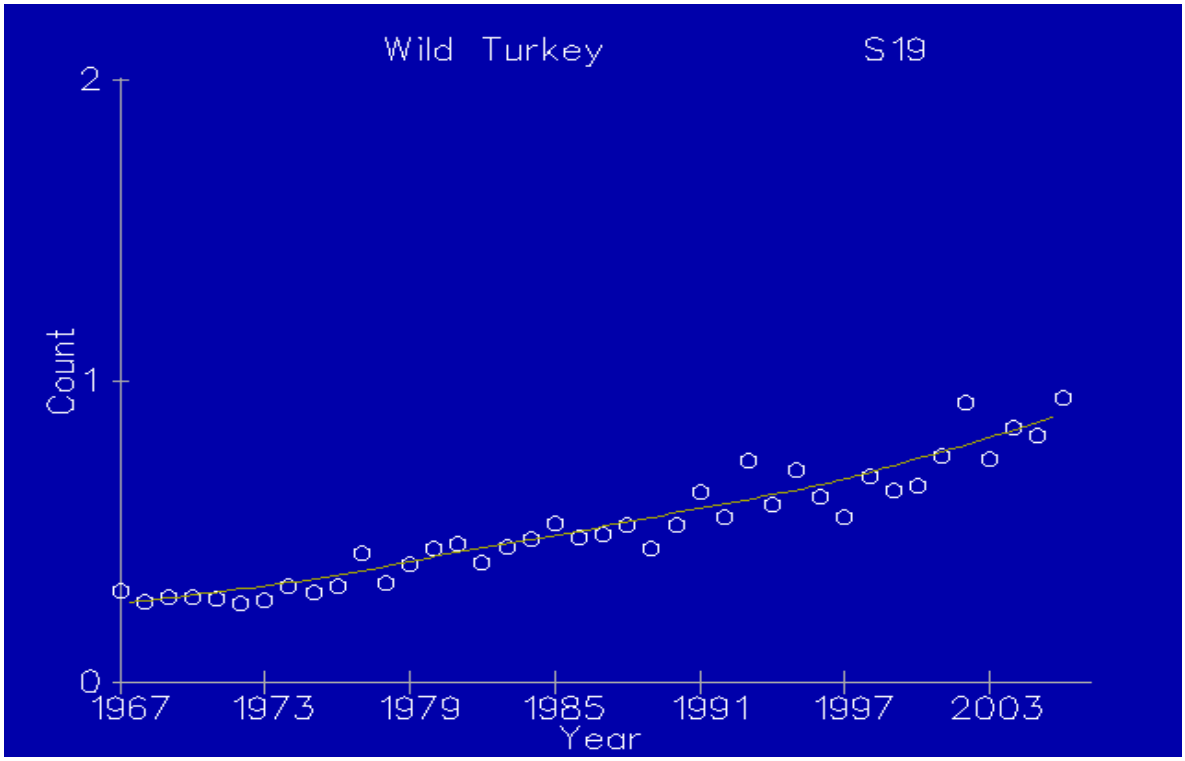


Figure 12 – Eastern Wild Turkey Breeding Bird Survey data for the Ozark–Ouachita Plateau FY 1966–2006

The Breeding Bird Survey data for the Ouachita Mountains indicate a 2.3 % increase in the turkey population from FY 1966 to FY 2006, but a -0.3 % decline for FY 1980 to FY 2006 (Sauer et al. 2007).

Figure 13 below depicts changes in habitat capability for the years FY 1994 to FY 2007. The overall trend is improving with a habitat capable of supporting 17,601 birds. This is above the 2005 Forest Plan objective of 9,177 birds for the first period (USDA Forest Service. 2005 Final EIS. Page 166).

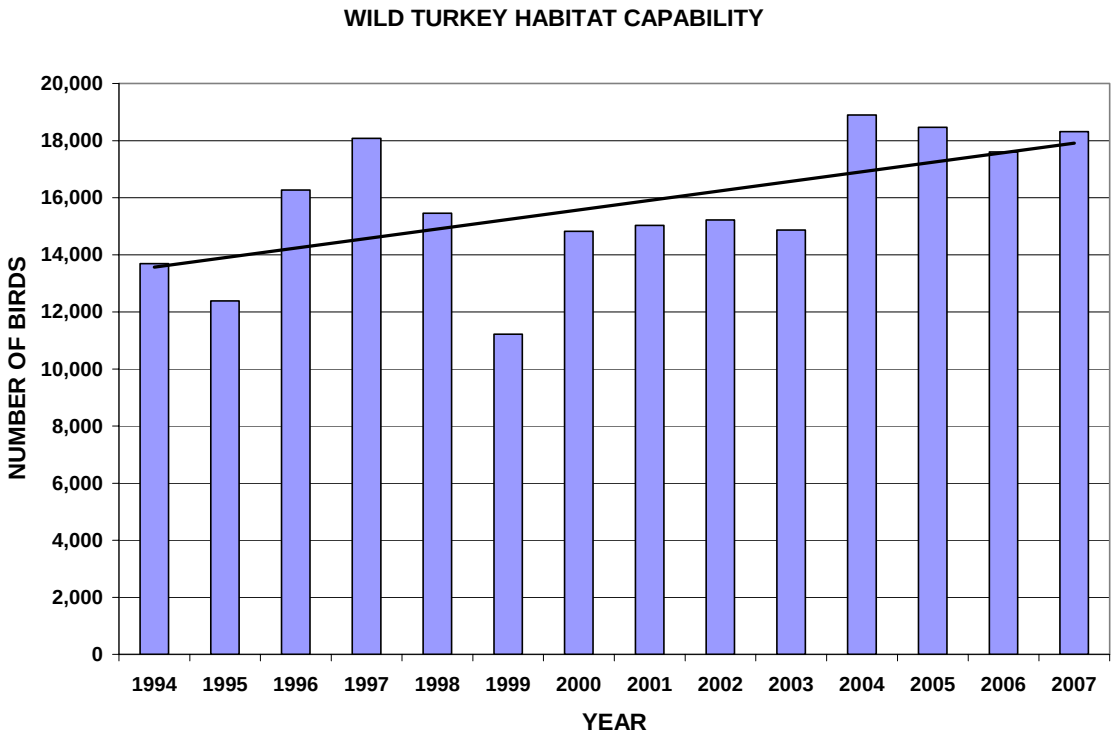


Figure 13. Eastern Wild Turkey Habitat Capability, Ouachita NF, FY 1994 - 2007

Interpretation of Trends: Long term turkey harvest, habitat capability, and Breeding Bird Survey data indicate overall positive trends for the turkey population. However, the drop in harvest levels, poults per hen, and birds detected on the Landbird points parallel a reduction in FY 2005 – FY 2007. Such reduction does not negate the long term positive trend, but does identify a potential trend to monitor. The habitat capability remains above the level projected in the 2005 Forest Plan and the sustained high levels for habitat capability would indicate that the drop in harvest levels, reductions in poults per hen and birds detected on the Landbird points could implicate factors other than habitat.

Implications for Management: Although there are some variations in poult production, harvest, and birds detected on Landbird point counts, the habitat capability and breeding bird surveys are showing positive trends. There is no reason to believe that this species is in danger of losing population viability or falling below the desired population levels. One of the wildlife management agencies, the Arkansas Game and Fish Commission, has shortened the season to stimulate a positive response. Indications are that the Eastern Wild Turkey and its habitat are doing well on the Forest but trends warrant watching.

Red-cockaded Woodpecker *(Picoides borealis)*
The Red-cockaded Woodpecker is a Management Indicator Species (MIS) for the Ouachita NF because it has Federal endangered species status. It was selected to indicate the effects of management on recovery of this species and to help indicate effects of management on shortleaf pine-bluestem woodland community (USDA Forest Service. 2005 Final EIS. Page 166). The 2005 Forest Plan has a management objective to "maintain or improve the population status of all species that are federally listed or proposed for listing."

Data Sources: This is one of the most intensively monitored species on the Forest and monitoring is done with high precision, intensity, and reliability. Active territories, nesting attempts, fledgling estimates, banding, augmentation, and the number of adults are tracked and reported annually to the Fish and Wildlife Service.

Definitions:
Active Territories: A territory is determined to be active when there are nesting or roosting RCW present.
Nesting Attempts: A nest attempt is recorded when a pair of RCW exhibits nesting behavior which results in at least 1 egg being laid.
Estimated Fledglings: Birds fledge when they leave their nests after hatching, and estimated fledglings refers to the number of young RCWs that leave the natal cavity.
Number of Adult Birds: Estimated number of adult RCW present in population prior to nesting season.

Red-cockaded Woodpecker Population Trends: Over the past decade, the number of active territories and number of adult birds are both showing an increasing trend (Figures 14 and 15).

Red-cockaded Woodpecker: Over the past decade, the number of active territories and number of adult birds are both showing an increasing trend (Figures 14 and 15). The Red-cockaded Woodpecker active territories have increased from a low of 11 territories in FY 1996 to 40 active territories in FY 2007. The Red-cockaded Woodpecker data for FY 2007 indicated 103 adult birds and 67 fledglings compared to 88 adult birds and 49 fledglings in FY 2006.

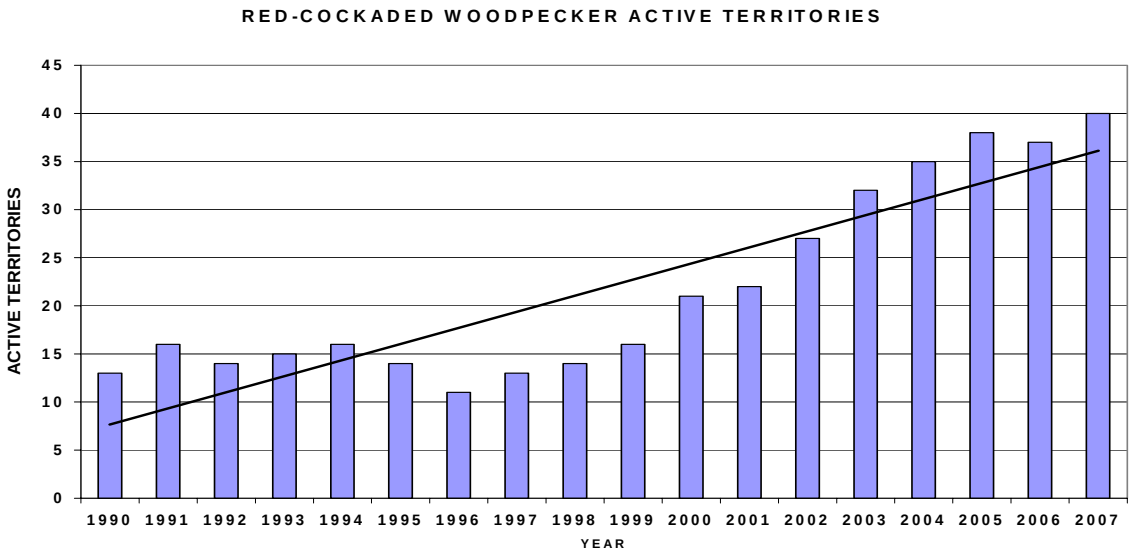


Figure 14. Red-cockaded Woodpecker Active Territories, Ouachita NF, FY 1990 – 2007

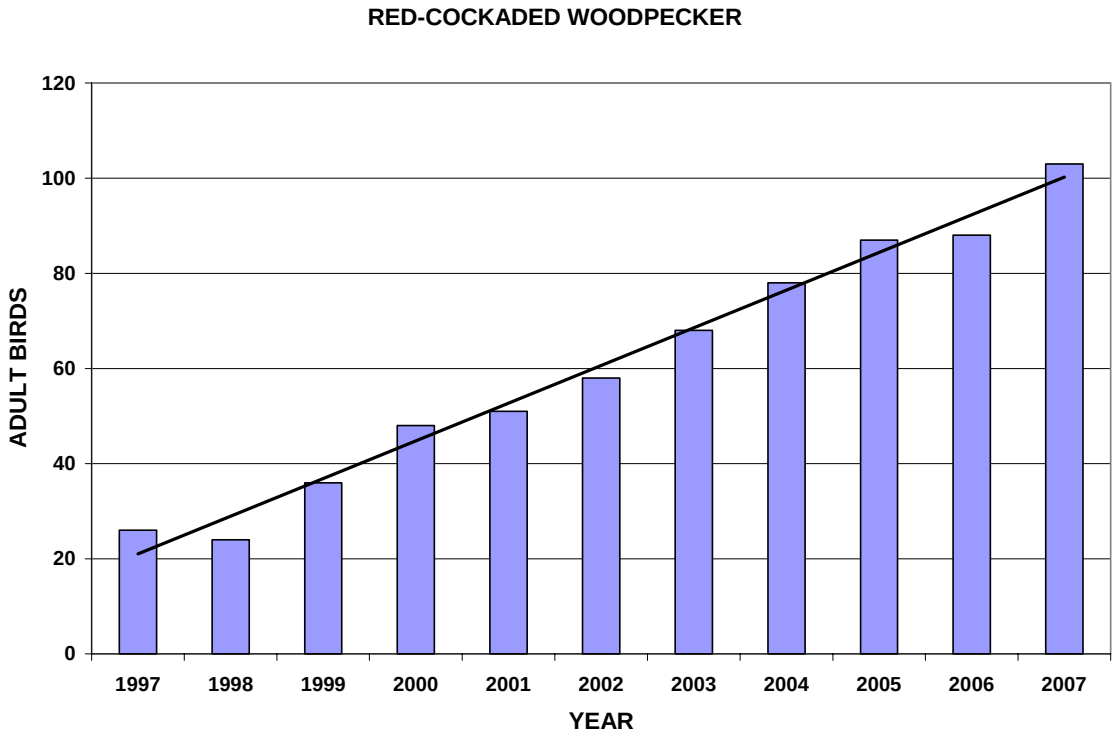


Figure 15. Red-cockaded Woodpecker adult birds, Ouachita NF, FY 1997 – 2007.

Interpretation of Trends: Populations of the Red-cockaded Woodpecker on the Ouachita NF have normal fluctuations through natural mortality and predation. These changes appear more dramatic in smaller populations than they would appear in larger populations. To be able to maintain the current level, with slight increases in the number of active nest territories and adult birds, is a significant step forward and indicates the management success and commitment for the recovery of this species.

Implications for Management: The population of this species exhibits an increasing trend. Barring any major catastrophic events, this species should continue to improve under the present management intensity. A large-scale ecosystem restoration project was initiated in Management Area 22 to restore the shortleaf pine-bluestem grass ecosystem on over 200,000 acres. This process will provide sufficient habitat for a recovery population of the endangered Red-cockaded Woodpecker (USDA Forest Service 2005). As the pine/bluestem ecosystem is restored and the acres of quality habitat are increased, the main factors influencing species population and recovery will be the limitations of population dynamics and uncontrollable natural influences. The Ouachita NF management intensity will be maintained and intensive monitoring will be continued.

Pileated Woodpecker *(Dryocopus pileatus)*
The Pileated Woodpecker is a Management Indicator Species (MIS) for the Ouachita NF, selected to indicate the effects of management on snags and snag-dependent species (USDA Forest Service. 2005 Final EIS, Page 166). This species prefers dense, mature to overmature hardwood and hardwood-pine forest types. It is a primary excavator of cavities important to obligate secondary cavity nesters, and is a key indicator for the retention of a complete community of cavity nesting species.

Data Sources: The Forest Landbird point count data, North American Breeding Bird Survey (BBS) (Sauer et al. 2007), and habitat capability predictions using CompPATS and Field Sampled Vegetation (FSVeg) data were used as data sources for evaluating Pileated Woodpecker population trends.

Pileated Woodpecker Population Trends: Population trend as indicated by the Breeding Bird Survey data, Forest Landbird data and habitat capability data are mixed. Ten years of Landbird monitoring data, shown in Figure 16, on the Ouachita NF show an overall increasing trend for Pileated Woodpecker.

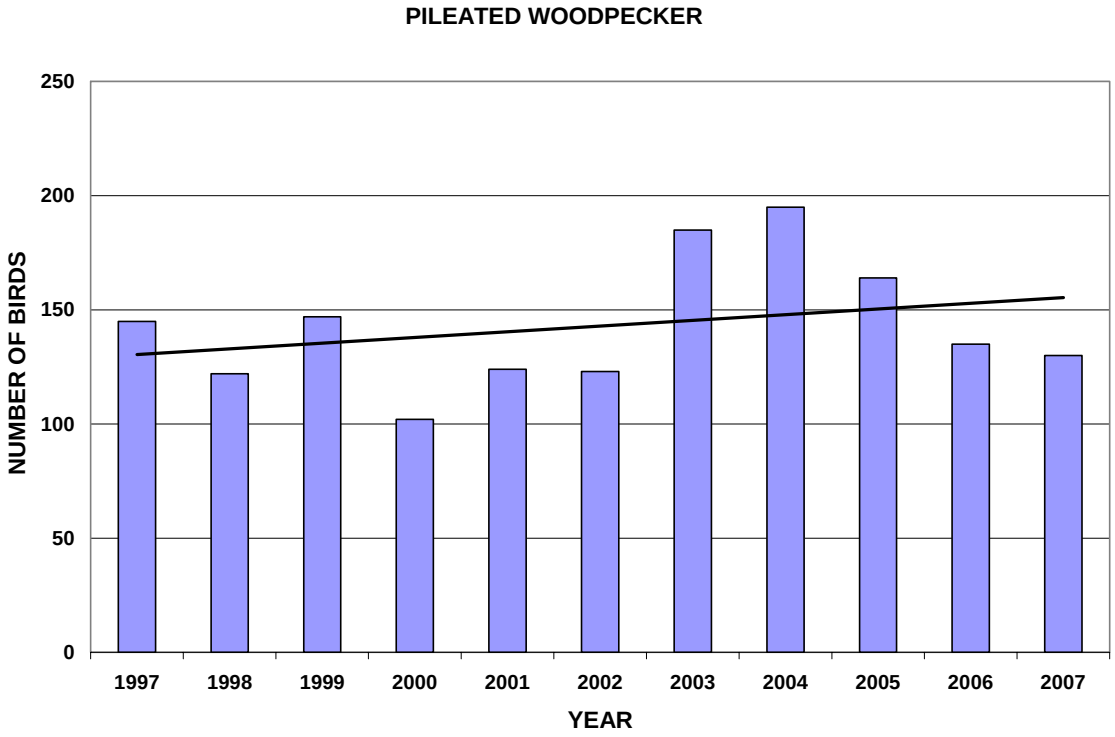


Figure 16. Pileated Woodpeckers Detected on Landbird Point Counts, Ouachita NF, 1997 – 2007

The Breeding Bird Survey data shown below in Figure 17 indicate a slight downward trend of negative 0.6 percent in the period of 1966 – 2006, but a positive trend of 1.25 percent increase for data from the 1980 to 2006 period, for the Ozark–Ouachita Plateau. Data indicate a positive 1.7 percent increase survey-wide.

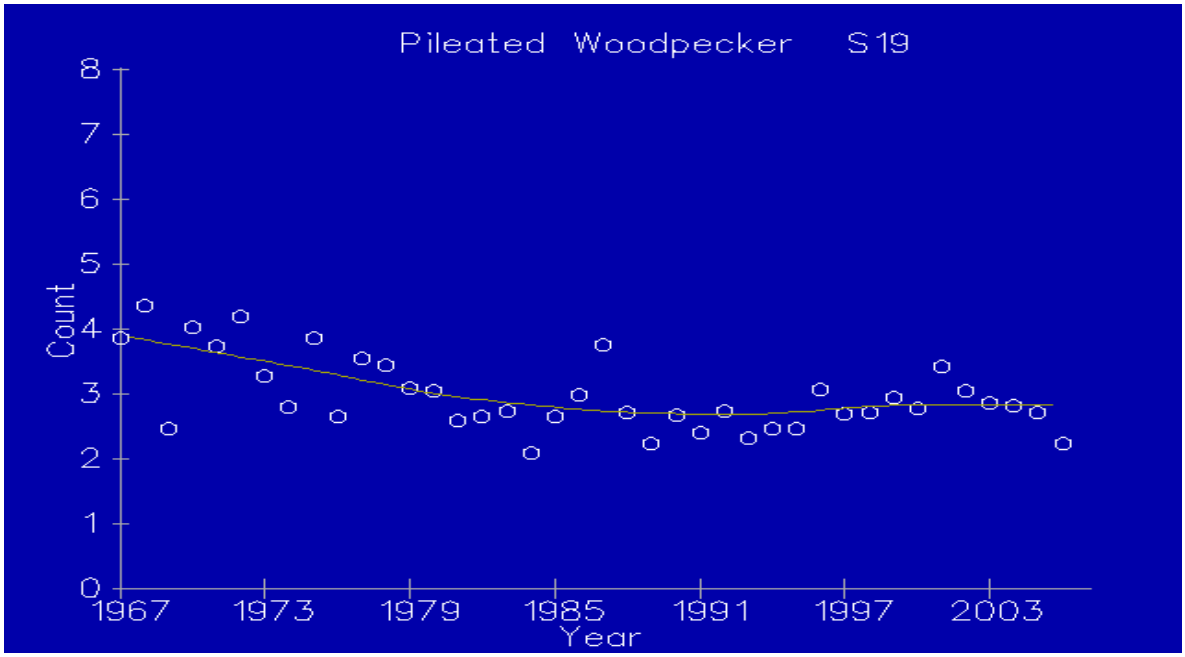


Figure 17. Pileated Woodpecker Breeding Bird Survey trend data 1966 – 2006 for the Ozark – Ouachita Plateau.

CompPATS estimates for the habitat capability, using all forest types, indicate an increasing trend (Figure 18). These data are for pine, pine-hardwood, hardwood, and hardwood-pine stands with the greatest value being for stands greater than or equal to 41 years old. As these stands age, the habitat capability to support the Pileated Woodpecker should continue to improve.

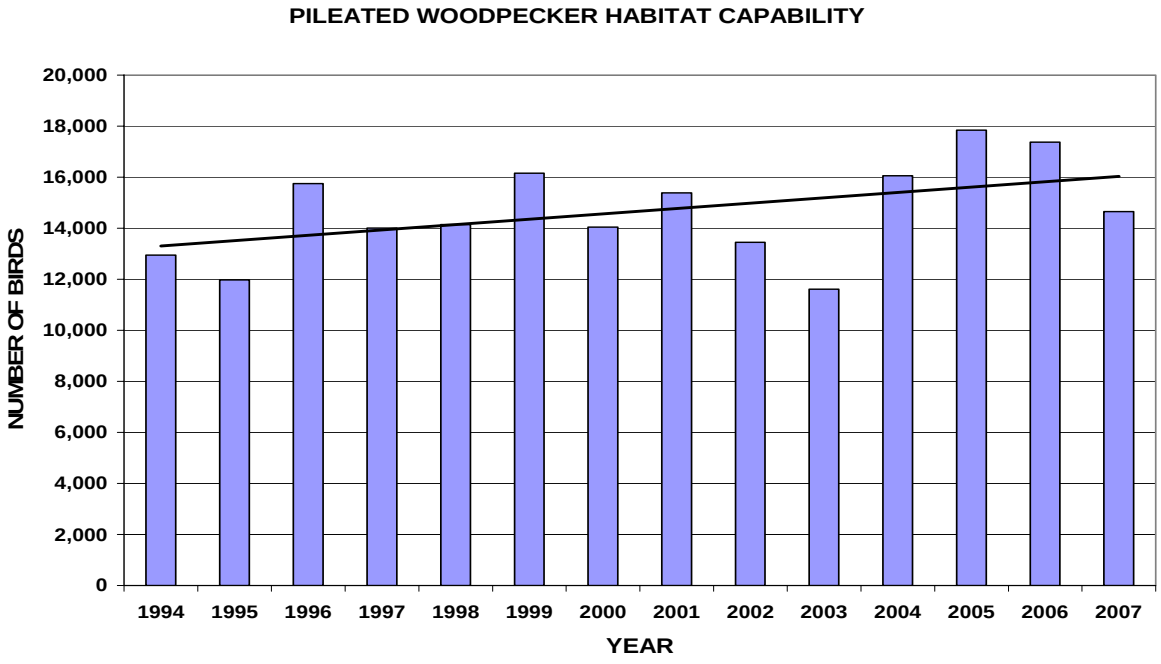


Figure 18. Pileated Woodpecker habitat capability on the Ouachita NF for 1994 - 2007.

Interpretation of Trends: The upward population trend in the Landbird point data and habitat capability are expected since a majority of the forest vegetation types are aging. The CompPATS program takes into account the conditions in all forest types, and it factors in management practices including prescribed fire and thinning. These data also show an upward trend. The overall situation should continue to improve as the unmanaged hardwood and hardwood-pine and the managed pine stands age. The current habitat capability being able to support 14,647 birds exceeds the 2005 Forest Plan bird population objectives of 11,265 (USDA Forest Service. 1995). The positive trend indicates that this species is doing well.

Implications for Management: The Pileated Woodpecker and its habitat appear to be secure within the Ouachita NF. There are no indications of a need to alter management direction.

Scarlet Tanager *(Piranga olivacea)*

The Scarlet Tanager is a Management Indicator Species (MIS) for the Ouachita NF, selected to help indicate the effects of management on mature forest communities. This species favors mature hardwood, and hardwood-pine, and is less numerous in mature mixed pine-hardwood and pine habitat types. It is relatively common in all of these habitats in the Ouachita Mountains.

Data Sources: The Forest Landbird point data, North American Breeding Bird Survey (BBS) (Sauer et al. 2007), and habitat capability predictions using CompPATS, and Field Sampled Vegetation (FSVeg) data were used to make an assessment of trend.

Scarlet Tanager Population Trends: The Landbird point data collected from 1997 – 2007 (Figure 19) indicate an overall positive trend for the Scarlet Tanager.

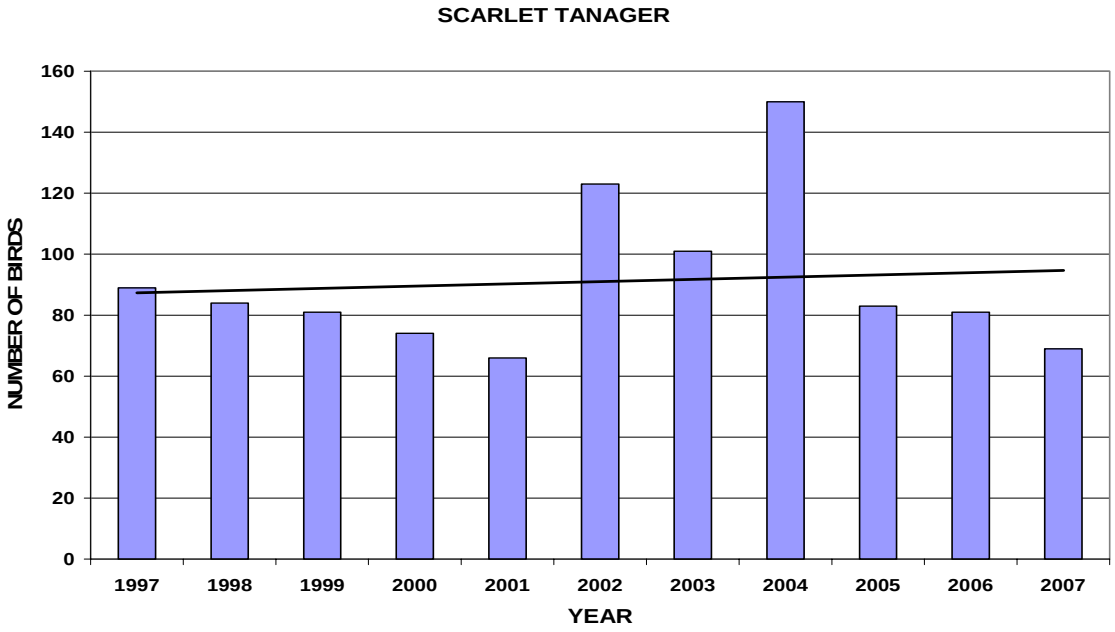


Figure 19. Scarlet Tanager Detected, Ouachita NF Landbird Points 1997 – 2007

The Breeding Bird Survey data (Figure 20) indicate a trend of gradual increase, but there is no statistically significant increasing trend of 0.89 percent for 1966 – 2006, for the Ozark-Ouachita Plateau.

Ouachita NF Landbird point data, Breeding Bird Survey data, and Habitat capability data all support an increasing trend for the Scarlet Tanager.

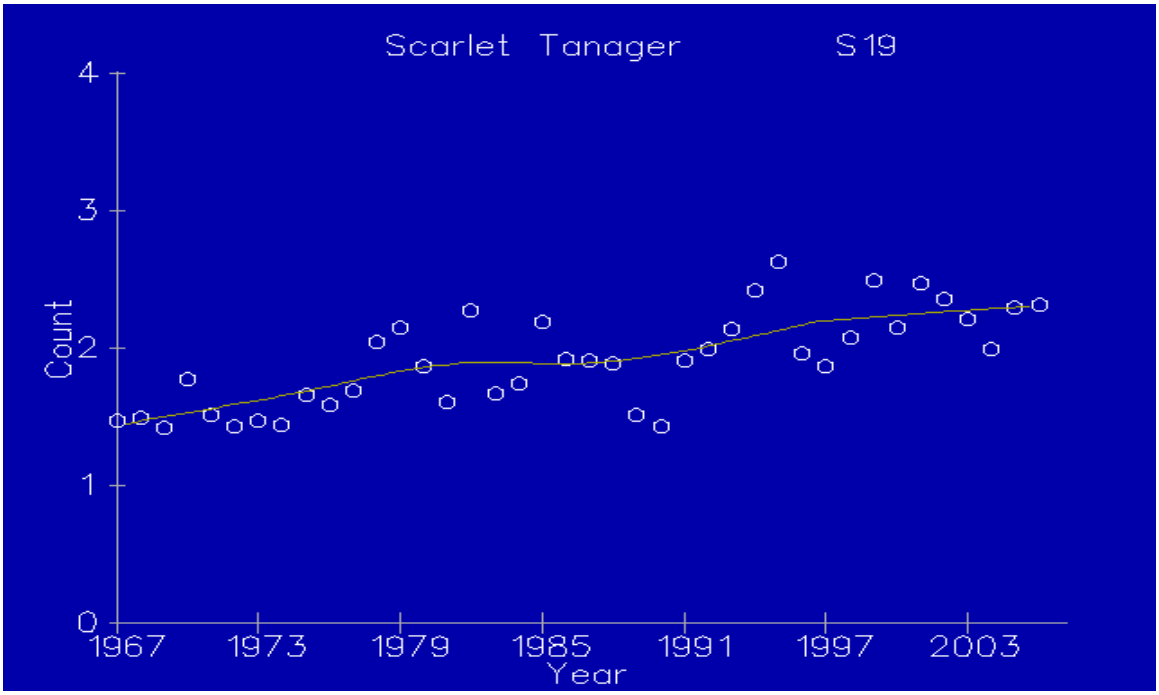


Figure 20 - Scarlet Tanager Breeding Bird Survey Trends for the Ozark-Ouachita Plateau 1966 – 2006

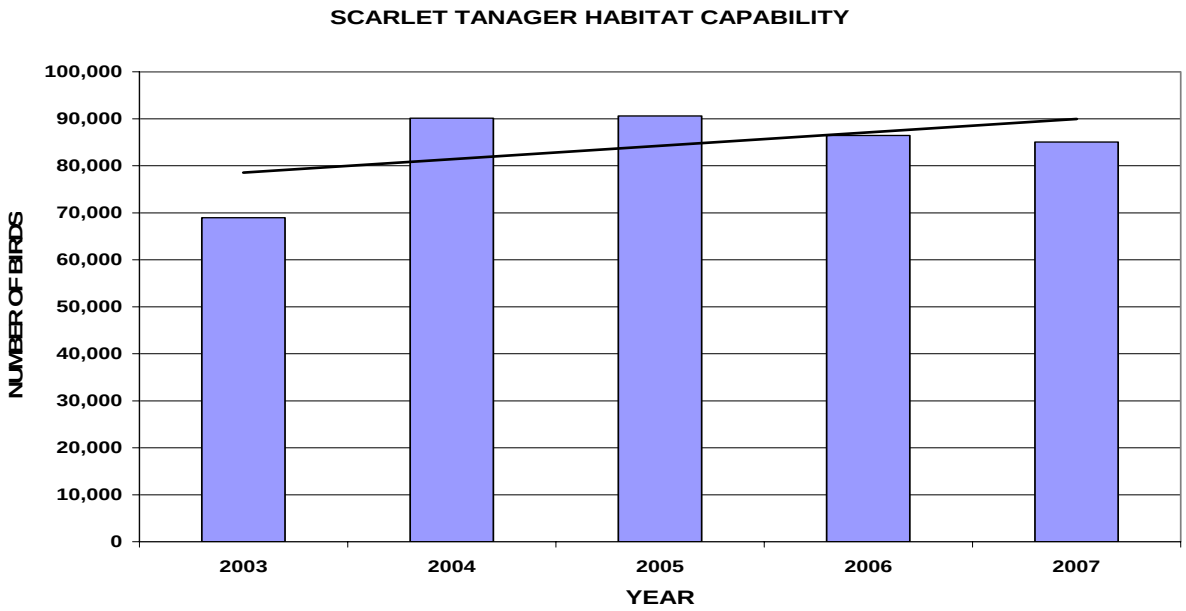


Figure 21. Scarlet Tanager Habitat Capability Trends, Ouachita NF 2003 – 2007

Interpretation of Trends: Data are supporting a conclusion of a trend of gradual increase, but there is no statistically significant relationship on the Ouachita NF and the Ozark-Ouachita Plateau where mature hardwood and mixed types are represented. On the Ouachita NF, there are 479,958 acres of hardwood and hardwood/pine forest types greater than 41 years old that will continue to mature. In the pine and pine-hardwood forest types, many more acres are being managed under various treatments under uneven aged management which also serve as habitat.

Consequences for Conservation: The Scarlet Tanager and its habitat are secure within the Ouachita NF. The continued long-term viability of this species is not in question. With the maturing of nearly 480,000 acres of hardwood and hardwood-pine and designated pine old growth habitats, the continued availability of adequate habitat is secure.

Implications for Management: The Scarlet Tanager has an apparent trend of gradual increase, but there is no statistically significant increasing population trend within the Ouachita NF and the Ozark and Ouachita Plateau. The Scarlet Tanager appears secure within its overall range. Its viability as a species is not in question at this time. The Scarlet Tanager will be retained as a Management Indicator Species and monitoring will continue through the Breeding Bird Surveys, Landbird point counts, and habitat capability monitoring processes.

Prairie Warbler *(Dendroica discolor)*

The Prairie Warbler is a Management Indicator Species (MIS) on the Ouachita NF, selected to help indicate the effects of management on the early successional component of forest communities. As a neotropical migrant, the Prairie Warbler is an international species of concern. This species uses early successional habitats such as regenerating old fields, pastures, and young forest stands. The vegetation selected may be deciduous, conifer, or mixed types. Habitats with scattered saplings, scrubby thickets, cutover or burned over woods, woodland margins, open brushy lands, mixed pine and hardwood, and scrub oak woodlands are most often selected.

Data Sources: The North American Breeding Bird Survey (Sauer et al. 2007) indicating trend results for the Ozark - Ouachita Plateau, Forest Landbird point data (1997 – 2006), and the Habitat Capability data are sources for evaluating Prairie Warbler population trends.

Population Trends: The Breeding Bird Survey data (Figure 22) indicate a significant declining trend of negative 4.08 percent for both periods of consideration, 1966 – 2006 for the Ozark-Ouachita Plateau (S-19) as well as a 1.9 percent decline throughout its range survey-wide.

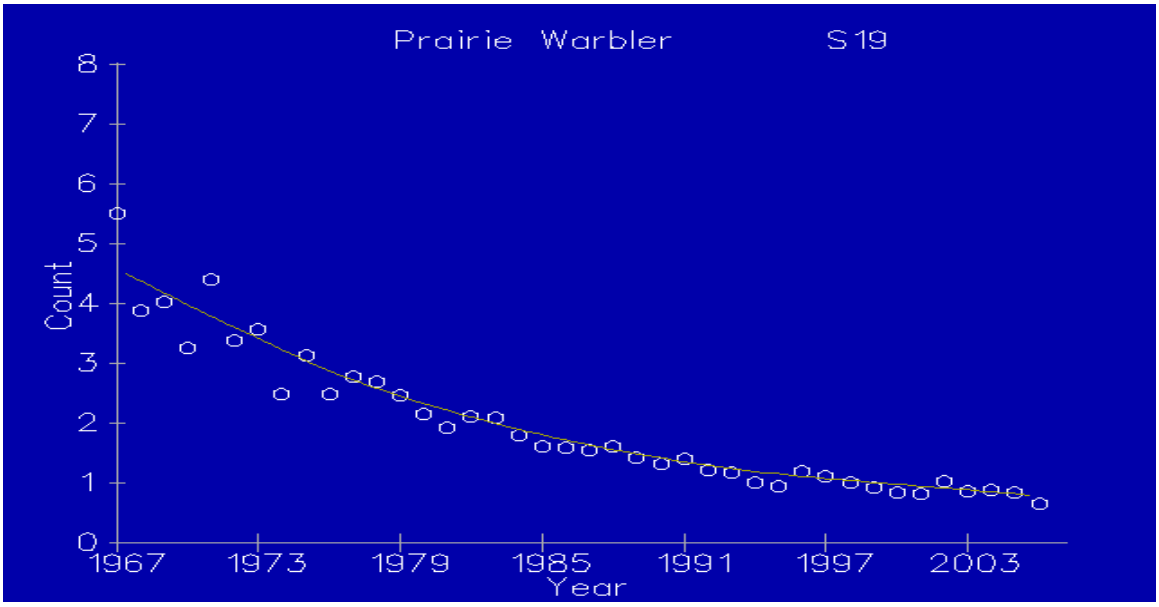


Figure 22. Prairie Warbler Breeding Bird Survey population trend for Ozark-Ouachita Plateau for 1966 - 2006.

Based on the data available, the Prairie Warbler is in a downward trend. These data are in agreement with the Breeding Bird Survey data for the Ozark-Ouachita Plateau and the same downward trend that is indicated throughout the Prairie Warblers' range nationwide.

Figure 23 indicates the number of Prairie Warblers recorded on the Landbird point counts, and Figure 24 displays the Ouachita NF habitat capability. Both of these data are indicating a downward trend.

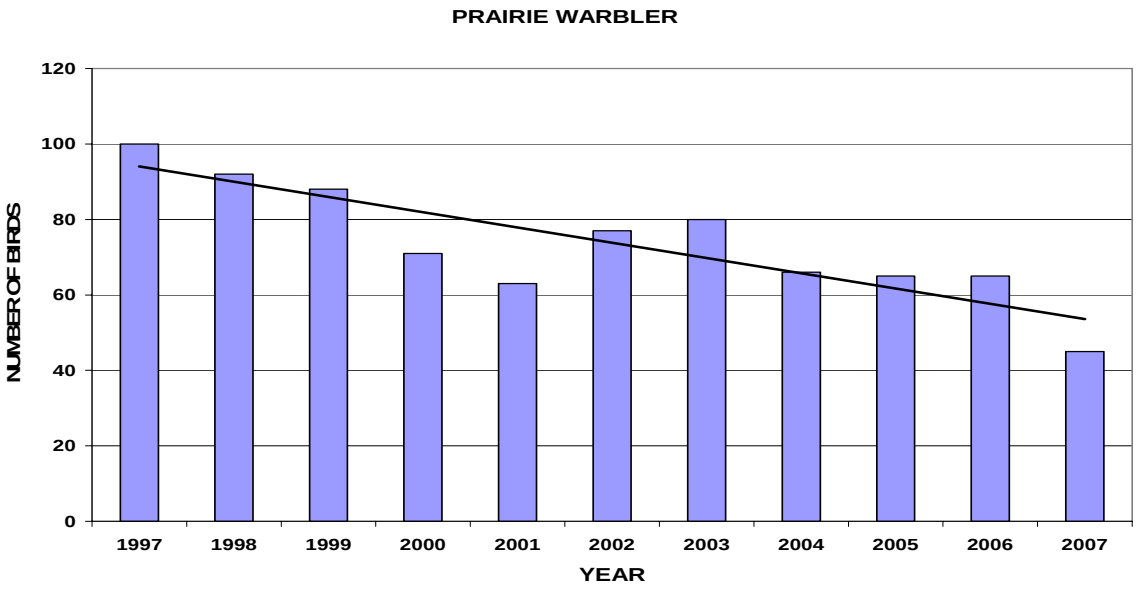


Figure 23. Prairie Warbler Detected on Landbird Point Counts, Ouachita NF 1997 – 2007

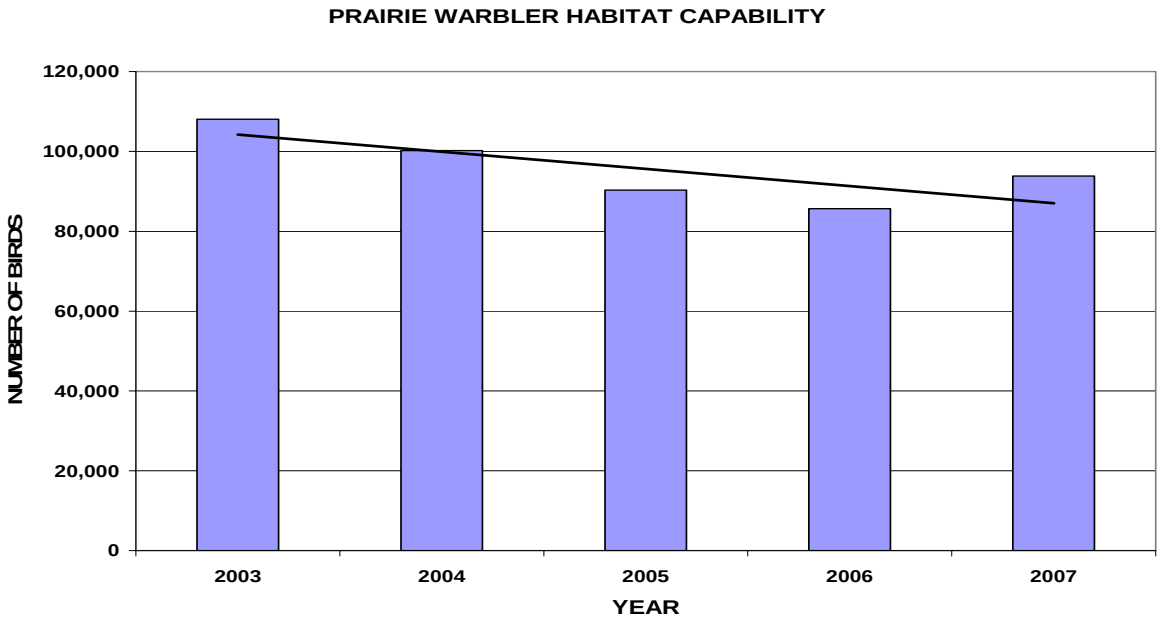


Figure 24. Prairie Warbler Habitat Capability Trends, Ouachita NF 2003 – 2007

Interpretation of Trends: Data are supporting a conclusion of a declining population trend for the Prairie Warbler on the Forest and survey wide. This decline is considered to be directly related to the decline in habitat in acres of early seral habitat available. See Figure 1 showing early seral habitat.

The decline in early seral habitat has been recognized and was addressed in the 2005 Forest Plan. Forest management has gone from approximately 15,000 to 18,000 acres of clear-cutting per year in the later 1980's to a low of about 800 acres of seedtree/shelterwood cutting in 2002. The changes by year in the creation of early seral habitat in the pine and pine/hardwood management types are demonstrated in Figure 1.

Since the lowest level of early seral habitat created in 1993, this habitat is showing a slight improvement over the long term. The Prairie Warbler has demonstrated a decline for the past decade (Figure 23) and mirrors the decline of habitat capability depicted in Figure 24. Under the 2005 Forest Plan implementation, early seral habitat should continue to increase and then stabilize at approximately 50,000 to 60,000 acres after ten years (FEIS 2005, p175). The Prairie Warbler and its habitat will continue to be monitored.

Implications for Management: The Prairie Warbler has a declining population trend within the Forest and throughout its overall range. Although it has been declining, the population viability on the Forest should not be threatened. The population decline has been exacerbated by the fact that the quantity of early seral habitat expected to be produced annually (5,500 acres), largely by seed tree and shelterwood cutting, has not yet been realized. There will be a lag time between implementation of the 2005 Forest Plan and the appearance of additional early seral habitat and its associated Prairie Warbler response. In the meantime, increases in thinning and prescribed fire in the pine and pine-hardwood types especially that associated with approximately 200,000 acres of Shortleaf-bluestem ecosystem restoration, will benefit Prairie Warbler populations by improving habitat.

The Prairie Warbler will continue to be monitored through the Breeding Bird Surveys, Landbird point counts, and habitat relationship processes. Actions being taken to reverse its declining habitat and population trend will continue.

Summary and Conclusions

This review of monitoring information for seven Terrestrial Management Indicator Species (MIS) is conducted to determine the status of the species and conservation needs. Table 4 displays the expected population trends, apparent population trends, risk of conservation of species, and management changes needed. The review demonstrated that none of the MIS are at risk and population trends are generally as expected. Current management practices are adequate for maintaining viable populations.

Table 4. Summary of Terrestrial Management Indicator Species Monitoring

Species	Expected Population Trends	Apparent Population Trends	Risk for Conservation of Species	Management Changes Needed
White-tailed deer (*Odocoileus virginianus*)	Decreasing	Increasing	None	None
Northern Bobwhite (*Colinus virginianus*)	Decreasing	Increasing	None	None
Eastern Wild Turkey (*Meleagris gallopavo*)	Stable	Increasing	None	None
Red-cockaded Woodpecker (*Picoides borealis*)	Increasing	Increasing	None	None
Pileated Woodpecker (*Dryocopus pileatus)*	Stable	Increasing	None	None
Scarlet Tanager *(Piranga olivacea)*	Stable	Increasing	None	None
Prairie Warbler *(Dendroica discolor)*	Decreasing	Decreasing	None	None

Population Trends, Ponds, Lakes, and Waterhole MIS

For pond, lake and waterhole management indicator species (Bluegill, Redear Sunfish, and Largemouth Bass), how well are the pond and lake aquatic habitat conditions being protected, enhanced or maintained? Report percentage of MIS game fish of harvestable size; electrofishing catch per unit (time) effort; number of ponds shoreline seined for spawning success.

This review of monitoring information for three pond, lake and waterhole Management Indicator Species (MIS) is conducted to determine the status of the species and conservation needs. During calendar year 2007, twenty samples were taken at eighteen lakes. North Fork Lake received one spring and two fall electrofishing samples due to the availability of Ouachita Baptist University students (Figure 25). The Ouachita NF appreciates the help in sampling by Dr. Jim Taylor and his classes from Ouachita Baptist University.

Figure 25. Ouachita Baptist University Students Helping with Sampling

Electrofishing results for 2007 showed some recovery from last year's very poor electrofishing sampling results (Figure 26). The fall electrofishing season was plagued by a number of cold fronts that tended to push fish into deeper water with resultant lower catch rates. Fall sampling was also plagued by low water making the fall pond sampling difficult. Lower catch rates often translated into greater oscillations in harvestability due to small sample sizes.

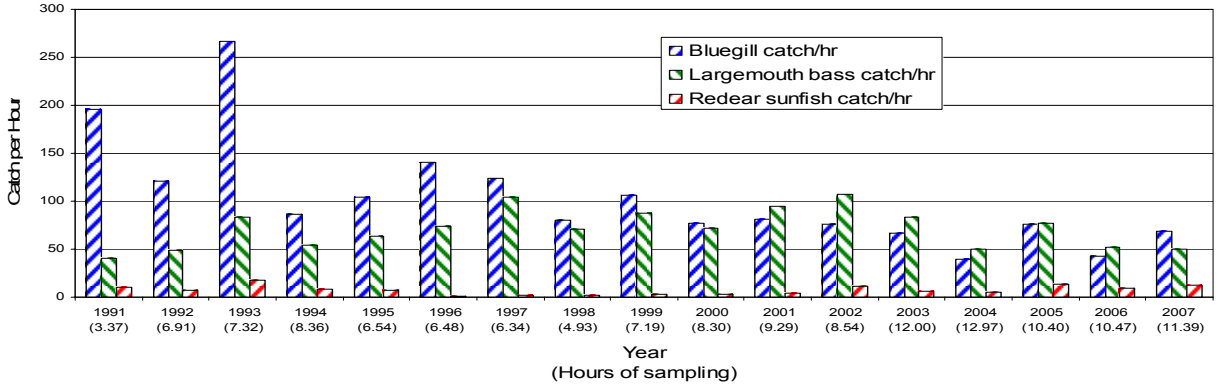


Figure 26. Annual Pooled Catch per Hour

While typical catches of big bass were missing from the Cedar Lake sample in Oklahoma, several nice bass and bluegill were taken from several ponds. (Figures 27 - 30).

Figure 27. John Burns Pond Largemouth Bass Catch

Figure 28. John Burns Pond Bluegill Catch

Figure 29. Old Forester Pond Largemouth Bass

Figure 30. Old Forester Pond 8+ Inch Bluegill

Bluegill *(Lepomis macrochirus)*

Bluegill catch for 2007 was the second lowest since 1991. The trend line associated with the annual pooled catch per hour is only slightly significant statistically (Figure 31). This graph also displays the variability in annual samples with the widened bars displaying the 25-75 % range of the samples and the lines displaying the variability to the 10% and 90% levels.

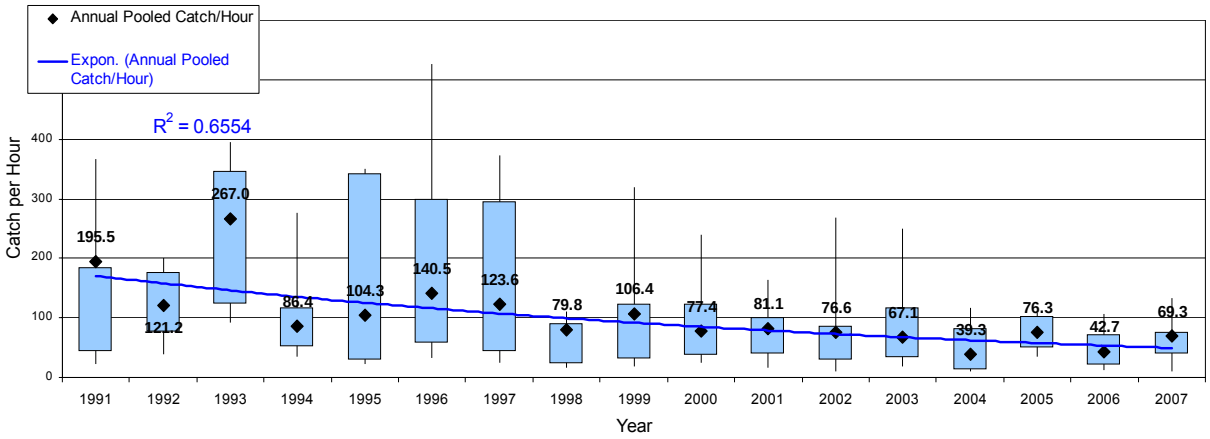


Figure 31. Annual Pooled Bluegill Catch per Hour

In comparison to results in other years, samples in 2007 were about half below average as shown in Figure 32. During 2007, only four samples had bluegill catches above the average catch per hour for each lake and most of the ponds had lower than average catches. Many of the 2006 bluegill catches were at or below their 25 percentile level.

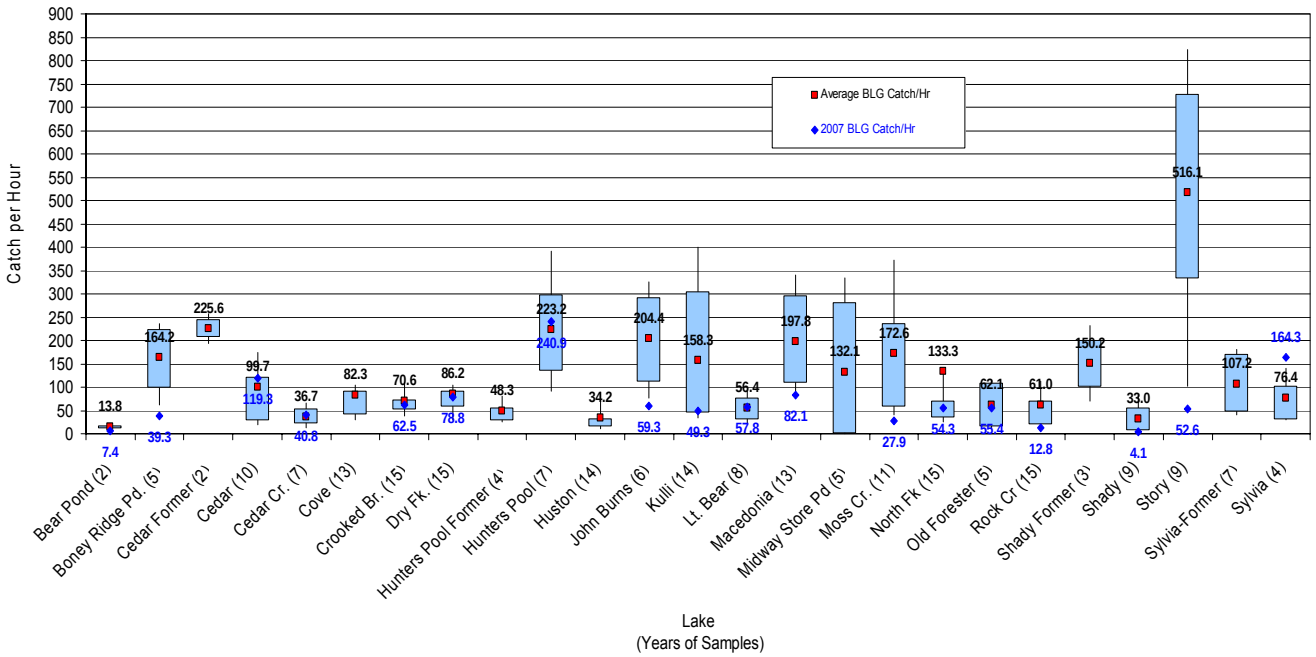


Figure 32. Bluegill Catch per Hour by Lake

Harvestability of bluegill in 2007 (Figure 33), while the sixth highest in seventeen years of sampling, was above last year's Proportional Size Distribution also know as PSD. PSD is calculated from the numbers of bluegill 150 mm (5.9 inches) and larger divided by the numbers of bluegill of stock size (adults) that are 80 mm (3.1 inches) and larger, expressed as a percentage. The trend line shows a slightly increasing trend; however, it is not statistically significant. The 2007 sample shows the largest variability of all samples to date.

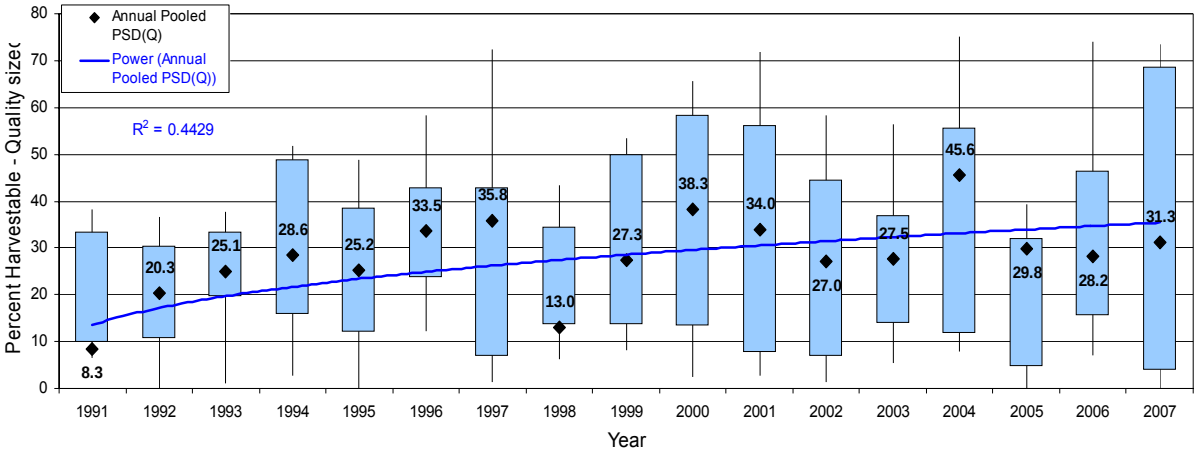


Figure 33. Proportional Size Distribution for Bluegill by Year

The considerable variability of this year's sampling can be seen in the following box-whisker plot (Figure 34). The 0% value for Bear Pond was the result of the sample being the second sample of this new pond with no harvestable bluegill caught this year. However, during 2006, only two adult bluegill were caught, both of which were quality size; therefore, harvestability went from 100% to 0% in two years solely on the basis of two bluegill caught in 2006 and none in 2007. This emphasizes the need to factor catch rates in when examining harvestability as wild swings can occur with low capture rates.

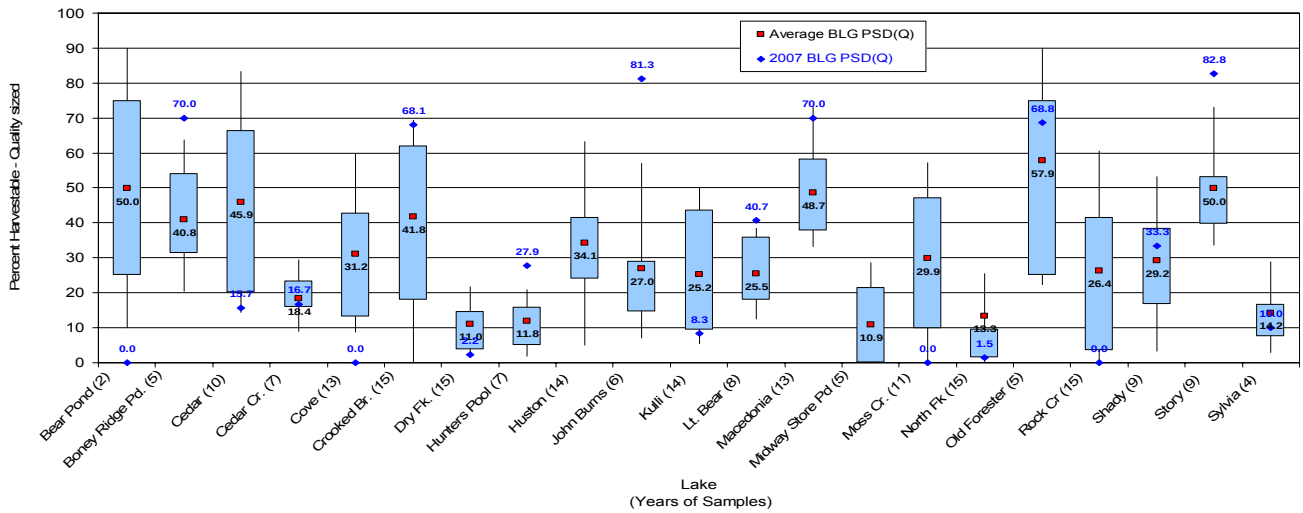


Figure 34. Proportional Size Distribution for Bluegill by Waterbody

The same set of graphs for Proportional Size Distribution (Preferred), previously known as RSD (Relative Stock Density) for bluegills equal to or in excess of 200 mm (7.9 inches) long shows relatively few catches of bluegill above that size with an increasing trend line that is not statistically significant (Figure 35).

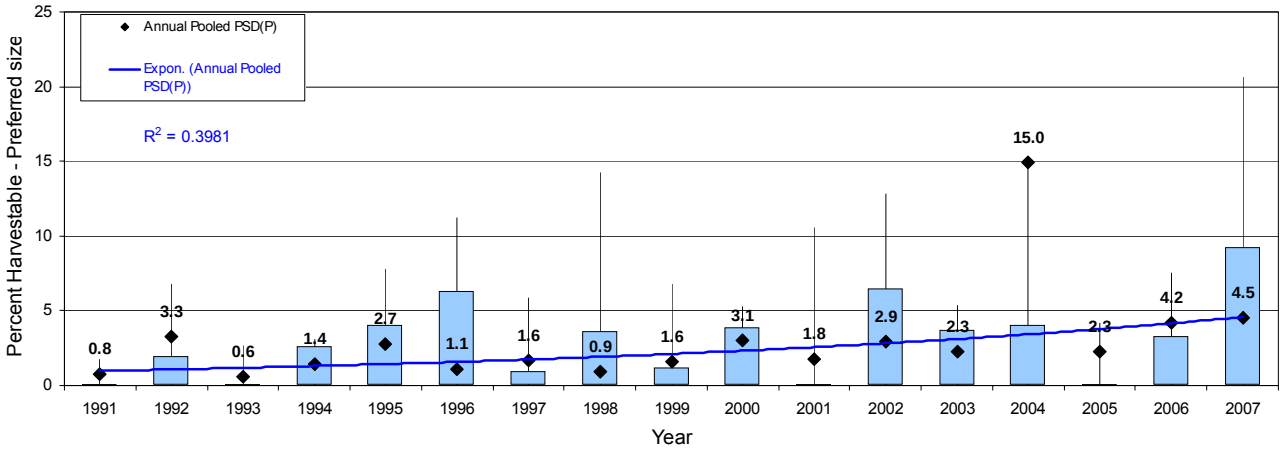


Figure 35. Proportional Size Distribution (Preferred) for Bluegill by Year

Only nine lakes and ponds in 2007 had bluegill in excess of 7.9 inches caught (non-zero values for 2007 BLG PSS (P) (Figure 36).

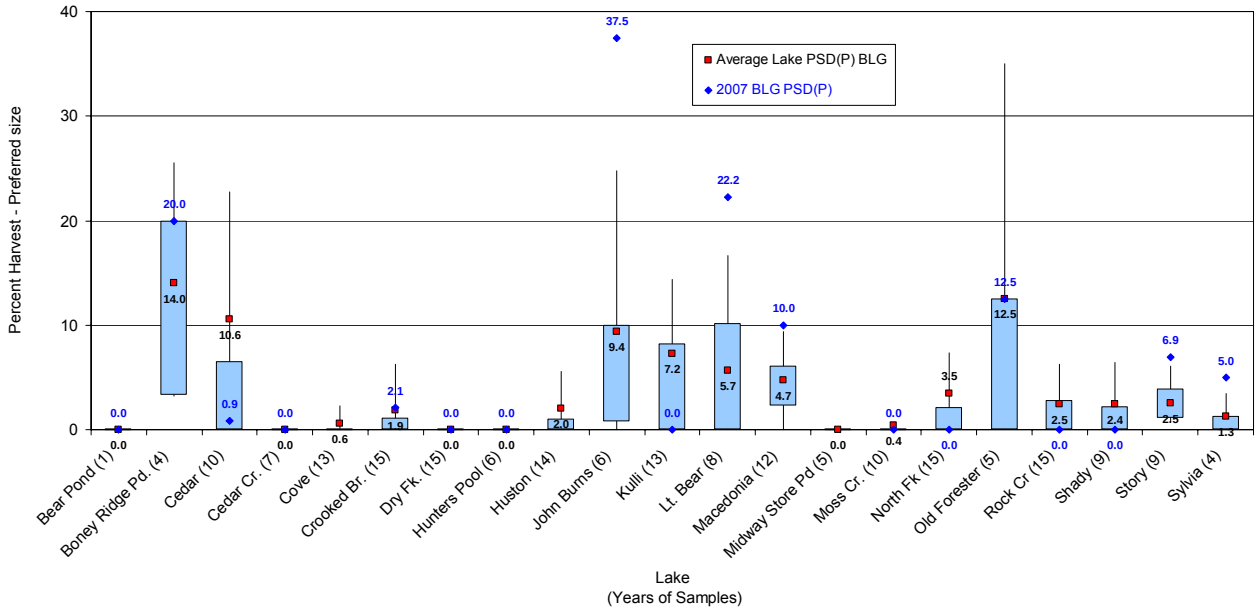


Figure 36. Proportional Size Distribution (Preferred) for Bluegill by Waterbody

The presence or absence of quality and preferred size bluegill in the samples is most often a function of whether spring electrofishing caught the larger bluegill spawning in the shallows or the fall electrofishing caught them schooling on deeper structure in the fall. Bluegill spawning generally occurs later than the ideal temperature window for lake and pond sampling in the spring. If fall water temperatures are too warm, the largest bluegill will not have concentrated on deeper structures. Conversely, if the temperature is too cool or a front is moving or just moved through, bluegill may be too deep to effectively electrofish. With the 2007 bluegill capture rates showing such wide variability; the same would be expected and is seen for PSD and PSD (P) as shown above.

As sampled in 2007, bluegill populations across the Ouachita NF are at suitable and sustainable levels and their viability is not in question.

Largemouth Bass *(Micropterus salmoides)*

The largemouth bass catch rate in 2007 sampling was the fourth lowest in seventeen years of sampling with a trend of increasing catches from 1991 through 1999 and decreasing catches since then (Figure 37), but this trend is of very low statistical significance.

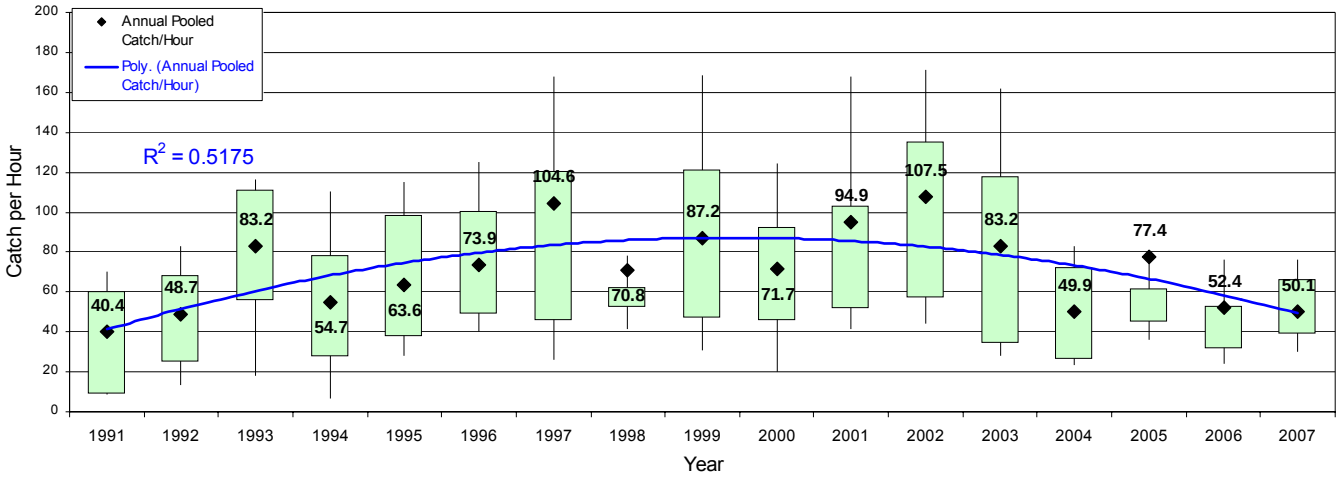


Figure 37. Annual Pooled Largemouth Bass Catch per Hour

Much like the bluegill results, largemouth bass catch rates were low overall, with nine waterbodies within the 25-75% range box and five waterbodies within the 10-90% legs of the boxes and two new low records (Figure 38). Story and North Fork had their second lowest bass catches, but Cedar Creek had the second highest catch. Bear Pond was sampled for only the second time so the data are not fairly represented in Figure 38.

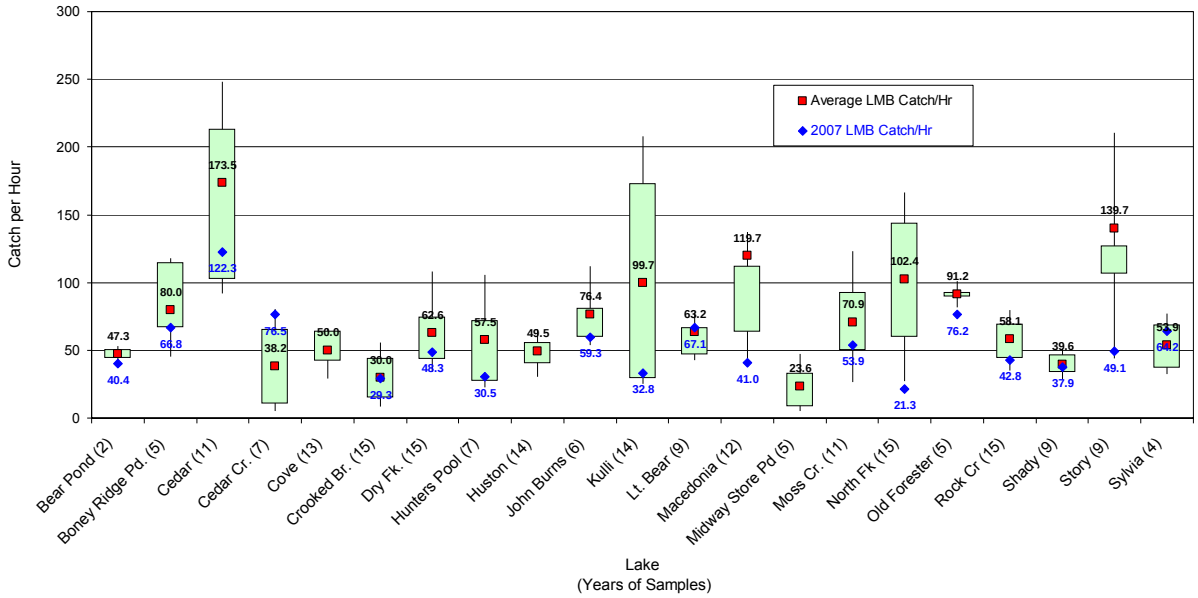


Figure 38. Largemouth Bass Catch per Hour by Lake

Harvestability of quality-sized largemouth bass continued to rise in 2007 and reached the highest value for Proportional Size Distribution (PSD) to date but with highly variable results between waterbodies. This overall trend is statistically significant (Figure 39). Quality bass are those equal to or larger than 300 mm (11.8 inches) and stock size is 200 mm (7.9 inches).

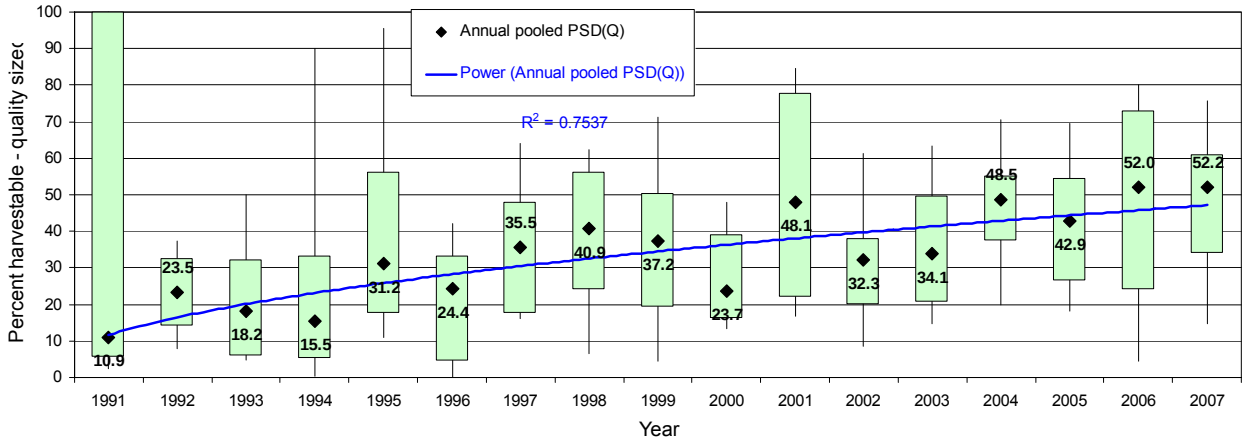


Figure 39. Proportional Size Distribution for Largemouth Bass by Year

Bass harvestability (PSD) values were well above average for Cedar Lake, and Boney Ridge pond, in Oklahoma, and Macedonia and John Burns ponds and North Fork and Rock Creek Lakes, in Arkansas (Figure 40). Bass PSD was well below average for Hunters Pool, Shady Lake and Story and Old Forester ponds. Bear Pond, sampled for the second time in 2007, had no harvestable-sized bass, but the bass population is too young to have reached the 12 inch size. With most 2007 PSD values distributed outside of long-term averages of each waterbody, there is additional support for the assumption of sampling/weather inconsistencies.

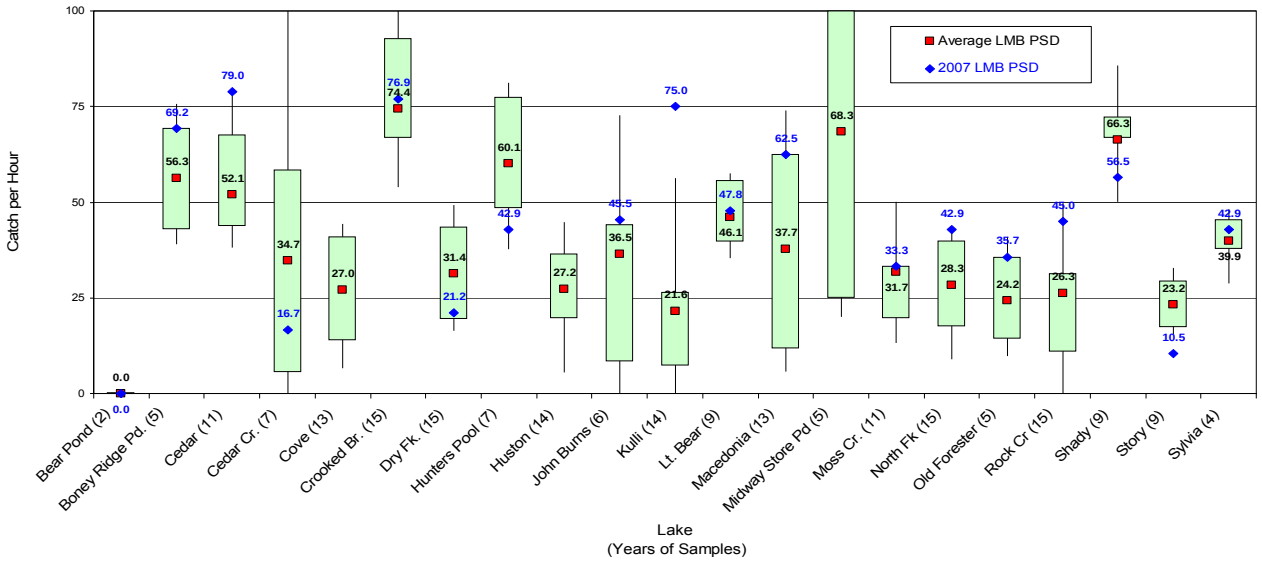


Figure 40. Proportional Size Distribution for Largemouth Bass by Waterbody

Largemouth bass catch of preferred lengths (380 mm or 14.9 inches) was the highest in the 17 years of samples with a pooled value of 23.31% of the total catch of stock size bass and larger and was over double of last year's value (Figure 41). However, there is no statistically significant trend for these values.

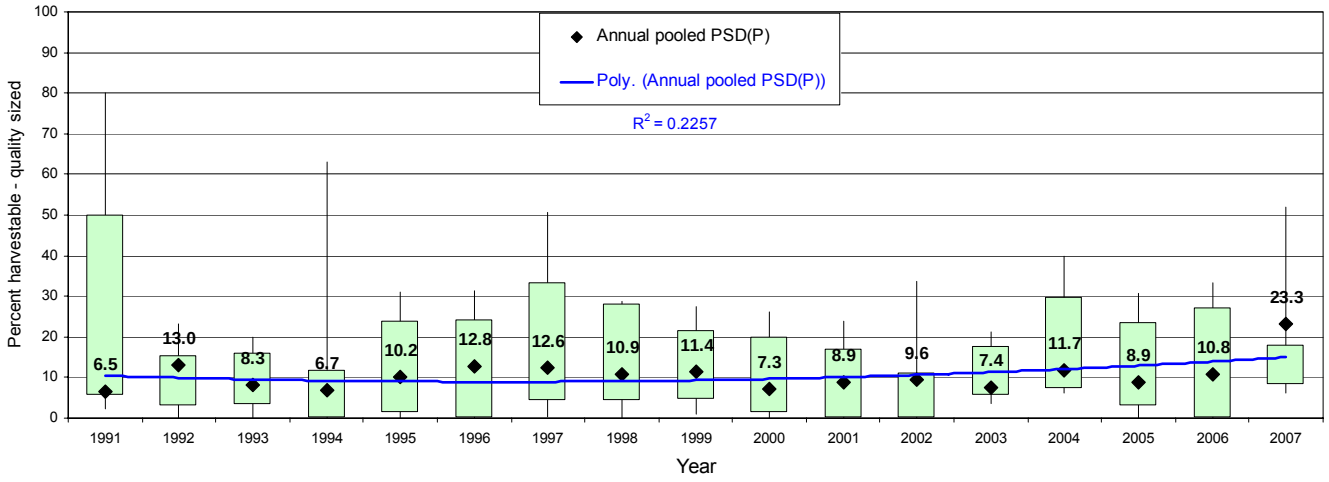


Figure 41. Proportional Size Distribution (Preferred) for Largemouth Bass by Year

For 2007 samples, largemouth bass PSD (P) is within the 25-75% range for eight lakes and ponds, within 10-25% or 75-90% for five waters, and outside of the 10-90% range for five waterbodies (Figure 42). Bear Pond has two samples with none of its bass yet reaching the 15 inch range. Ten of the waterbodies had PSD (P) values above their average value.

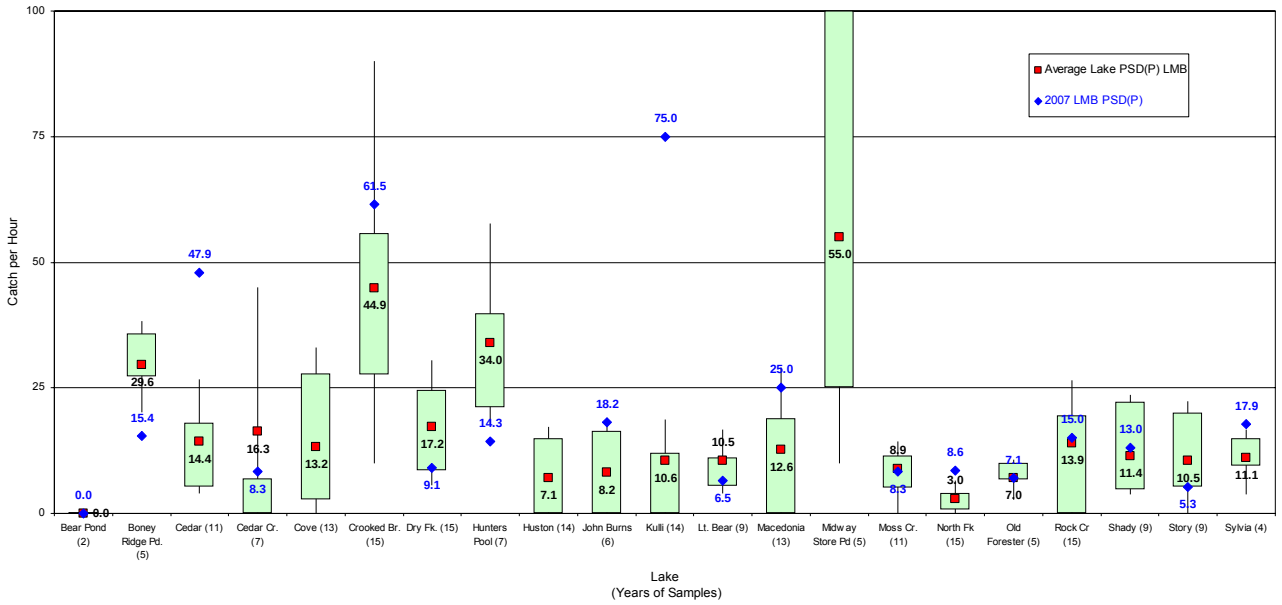


Figure 42. Proportional Size Distribution (Preferred) for Largemouth Bass by Waterbody

Disappointingly, no trophy bass were caught at Cedar Lake in 2007 but, based on results; sampling was too early in the season to have caught the largest female bass spawning. As sampled in FY 2007, largemouth bass populations across the Ouachita NF are at suitable and sustainable levels and their viability is not in question.

Redear Sunfish *(Lepomis microlophus)*

Redear sunfish catches have ranged from four to ninety times less than bluegill or largemouth bass catches over the past 16 years. The redear sunfish catch in 2007 is the fourth highest annual catch (Figure 43). While the redear sunfish annual pooled catch rate trend line shows a slight increase since 1998, the trend is not statistically significant.

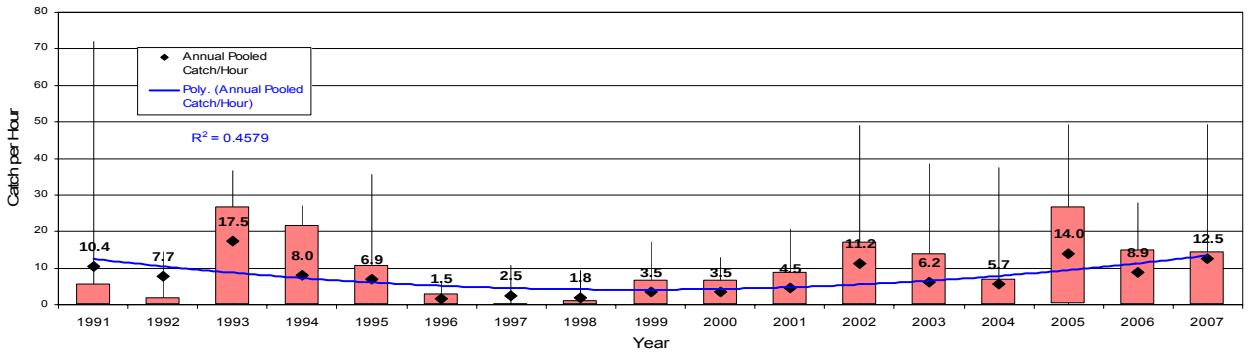


Figure 43. Annual Pooled Redear Sunfish Catch per Hour

The FY 2007 redear catch was dominated by the catch of 113.54 redear per hour at Hunters Pool (Figure 44). Capture of redear sunfish in Hunters Pool prior to and since its rebuilding and restocking has always been greater than elsewhere on the Ouachita NF. This is not unusual for the species, as its native waters are coastal plain pools and backwaters. Hunters Pool is the one of the southern-most, most intensively-managed sport fisheries on the Ouachita NF. Seven of the waterbodies had 2007 results above their average annual redear catch per hour, five were below average, and six waterbodies had zero catch of redears for all years.

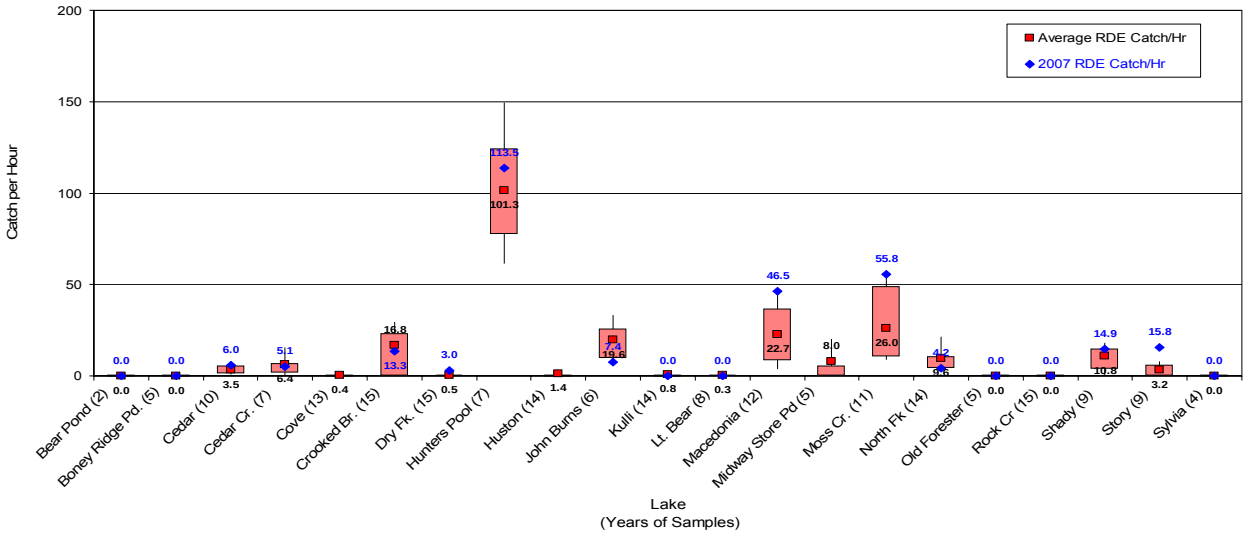


Figure 44. Redear Sunfish Catch per Hour by Lake

Harvestability of redear sunfish utilizes a stock length of 100 mm (3.9 inches) and a quality length of 180 mm (7.1 inches). PSD for the pooled redear catch in 2007 was 2.5 percentage points lower than in 2006. While the trend line peaked in 1999 and has slowly been decreasing since, it is not statistically significant (Figure 45).

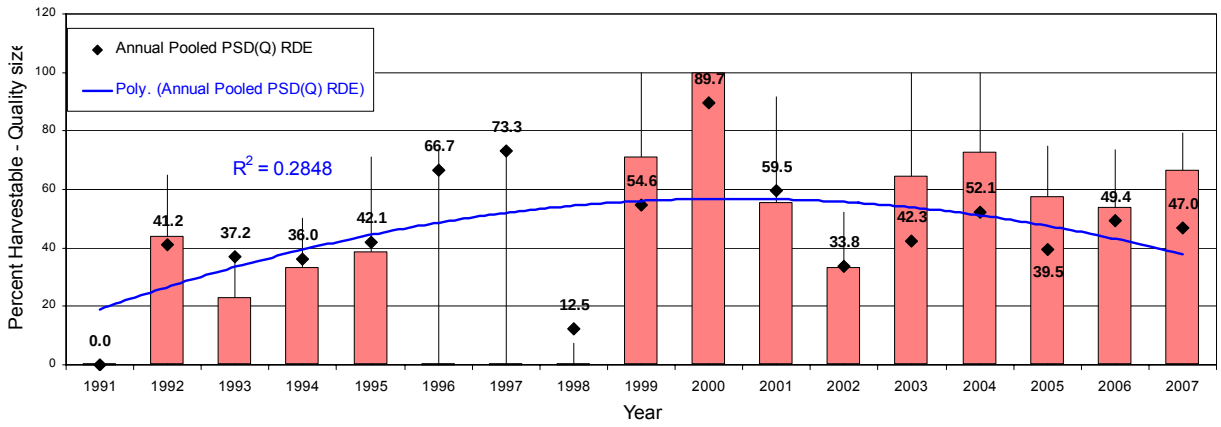


Figure 45. Proportional Size Distribution for Redear Sunfish by Year

The 2007 catch of redear sunfish was dominated by quality sized and larger redear sunfish at Cedar, Crooked Branch, and John Burns Pond, with Crooked Branch and John Burns having percentages above the 90 percentile of their annual samples (Figure 46). Kulli, Macedonia Pond and Moss Creek Pond had harvestable sized redear sunfish just below their long-term average. The particular sunken woody debris structure in Moss Creek, where the majority of large redear sunfish have been caught, appears to have rotted to the point it is providing less cover for redear sunfish. This structure will continue to be sampled, and it has been recommended to the District that additional fish attracting structures be added to existing structure. Typically, redear sunfish are generally only in shallower waters for spawning in the spring and their schooling in the fall may be on structures too deep to efficiently electrofish. However, Hunters Pool, which is quite shallow, has the highest catch rates for this species. With a dense population of redears and less deep water, the pond's redear harvestability rate shows less variability than the other lakes and ponds with deep holes and heavy cover.

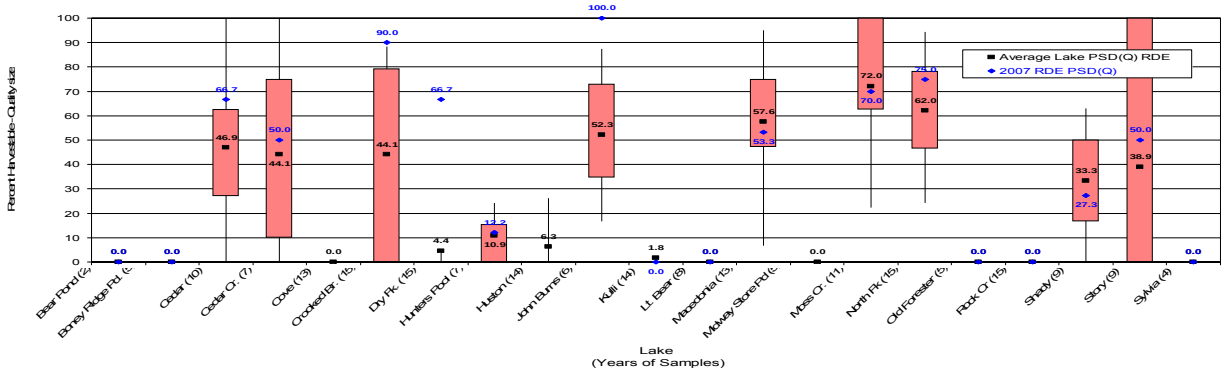


Figure 46. Proportional Size Distribution for Redear Sunfish by Waterbody

For the larger, preferred sized redear sunfish (230 mm or 9 inches), PSD (P) was higher in 2007 than in 2006 but lower than the 2005 figure (Figure 47). The trend line, that peaked in 2000 and since has been showing a downward trend, is not statistically significant.

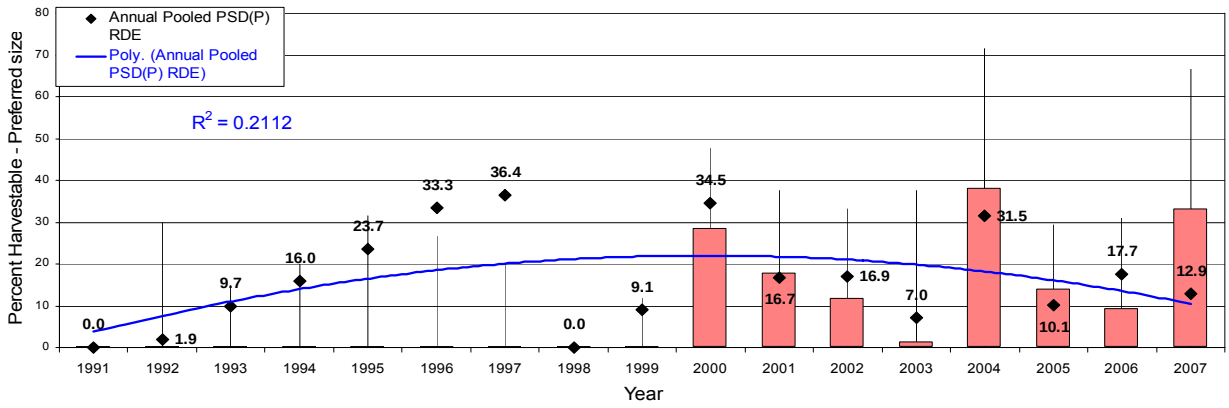


Figure 47. Proportional Size Distribution (Preferred) for Redear Sunfish by Year

The 2007 redear catch of preferred stock size redear sunfish is above average for six lakes and ponds (Figure 48) and below average for three waters. None of Hunters Pool quality-sized redear sunfish achieved the preferred size class. Because of the difficulty in catching large redear sunfish and the variability in PSD (P) seen with small sample sizes, these fluctuations in values are expected to result in trends with little to no statistical significance.

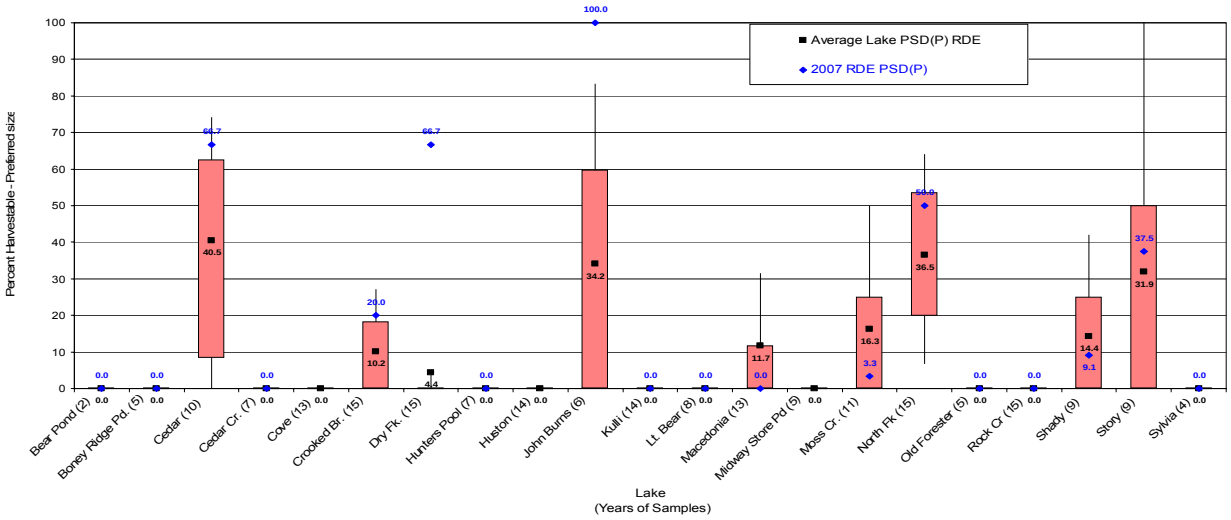


Figure 48. Proportional Size Distribution (Preferred) for Redear Sunfish by Waterbody

As sampled in 2007, the redear sunfish populations across the Ouachita NF are at suitable and sustainable levels and their viability is not in question.

Other Pond, Lake, and Waterhole Monitoring

In addition to the pond, lake, and waterhole MIS species, some additional sampling of pond, lake, and waterhole species is conducted to determine catch and harvestability rates of other game fish or to assess potential hazards to sustainable sport fisheries. For FY 2007, additional monitoring for white crappie, gizzard shad, and threadfin shad was conducted due to angler interest, concern over species expansion, and concern over species introduction, respectively.

White Crappie *(Pomoxis annularis)*

In addition to the previous three lake and pond species tracked Forest-wide, the white crappie population in Dry Fork Lake has been tracked due to anglers' interest at this particular lake. Crappie populations in the rest of the Ouachita NF waters are not nearly as abundant, thus this species is not a Forest-wide MIS. The population in Dry Fork Lake is also being tracked to follow its cyclic population. The pattern of low catch rates and high harvestabilities of both quality (200 mm or 7.9 inches) and preferred (250 mm or 9.8 inches) sized crappie continues (Figure 49). During FY 2007, larger crappie were caught in the low ebb of their population numbers (low catch rates) and show some of the highest harvestability scores.

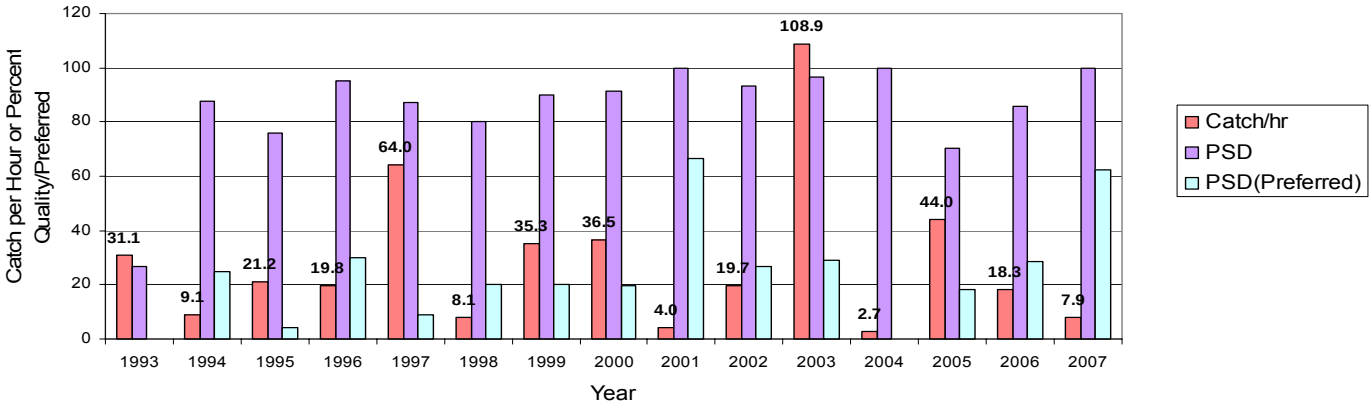


Figure 49. White Crappie Catch per Hour, Proportional Size Distribution (Quality) and (Preferred) for Dry Fork Lake, Perry County

Gizzard Shad *(Dorosoma cepedianum)*

Due to concern that the gizzard shad population in Cedar Lake is expanding and could impact the sport fishing, gill netting was conducted in the fall of FY 2007 to continue to monitor the gizzard shad population. Two new 200-foot monofilament nets, sized specifically to capture these shad and minimize bass catches were utilized in 2006 for the first time. The gizzard shad length frequencies (Figure 50) indicate three year classes caught in the nets in 2006 and three or more caught in FY 2007. The 14-16 inch gizzard shad caught with electrofishing were not seen in the netting results for 2006 but were caught in the nets in FY 2007. Distributions of sizes of the Cedar Lake shad are as expected. The capture of smaller gizzard shad from the FY 2007 spawn may well be the result of the lake refilling later in the spring and triggering a late spawn by the shad.

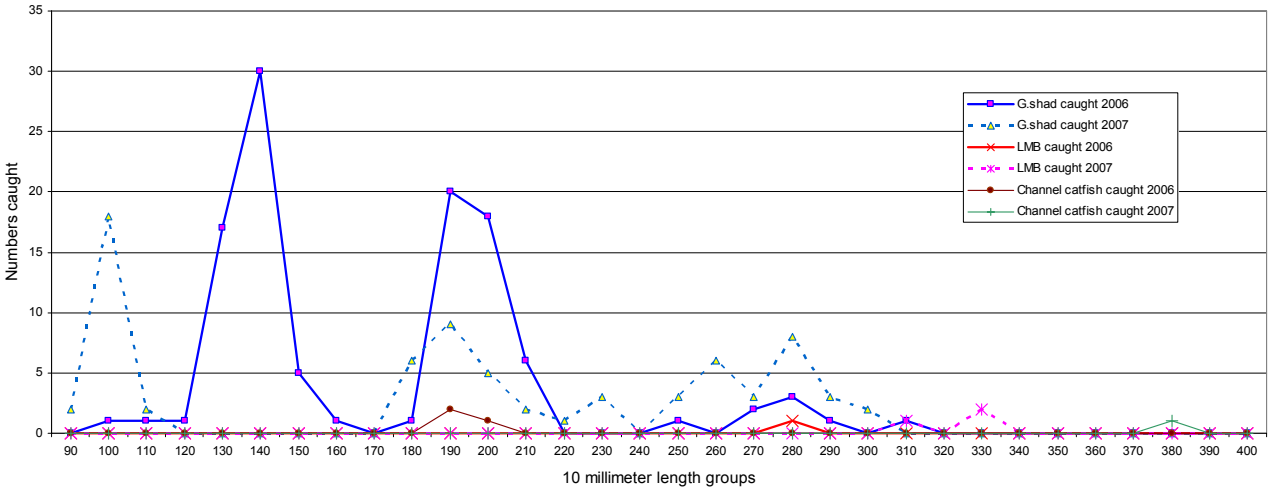


Figure 50. Cedar Lake Gizzard Shad Length Frequencies from Gill Nets (2) for 2006 and FY 2007

The catch per hour was low for gizzard shad and very low for the non-targeted species (Figure 51). While Cedar Lake was gill netted in 2005, the results are not comparable as those nets were significantly different and considerable less footage of nets was fished compared to the past two year's net footages and effort. Catch result differences could well be the result of differences in lake/gill net visibility with length frequency results possibly influenced by the low water levels (11 feet low) experienced from December 2006 through spring 2007. These low lake levels would have resulted in crowding of all species, particularly the pelagic gizzard shad. Large predators would have had the advantage of preying on the crowded prey and the prey species would have encountered more competition for the more limited plankton and detritus food sources.

With only two years of data for two nets, set only one night each year, insufficient data exists for significant interpretation of results. Trends in the gizzard shad population will continue to be monitored by gill netting in order to detect any over population or change in abundance or length frequencies within the gizzard shad population.

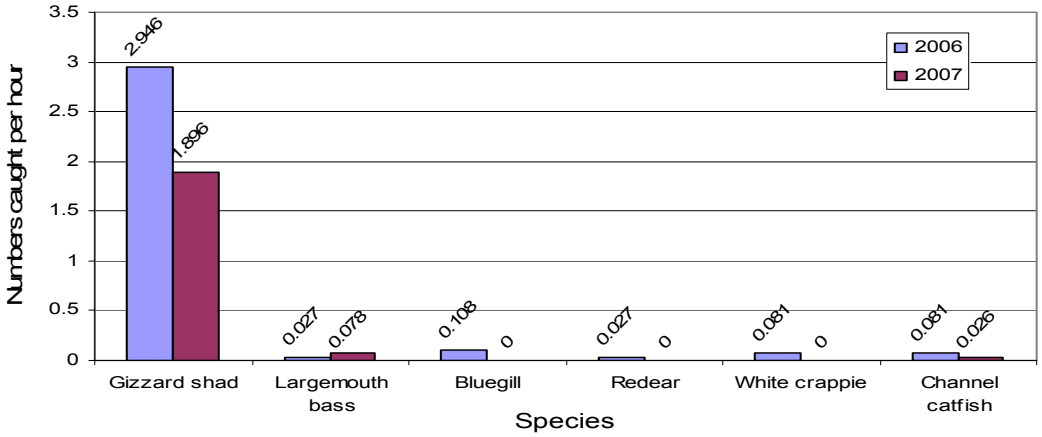


Figure 51. Cedar Lake Gizzard Shad Catch per Hour per Year, Combined Nets

Threadfin Shad *(Dorosoma petenense)*

During 2006 fall electrofishing of North Fork Lake, threadfin shad were discovered. The two, 200 foot monofilament nets described above were set in North Fork Lake to assess the population size and structure. The two nets were fished an average of 22 hours each and caught fish smaller and larger than those electrofished. Data indicate that there are at least two year classes present. Stocking records where checked by the Arkansas Game and Fish Commission and it appears highly unlikely these shad came from their hatchery system leading to a perception that the threadfin shad were stocked in North Fork Lake by the public. The lake was again sampled with two gill nets in FY 2007, set in the same locations and for 47 hours combined fishing time. Results showed a significantly higher catch per hour of threadfin shad in FY 2007 than what was caught in 2006 (Figure 52).

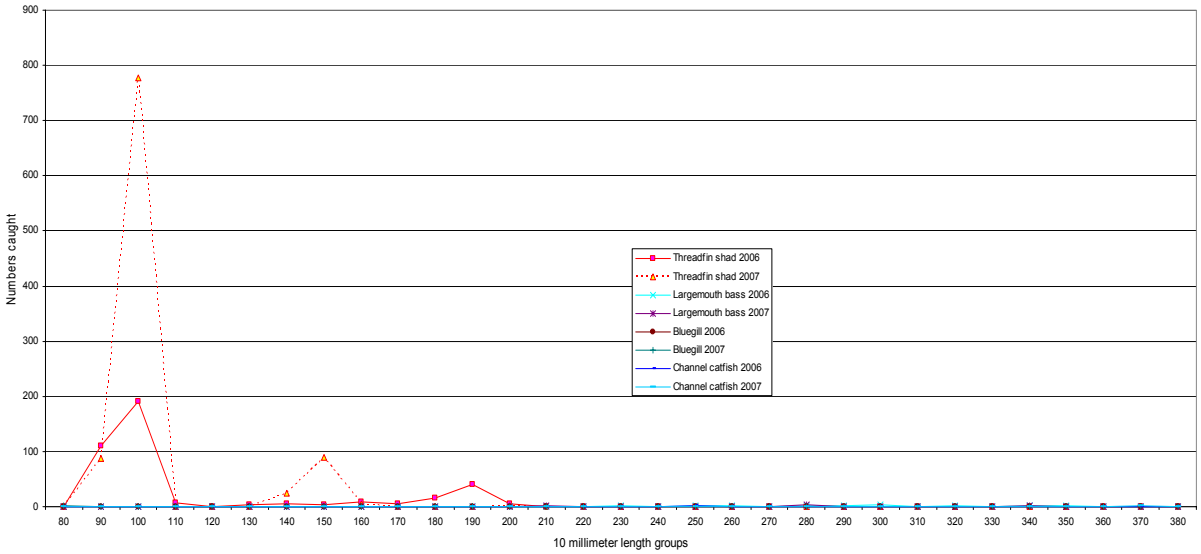


Figure 52. North Fork Lake Threadfin Shad Length Frequencies from Gill Nets (2) for 2006 and FY 2007

The catch rate for the threadfin shad at North Fork Lake was over ten times greater than the gizzard shad catch rate at Cedar Lake. The FY 2007 netting had slightly more by-catch of species (other than threadfin shad) with two additional species (largemouth bass and channel catfish) and 14 individual fish in 2006 and three species (same as above plus bluegill) and eight individual fish in FY 2007 (Figure 53). The catch of non-target species at North Fork Lake was similar in number to Cedar Lake's netting by-catch but more bass were taken at North Fork Lake. Over two times more threadfin shad were caught in FY 2007 for nearly the same soak time as in 2006 resulting in a 20.979 threadfin shad caught per hour in FY 2007 and 9.045 in 2006. No threadfin shad were caught in the net near the dam in FY 2007 and the vast majority of the FY 2007 caught threadfin shad were caught in the half inch mesh (865 out of the total of 986 shad netted) of the net set in the upper half of the lake.

While the threadfin shad catch rate is still considered low, they should increase the forage base for largemouth bass. However, they are also likely to compete with panfish (Mike Armstrong, AGFC Fisheries Chief, personal communication).

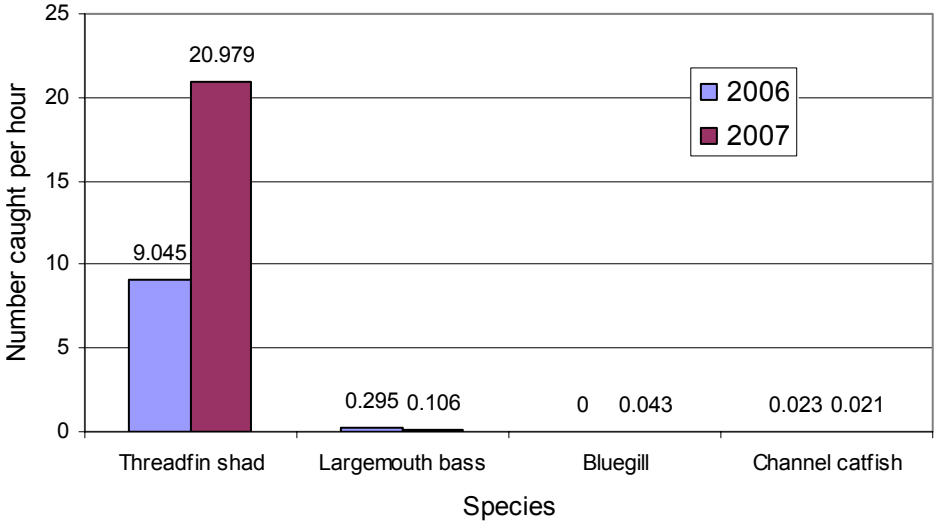


Figure 53. North Fork Lake Threadfin Shad Catch per Hour per Year, Combined Nets

Shoreline Seining

Shoreline seining was conducted in 27 lakes and ponds across the Ouachita NF. Adequate reproduction was found for sunfish and bass in most waters. Difficulties in pulling seines were encountered and noted at several ponds, most of which also had low numbers of bass young. In these cases, the results are more indicative of the ability to seine versus inadequate reproduction. Results also seemed variable based on the week of sampling. Those sampling the first full week of June had lower sunfish/bluegill catch in relation to good bass catches versus those sampling a week or two latter that caught what appeared to be better balanced bass/bluegill catches.

Pond, Lake and Waterhole MIS and Other Species Summary and Conclusions

This review of monitoring information for three pond, lake, and waterhole Management Indicator Species (MIS) is conducted to determine the status of the species and conservation needs. Table 5 displays trends, risk of conservation of species, and management changes needed for the three selected MIS. The review demonstrated that none of the MIS are at risk and that trends are generally as expected. Current management practices are adequate for maintaining viable populations and no management changes are indicated.

Table 5. Summary of Pond, Lake, and Waterhole Management Indicator Species Monitoring

Pond, Lake and Waterhole Management Indicator Species					
Common Name	Scientific Name	Trend Harvestability	Trend Proportional Size Distribution Preferred	Risk for Conservation of Species	Management Changes Needed
Bluegill	*Lepomis macrochirus*	Not Significant, Slightly Increasing	Not Significant, Slightly Increasing	Sustainable- Viability not in Question	None
Largemouth bass	*Micropterus salmoides*	Significant, Increasing	No statistically significant trend	Sustainable- Viability not in Question	None
Redear sunfish	*Lepomis microlophus*	Not Significant, Slightly Decreasing	Not Significant, Slightly Decreasing	Sustainable-Viability not in Question	None

Additional monitoring for white crappie, gizzard shad, and threadfin shad was conducted during FY 2007 even though these are not MIS species. The white crappie population in Dry Fork Lake is monitored because it has been the most abundant population on the Ouachita NF. Monitoring shows that it remains as the most abundant population within the Ouachita NF. Gizzard shad in Cedar Lake is monitored to determine if the population is expanding, and FY 2007 was the second year for monitoring of this species. Insufficient data exists for significant interpretation of results of the two years of monitoring and monitoring of Cedar Lake will continue. Threadfin shad were discovered in North Fork Lake during FY 2006 monitoring. Results from FY 2007 monitoring show a significantly higher catch per hour of threadfin shad than in FY 2006.

Population Trends--Stream and River MIS

There are 21 species of fish associated with stream and river habitat. Monitoring for 12 species is conducted every five years utilizing a Basin Area Stream Survey. Data for the Johnny and channel darter are collected annually.

For Management Indicator Species, how well are the stream and river aquatic habitat conditions being protected, enhanced or maintained?
All stream and river monitoring surveys will be analyzed for changes in aquatic habitat conditions, including the changes in Management Indicator Species during FY 2008, along with the Basin Area Stream Survey data.

Johnny and Channel Darters (Etheostoma nigrum and Percina copelandi)
The Johnny and channel darter data are derived from snorkel counts conducted at permanent monitoring sites for the threatened leopard darter. All darter species are identified during the snorkeling of each transect by an experienced five-member crew.

Johnny darters are more typically found over gravel and sand substrates, much finer substrates than the channel darter's preference for cobble and boulder substrates. Shifts in species distribution were compared to shifts in substrates in an effort to establish a relationship. However, after examining the variability in the two species numbers at the individual sites over several years, it was not possible to draw a direct correlation, and it is suspected that there are more influences than just substrate differences occurring at the site, drainage and regional/climatic levels. The winter of 2004/2005 had fewer and smaller flushing storm events than normal followed by an extremely dry summer with lots of silt and detritus buildups observed and noted in the survey records. The winter of 2005/2006 was wet with numerous spates that

cleaned substrates, but it was followed by a dry summer that set numerous low flow records. The winter 2006/2007 was also wet and led into a wet spring/early summer that showed good darter recruitment. The 2005 and 2006 Johnny and channel darter pooled counts/minute data (Figure 54) show a large increase in Johnny darter counts in the summer of 2005. This may be the result of low winter flows leaving more suitable spawning substrate that resulted in more reproduction, less flushing of post-hatch Johnny darters from suitable rearing habitat and/or better summer foraging habitat. Over the same time period, channel darters show a slight increase across the sampled drainages from 2005 to 2006, which could possibly be in response to the 2005/2006 winter's flushing flows coarsening the substrate. Both species show recovery in FY 2007, particularly channel darters, probably as the results of continuing improvement in spawning conditions with the flushing flows. Trend lines for Johnny and channel darters show a downward trend but only the trend line for channel darters is statistically significant.

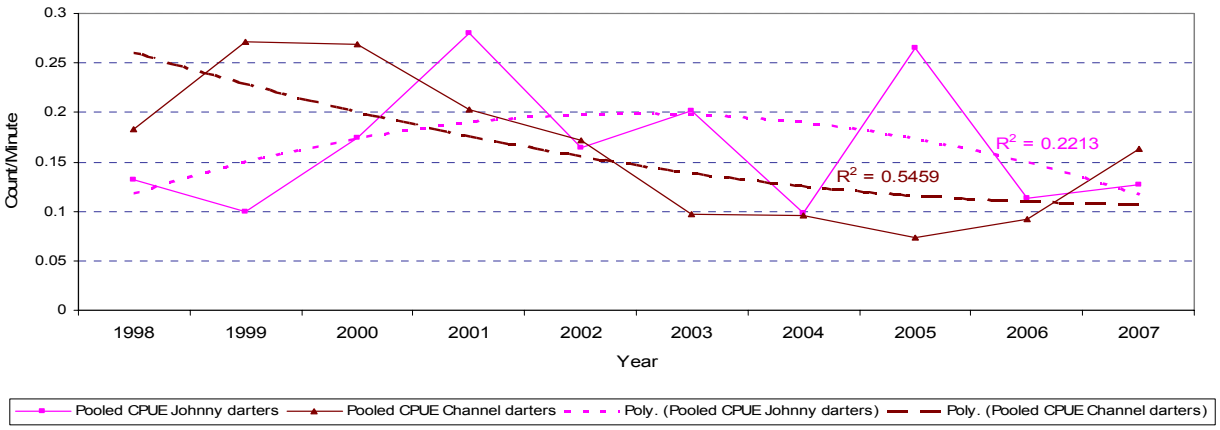


Figure 54. Johnny and Channel Darter Annual Pooled Counts per Minute

Most Johnny darter counts were highly variable in FY 2007 with five sites at or beyond their 10 % or 90% variability limits and only five counts near their median values (Figure 55). As normal, the Mountain Fork River site at Oklahoma Highway 4 Bridge had the highest single count for Johnny darters.

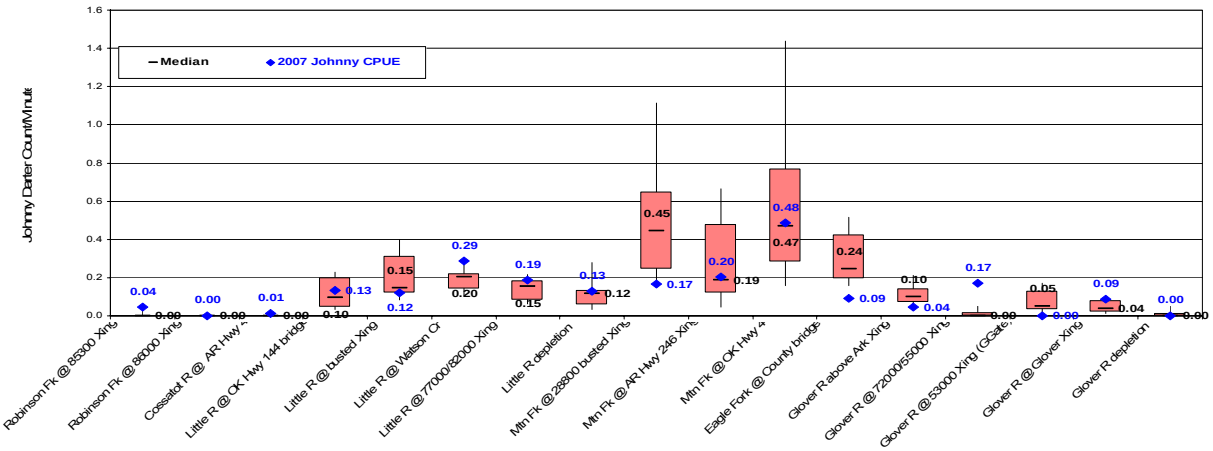


Figure 55. Johnny Darter Counts per Minute by Site

For channel darters, seven of the counts were within the 25-75 percentiles of previous counts, with nine sites above the median and two sites at the 90 percentile (Figure 56). The highest count for channel darters for FY 2007 came from two Upper Little River sites, where some of the highest visibility in the ten years was experienced.

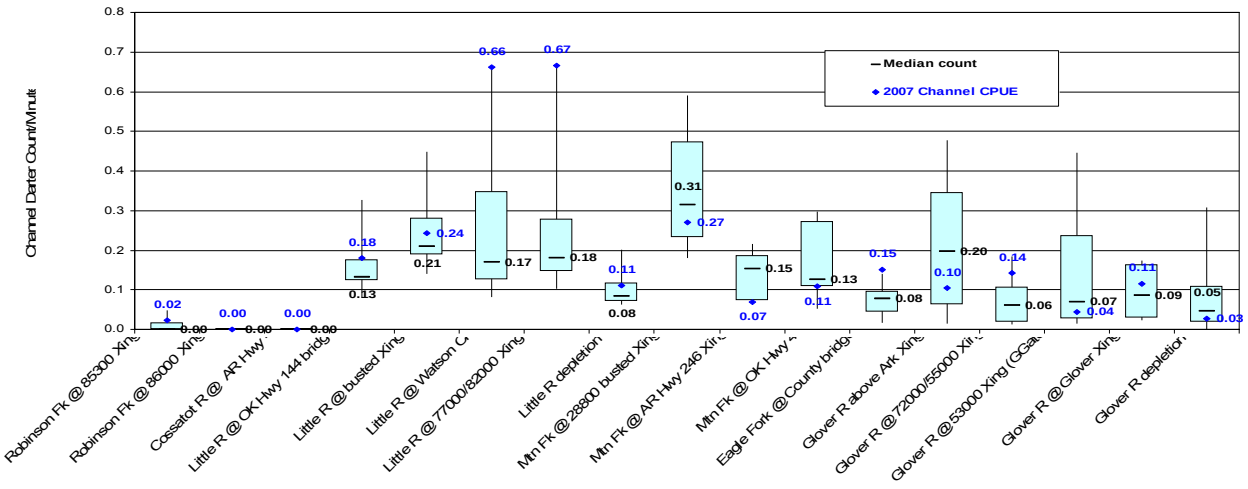


Figure 56. Channel Darter Counts per Minute by Site

Viability is not considered threatened for either the Johnny or channel darter.

Part I for Desired Conditions of the Ouachita NF, Wildlife and Fish Habitat, R8 Sensitive Species and Species of Viability Concern and Habitat. *What are the status and trends of R8 Sensitive species and species of viability concern habitat and/or populations. Annually report findings of all monitoring and research efforts involving Sensitive species and/or species of viability concern. At five year intervals, evaluate population or habitat availability trends.*

Ouachita Darter *(Percina sp. nov.)*

Ouachita darter snorkel surveys were initiated in 2004 as an annual survey from Shirley Creek Canoe Camp downstream to the Arkansas 379 Highway Bridge at Oden. During subsequent monitoring, sites originally surveyed during an Arkansas Tech University study have been utilized with modifications, adding or deleting sites based on flow conditions or occupancy by anglers. Crew size has varied from four to six individuals so counts are analyzed by count per unit of time to address the crew size variable. Given the turnover in individuals conducting the survey, the small number of replicate samples, and the inexperience in surveying for Ouachita darters, variability will either shrink or even broaden over time in addition to population fluctuations. The trend line is not significant, and the availability of only four data points (Figure 57) limits any conclusions that might be drawn.

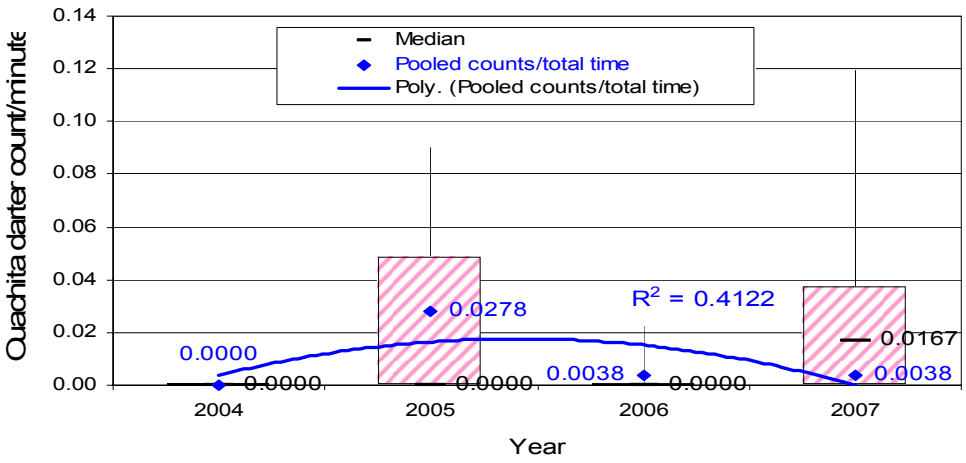


Figure 57. Ouachita Darter Annual Pooled Counts

Only four of the seven sites snorkeled to date have produced counts of Ouachita darters and three have had repeat observations of the darter (Figure 58). Apparently, even small flow differences affect suitability of the monitored sites for the Ouachita darter. This finding is based only on the slight flow differences between the sample dates. The Ouachita darter is usually found in runs with beds of water willows in swift water, or they are found at the head of riffles in pools or runs where not associated with water willow. Timing and crew constraints have not provided tight enough control on flow levels to keep all seven sites within the preferred habitats of the darter.

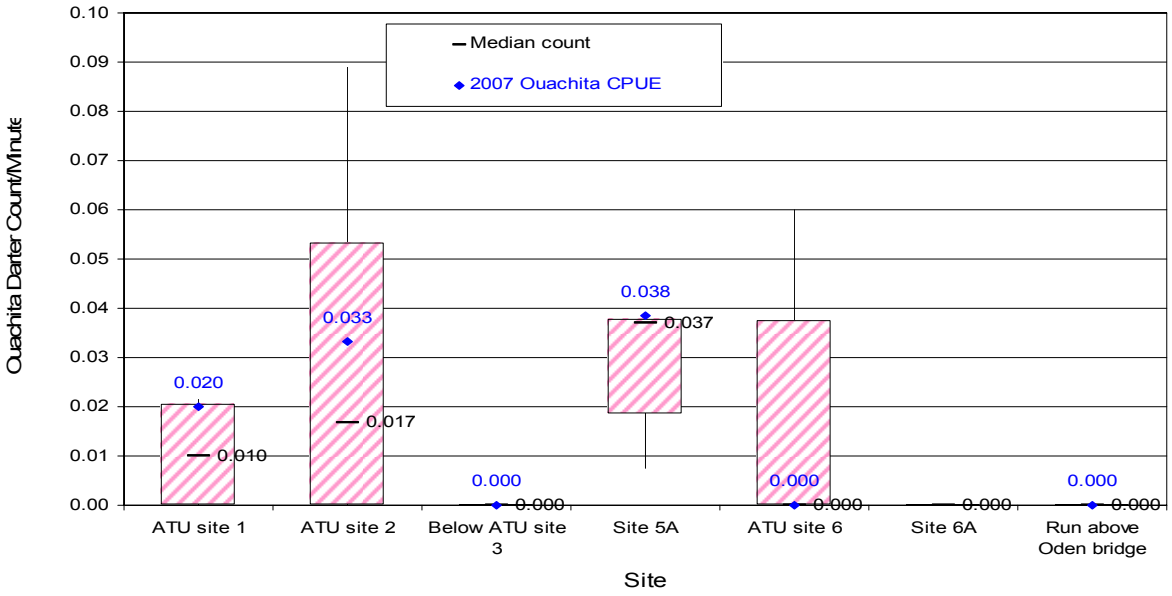


Figure 58. Ouachita Darter Counts per Minute by Site

The Ouachita darter population in this section of the river is considered viable. Additional monitoring and refining of techniques are necessary to better assess the variability in its numbers in this section of the river.

Stream and River MIS Summary and Conclusions

This review of monitoring information for 21 Stream and River Management Indicator Species (MIS) is conducted to determine the status of the species and conservation needs. Results from Basin Area Stream Surveys have not been completely analyzed; therefore, this data will be reported during FY 2008. Monitoring for the Ouachita Darter, an R8 Sensitive Species, is included in this section as the Ouachita Darter is a stream and river species. The Leopard Darter is discussed under the Threatened and Endangered Species Habitat Section.

Threatened and Endangered Species and Habitat Desired Conditions

Proposed, Endangered, Threatened, and Sensitive (PETS) Species Habitat Desired Condition
Habitats for federally listed species (and those proposed for listing) are conserved or restored, and listed species are recovered. Habitats for sensitive species and other species of concern are sufficient to prevent downward trends in populations or habitat capability and to prevent federal listing. Flow regimes and habitat connectivity in streams that provide habitat for Proposed, Endangered, Threatened, and Sensitive aquatic and riparian-dependent species are sufficient to allow the affected species to complete all phases of their life cycles. Vegetation conditions reflect the desired conditions identified for each system in the previous section.

What are the status and trends of federally listed species' populations?

Red-cockaded Woodpecker *(Picoides borealis)*
Red-cockaded Woodpecker: The Red-cockaded Woodpecker data for FY 2007 indicated 103 adult birds and 67 fledglings compared to 88 adult birds and 49 fledglings in FY 2006. Over the past decade, the number of active territories and the number of adult birds are both showing an increasing trend.

Annually report numbers or acres accomplished for each of the following RCW habitat activities:

RCW Habitat Activity	FY 2006	FY 2007
Augmentations	0	0
Artificial Cavities	26	41
Cavity Restrictors	4	17
Predator Guards	30	12
Cluster Predator Control	41	49
Midstory Reduction for RCW (acres)	4,935	2,034
Prescribed Fire for RCW (acres)	8,670	21,164

Annually report numbers or acres accomplished for each of the following activities.

Maintenance of Threatened, Endangered or Sensitive Species Structures (SNEDS-Snake Excluding Device Structure, SQUEDS-Squirrel Excluding Device Structure, restrictors): 212 Structures

Harperella (*Ptilimnium nodosum*)
Harperella is the only endangered plant known to occur on the Ouachita NF. This species typically grows on rocky shoals, in crevices in exposed bedrock, and (sometimes) along sheltered muddy banks. It seems to exhibit a preference for the downstream margins of small pools or other spots of deposition of fine alluvium. In most harperella sites, there seems to be significant deposition of fine silts. On the Ouachita NF, harperella occurs in perennial streams either on or among boulders or large cobbles or on coarse sediment bars. Harperella is often associated with *Justicia americana*, *Gratiola brevifolia*, *Dulchium arundinaceum*, and *Eleocharis quadrangulata*.

Seven sites were monitored in FY 2007: one site on Rainey Creek, four on Irons Fork Creek, and two on Fiddler Creek. It is difficult to sample harperella populations without damaging individual plants due to the large numbers of stems that are usually concentrated in small areas. Sites were monitored in relation to the size of the general area that plants occupied compared to previous years, and an estimate was made of the number of flowering versus vegetative stems. In FY 2007, all seven sites occupied areas similar to previous years, and population numbers were estimated to be similar to those in previous years. All sites were healthy and had an abundance of flowering and fruiting individuals, although one small subpopulation was damaged by vehicle(s) traveling off road at a low water crossing on Fiddler Creek.

Leopard Darter *(Percina pantherina)*
Based on the counts at the eighteen permanent monitoring sites snorkeled during the summer of 2007, leopard darter counts were the third highest (annual pooled count per minute) since sampling at permanent monitoring sites began in 1998 (Figure 59). Until 2006, the trend had been a slight increase in annual pooled counts from 1998 through 2001 (four years). The years 2002 and 2003 showed a decline to less than half of the 2001 count. After two years, in 2005, the second highest pooled count was recorded. The 2005 count is contrasted with the 2006 count at the permanent transect which is the lowest of these leopard darter counts. In FY 2007, the count climbs nearly to the 2005 level. The trend line is not at all statistically significant.

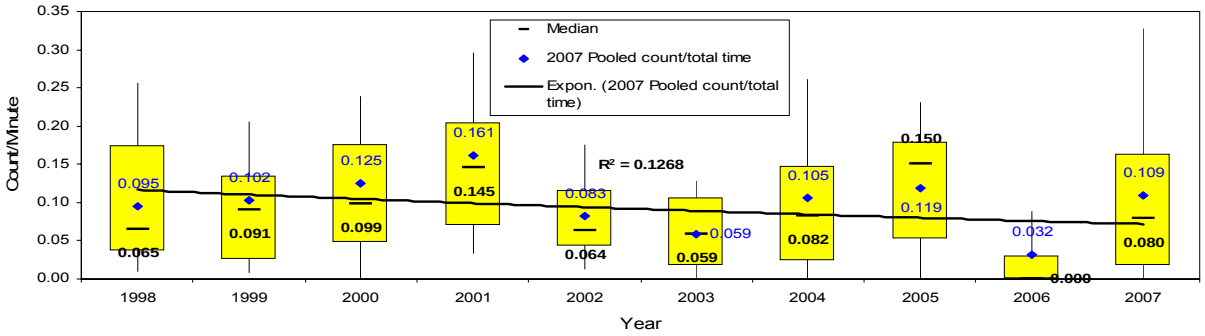


Figure 59. Leopard Darter Annual Pooled Counts

Leopard darters were not seen at three of the seventeen graphed sites and were below the ten percentile mark at one site in FY 2007 (Figure 60). The FY 2007 leopard darter counts were in the lower portion of the 25-75 percentile boxes for four sites, in the top end of the 25-75 percentile boxes for four sites, and between the 10 and 25 percentile points at one site. One site had a count above the 90 percentile with two sites between the 90 and 75 percentiles. This represents a nearly range-wide increase in abundance. The Robinson Fork population represents the only drainage area where all counts were zero; however, it has been typical to

see no leopard darters at the two sites for several years and then to find one or two leopard darters the next year. This off-Forest population is the most vulnerable to extirpation because it is in a small drainage area isolated above a reservoir. The Cossatot population is also quite small within a watershed of mixed ownerships but with significant portions in National Forest and State Park ownership.

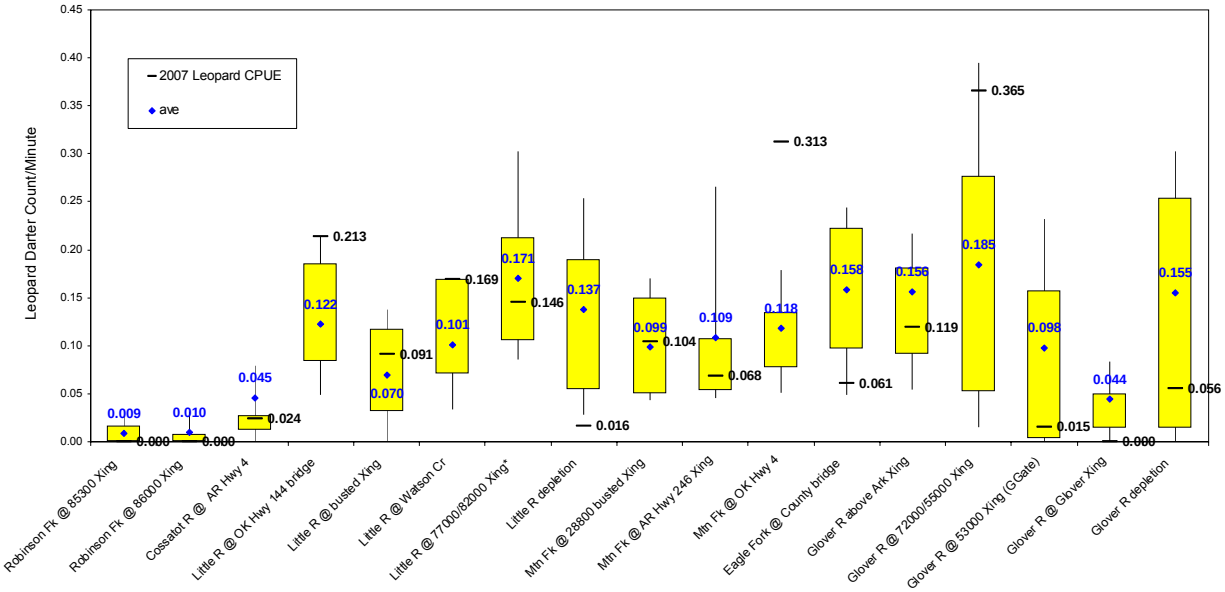


Figure 60. Leopard Darter Counts per Minute by Site

The FY 2007 leopard darter counts are up significantly compared to 2006 monitoring counts, likely the result of clean spawning substrates from a wet winter and good recruitment from a wet spring as discussed for the Johnny and channel darters. As would seem to be indicated by previous monitoring, it generally takes a couple of years after a drought for the leopard darter population to rebuild to pre-drought levels though FY 2007 results are close to 2005 results.

Leopard darters are undergoing a 5-year Status Review by the US Fish and Wildlife Service and results have not been released. Data presented here would indicate the population is experiencing natural variations. There are no new threats perceived to its survival. Additionally, delisting criteria as laid out in the draft recovery plan have not been achieved, so delisting is not anticipated.

Bald Eagle *(Haliaeetus leucocephalus)*
On June 28, 2007 the Interior Department took the Bald Eagle off the endangered species list. The Bald Eagle will still be protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The Ouachita NF had one active Bald Eagle nest during FY 2007. Two fledglings are visible in Figure 61 below.

Figure 61. Bald Eagle Fledglings, Ouachita NF

Bear Den Cave Monitoring for Indiana Bat *(Myotis sodalis)*
Surveys at Bear Den Cave did not find Indiana bats using this winter hibernaculum in FY 2007.

American Alligator (*Alligator mississippiensis*)
The American alligator is considered a threatened species due to its similarity to the American crocodile. Surveys of the American alligator on the Oklahoma Ranger District located 8 alligators in Red Slough and Ward Lake as opposed to 12 alligators counted in FY 2006.

American Burying Beetle *(Nicrophorus americanus)*
Two American burying beetles (ABB or *Nicrophorus americanus*) were caught during 920 trap nights. The two ABB were found on the Poteau/Cold Springs Rangers Districts during 432 trap nights. During FY 2006, three ABB were caught during 921 trap nights.

Listed Freshwater Mussels
Freshwater mussel surveys were conducted in the Caddo, Ouachita and the Saline river systems during FY 2007, in conjunction with the USFWS aquatic specialist and the AGFC malacologist to provide information for the Arkansas fatmucket (*Lampsilis powellii*) five-year status review. The species and numbers of all other mussel species encountered during this survey were also noted. The USFWS concluded that the Arkansas fatmucket should be reclassified as endangered throughout its range, *i.e.,* it meets the Endangered Species Act definition of endangered, which is that a species is in danger of extinction throughout all or a significant portion of its range.

Severe declines were noted for all mussel species' distributions and abundances in the lower Caddo, South Fork Ouachita, Ouachita, Middle Fork Saline, and Alum Fork Saline river systems. Even though populations of Arkansas fatmucket remain in most of the historic stream reaches in the Middle Fork Saline, South Fork Ouachita and Ouachita river systems, the number of localities and Arkansas fatmucket, as well as all other mussel species' abundance at

those localities has decreased since federal listing. Increased channel instability appears to be the primary reason for the extirpation of mussels.

Field surveys and fish host study work conducted from 2003 to 2006 on the Arkansas fatmucket were completed by Dr. Christian and graduate students from Arkansas State University under a cooperative project funded by the Ouachita NF, and results were released in FY 2007. The Final Report of Forest Service Agreement No. 03-CS-11080901-010 (31 October 2006) 'Life History and Population Biology of the Federally Threatened Arkansas fatmucket [*Lampsilis powellii* (I. Lea 1852)] and the State Special Concern Ouachita Creekshell [*Villosa arkansasensis* (I. Lea 1862)]' revealed in the executive summary that the U.S. Fish and Wildlife Service listed *Lampsilis powellii*, Arkansas fatmucket mussel, as threatened in 1990, and by 1992 had approved a species recovery plan. Arkansas fatmucket was listed as threatened due to habitat modification and destruction. *Villosa arkansasensis*, Ouachita Creekshell mussel, is listed as an Arkansas state species of special concern as an S2 species (very rare, typically between 5 and 20 estimated occurrences or with many individuals in few occurrences, often susceptible to becoming extirpated) that is endemic to the streams of the Ouachita Mountains of Arkansas and Oklahoma.

A total of 137 Arkansas fatmucket were found at 19 of 33 surveyed sites during this study. Arkansas fatmucket numbers were significantly reduced across 29 sites between the Harris and Gordon (1988) survey and the current survey. Slightly fewer individuals (14) were located overall in the present survey, 21 sites had fewer Arkansas fatmucket when compared to Harris and Gordon, while seven sites showed an increase in numbers. In general, relative numbers of Ouachita creekshell mussels collected by Harris and Gordon were similar to the current survey.

For the habitat assessment of Arkansas fatmucket Saline River survey sites, 12 sites were classified as optimal and 4 sites ranked suboptimal based on total US EPA Rapid Bioassessment Protocols. Habitat assessment for the Arkansas fatmucket Ouachita River sites indicated 11 optimal and 3 suboptimal US EPA Rapid Bioassessment Protocols scores, with both Caddo River sites classified as optimal. For Ouachita creekshell survey sites in the Saline and Ouachita Rivers USEPA RBP habitat assessment ranged between suboptimal to optimal, with 13 out of 16 Saline River sites ranking optimal and 6 out of 7 Ouachita River sites ranking optimal.

For Arkansas fatmucket host fish suitability trials, a total of 22 fish species representing six families were utilized for the 2003 host suitability Trial 1. Throughout the 2003 Trial 1, a total of 326 juvenile Arkansas fatmucket were collected. These excysted juveniles were from three fish species, with the majority excysting from spotted bass, *Micropterus punctulatus*. Juvenile Arkansas fatmucket mussels excysted only from the Family Centrarchidae (sunfish family) during 2003. During 2004, host suitability Trial 2 utilized 7 species of the sunfish family with a total of 329 juvenile mussels collected from 4 species and with greatest numbers of juveniles transforming on largemouth bass, *Micropterus salmoides.*

For the Ouachita creekshell host suitability trials, the first round of host suitability trials was completed spring 2005 resulting in 19 transformations on 3 host species. Based on the first round of trials, the primary host appears to be the shadow bass, *Ambloplites ariommus*, with secondary hosts being the Creole darter, *Etheostoma collettei,* and Green sunfish *Lepomis cyanellis*. Successful host fish species for the spring 2006 trial included the Creole darter, *E. collettei* and Greenside darter, *E. blennioides*. Thus, Ouachita creekshell appears to use fish hosts from two fish families: Centrarchidae and Percidae.

The consequence of mussel distribution being tied to the distribution of their host fish is that the management for the suitable host fish is paramount in order to conserve and manage the mussel of interest. The fact that the relative abundance of most suitable host fish is fairly low indicates that managing the suitable host fish and by default their habitat is a priority in mussel conservation for these Ouachita River drainage endemics.

The Journal of the Southwestern Association of Naturalists published the following: Status Of Rare And Endangered Freshwater Mussels In Southeastern Oklahoma, By Heather S. Galbraith, Daniel E. Spooner, and Caryn C. Vaughn of the University of Oklahoma, Oklahoma Biological Survey and Department of Zoology.

The conservation status of rare and endangered species of mussels in southeastern Oklahoma was reviewed by completing surveys of 10 long-term monitoring sites on the Kiamichi River and five sites in the Little River. Extant populations of the Ouachita rock pocketbook, *Arkansia wheeleri;* scaleshell, *Leptodea leptodon;* winged mapleleaf, *Quadrula fragosa*; and rabbitsfoot, *Quadrula cylindrica cylindrical* were found. This is the first reported documentation of *Q. fragosa* in the Little River. When these data are compared to historic records, populations, particularly of Ouachita rock pocketbook and rabbitsfoot, appear to be declining.

R8 Sensitive Species and Species of Viability Concern and Habitat

What are the status and trends of R8 Sensitive species and species of viability concern habitat and/or populations?

Annually report findings of all monitoring and research efforts involving Sensitive species and/or species of viability concern. At five-year intervals, evaluate population or habitat availability trends.

Slit-mouth snail - Annually report slit-mouth snail survey results in comparison to past surveys.

Rich Mountain Slit-mouth Snail (*Stenotrema pilsbryi)*
Six thirty-minute surveys (3 hours) were conducted at each of six sites over three days. Live snails were found at all six sites with a total of 15 snails found. Five thirty-minute surveys (2.5 hours) were conducted at each of the five sites over four days in FY 2006. Of the five sites, only four contained snails and eight total live snails were found.

Endemic Salamanders
Report survey results in comparison to past surveys for the Rich Mountain, Caddo Mountain, and Fourche Mountain salamanders:

During FY 2007, Biologists from New York and Oklahoma AGFC with assistance from herpetologist, Kelly Irwin of the AGFC, collected salamander specimens to identify and define species and species boundaries within the *Plethodon ouachitae* complex which includes the Caddo Mountain, Rich Mountain, and Fourche Mountain salamanders, using modern DNA sequence techniques. This work is essential in order to determine the true endemic plethodontid salamander diversity and its distribution in the Ouachita Mountains of Arkansas and should be finalized during FY 2008.

Geologic Resources Desired Conditions

Geologic Resources Desired Condition
Unique geological resources and values on the Ouachita NF are sustained. Threats from geologic hazards to human life, natural resources, or financial investment are minimized.

Report any geologic resources and hazards identified and monitoring results for value of resources discovered and risk of geologic hazards.

During FY 2007, no geologic resources or hazards were identified. Potential threats from geologic hazards to human life, natural resources, or financial investment remain low on the Ouachita NF in both Arkansas and Oklahoma. Where such threats are identified, appropriate actions will be taken to minimize them. Threats identified by Ouachita NF personnel and the public should be identified to the Forest Geologist for evaluation and possible action.

Landownership Pattern and Land Administration Desired Conditions

Landownership Pattern Land Administration Desired Condition
Public lands are easily accessible. Land adjustment administration contributes to the reduction of the complexity of landownership patterns and consolidates the National Forest System land base; reduces administrative problems and costs; enhances public access and use; and supports resource management objectives, including the protection and improvement of habitat condition and linkage. Clear title to National Forest System land is retained. Occupancy trespass is eliminated, and National Forest boundaries are clearly posted.

Landline Location or Maintenance

How many miles of Forest boundaries have been located or maintained?
There were 65.0 miles of landline location or maintenance accomplished on the Ouachita NF, compared to 52.58 miles of landline location maintenance during FY 2006.

How many encroachments have been resolved?
A total of ten encroachments were resolved.

Land
How many acres of land have been purchased?
During FY 2007, 120 acres of land were purchased as compared to 2,257 acres purchased in FY 2006.

How many acres of land have been exchanged?
There were 3,978 acres of lands exchanged (To Proponent, 556; to FS, 3,422) as compared to FY 2006 acres of land exchanged of 72.95 acres (To Proponent, 31.95; to FS, 41.0)

How many acres of land have been sold?
A 9.98 acre administrative site in Heavener, OK containing three residential properties was sold. Considerably more acres were sold in FY 2006 (162.45 acres). The first time that the Forest Service has sold National Forest System lands other than by the Small Tracts Act was during FY 2006. Sales during FY 2006 and FY 2007 were accomplished under PL 108-350 or the Forest Service Facility Realignment and Enhancement Act of 2005.

ROW

How many ROW acquisition cases have been accomplished?

No road easements were acquired during FY 2007.

Heritage Resources Desired Conditions

Heritage Resources **Heritage Stewardship Desired Condition**
Significant heritage resource sites are identified, preserved, or enhanced. Connections are made with the American people on the importance of public land heritage stewardship through public involvement programs. The past, present, and future of heritage resources' role in ecosystem management, including socio-cultural values in an environmental context, are recognized.

Heritage Sites Managed to Standard

Annually report sites managed to standard (sites inventoried, evaluated, protected, promoted, preserved, restored, rehabilitated, monitored, or enhanced). Include the number of site management plans developed, conflicting site-specific land use activities identified and resolved, Section 110 targets achieved, the number of public involvement programs/projects initiated, agreements with research entities, and report and database updates. Every fifth year, progress in increasing the number of heritage resources protected and managed to standard will be evaluated.

The Heritage Resource program on the Ouachita NF involves a wide range of activities ranging from archeological survey and site documentation, to site protection, collections, management, and public outreach. The primary emphasis of the program, however, deals with the task of complying with Section 106 of the National Historic Preservation Act. Section 106 requires that agencies take into account the effects of their actions on historic properties (sites listed on or eligible for listing on the National Register of Historic Places). This generally requires some field investigations, since many of those properties have not previously been identified.

Public involvement is also a strong focus in the heritage program. During FY 2007, the Ouachita NF hosted a number of local volunteers who assist with collections management in the Supervisor's Office. This group provided over 600 hours of service (valued at over $9,000). In addition, the Heritage Resource staff presented numerous programs to archeological societies and civic groups in Arkansas and Oklahoma during the year.

The heritage staff dedicated many hours entering heritage data (sites and events) into the corporate database. This allows more efficient management of the resource and easier upward reporting of program accomplishments. The database also provides documentation of site monitoring activities accomplished during the year. Twenty-one archeological and historic sites were revisited by heritage staff to reassess their conditions.

Heritage Resource Evaluations

Report number of properties of heritage resource evaluation accomplished.

One archeological site, near Shady Lake was formally evaluated for eligibility for inclusion on the National Register, however the evaluation was inconclusive.

Heritage Resource Survey

Report number of acres of heritage resource survey accomplished.

Archeological survey was undertaken on 22,460 acres during the year as a part of Section 106 activities. As a result, 82 archeological sites were found and documented.

Heritage Resources **Tribal and Native American Interests Desired Condition**
The Ouachita NF is maintained in a condition that allows Native American tribes and individuals to retain traditional connections to the land and to foster both traditional and contemporary cultural uses of the Ouachita NF. The Ouachita NF has active agreements and protocols to facilitate consultation (all resources) and government-to-government relationships.

Report the number and types of agreements and protocols executed and the number of consultations accomplished in FY 2007. Every fifth year, feedback, and satisfaction will be evaluated as indicators of progress toward the desired condition.

The Arkansas districts of the Ouachita NF routinely consult with four Tribes (Caddo Nation of Oklahoma, Choctaw Nation of Oklahoma, Chickasaw Nation, and the Quapaw Tribe) and provide copies of environmental and heritage resource documents for their information, review, and comment. The Oklahoma District consults with these same four tribes and two additional tribes (Wichita and Affiliated Tribes and Absentee Shawnee Tribe).

Part of this interaction involves planning and participating in a conference, the To Bridge A Gap Conference, designed to bring together Tribal and Forest Service representatives to discuss issues of interest and concern to both. The conference promotes closer working relationships, consultation, and information sharing between the Tribes and Forest Service. The Ouachita NF, in consultation and cooperation with the Caddo Nation, the Choctaw Nation, the Chickasaw Nation, and the Ozark-St. Francis National Forests, developed the *To Bridge A Gap Conference* to facilitate Government-to-Government relationships with the tribes in Oklahoma in 2002. The conference has been hosted by the Choctaw Nation (2002, 2003), the Caddo Nation (2004), the Absentee Shawnee Tribe (2005), the Muskogee (Creek) Nation (2006) and the Chickasaw Nation (2007). The Ouachita National Forest continues to work with the Oklahoma Tribes.

The Ouachita and Ozark-St. Francis National Forests heritage programs teach a Heritage Resource Technician Training class on an intermittent basis. This class is open to and often attended by Tribal employees.

Public Use and Enjoyment Desired Conditions

Public Use and Enjoyment **Recreation Participation Desired Condition**
Recreation participation, activities, and services contribute to visitors' physical and mental well-being and represent a variety of skill levels, needs, and desires. Quality fish and wildlife habitat and a variety of access opportunities are available to the public. Facilities and infrastructure are high quality, well maintained, safe, accessible, and consistent with visitors' expectations. Primitive recreation opportunities are maintained on at least 70,000 acres, semi-primitive recreation opportunities on at least 136,000 acres, and roaded-natural recreation opportunities on much of the remainder of the National Forest. Existing "rural" recreation opportunities in developed recreation areas are maintained.

How many recreation sites are managed by the Ouachita NF?

There are a total of 118 recreation sites managed by the Ouachita NF.

How many recreation sites were maintained to standard?
There were 99 of the 118 Recreation sites maintained to standard.

What was the occupancy/use rate for each recreation site?
There are 24 recreation sites that are operated as fee sites. Occupancy information as well as use by persons at one time (PAOT) for each of these sites is included in Table 5.

Table 5. Recreation Sites Average Occupancy and PAOT, Ouachita NF

Recreation Site Name	Recreation Site Type	% Average Occupancy FY 2006	% Average Occupancy FY 2007	Use by Persons at One Time (PAOT) FY 2007
Billy Creek	Campground	6	6	70
Cedar Lake	Campground	9	18	*
Cedar Lake	Group Campground	0	0	560
Cedar Lake	Horse Camp	26	26	770
Cedar Lake	Picnic Site	*	0	0
Cedar Lake	Swimming Site	*	0	0
Winding Stair	Campground	12	15	145
Albert Pike	Campground	31	20	310
Bard Springs	Campground	6	4	35
Knoppers Ford	Campground	9	9	85
Camp Ouachita	NFS - Organization Site	5	1	200
Lake Sylvia	Campground	11	0	0
Lake Sylvia	Group Campground	*	*	*
Lake Sylvia	Swimming Site	15	15	442
South Fourche	Campground	6	6	75
Shady Lake	Campground	15	11	340
Shady Lake	Swimming Site	*	0	0
Little Pines	Boating Site	6	6	210
Little Pines	Campground	13	13	50
Little Pines	Swimming Site	30	30	310
Camp Clearfork	NFS - Organization Site	47	47	85
Charlton	Campground	11	12	345
Charlton	Group Campground	*	0	0
Charlton	Swimming Site	*	0	0

* Data not available

As can be seen within Table 5, use of FS maintained fee use recreation areas varies widely, from no reported use to a high of an average occupancy of 47% at Camp Clearfork. Other sites receiving relatively high use are Cedar Lake Horse Camp (26% average occupancy), Albert Pike Campground (20% average occupancy), and Little Pines Swimming Site (30% average occupancy).

Public Use and Enjoyment **Conservation Education and Stewardship Desired Condition**
People connect to the land and to each other, aided by high-quality public information, interpretive services, and environmental education programs/ activities, with nonprofit partners often in a lead or cooperating role. Proactive efforts reach both traditional and nontraditional users and lead to a greater citizen understanding, appreciation, advocacy, and participation in forest stewardship and ecosystem conservation. Particular emphasis is placed on an ecosystem-based approach to management that takes into account the roles of the Ouachita NF as a contributor to local quality of life, including opportunities for sustainable economic development through recreation, tourism, and carefully designed timber harvests; as a producer of clean water; as a provider of habitat vitally important to many native species; and as a source of wildlife, wilderness, and abundant recreation opportunities. Through public involvement programs associated with project-level and plan-level activities, connections are made with the American people on the importance of public land heritage stewardship. The role that heritage resources play in ecosystem management, including the role of socio-cultural values within an environmental context, is highlighted.

How many conservation education products/presentations were presented and what is the estimated number of people reached?
Over 100 presentations were offered and over 55,000 persons, not including those reached by newspaper or television audiences, received information from, or participated in, Forest Service programs. Conservation Education Activities are recorded and attached as Appendix B.

Public Use and Enjoyment **Landscape Management Desired Condition**
The biological, physical, and cultural features of landscapes that provide for a "sense of place" as defined in the Landscape Character descriptions are intact. Landscapes possess a vegetation pattern and species mix that is natural in appearance. Built elements and landscape alterations complement the lines, forms, colors, and textures found in the landscape. Fifty percent of projects undertaken on the Ouachita NF within High Scenic Integrity Objective (SIO) areas will attain a high SIO, 65 percent of projects undertaken in Moderate SIO areas will attain Moderate SIO rating, and 100 percent of projects located in Low SIO areas will attain that rating. Refer to the FEIS, Chapter 3, Scenery Management System for a more detailed description of the Scenery Management System and Scenic Integrity Objectives.

How many of what project types were conducted in areas with a high SIO?
Seven timber management projects, two of which were in Wild and Scenic River Corridors with a very HIGH SIO, and one Special Use Project for a buried electric line adjacent to a wilderness area were conducted.

How many landscape architecture consultations occurred?
Fourteen consultations occurred with a Landscape Architect for the above eight projects.

To what degree were SIOs maintained/achieved?
The Forest exceeded the base requirement of having fifty-five percent of the projects undertaken within a High Scenic Integrity Objective (SIO) area attaining the HIGH SIO, 70 percent of projects undertaken within a Moderate SIO area attaining the MODERATE SIO rating, and 100 percent of projects located in Low SIO areas attaining the LOW SIO rating.

Public Use and Enjoyment **Law Enforcement Desired Condition**
A safe environment for the public and agency employees is provided on National Forest System land; natural resources and other property under the agency's jurisdiction are protected.

It is critical that a safe environment for the public and agency employees is provided on National Forest System lands, and that natural resources and other property under the agency's jurisdiction are protected. Law Enforcement and Investigation (LE&I) continues, however, to work under declining budgets and downsized personnel. In FY 2007, budget deficits required a continued reduction of 33% in the seven Cooperative Law Enforcement Agreements that support local county law enforcement assistance in Arkansas and Oklahoma. The number of Forest law enforcement officers (LEOs) in FY 2007 remained at eight, the same as FY 2006. The historical high of LEOs forest-wide was twelve and the low was five during FY 2005. LEOs often work 120-150 hours in a normally 80-hour, two-week pay period. During FY 07, a total of 3,434 hours of Administratively Uncontrollable Overtime (AUO) were worked by LEOs.

Ouachita NF Law Enforcement (LE) personnel spent approximately 177 days in support of various details away from their home units. These details included security details, fire severity patrols, and large group gatherings. On the Forest, a total of 285 Federal Violation Notices, 436 State Violations, 370 Warning Notices, and 610 Incident Reports were issued. A comparison of LE activity with FY 2006 is provided in the tabulation below.

Fiscal Year	Federal Violation Notices	State Violations	Warning Notices	Incident Reports
2006	256	230	331	444
2007	285	436	370	610

Approximately 8,775 marijuana plants were eradicated from within and adjacent to the Ouachita NF. There were 89 separate investigations initiated, including 29 felony drug cases. Additionally, 98 separate misdemeanor drug cases were documented. These incidents include drug and drug paraphernalia possession, K-9 and Forest Service assists to other law enforcement agencies and working with the various local Drug Task Forces. A comparison of LE activity with FY 2006 is provided in the tabulation below.

Fiscal Year	Marijuana Plants	Investigations	Felony Drug Cases	Misdemeanor Drug Cases
2006	6,300	97	41	51
2007	8,775	89	29	98

Ouachita NF Law Enforcement personnel spent 252 hours in public relations programs for Drug Prevention, Hunter Safety, and Girl Scouts. Forest LEO traveled a total of 229,220 miles in FY 2007, in support of public and agency safety, as well as protection of natural resources and property. Law Enforcement reports show a total of 19,375 public contacts during FY 2007. A comparison of LE activity with FY 2006 is provided in the tabulation below.

Fiscal Year	Public Relations Programs	Miles Traveled	Public Contacts
2006	32	196,423	12,236
2007	252	229,22	19,375

How many facilities were maintained to standard?
Ouachita NF facility inventory included 356 buildings that are categorized as follows: Existing; Operational or Existing; or Abandoned. Nearly 87%, or 309, were rated good or fair, leaving 47 facilities rated poor. The majority of buildings rated "poor" are at Camp Ouachita which is undergoing renovation.

How many new facilities do not meet Built Environment Image Guide (BEIG) principle Forest-wide?
There are no facilities known to fall short of BEIG principles on the Ouachita NF.

Facility Operation and Maintenance - Transportation System Desired Condition

Facility Operation and Maintenance - Transportation System Desired Condition
The transportation system of roads and trails is safe, affordable, and environmentally sound, responds to public needs, and is efficient to manage. The system provides public access for recreation, special uses, and fire protection activities and supports Ouachita NF management objectives. The system is well maintained commensurate with levels of use and available funding. The system is connected to state, county, or local public roads and trails. Unnecessary roads and trails are removed and the landscape restored. Rights-of-way to access National Forest System lands satisfy public needs and facilitate planned resource activities. Over the planning period, the number of inventoried unclassified roads and trails is reduced, and the development and proliferation of new unclassified roads is minimized. An environmentally sustainable, integrated system of backcountry and rural non-motorized trails is maintained. The system can accommodate a range of experiences in high-quality settings for a diverse visitor population; conflicts among users are minimized; and opportunities for partnerships are provided. The availability of day use "loop hikes" is improved. Recreation opportunities for Off-Highway Vehicle (OHV) enthusiasts will be available within an integrated system of designated roads and trails. Designated OHV routes provide a high-quality OHV experience. Conflicts between OHV enthusiasts and other recreational uses, with private lands and homeowners adjacent to National Forest land, and with resource issues are addressed and resolved in a timely manner. Resolutions are consistent with area objectives and management direction.

How many miles of road by maintenance level exist?
Miles and percentages of roads by maintenance level for FY 2007 are presented in Table 6.

Table 6. Maintenance Level 1- 5 FS Roads, FY 2007, Ouachita NF

Maintenance Level	Miles	Percentage
1 - Basic Custodial Care (Closed)	1,665	30.0
2 - High Clearance Vehicles	2,661	48.0
3 - Suitable For Passenger Cars	1,160	20.9
4 - Moderate Degree of User Comfort	46	0.8
5 - High Degree of User Comfort	18	0.3
Total	**5,550**	**100.0**

How many miles of roads were operated and maintained to meet the objective maintenance level and class?
There were 550 miles of road operated at assigned objective maintenance levels and maintained to sustain the assigned objective maintenance level. In FY 2006, 558 miles of road were operated and maintained to meet the objective maintenance level and class. Declining road maintenance budgets are contributing to difficulties in meeting objective maintenance levels and classes.

How many miles of arterial/collector roads were reconstructed this year?
There were 6.44 miles of arterial/collector roads (4 roads) reconstructed as compared to 15.56 miles of arterial/collector roads (7 roads) during FY 2006.

How many miles of arterial/collector roads were constructed this year?
No new arterial/collector roads were constructed during FY 2006 or FY 2007.

How many miles of local roads were reconstructed this year?
There were 34.20 miles of local roads reconstructed as compared to 55.4 miles during FY 2006.

How many miles of local roads were constructed this year? How many miles were added (classified) to the system?
There were 4.28 miles of local roads (8 roads) constructed and added to the system as compared to 15.99 miles of local roads (22 roads) during FY 2006.

How many miles of road were removed from the system (decommissioned)?
There were 12.30 miles of road removed from the system as compared to 204.35 miles of road removed from the system during FY 2006.

How many accidents were reported (both road and trail)?
Within or adjacent to the Ouachita NF, LEOs responded to or assisted with 37 accidents. These numbers include minor injuries (sprains, allergic reactions, dog bites, etc); ATV, motorcycle, and motor vehicle accidents; and a plane crash. Thirteen separate search and rescue operations were also conducted. Officers conducted 32 compliance checkpoints to address the growing traffic, ATV and alcohol violations occurring as a result of increased public visitation on the Ouachita NF. Additionally, LE&I experienced a felony assault on an officer in which the officer had to deploy their firearm. A comparison of FY 2006 and FY 2007 LEO activity on the Ouachita NF follows.

Fiscal Year	Accidents			Search & Rescue	Compliance Checkpoints
	Personal	Plane/Vehicle/Motorcycle	ATV		
2006	8	23	*	9	0
2007	30	4	3	13	32

*Data not reported in FY 2006

Were any visitor satisfaction surveys for roads or trails conducted during FY 2007?
No

How many miles of non-motorized trail exist?
There were 553.8 miles of open, non-motorized trail managed.

How many miles of motorized trail exist?
There were 176 miles of open, motorized trail managed.

How many conflicts were identified by field staff or reported by the public?
Conflicts between OHV riders and other users were not tracked during FY 2007. Some complaints were received about multiple use of trails and conflicts between equestrians and motorcyclists in Oklahoma. Also, some information was received from the public about illegal OHV use on the Ouachita National Recreation Trail. During FY 2007 monitoring, one sub-population of the federally endangered plant, *Harperella,* was damaged by OHV traversing the stream and stream bank.

Commodity, Commercial, and Special Uses Desired Conditions

Commodity, Commercial, and Special Uses Minerals and Energy Development Desired Condition
Minerals and energy developments meet legal mandates to facilitate production of mineral and energy resources on the Ouachita NF in a manner that minimizes adverse impacts to surface and groundwater resources.

How many minerals cases were administered during this fiscal year?
There were 640 cases (Active Cases; 75; Inactive Cases and Oil and Gas Leases: 565) administered as compared to 403 in FY 2006.

How many operating plans have been administered to standard?
There were 75 operating plans administered to standard.

How many violation notices were issued this year?
None

Report emerging issues.
Gas exploration interest is increasing associated with the Fayetteville shale formation.

Reserved and Outstanding Mineral Rights

Number of operations proposed under outstanding and reserved mineral rights processed
None

Number of operations proposed under outstanding and reserved mineral rights processed within 60 days and 90 days, respectively.
Not applicable.

Commodity, Commercial, and Special Uses Livestock Grazing Desired Condition
Livestock grazing opportunities are maintained consistent with other resource values in designated livestock grazing areas (allotments).

Livestock grazing demand is still in decline on the Ouachita NF, and it is expected that this trend will continue. Weyerhaeuser Company terminated the Cooperative Agreement with the Ouachita NF at the end of the 2005 grazing season.

How many range allotments are currently active on the Ouachita NF?

There is a general downward trend in the number of range allotments. The number of range allotments has remained at 16 since FY 2004, which is a decrease from the 20 active allotments in FY 2003.

How many acres of the Ouachita NF are in range allotments?

Beginning with FY 2007, the number of acres in range allotments was tracked. For FY 2007, 201,675 acres were in active range allotments, down from 275,815 acres in FY 2006, a decline of 74,140 acres.

How many permittees are associated with the range allotments?

There is a general downward trend in the number of permittees holding range allotments. There are 15 permittees, as compared to 20 in FY 2006

How many Head Months are associated with the range allotments?

There were 1,813 head months grazed. For FY 2006, 2,274 head months were associated with range allotments.

How many head of livestock are associated with the range allotments?

Fewer animals are being grazed. In FY 2007, 300 head of livestock were associated with range allotments, representing a decrease of 40.5 percent since 2005.

How many acres of range forage improvement were accomplished this year?

During FY 2007, acres of range forage improvement further decreased to 300. Acres of range forage improvement decreased from FY 2005 to FY 2006 from 1,110 acres to 500 acres, respectively.

Commodity, Commercial, and Special Uses Lands and Special Uses (Non-recreation) Desired Condition
Facilities are centrally located or concentrated on existing sites or designated corridors, minimizing the number of acres encumbered by special use authorizations. Special uses serve public needs, provide public benefits, and conform to resource management and protection objectives. All uses are authorized and are in full compliance with the terms and conditions of the authorization.

Special Uses

How many special use permits, by type, are active?

There were 506 authorizations on the Ouachita NF during FY 2007 compared to 532 in FY 2006.

Type of Authorization	FY 2006	FY 2007
Roads	318	317
Water Lines, Electric, & Telephone Utilities	58	58
Research or Resource Surveys	13	11
Dams and Reservoirs	24	24
Communication Uses	74	60
Recreation Uses	10	7
Community Uses	7	7
Misc. Uses	21	15
Total	532	506

Appendix C contains a list of 20 approved communication sites and this list remains unchanged from FY 2006.

Although no clear trends are emerging, State agency requests to utilize government owned facilities is increasing.

Firewood

How many cords of firewood were sold?

There were 1,299 cords of firewood sold, which is a decrease from the 1,364 cords sold in FY 2006, but more than the 1,022 cords sold in FY 2005.

Fire (Community Protection and Safety) Desired Conditions

Fire (Community Protection and Safety) Desired Condition
The Wildland Urban Interface (WUI) is that area of Federal land immediately adjacent to the at-risk communities and typically extends one-quarter to one-half mile either side of National Forest System lands. The goals within the WUI are to reduce the risk of loss of human life, enhance protection of homes and improvements, and provide an area where firefighters can safely conduct tactical operations to stop the spread of a wildland fire. In WUI areas, vegetation management to restore, maintain, or enhance fire-adapted ecosystems to an approximate "reference condition" will be vigorously undertaken. For these types of ecosystems (Fire Regime 1), stands will be treated by reducing the number of overstory trees per acre (to approximately 50 to 70 square feet basal area) and removing woody midstory and understory vegetation. A "park-like" or "woodland" condition is the goal in both pine and oak types and is the most common condition where fuel mitigation projects are likely to be initiated. Local jurisdictional authorities, citizen groups, and the Forest Service will act together to mitigate hazardous fuel conditions in areas surrounding at-risk communities and developments. Practices such as the creation of "defensible space" around structures will be encouraged through fire prevention programs such as "Firewise."

How many acres within the Wildland Urban Interface (WUI) have received hazardous fuel reduction treatments?

Specific hazardous fuel treatments were accomplished on 83,136 acres, most of which were in the WUI. Other fire treatments on the forest also improve conditions in the WUI.

In FY 2006, hazardous fuel treatments were accomplished in the WUI on 47,486 acres, and 28,151 acres were accomplished in non-WUI.

What changes, by acres, to condition class have occurred?
There currently is no working database that accurately tracks condition class changes. It is estimated that over 150,000 acres were likely to have changed condition class as a result of fuels mitigation and related vegetation management activities. Prescribed fire treatments that lowered condition class included 83,000 acres specifically designed to reduce hazardous fuels and 68,000 acres treated with prescribed fire to address other resource benefits, *e.g.,* wildlife, non-native invasive weed control, etc. Condition class was effectively lowered on all treatment acres where activities moved current vegetation (composition and density) closer to reference conditions. Condition class changes represent greater gains in reaching reference conditions usually where multiple treatments have taken place in the past five years, such as thinning treatments followed by frequent fire treatments.

How many cooperative agreements involving how many acres were accomplished this year?
Several agreements involving thousands of acres were implemented. There currently is no working database available that tracks all agreements and/or provides a suitable means for summarizing data. Estimates are as follows:

Wyden Amendment – Ranger Districts, under authorities provided by the Wyden Amendment, may conduct prescribed fires on tracts of private land adjoining Forest Service ownership. No prescribed fires were conducted under this authority during either FY 2006 or FY 2007.

Stevens Act – Each year the Districts conduct prescribed fires jointly with the Arkansas Forestry Commission (AFC) on private lands adjacent to Forest Service ownership. Landowners sign an agreement with AFC to conduct prescribed fires. Working together, the Forest Service and AFC then coordinate prescribed fire activities. In FY 2007, Steven's Act Burning by the Arkansas Forestry Commission exceeded 9,000 acres which compares to over 4,000 acres in FY 2006.

What "communities at risk" and "communities of interest" have been positively affected by prescribed fire or other treatments that have reduced hazardous fuels and the threat of catastrophic wildfire?

Arkansas

Communities at Risk	Communities of Interest
Blackfork	Albert Pike
Bonnerdale	Crystal Springs
Danville	Story
Bluffton	Jessieville
Fourche Valley	Blue Springs
Fourche Junction	Mountain Thyme
Joplin	Blakely
Waltreak	Cherry Hill
Onyx	Aplin
Rover	Post Mountain
Steve	Chula
Chalybeate Springs	Ouachita CCC (near Royal)
Blueball	
Eagleton	
Winfield	
Black Springs	
Harvey	

Oklahoma

Communities at Risk	Communities of Interest
Sherwood	Cedar Lake
Haw Creek	Conser
	Pipe Springs
	Stapp
	West Holson Valley
	Lenox

How many wildfires occurred (by size and cause)?
During FY 2007, 68 wildfires burned 14,347 acres on the Ouachita NF. Of the total number of fires, 20% were lightning-caused and 29% of the total acres burned were a result of these natural ignitions. Arson accounted for 34% of all fires and about 6% of the total acres burned. Other causes of wildfires include escapes from debris burning (15%), campfires (7%), equipment (1%), railroads (12%), and other miscellaneous causes (11%). This compares to an unusual FY 2006, when 187 wildfires burned 23,185 acres. Lightning caused forty-six percent of the total number of fires and 87% of the total acres burned were a result of these natural ignitions. Arson accounted for 31% of all fires and about 8% of the total acres burned.

Wildfire Activity	FY 2006	FY 2007
Total Incidents	187	68
Total Acres	23,185	14,347

Wildfire by Cause (% of Total Number)		
Lightning	46	20
Arson	31	34
Escapes from other Fires	7	15
Campfires	3	7
Equipment	3	1
Railroads	1	12
Misc.	9	11

How many acres of Wildland Fire Use (WFU) were accomplished?
The second WFU project undertaken by the Ouachita NF was completed on the Jessieville/Winona/Fourche Ranger District cluster and included 3,481 acres. The WFU projects are naturally ignited fires (lightning) managed for resource benefits (rather than implementing a full suppression response). With the FY 2007 project, use of WFU has successfully been implemented for two consecutive years.

How many large / significant incidents occurred?
One very large fire occurred. This fire was in Oklahoma and burned approximately 9,000 acres. This was due to rugged terrain and with safety in mind for firefighters; natural boundaries were used for firelines where possible. This compares to two large fire incidents during FY 2006.

How many acres of growing season prescribed fire were completed?
There were no growing season prescribed fires during FY 2007. This compares to almost 20,000 acres treated with prescribed fire (understory) during the growing season accomplished between mid-April and the end of the fiscal year (September 30) during FY 2006.

Part 2 – Strategic Direction

Part 2 of the Forest Plan contains the strategic direction to be followed in order to move toward desired conditions. Many variables that influence the degree to which objectives are achieved cannot be fully assessed when a plan is revised or amended. Legal mandates, congressional intent as expressed in annual budgets, natural disturbance events, and other issues or factors over which the Forest Supervisor has little or no control, all influence performance. The actual mix and level of activities to be conducted will be determined each year, utilizing every opportunity to move toward the desired conditions and to contribute to the Forest Service's national strategic goals (http://www.fs.fed.us/plan). Restoring and maintaining healthy and productive ecosystems, providing high-quality recreation opportunities, protecting air quality, and providing clean water, appealing scenery, forest products, and economic opportunities to communities that rely upon the Ouachita NF are the highest priorities under the 2005 Forest Plan. Appendix D presents a summary of proposed and probable activities. The following sections contain monitoring findings associated with implementation of the objectives and strategies of the 2005 Forest Plan.

Forest Health/Terrestrial, Riparian, and Aquatic Communities/Wildlife and Fish Habitat (including Proposed, Threatened, Endangered, and Sensitive Species Habitat)

OBJ01. *Increase prescribed fire to an average of 180,000 acres per year by 2011 to help achieve and maintain desired community conditions.*

How many acres of prescribed fire were accomplished this year?
A total of 145,354 acres of prescribed fire were accomplished. This accomplishment was more than FY 2006 (43,093 acres) and not far short of the Forest Plan projection.

OBJ02. *Move 5,000 acres into fire regime condition class I annually.*

How many acres were moved into fire regime condition class I?
There is no working database available that accurately tracks the annual acre change from condition class 2 to condition class 1.

OBJ03. *Treat at least 300 acres per year for non-native, invasive species.*

How many acres were treated this year for non-native, invasive species?
The Ouachita NF utilized biological control (grazing) to treat 335 acres of kudzu in Oklahoma

OBJ04. *Maintain or improve the population status of all species that are federally listed or proposed for listing when evaluated at 5-year intervals.*

Compliance with OBJ 04 will be reported in the Threatened, Endangered, and Sensitive Species and their Habitats section.

OBJ05. *For wildlife purposes, strive to achieve a total open road density of 1.0 mile per square mile or less for all MAs except MAs 1 and 4 (where the desired density is zero open roads per square mile) and MAs 2, 16, 17, 19, and 21 (where the desired density is 0.75 mile of open road per square mile or less during critical periods for wildlife, i.e., March to August).*

How many road analyses were completed?
Roads Analyses were completed for six projects as shown in the following tabulation. Also during FY 2007, work continued on two Roads Analyses initiated in FY 2006 and three Roads Analyses were initiated that will be completed in FY 2008.

Projects and Project-Level Roads Analyses, Ouachita NF	
Completed in FY 2007	**Ongoing or Initiated in FY 2007**
Hon EMU 4, Poteau-Cold Springs Ranger District cluster	South Waldron Ridge, Poteau-Cold Springs Ranger District cluster (ongoing)
Upper Irons Fork, Mena-Oden Ranger District cluster	Mill-Moss-Riley, Jessieville-Winona-Fourche Ranger District cluster (ongoing)
Bogus Ridge Watershed, Mena-Oden Ranger District cluster	Polk/Mill Creek Watersheds Caddo-Womble Ranger District cluster (initiated)
Rocky Branch Watershed, Mena-Oden Ranger District cluster	Lower Sugar Creek, Poteau-Cold Springs Ranger District cluster (initiated)
Kates Creek Watershed, Caddo-Womble Ranger District cluster	Upper Cossatot Watershed, Mena-Oden Ranger District cluster (initiated)
Upper South Fourche, Jessieville-Winona-Fourche Ranger District cluster	

How many miles of road were decommissioned?
Beginning with the FY 2007 Monitoring and Evaluation Report, miles of road decommissioned each year will be reported.

There were 12.3 miles of road decommissioned.

OBJ06. *Establish 5,500 acres per year in grass/forb condition within the pine-oak forest subsystem while maintaining 60-90 percent in mature to late seral condition.*

Are landscape-level and stand level horizontal and vertical structure of major forest communities established annually within desirable ranges of variability?

Report acres of regeneration harvest under irregular shelterwood or irregular seedtree system per year; acres of mature pine-oak forest.
There were 4,363 acres of early seral habitat created by regeneration harvest methods and 297 acres were created by wildlife habitat improvements. During FY 2006, 2,602 acres of early seral habitat were created by regeneration harvest methods and 674 acres of early seral habitat were created by wildlife habitat improvements.

OBJ07. *Increase cumulative total area being restored to shortleaf pine-bluestem grass or shortleaf pine-oak woodland conditions to 350,000 acres by 2021.*

How much restoration to shortleaf pine-bluestem grass or shortleaf pine-oak woodland conditions has occurred?
Within Management Area (MA) 22, almost 52,000 acres were treated with prescribed fire to restore and/or maintain shortleaf pine-bluestem conditions, and well over 2,000 acres were treated to restore shortleaf pine-oak woodland through vegetation management activities, including midstory reduction (4,395 acres), commercial thinning (1,946 acres), harvest (285 acres) and timber stand improvement (2,988 acres). Within MA 14, 5,526 acres of pine-oak forest and 1,842 acres of pine-oak woodland were commercially thinned towards restoration of woodland conditions within the pine-oak stands.

Report acreage of landscapes in which active management (e.g., thinning, treatment with fire) to restore a significant pine-bluestem or pine-oak woodland component are underway.

Number of acres district-wide identified in decision documents that state woodland restoration as an objective. These should be planned in large tracts that fit appropriately within the landscape, such as mostly contiguous NF ownership, a watershed, etc., but should not exclude other smaller appropriate areas.

Spatial display in a separate GIS shapefile of all your areas dedicated to pine woodland condition, including MA 21, MA 22, and pine woodlands in MA 14 or other MAs.

Treatments scheduled to occur and treatments accomplished on these acres to restore woodland conditions. (What is the schedule of treatments to restore it to woodland condition? Has it been thinned? Thinned and treated with fire once? Thinned and treated with fire twice? Etc.)

OBJ08. *Establish and maintain the following mix of seral stages in pine-bluestem woodland: 3-9% early, 15-30% mid, and 60-90% late seral.*

Report percentages of pine-bluestem in early and late seral stages and acres treated with fire and thinned in the pine-bluestem condition.
Tracking systems for reporting percentages of early and late stages of pine-bluestem are not available as yet. Nearly 52,000 acres were treated with prescribed fire to restore and/or maintain shortleaf pine-bluestem conditions, and 1,946 acres were commercially thinned. During FY 2006 over 13,000 acres were treated with prescribed fire to restore and/or maintain shortleaf pine-bluestem conditions, and 1,302 acres were commercially thinned.

OBJ09. *Apply management actions to restore ecosystem health in at least 5,000 acres per year of oak forests and woodlands affected by oak decline and other hardwood diseases, insect problems, and drought.*

Report acres of oak forest and woodland treated with fire; acres thinned or regenerated.
At least 12,736 acres of dry-mesic hardwood were treated with prescribed fire during FY 2007, and no acres were thinned.

OBJ10. *Reduce susceptibility to southern pine or Ips beetle outbreaks on at least 25,000 acres per year.*

Report acres treated (thinned) and acres at risk. Report acres of pine harvest. Report acres at risk every five years*.*
At least 113,270 acres of pine forest and woodland were treated with prescribed fire, and silvicultural treatments were applied to approximately 17,350 acres (see table 1). At least 45,520 acres of pine forest and woodland were treated with prescribed fire during FY 2006, and silvicultural treatments were applied to approximately 26,818 acres.

OBJ11. *Apply management practices to begin replacing off-site loblolly pine plantations with shortleaf pine and native hardwoods where such plantations were installed outside the natural range of loblolly pine (i.e., most of the Ouachita Mountains); treat at least 500 acres per year.*

How many acres of off-site loblolly pine forests and woodlands have been replaced with shortleaf pine and native hardwoods? There were no acres of off-site loblolly pine forest/woodlands replaced with shortleaf pine and native hardwoods in FY 2007.
The Ouachita NF is currently in the transition phase of *converting* to the new vegetation inventory databases and activity tracking systems, Natural Resource Information System: Field Sampled Vegetation (FSVeg) and Forest Service Activity Tracking System (FACTS), as well as GIS databases. These databases are not currently populated sufficiently to adequately answer all aspects of some of monitoring and evaluation questions. During FY 2008 additional data will be populated in these databases and that data will be utilized to answer those questions in future M&E Reports. For FY 2007, insufficient data were available to report on rare natural systems (OBJ12) or old growth conditions (OBJ13). In addition insufficient data were available to answer the following questions, listed by objective number:

OBJ08 *Are landscape-level and stand level percent seral stages in the pine-bluestem woodland community within desirable ranges of variability?*
OBJ09 *How many acres of oak forests and woodlands have been treated for oak decline and other hardwood forest health problems?*
OBJ10 *How many acres of pine forests and woodlands have been treated for southern pine beetle susceptibility?*

It was not necessary to treat any acres within the Forest for southern pine beetle susceptibility.

Soil, Water, and Air

How well are watershed conditions being protected, enhanced or maintained?
The Basin Area Stream Survey was conducted during FY 2006 to assess watershed conditions. It is described and explained below.

How many acres of soil and water improvement were accomplished this year?
There were 45 acres of soil and water improvement accomplished.

What progress was made this year towards the five year report on watershed evaluations to determine if the progress in improving condition ratings has been made? What progress was made this year toward the five year report on Basin Area Stream Surveys?
This year, the determination of the effectiveness of the 2005 Forest Plan Standards and Best Management Practices (BMPs) was assessed primarily through the resurvey of the Basin Area Stream Surveys (BASS). This activity occurs every few years, and 2006 was the sixth survey since 1990. BMPs are basically a preventative rather than an enforcement system. BMPs are a whole management and planning system in relation to sound water quality goals, including both broad policy and site-specific prescriptions. In additional to state BMPS, the 2005 Forest Plan includes standards for watershed protection.

In cooperation with the Southern Research Stations Center for Aquatic Technology Transfer (CATT), nine watersheds were intensively monitored on the Cold Springs, Jessieville, and Mena units of the Poteau/Cold Springs, Jessieville/Winona/Fourche, and Mena/Oden Ranger District clusters, respectively. This survey provided data for over 48,000 acres or 46 miles of stream. In addition, 17 sites on 15 streams were monitored extensively.

The Basin Area Stream Survey methodology provides a monitoring link from Best Management Practices (BMPs) to the aquatic ecosystem. The objectives of this study are to identify the physical, chemical and biological characteristics of streams and compare individual streams, paired streams (adjacent watersheds, one managed and one unmanaged or reference), and

reference versus managed streams (all reference and managed watersheds) among and across years in a format that will allow determination of stream health as it is affected by Ouachita NF management activities. This serves as a cumulative effects analysis for BMPs as well as provides insight into watershed health, aquatic habitats and fish communities.

The analysis of this large project will occur in the next two fiscal years.

OBJ12. *Maintain or improve watershed health.*

How well are the stream and river aquatic habitat and watershed conditions being protected, enhanced or maintained? What was the result of soil quality monitoring this year?
During FY 2007, 16 post timber harvest treatment units were assessed for compliance with soil quality standard SW003 in the 2005 Forest Plan, This standard requires that a minimum of 85% of a treatment area remain in an acceptable condition of soil productivity following soil disturbing actions. Of these 16, or 100%, met the standard.

How many of the impaired waterbodies are on or downstream of the Ouachita NF?
It will take several years to analyze the data collected as a result of the Basin Area Stream Survey. Results will be reported in subsequent M&E Reports.

How many acres of soil inventory have been accomplished?
No soil inventory was accomplished on the Ouachita NF.

What percent of treatment units are meeting soil quality standards this year?
During FY 2007, 100% of the treatment units met the soil quality Standard.

OBJ13. *Conduct watershed improvement actions on at least 40 acres per year.*

How many acres of watershed improvement actions have been accomplished?
The Ouachita NF exceeded the objective of completing 40 acres of watershed improvement actions per year by accomplishing 45 acres of watershed improvement or maintenance. The FY 2007 work included 35 acres of watershed improvement through normal project work and 10 acres of watershed improvement by restoring a tornado area that was harvested by a method of clear cutting. Most of the normal project restoration work involved stabilizing gullies and abandoned roads.

How many acres of watershed improvement maintenance have been accomplished?
There were 45 acres of soil and water improvement accomplished. This work typically includes re-applying stabilization measures, such as re-constructing waterbars and re-seeding, on areas of watershed improvement projects that were accomplished 1-3 years earlier but for various reasons are now (or expected to become) unstabilized and need additional treatment.

OBJ14. *Protect and improve the Air Quality Related Values of the Class I Area.*

What monitoring of the AQRV of the Class I Area occurred this year?
No monitoring of the Class I Area was accomplished.

How many twice weekly air filter checks were documented on the IMPROVE Monitoring Network?
In the 1st and 4th quarters of FY 2007, the Caney Creek IMPROVE site achieved less than 90% of data collection. In the second quarter of FY 2007, they had at least 90% of data collection. In the third quarter of FY 2007, they had 100% of data collection.

What are the results of the air visibility monitoring efforts at Particulate Matter (PM) 2.5?
There is no obvious trend for average and median exceedence for all years with data. There seem to be seasonal fluctuations with the summer and fall having the most concentrations of $PM_{2.5}$. Insufficient annual data exists to establish trends.

What were the findings (and trends) in comparison to previous monitoring efforts?
No change.

How many PSD permits were reviewed this year?
A total of six PSD permits were reviewed during FY 2007 which is one less than the seven PSD permits reviewed during FY 2006.

How many regional air quality planning committees were participated in?
The zone air quality specialist participated in three air quality planning committees during FY 2007.

Was any data gathered this year that will contribute to the report (due in 5 years) on the potential influence from acid rain on water quality?
Data gathered as a part of Basin Area Stream Surveys will contribute to determining the potential influence from acid rain on water quality.

Lands

OBJ15. *Maintain landlines on a 10-year cycle.*

How many miles of landlines were located or maintained this year?
65.0

Minerals

OBJ16. *Process applications for federal mineral leases, licenses, and permits within 120 days.*

How many minerals leases, licenses and/or permits applications were received this year?
How many of the received leases, licenses, and permits were processed within 120 days?
Only one application was received for FY 2006; however during FY 2007, 4 APDs for gas drilling (2 in Arkansas and 2 in Oklahoma) were received. All 4 were processed timely.

Applications for mineral leases, licenses, and permits on the Ouachita NF in Arkansas and Oklahoma are processed within 120 days by the District Ranger and Forest Geologist.

OBJ17. *Process operations proposed under outstanding and reserved mineral rights within 60 days and 90 days, respectively.*

How many process operations were proposed under outstanding and reserved mineral rights this year?
None.

How many were processed within 60 and 90 days, respectively?
Not applicable.

Currently, the Ouachita NF is working with only one company with reserved mineral rights. Processing operating proposals within required timeframes is accomplished by the District Ranger. Any new proposals will be similarly processed.

Heritage Stewardship and Tribal and Native American Interests

OBJ18. *Complete a forest overview of heritage resources by 2007 incorporating the results of 20+ years of Section 106 and Section 110 work and documentation.*

What progress was made this year towards completing the forest overview of heritage resources by 2007?
Each of the Ouachita's five Ranger District clusters has continued during the fiscal year to update the Heritage Resource Survey Coverage and Sites layers in GIS. This data is critical in developing a current Cultural Resource Overview. The overview will detail what is currently known about the archeology (prehistory and history) within the Ouachita Mountains of west-central Arkansas and southeastern Oklahoma, reveal any data gaps that may be present and will allow the Ouachita NF to place its limited heritage funding where it will have the greatest benefit. The data generated was provided to a contractor who drafted much of the Heritage Overview during the FY 2007.

OBJ19. *Drawing upon the heritage resources overview, complete a Heritage Resources Management Plan by 2010.*

What progress was made this year towards completing a Heritage Resources Management Plan by 2010?
The Ouachita NF is continuing to gather data regarding the prehistory and history of the area encompassed by the Ouachita NF; most of the data is being generated through compliance with the Section 106 of the National Historic Preservation Act. This data, together with the Cultural Resources Overview, will allow a comprehensive management plan to be developed for the Ouachita NF by 2010, as included in OBJ 21.

OBJ20. *Revise the Programmatic Agreement with SHPOs and THPOs by 2011.*

What progress was made this year towards Programmatic Agreement with SHPOs and THPOs by 2011?
A Programmatic Agreement between the State and Tribal Historic Preservation Officers, the Ozark-St. Francis and Ouachita National Forests and the Advisory Council on Historic Preservation is currently in effect. After the Heritage Resources Overview and Heritage Resource Management Plan have been developed and approved, the Ouachita NF will have the basis for modifying the Programmatic Agreement as appropriate.

Public Use and Enjoyment

Provide Outdoor Recreation Opportunities

How many persons at one time (PAOT) days were utilized this year?
Within the 118 recognized recreation sites on the Ouachita NF, 2,445,970 PAOT days were utilized during FY 2007. Inventory tracking for recreation sites was adjusted, breaking out individual types of recreation at several sites. For example, a single campground may have been reported in FY 2006, but in FY 2007, the same area may be reported as a campground, a picnic site, and a swimming site. Because of the changes in tracking, recognized recreation sites are reported as 118 in FY 2007 and were reported as 77 for FY 2006. No new recreation sites have been created: the additional sites are simply a result of different inventory tracking.

Monitor swim areas five times per month during open season for fecal coliform with immediate closures for areas with high counts (<200 colonies/100 mg.).

How many swim-water sites have been monitored throughout the open season?
There were 13 swim-water sites monitored, and all were found to meet state standards.

Objectives

OBJ21. *Conduct maintenance on at least 300 miles of trails (non-motorized use) per year.*

How many miles of trails' (non-motorized use) maintenance were accomplished this year?
Trail maintenance was performed on 299.8 miles of non-motorized trail.

OBJ22. *Maintain all recreation facilities to standard.*

How many recreation sites were maintained to standard this year?
Of 118 recreation sites, 99 (84%) were maintained to standard.

OBJ23. *Improve accessibility within at least one recreation site per year.*

Report sites improved for accessibility.
The north shore camp loop of the Cedar Lake Recreation Area was improved for accessibility.

OBJ24. *Designate and sign a system of roads and trails suitable for public access by motor vehicle, including off-highway vehicles, no later than October 2009; at the same time, initiate the process to prohibit cross country travel by motorized vehicles except for emergency purposes and specific authorized uses.*

What progress has been accomplished towards completing the MVUM?
The Forest worked with the public to identify potential routes for designation for public use by motorized vehicle. Seven Open Houses were held in May and June of 2007 and extended office hours were offered on July 10 and 12, 2007. The Ouachita NF also established a website for the public to review maps. Work continued to update the GIS roads/trails layer as well an INFRA.

What percentage of routes designated for use by OHV is appropriately signed?
This is not applicable at this time because routes have not yet been designated. The Forest will complete an environmental review and develop the preferred action alternative during FY 2008.

OBJ25. *Maintain recreational fishing opportunities of stocked lakes and ponds.*

How well are the recreational fishing opportunities being protected, enhanced or maintained?
Fishing recreational opportunities are being protected, enhanced or maintained by monitoring of bass and sunfish spawn, with supplemental stocking requested from the state as needed, structural habitat improvements (fish attractors/cover), fertilizing and liming to increase productivity and reduce excessive aquatic vegetation, access improvements and annual to biannual electrofishing to monitor the adult fish populations of Ouachita NF lakes and select ponds. Annual channel catfish stocking is occurring in most managed recreational fishing waters in close coordination with the fish and game agency of each state. In FY 2007, additional fish sampling was continued to monitor two shad populations that were somehow introduced into the two lakes, and control measures will be undertaken if these populations begin to impact game fish populations negatively.

Report percentage of MIS game fish of harvestable size; electrofishing catch per unit (time) effort; number of ponds shoreline seined for spawning success.
Please see the report under MIS of this report for information on progress on OBJ 25.

OBJ26. *Improve or maintain all designated observation sites at least once per decade.*

How many designated scenic overlooks are maintained on the Ouachita NF?
There are a total of 38 observation sites maintained within the Ouachita NF.

How many observation sites were improved or maintained this year?
No observation sites were improved.

Wilderness

OBJ27. *Conduct inventories to determine the presence and extent of non-native invasive species in wildernesses by 2010; based on results of these inventories, develop and implement appropriate monitoring and treatment programs.*

How many acres of Wilderness have been surveyed for non-native invasive species this year? What progress is being made toward completing inventories of non-native invasive species in wildernesses? What non-native invasive species have been identified and treatment and monitoring plans implemented? How many acres have been treated for invasive species control?
Work to survey wilderness areas for non-native invasive species has not been initiated. This work will be initiated in FY 2008.

OBJ28. *Update all Wilderness Management Plans, including monitoring components, wilderness education, and restoration needs, by 2008.*

How many acres of Wilderness Area Administration have been accomplished?
64,469

How many Wilderness Management Plans were updated this year?
In FY 2007, work began on a review of the existing management plans. Additional work during FY 2008 will be required to complete this project. Priority plan elements will be those that are in the Chief's 10 Year Wilderness Challenge.

What progress is being made towards updating all the Wilderness Management Plans by 2008?
Plans are to begin this work in FY 2008

Facility Operation and Maintenance

OBJ29. *Eliminate three leased facilities by 2015.*

How many leased facilities were eliminated in FY 2007?
None

OBJ30. *Eliminate 30 percent of other non-essential administrative facilities by 2015.*

How many non-essential facilities remain as a percentage of the FY 2005 baseline (to be determined)?
Work will be undertaken during FY 2008 to identify non-essential facilities.

OBJ31. *Upgrade all identified public facilities to standards by 2015.*

What percent of identified public facilities are accessible?
Work will be undertaken during FY 2008 to identify facilities requiring additional work to make them accessible.

OBJ32. *Complete energy efficiency upgrades on all administrative buildings and complete identified work on 10 percent of administrative buildings needing upgrades by 2015.*

What percent of administrative buildings need work and complete percentage energy efficiency upgrades?

A survey to identify administrative buildings that need energy upgrades will be initiated during 2008.

OBJ33. *Inspect all buildings compliance with health and safety standards and address all identified health and safety issues.*

What percent of inspected buildings met health and safety standards?
All buildings inspected by FS Engineering personnel/staff, either met, or were corrected to meet standard. Engineering inspects at least one-third of the fire, administration and other buildings each year and some recreation buildings. During FY 2008, districts will be asked to document safety inspections that they routinely conduct. This data had not previously been reported and was not available for the FY 2007 M&E Report.

Transportation System and Public Use of Off-Highway Vehicles

OBJ34. *Complete a transportation plan for the Ouachita NF by late 2007 that (among other things) addresses the backlog of maintenance and reconstruction needs.*

What progress has been accomplished towards completing the transportation plan?
Much of the work to complete the Transportation Plan is included in on-going work for travel analysis and will be completed with publication of the Motor Vehicle Use Map (MVUM). Updating County Road Cooperative Agreements is on-going.

OBJ35. *By 2015, identify all system roads that should be decommissioned.*

OBJ36. *Decommission 25 percent of roads identified under the previous objective by 2015 (many such needs to decommission roads will be identified well before 2015).*

How many road miles have been decommissioned and removed from the road inventory?
What progress has been made towards Objective OBJ38?
There were 12.30 miles decommissioned which is significantly lower than the 204.35 miles decommissioned during FY 2006, an unusual year.

OBJ37. *Reduce miles of road under Forest Service maintenance.*

How many road miles are in road maintenance inventory?
At the end of FY 2007, there were 5,550 miles of road in Forest Service Inventory.

How many road miles have been eliminated from road maintenance inventory this year?
No roads have been eliminated from the road maintenance inventory this year.

OBJ38. *Improve aquatic organism passage on an average of no less than six stream crossings per year (where there are road-related barriers to passage).*

How many stream crossings were improved for aquatic organism passage?
Five crossings were retrofitted for passage or replaced with fish friendly designs to restore fish passage to 13 miles of streams.

Commodity and Commercial Uses (Timber, Minerals, Energy)

OBJ39. *Sell an average of at least 200,000 hundred cubic feet (ccf) of timber per year.*

How many hundred cubic feet (ccf) of timber were sold this year?
There were 206,356.58 ccf of timber sold compared to 199,270.45 ccf in FY 2006.

What was the volume of timber sold in comparison to the projected annual average?
Table 7 describes the volume of timber offered and sold during FY 2007. More timber was sold than was offered due to timber being offered for sale during the previous FY, but not sold until FY 2007.

Table 7. Timber Offered and Sold (CCF), Including Method of Harvest

		FY 2006	FY 2007
Timber Offered	How many hundred cubic feet (ccf) of timber were offered?	75,699.20	198,605.81
Timber Sold	How many hundred cubic feet (ccf) of timber were sold?	199,270.45	206,356.58

Timber Harvest Method by Acres Sold			
	Clearcut	74	0
	Seedtree	1,503	3,594
	Shelterwood	1,099	769
	Shelterwood Final Harvest	169	40
	UEAM-Single-tree selection	1,605	890
	UEAM-Group selection	1,611	2,175
	Thinning	13,046	9,922
	Salvage	995	69
	Removal Cut	0	21
	Land Clearing (Roads, Ponds, Etc.)	0	218

Timber Resource Inventory

How many acres of timber resource inventory have been accomplished?

A total of 59,057 acres of timber resource inventory was reported as accomplished during FY 2007.

Fuels

OBJ40. *Treat the highest priority areas at a rate of 500 to 1,000 acres per year. Most of these areas (i.e., adjacent NF lands) should be restored to condition class 1 by FY 2011.*

How many of the 500-1000 highest priority acres were treated?

There is no working database that accurately tracks accomplishments in the highest priority areas.

What percent of the Ouachita NF is in fire regime condition class 1 and 2?

There is no working database that accurately reflects acres in condition class 1 and 2 for the Ouachita NF. Based on previous estimates done using FY 2000 data, there is an estimated 100,000 to 150,000 acres of the Ouachita NF that likely is in either condition class 1 or 2 (slightly less than 10% of the total Ouachita NF).

What progress towards restoring these acres to condition class 1 by FY 2011 is being made?

There is no working database that accurately tracks accomplishments in the highest priority areas: however, with accomplished acres for FY 2007 at the top of the range in OBJ42, it is reasonable that restoration of these acres to condition class 1 by FY 2011 is a reasonable and achievable goal.

OBJ41. *Complete 50,000 to 100,000 acres per year of hazardous fuel reduction in the other moderate to high priority areas.*

How many acres of hazardous fuel reduction were accomplished this year?
Hazardous fuel treatments met the Plan objective of between 50,000 to 100,000 acres per year. During FY 2007, 83,136 acres of hazardous fuel treatments were accomplished, most of which was in the WUI. Prescribed fire treatments for other objectives also help meet this objective. The tabulation below compares accomplishments for FY 2006 and FY 2007.

Hazardous Fuel Reduction	
	Acres
FY 2006	75,637
FY 2007	83,136

Budget

The tabulation below shows budget trends for the current year plus the past five years.

2002	2003	2004	2005	2006	2007
$17.8 million	$11.4 million	$9.4 million	$10.2 million*	$8.5 million	$6.8 million**

* The 2005 budget of $10.2 million included an additional appropriation of $1.1 million for timber sales.
** National Forest System funds in FY 2007 totaled $6,781,319.

The Ouachita NF experienced significant changes in National Forest System (NFS) budgets between FY 2002 and FY 2007. The NFS allocations do not include appropriations for Knutsen-Vandenburg or for construction and maintenance of facilities and infrastructure. While funding levels had increased in FY 2001 for ice storm recovery, they declined in FY 2002 due to fire borrowing (transfer of funds to fight major wildfires nationwide). Fire borrowing did not affect funding for either FY 2004 or FY 2005. Discounting that the 2005 budget was enhanced by a $1.1 million additional appropriation and that the Ouachita NF also held the Western Operations Center budget through FY 2006, the trend for National Forest System funding levels is decreasing.

Performance History

Table 8 displays management accomplishments completed on the Ouachita NF during FY 2003 through FY 2007.

Table 8. Resource Management Accomplishments

Objective or Activity	Unit of Measure	FISCAL YEAR				
		2003	2004	2005	2006	2007
Trail Construction	Miles	6	6	0	5	5
Trail Maintenance	Miles	293	288	293	299.8	300
Heritage Resource Survey	Acres	6,490	22,930	20,046	16,176	22,460
Waterhole Development	Structures	107	142	220	57	212
Midstory Reduction	Acres	3,014	353	1,350	7,715	4,935
Prescribed Fire	Acres	128,319	134,386	96,376	43,093	145,354
Lime, Fertilize And/Or	Acres	647	670	828.5	970	1,281

Objective or Activity	Unit of Measure	FISCAL YEAR				
		2003	2004	2005	2006	2007
Stock Lakes/Ponds						
Livestock	Number	1,179	903	715	530	300
Animal Unit Months (AUM) Head Months (HM)	Number	8,334 (AUM)	5,081 (AUM)	5,595 (AUM)	2,274 (HM)	1,813 (HM)
Active Range Allotments	Number	20	17	16	16	16
Watershed Improvement & Maintenance	Acres	35	56	73	87	45
Minerals Administration	Cases	191	577	860	403	640
Timber Offered	Million cubic feet	13.11	17.77	20.02	7.57	19.86
Timber Sold	Million cubic feet	11.16	14.24	16.68	19.93	20.64
Acres Sold by Harvest Method:						
Salvage/Sanitation	Acres	118	539	1,008	995	69
Clearcut	Acres	0	0	0	74	0
Seedtree/ Shelterwood	Acres	460	2,068	2,702	2,602	4,363
Seedtree	Acres	N/A	N/A	N/A	1,503	3,594
Shelterwood	Acres	N/A	N/A	N/A	1,099	769
Thinning	Acres	5,873	12,073	8,933	13,046	9,922
Uneven-Aged Management*	Acres	1,334	2,760	3,289	3,216	3,065
Timber Harvested	Million cubic feet	12.24	11.40	16.47	16.67	13.93
Reforestation (planting & natural regeneration)	Acres	6,307	7,840	7,011	6,640	4,446
TSI & Reforestation Herbicide Treatment	Acres	1,344	1,452	2,891	1,124	3,253
Non-Herbicide Release Treatment	Acres	20,978	17,536	11,095	7,166	5,725
Land Line Location Or Maintenance	Miles	39.5	77.0	80.0	52.6	65.0
Rights-of-way	Cases	2	1	1	0	1
Arterial/Collector Roads Reconstructed	Miles	33	4	14	15.56	6.44
Local Roads Constructed	Miles	5	5	5	15.99	4.28
Soil Inventory	Acres	50,000	0	9,090	3,240	0
Stream Inventory	Miles	N/A	N/A	N/A	46	10
Stream Inventory For Leopard Darter	Miles	N/A	N/A	N/A	8	8
Stream Inventory For Ouachita Darter	Miles	N/A	N/A	N/A	6	6
Total Stream Inventory	Miles	N/A	N/A	N/A	60	26

Objective or Activity	Unit of Measure	FISCAL YEAR				
		2003	2004	2005	2006	2007
5 Yr. Basin Area Stream Survey (Water Resource Inventory)	Acres	N/A	N/A	N/A	48,237	N/A**
Fish Attractors	Sites	45	26	6	16	65
Streams Monitored for Offsite Herbicide Movement	Sites	11	11	11	6	3

* Unevenaged Management consisted of 1,611 acres of group selection and 1,605 acres of single-tree selection.
** Basin Area Stream Survey occurs one time every five years.

Part 3 - Design Criteria and Implementation

As projects are undertaken to implement the 2005 Forest Plan, implementation monitoring reviews will be undertaken and results reported in this section. During FY 2007, one IMR was completed and is reproduced in Appendix E. As described in the attached report, a Forest Review team conducted an Implementation Monitoring Review of growing season prescribed fire projects on the Jessieville-Winona-Fourche Districts during June, 2007.

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Part 4 - Recommendations

This section of the Monitoring and Evaluation Report addresses actions identified through inventory and monitoring that will need to be addressed during FY 2008, and it also reports progress on recommendations made in previous M&E reports.

Progress on Recommendations for FY 2007 and Recommendations for FY 2008

Vegetation Inventory Databases And Activity Tracking Systems: During FY 2006, the Ouachita NF began a transition phase of *converting* to the new vegetation inventory databases and activity tracking systems, Natural Resource Information System: Field Sampled Vegetation (FSVeg), Forest Service Activity Tracking System (FACTS), and GIS databases. These databases are becoming operational and populated with information that will track progress within landscape-level and stand level compositions and structure of major forest communities and will be useful to determine status within desired ranges of variability.

FY 2007 Action Items:

- Utilize data from Field Sampled Vegetation (FSVeg) and Forest Service ACtivity Tracking System (FACTS) in the FY 2007 Monitoring Report as conversions are completed and data is available. Transition to FSVeg and FACTS is nearly complete, and it has become apparent that FSVeg and/or FACTS will not provide all of the data required to monitor silvicultural activities on the Ouachita NF. The TIMS program currently provides the most accurate data on silviculture work accomplished. TIMS data will be combined with GIS data by Management Area and fire databases to provide a more comprehensive picture of landscape level accomplishments.

FY 2008 Action Item:

- **Supplement data from FSVeg and FACTS with data from TIMS, GIS data on Management Areas and fire databases to track landscape level accomplishments.**

Forest Fuels: The 2005 Forest Plan (Objective 40) is as follows: “Treat the highest priority areas at a rate of 500 to 1,000 acres per year. Most of these areas (i.e., adjacent NF lands) should be restored to condition class 1 by FY 2011.“ During FY 2006 and FY 2007, there was no working database to accurately track accomplishments in high priority areas.

FY 2007 Action Items:

- Develop a monitoring protocol utilizing GIS mapping to track fuel treatment accomplishments accurately in high priority areas. A monitoring protocol has been developed, although it is was not fully operational during FY 2007. The Ouachita NF has joined with and adopted the Ozark NF GIS fire accomplishment tracking system and will be able to analyze the effects of the fire program on the vegetation communities, including high priority areas.

- Schedule the Calcareous Prairie for a fire treatment in FY 2007. Accomplished: Of the 249 acres identified as Calcareous Prairie community, eighty-five percent was successfully treated with prescribed fire in FY 2007.

FY 2008 Action Item:

- **Implement the newly developed monitoring protocol utilizing GIS mapping to track fuel treatment accomplishments accurately in high priority areas.**

Surveys for Listed Freshwater Mussels: During FY 2006, Forest Service personnel did not conduct any surveys for listed freshwater mussels; however, field surveys and fish host study work on the Arkansas fatmucket was completed by Dr. Christian and graduate students from Arkansas State University under a cooperative project funded by the Ouachita NF. The report was not scheduled for completion until 2007.
FY 2007 Action Items:

- Work with Arkansas State University to complete the report for Arkansas fatmucket and include data from report in the FY 2007 Monitoring and Evaluation Report.
- Conduct surveys on other listed freshwater mussels during FY 2007.

Freshwater mussel surveys were conducted in the Caddo, Ouachita and the Saline river systems during 2007, in conjunction with the USFWS Aquatic Specialist and the AGFC Malacologist to provide information for the Arkansas Fatmucket (Lampsilis powellii) five-year status review.

The Final Report of Forest Service Agreement No. 03-CS-11080901-010 (31 October 2006) 'Life History and Population Biology of the Federally Threatened Arkansas fatmucket [Lampsilis powellii (I. Lea 1852)] and the State Special Concern Ouachita Creekshell [Villosa arkansasensis (I. Lea 1862)]' was received.

The Journal of the Southwestern Association of Naturalists published the following: STATUS OF RARE AND ENDANGERED FRESHWATER MUSSELS IN SOUTHEASTERN OKLAHOMA, by HEATHER S. GALBRAITH, DANIEL E. SPOONER, AND CARYN C. VAUGHN of the University of Oklahoma, Oklahoma Biological Survey and Department of Zoology.

Both of these items were accomplished in 2007, and results will be included in the 2008 monitoring report.

Implement the Travel Management Rule: The Travel Management Rule requires that all National Forests and Grasslands designate a system of roads, trails, and areas for use by motor vehicles.
FY 2007 Action Item:

- Work with the public to identify a system of roads, trails, and areas for public motor vehicle access.

During FY 2007, the Forest worked with the public to identify potential routes for designation for public use by motorized vehicles. Seven Open Houses were held in May and June, 2007 and Extended Office Hours were offered July 10 and 12, 2007. The Ouachita NF also established a website for the public to review maps at aokforests.com during FY 2007. Work continued to update the GIS roads/trails layer as well an INFRA.

FY 2008 Action Item:

- **Continue to work with the public to refine a system of roads, trails, and areas for public motor vehicle access. The Forest will complete environmental review and develop the preferred action alternative during FY 2008.**

Wilderness Surveys for Non-native Invasive Species: Forest Plan Objective 29 provides for inventories to determine the presence and extent of non-native invasive species in wildernesses by 2010. Work to survey wilderness areas for non-native invasive species was not initiated.
FY 2007 Action Item:

- Initiate surveys for non-native invasive species in wilderness areas (to be completed by 2010).

This Action Item will be carried forward to FY 2008.

FY 2008 Action Item:

- **Initiate surveys for non-native invasive species in wilderness areas (to be completed by 2010).**

Wilderness Management Plans: Wilderness Management Plans are targeted to be updated by 2008. Priority plan elements will be those that are in the Chief's 10 Year Wilderness Challenge.
FY 2007 Action Item:

- Meet with the partners who assisted in development of the existing plans and begin the process of updating wilderness management plans.

Additional work will be required in FY 2008 to update the wilderness management plans.

FY 2008 Action Item:

- **Complete the updates of wilderness management plans. Priority plan elements will be those that are in the Chief's 10 Year Wilderness Challenge.**

Energy Upgrades: The 2005 Forest Plan Objective 34 is as follows: "Complete energy efficiency upgrades on all administrative buildings and complete identified work on 10 percent of administrative buildings needing upgrades by 2015."
FY 2007 Action Item:

- Continue work initiated during FY 2006 to identify needed energy efficiency upgrades and complete work where feasible.

Additional work will be required in FY 2008 to identify needed energy efficiency upgrades.

FY 2008 Action Item:

- **Continue work initiated during FY 2007 to identify needed energy efficiency upgrades and complete work where feasible.**

Basin Area Stream Survey: Basin Area Stream Surveys are conducted periodically (typically on a five-year cycle); and at five-year intervals, the desired condition status of this habitat is evaluated.
FY 2007 Action Item:

- The Basin Area Stream Survey was conducted during FY 2006. During FY 2007, work to analyze data from the Basin Area Stream Survey and stream and river monitoring surveys for changes in aquatic habitat conditions, including the changes in Management Indicator Species was initiated.

Although some work has been accomplished to analyze the data collected during the FY 2006 BASS, additional work will be required during FY 2008. Data from the BASS will be utilized to accomplish NEPA required for Travel Management Planning.

FY 2008 Action Item:

- **During FY 2008 complete the analysis of data collected during the FY 2006 Basin Area Stream Survey and report results on data from the nine watersheds surveyed under BASS.**

Management Indicator Species for stream and river aquatic habitat: All stream and river monitoring surveys will be analyzed for changes in aquatic habitat conditions, including the changes in Management Indicator Species during FY 2008, along with the Basin Area Stream Survey data.

FY 2008 Action Item:

- **During FY 2008 analyze data for stream and river MIS species for changes in aquatic habitat conditions.**

Endemic Salamanders: During FY 2007, salamander specimens were collected to identify and define species and species boundaries within the Plethodon ouachitae complex which includes the Caddo Mountain, Rich Mountain and Fourche Mountain salamanders, using modern DNA sequence techniques. This work is essential in order to determine the true endemic plethodontid salamander diversity and its distribution in the Ouachita Mountains of Arkansas, and should be finalized during FY 2008.

FY 2008 Action Item:

- **Complete work to identify salamander diversity and distribution in the Ouachita Mountains of Arkansas**

Forest Overview of Heritage Resources: Objective 20 of the Revised Forest Plan is as follows*: "Complete a forest overview of heritage resources by 2007 incorporating the results of 20+ years of Section 106 and Section 110 work and documentation."*

Each of the Ouachita's five Ranger Districts expended considerable effort during FY 2007 to complete the development of the Heritage Resource Survey Coverage layers in GIS that will be critical in developing a current Cultural Resource Overview. Data was provided to an Archeological Contractor who has analyzed most of the data and is providing draft sections of a report as well as several GIS maps.

FY 2008 Action Item:

- **Complete the Forest Overview of Heritage Resources.**

Appendix A – List of Contributors and Preparers

Robert Bastarache—Oklahoma Ranger Districts, Biologist
Bubba Brewster – Ouachita NF, Forest Engineer
Alan Clingenpeel—Ouachita NF, Forest Hydrologist
Betty Crump—Ouachita NF, Stream Ecologist
Chris Davidson—US Fish and Wildlife Service, Endangered Species Coordinator
Jerry Davis—Ouachita NF, Forest Wildlife Biologist
Meeks Etchieson—Ouachita NF, Forest Archeologist
Tracy Farley—Ouachita NF, Public Affairs Team Leader
Glen Fortenberry— Ouachita NF, Staff Officer, Fire Team
Roger Fryar—Ouachita NF, Assistant Fire Team Leader
Larry Hedrick—Ouachita NF, Staff Officer, Integrated Resources
Susan Hooks—Ouachita NF, Forest Botanist and Range Program Manager
Kelly Irwin—Arkansas Game and Fish Commission, Herpetologist
Ron Krupa— Ouachita NF, Forest Recreation Staff
Alett Little—Ouachita NF, Forest Planner
Judith Logan—Ouachita NF, Forest Air Specialist
Diane Lowder—Ouachita NF, Financial Manager
Sarah Magee—Ouachita NF, Realty Specialist
Stanley Mason—Ouachita NF, Soil Scientist
Caroline Mitchell—Ouachita NF, Editorial Assistant
Warren Montague—Poteau/Cold Springs Ranger Districts, Biologist
Lea Moore—Ouachita NF, Civil Engineer
Laura Morris— Caddo/Womble Ranger Districts, Biologist
Joe Neal— Poteau/Cold Springs Ranger Districts, Biologist
John Nichols—Ouachita NF, Forest Geologist
Tim Oosterhous—Ouachita NF, Recreation Program Manager
Bill Pell—Ouachita NF, Staff Officer Planning, Recreation, Heritage, and Environmental
Frances Rothwein—Poteau/Cold Springs Ranger Districts, Biologist
David Saugey—Jessieville/Winona/Fourche Ranger Districts, Biologist
Elaine Sharp—Ouachita NF, Forester Lands/Special Uses
Jo Ann Smith—Ouachita NF, Forest Silviculturist
Richard Standage—Ouachita NF, Forest Fisheries Biologist
Charlie Storey—Ouachita NF, Forest Land Surveyor
Debbie Ugbade—Ouachita NF, Public Affairs Specialist
Ray Yelverton—Ouachita NF, Sales Forester

Appendix B – Conservation Education Activities

Staff & Unit	Date	Activity	Partners Involved	# of Attendees	# of Programs
Public Affairs	Ongoing	Conservation Education Web Page			
Saugey-Jessieville/Winona	10/27/06	Bats Program	AGFC Delta Rivers Nature Center Pine Bluff, AR Rusty Scarborough AGFC Contact	1200	1
Saugey-Jessieville/Winona	10/28/06	Bats Program	AGFC Delta Rivers Nature Center Pine Bluff, AR Rusty Scarborough AGFC Contact	2400	1
Saugey-Jessieville/Winona	01/17/07	Bats Program	Mississippi Bat Working Group Annual Meeting Museum of Natural Science, Jackson Alison McCartney, Contact	50	1
Saugey-Jessieville/Winona	02/14/07	Bats Program	Rafinesque's Big-eared Bat Symposium - Invited Speaker Southeastern Bat Diversity Network Pensacola, FL Mary K. Clark, Contact	100	1
Saugey-Jessieville/Winona	03/28/07	Bats Program	Jones Family Life Center Springdale, AR	100	1
Betty Crump/David Saugey	04/04/07	Bats Program	Leadership Hot Springs Partnership with Youth Hollywood Park, Hot Springs, Fred Lenard	25	1
David Saugey-Jessieville/Winona	04/05/07	Bats Program	Gear-Up after school program Hot Springs Middle School Lynn Stong	19	1
David Saugey-Jessieville/Winona	04/13/07	Scientific Paper	AR Academy of Science Lake Point Conference Center AR Tech University	30	1
David Saugey-Jessieville/Winona	04/27/07	Bats Program	Southside Elementary Batesville, AR Ms. Carlile	120	2
David Saugey-Jessieville/Winona	05/02/07	Bats and Silviculture	2007 Forestry Field Day Crossett Exp. Forest, AR Dr. Jim Guldin SRS and AGFC	60	2
David Saugey-Jessieville/Winona	05/04/07	Bats!	Jessieville Elementary 2nd Grade Field Trip to VIC	34	1

Staff & Unit	Date	Activity	Partners Involved	# of Attendees	# of Programs
David Saugey-Jessieville/Winona	05/18/07	Bats and Interpretive Walk	Friendship Trail and Jessieville VIC St. Lukes School Rosie McNamara	30	1
David Saugey-Jessieville/Winona	05/21/07	Bats!	Lake Hamilton Elementary Learning Camp Ms. Nash	128	1
David Saugey-Jessieville/Winona	05/21/07	Bats!	Gardner Elementary Magnet Listene Speed	130	3
David Saugey-Jessieville/Winona	06/04/07	Bats!	Garland County Public Library- Summer Program Tiffany Hough	80	1
David Saugey-Jessieville/Winona	06/14/07	Bats!	Holy Souls School Summer Enrichment Program Little Rock – Theresa Haaser	80	1
David Saugey-Jessieville/Winona	06/14/07	Bats!	Cossatot Conservation District- Summer Camp Lake Gilham Robin Stacey	25	1
David Saugey-Jessieville/Winona	09/27/07	Bats-Field Methods	Ecology Club Cabot High School Carmen Tharp	42	1
John Nichols, Minerals Staff	02/09-02/12/07	Tucson Gem and Mineral Society Show - Forest Service exhibit	TGMS, FS-WO	40,000	1
John Nichols, Minerals Staff	4/20/07	Programs to Ftn.Lake, Jessieville, Mtn Pine 4th grades	Hot Springs Village Optimists Club	250	1
John Nichols, Minerals Staff	Oct. - Ongoing	Minerals and Geology Web Pages			
John Nichols, Minerals Staff	04/07/07	Children's Outdoor Awareness Day		500	1
Doug Klobe, Public Affairs	4/21/07	Arbor Day Activities	Information Assistance (wildlife on the Ouachita)		
Rod McCullough and Robert Bastarache Oklahoma Ranger District	11/9/06	Oklahoma State University Field Tour for Forestry Majors	none	25	1
Robert Bastarache Oklahoma Ranger District	11/14/06	Career Day at Broken Bow High School (OK)	Oklahoma Department of Wildlife Conservation	102	1
Archeology and Law Enforcement	4/2/2007	Booneville Schools	Booneville Middle School Career Orientation Class	80	1

Staff & Unit	Date	Activity	Partners Involved	# of Attendees	# of Programs
Poteau-Cold Springs RD					
Law Enforcement Poteau-Cold Springs RD	12/13/06	Girls Scouts	Booneville Girl Scout Brownie Troop 144	11	1
Law Enforcement Poteau-Cold Springs RD	2/21/07	Girls Scouts	Catalpa Service Unit - Booneville	60	1
Law Enforcement Poteau-Cold Springs RD	10/6/06	Booneville Schools	Booneville Elementary	110	1
Jessieville-Winona-Fourche Ranger District	4/13/07	Co-author, Blake Sasse, Arkansas Game and Fish Commission	Notes on the Natural History of the small-footed bat in Arkansas	30	1
Robert Bastarache OK Ranger District	4/19/07	Snake Presentation to Dierks Elementary School (Broken Bow, OK)	none	65	
Robert Bastarache OK Ranger District	4/20/07	Wildlife Field Trip for Wildlife Class from Southeastern Oklahoma State University	none	6	
Poteau-Cold Springs RD	4/21/07	Earth Day-Waldron AR		100	
Poteau-Cold Springs RD	4/21/07	Farm Safety Day - Waldron AR	none	200	
Poteau-Cold Springs RD	4/27/07	BATS! Southside Elementary School, Batesville (2 pgms)	Arkansas Game and Fish Commission, Nongame Division	124	
Poteau-Cold Springs RD	4/27/07	Forests, snakes, Smokey Bear	Lake Ouachita State Park, their Naturalist	131	
Jessieville-Winona-Fourche Ranger District	5/2/2007	Bats and Silviculture	SRS and Arkansas Game and Fish Comm.	60	2
Jessieville-Winona-Fourche Ranger District	4/21/07	Earth Day-Waldron AR		100	
Jessieville-Winona-Fourche Ranger District	4/26/07	GIS / Compassing		100	
Poteau-Cold Springs RD	5/4/2007	GIS / Compassing		60	
Poteau-Cold Springs RD	5/4/2007	Making a Bird Nest		110	

Staff & Unit	Date	Activity	Partners Involved	# of Attendees	# of Programs
Rich Standage Supervisor's Office	5/15/07	5th grade science classes - Lakeside School		103	4
Rich Standage Supervisor's Office	5/16/07	5th grade science classes - Lakeside School		102	4
Jessieville-Winona-Fourche Ranger District	5/18/07	Bat Program (1)and Friendship Trail Walk, St. Lukes School		30	
Jessieville-Winona-Fourche Ranger District	5/21007	Bat Programs (3) for Learning Camp		128	
Jessieville-Winona-Fourche Ranger District	5/21/07	Bat Program (1)		130	
Jessieville-Winona-Fourche Ranger District	5/4/2007	Bat Program (1) and Interpretive Walk Friendship Trail		34	
Jessieville-Winona-Fourche Ranger District	6/9/2007	Kid's Fishing Day	Arkansas Game and Fish Comm. Fisheries Division/Magic Bait Company	40 children and 30 adults	
Jerry Davis Wildlife Biologist	On-Going	Paper - Woodland Restoration	NatureWatch AR/OK Bird List Serves	800 adults 20 Children	2
Jerry Davis Wildlife Biologist		Tour	NatureWatch AGFC Rocky Mtn Elk Foundation	8	1
Jerry Davis Wildlife Biologist	On-Going	Paper Distribution	NatureWatch AR/OK Bird List Serves	900 Adults 20 Children	2
Jerry Davis Wildlife Biologist	On-Going	Article	NatureWatch AR/OK Bird List Serves Audubon Society	920 Adults 30 Children	2
Jerry Davis Wildlife Biologist		Data	NatureWatch Partners in Flight	175 Adults 3 Children	31
Jerry Davis Wildlife Biologist	On-Going	Traveling Display on elk habitat	NatureWatch Rocky Mtn Elk Foundation AGFC		2
Jerry Davis Wildlife Biologist		Tour	NatureWatch Eyes on Wildlife	5 Adults	1
Jerry Davis Wildlife Biologist	On-Going	Presentations, Articles, Posters	NatureWatch AR/OK Bird List Serves Garland Co. Audubon Society Bird List Serves – AR and OK	800 Adults 15 Children	1
Jerry Davis Wildlife Biologist	On-Going	Article	NatureWatch AR/OK Bird List Serves	800 Adults 20 Children	1
Jerry Davis Wildlife Biologist	On-Going	Article	NatureWatch AR/OK Bird List Serves Audubon Society	800 Adults 15 Children	1
Jerry Davis Wildlife Biologist				11 Adults	1

Staff & Unit	Date	Activity	Partners Involved	# of Attendees	# of Programs
Jerry Davis Wildlife Biologist		Presentation		55 Adults	1
Jerry Davis Wildlife Biologist		News Release		63 Newspapers AR and OK	1
Jerry Davis Wildlife Biologist			NatureWatch City of Ft. Smith	25 Adults 320 Children	11
Jerry Davis Wildlife Biologist		Article	NatureWatch AR/OK Bird List Serves Audubon Society		2
Jerry Davis Wildlife Biologist		Presentation	NatureWatch Audubon - AR	128 Adults 8 Children	5
Jerry Davis Wildlife Biologist		News Release		63 Newspapers AR and OK	1
Jerry Davis Wildlife Biologist		Tour	NatureWatch Arkansas State University	20 Adults	1
Total Programs					110

Appendix C – Approved Communication Sites

Approved Communication Sites and sites for which plans are under development:

Bee Mountain Electronic Site Mena RD, Polk County, AR NW1/4 of SE1/4 Section 13, T3S R31W This site is unoccupied and may be abandoned.	**Buck Knob** Oden RD, Scott County AR T1S. R28W, Sec. 1
Cove Mountain Fourche RD. Perry, Co. AR T3N, R21W, Sec. 14	**Crystal Mountain** Winona RD, Saline County, AR T2N, R18W, Sec. 8 This site is unoccupied and may be abandoned.
Danville Electronic Site Fourche RD, Yell Co. AR T 4N, R23W, Sec. 12	**Dutch Creek** Fourche RD, Yell County, AR, 2.3 Ac. T4N, R23W, Sec. 12 Microwave, mobile radio
Eagle Mountain Mena RD, Polk Co. AR SW1/4 Sec. 30 T3S, R29W	**High Peak** Caddo RD. Montgomery Co. AR T3S, R24W, Sec. 19
Kiamichi Mountain (Three Sticks Historical Monument) Kiamichi RD, LeFlore Co. OK T2N, R25E, Sec. 29	**Federal Aviation Agency, VORTAC Site** Choctaw RD, LeFlore Co. OK Sect. 6, T2N, R26E
Ouachita Pinnacle Jessieville RD, Garland Co. AR T1N, R21W, Sec. 15	**Paron Elec. Site** Winona RD, Saline Co, AR T2N, R18W, Sec. 11
Poteau Mtn. (Bates) Poteau RD. Sebastian Co. AR T4N, R32W, Sec. 34	**Rich Mtn. #1** Mena RD, Polk Co. AR NW1/4 Sec. 17, T1S, R31W
Rich Mtn. #2 Mena RD, Polk Co. AR NW1/4 Sec. 6, T2S, R30W	**Tall Peak** Mena RD, Polk Co. AR SE1/4 SE1/4, Sec. 24, T4S, R28W
White Oak Mtn. Cold Springs RD., Scott Co. AR T4N, R28W, Part of the NE NW, Sec. 26	**Sycamore** Choctaw RD, LeFlore Co. OK T3N, R23E, Sec. 33
Slatington Peak Caddo RD. Montgomery Co. AR NW1/4 NW1/4 Sec. 4, and NE1/4 NE1/4 Sec. 5, T4S, R27W Currently unoccupied, retain for future development.	**Hodgen** Choctaw RD, Leflore Co. OK T3N, R25E, Sec. 2 Site plan under development.

Appendix D – Proposed and Probable Activities

Activity	Unit of Measure	Range of Proposed/ Probable Annual Activity	Actual Annual Activity FY07
Allowable Sale Quantity	Million cubic feet/year	27	20.64
Timber offered for sale	Million cubic feet/year	20-30	19.86
Regeneration harvest (by modified seedtree/ shelterwood methods)*	Acres	5,000-6,000	4,363
Management Area 14	Acres	4,000-4,700	3,981
Management Area 15	Acres	140	0
Management Area 16	Acres		97
Management Area 17	Acres	250	0
Management Area 21	Acres	160	0
Management Area 22	Acres	1,000-1,200	285
Other MAs	Acres	250	0
Uneven-aged management*	Acres	9,000-12,500	3,065
Management Area 14	Acres	7,200-7,850	1,972
Management Area 16	Acres	1,000-1,300	676
Management Area 19	Acres	800-850	417
Commercial Thinning*	Acres	20,000-28,500	9,922
Management Area 14	Acres	10,000-13,700	7,368
Management Area 15	Acres	1,000	0
Management Area 16	Acres		608
Management Area 17	Acres	400-500	0
Management Area 21	Acres	1,500-1,600	0
Management Area 22	Acres	7,000-8,200	1,946
Midstory reduction	Acres	4,325-5,000	5,850
Management Area 21	Acres	500-600	1,220
Management Area 22	Acres	3,500-3,725	4,630

Activity	Unit of Measure	Range of Proposed/ Probable Annual Activity	Actual Annual Activity FY07
Other MAs	Acres	325-500	1,560
Watershed improvement and maintenance	Acres	30-60	45
Arterial/collector roads reconstructed	Miles	15-20	6.44
Local roads reconstructed	Miles		34.20
Local roads constructed	Miles	5-10	4.28
Roads decommissioned	Miles	10-20	12.30
Trail maintenance (non-motorized)	Miles	300-350	300
Heritage resource survey	Acres	9,000-10,000	22,460
Active range allotments	Number	≤17	16
Prescribed Fire	Acres	80,000-250,000	145,354
Management Area 6	Acres	5,000-10,000	2,465
Management Area 14	Acres	25,000-110,000	43,405
Management Area 17	Acres	8,000-22,000	7,659
Management Area 21	Acres	8,000-25,000	16,527
Management Area 22	Acres	27,000-70,000	51,617
Other MAs	Acres	7,000-13,000	23,680

*Reported figures based on acres sold.

Appendix E – Implementation Monitoring Review

An Implementation Monitoring Review (IMR) took place on June 27, 2007 at three growing season prescribed burns on the Jessieville-Winona-Fourche Districts. The IMR was undertaken to determine whether growing season prescribed burning projects were planned, documented, and implemented in a safe and appropriate manner. The intent was to review project consistency not only with Forest Plan direction, but also agency, Region and Forest prescribed burning guidelines. Documentation of the review was shared with all forest Districts, so that lessons learned on these projects can aid other units in the planning and implementation of similar prescribed burning projects.

Summary of Findings

The District places a high priority on safety. There was good documentation of the safety and operational briefings done on a daily basis before each burn. Each prescribed burn plan contained current, updated job hazard analyses for aerial ignition as well as prescribed burning tasks.

The District Ranger and Staff of the Jessieville-Winona-Fourche Districts are knowledgeable of the uses of prescribed fire and are skillful in its application on the land. This was evident in the results obtained in all three of the prescribed burns conducted during June and July of 2007 and visited during this review.

The location of firelines utilized natural breaks to help control runoff and the waterbar spacing was adequate. However, most of the waterbars were not functional. They were constructed at a 90 degree angle (rather than 30-45) and had no outlet. Gullies and rills were observed along portions of the firelines. As a result of the IMR findings, on-site waterbar construction workshops were conducted by the Forest Soil Scientist with each District cluster emphasizing spacing, function and post-fire erosion control measures.

VSMOKE overstates smoke effects, particularly if burns are executed on days with high mixing heights. Smoke plume monitoring via NOAA's Fire Detect site confirmed actual smoke dispersion was quite different than model projections. It was suggested that modeling results be included in the project file only and not part of the burn plan or NEPA analysis documentation nor specifically referenced until the model is validated for complex terrain in the South. Since the IMR, a team has been assigned to develop a process for addressing smoke issues of growing season burns. It must be added here that there were no significant smoke incidents associated with any of these prescribed burns. These burns and others provide an increasing body of evidence that support occasional use of low transport wind speeds with increased mixing heights during sunny daytime ignition. Additionally, over night smoke-related problems appear to be minimal when fire is slowly backing in thinly populated back country and smoke movement is localized.

All of the burns contributed to the objectives of reducing fuel volume and continuity, as well as increased production of browse and herbage. However, hot spots totaling 120 acres occurred in the North Link Mountain burn. Very little mortality (<1%) occurred in Bills Branch and South Link Mountain burns. A fire that burns in a stand of mature trees without damage can kill young trees in regeneration areas. Pre-burn young stands under milder conditions to minimize the threat to young stands if possible. If not possible, limit all firing in plantations to backing fire only, particularly on growing season prescribed fires.

Backing fires must be used rather than head or flanking fires. Backing fires even at relatively high ambient air temperatures have not caused significant mortality.

Growing season burns take more time and require more personnel. Firing with helicopters mitigates some of the potential risk of crew fatigue from hand ignition, particularly when firing out ridges. More than one day must be allowed for completion of a typical burn, meaning that the fire(s) must be allowed to burn over one or more nights.

Relatively large-scale prescribed burns, i.e. several thousand acres, can be implemented in the summer under fairly extreme temperature and atmospheric conditions without undue environmental damage. The general consensus on this Forest prior to these projects was that large-scale summer burns could not be done without causing severe tree mortality.

Burn Plans and environmental analyses/documents should address both conditions and effects for dormant and growing season fire applications.