2014 Monitoring and Evaluation Report

United States
Department of
Agriculture

Forest
Service

Southern
Region

March, 2015

Kisatchie National Forest

Claiborne, Webster, Grant, Rapides, Natchitoches, Vernon and Winn Parishes, Louisiana

Calopogon tuberosus in Cooters Bog (USDA 2005)

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Kisatchie National Forest
2500 Shreveport Highway
Pineville, Louisiana

2014 Monitoring and Evaluation Report
Forest Supervisor's Certification

I have evaluated the monitoring results and recommended actions in this report. The 2014 recommend actions will be implemented according to the timeframes indicated unless new information or changed resource conditions warrant otherwise. I find the management direction in the *Kisatchie National Forest's Revised Land and Management Plan, August 1999* sufficient to guide the Kisatchie National Forest in 2015. The forest plan's monitoring questions will be reviewed, evaluated and adjusted, as necessary, to comply with the 2012 Planning Rule. Additional information concerning this forest plan's monitoring transition is in Appendix A.

WILLIAM E. TAYLOR, JR.
Forest Supervisor
Kisatchie National Forest
Date: 6/16/2016

EXECUTIVE SUMMARY

The Forest and Rangeland Renewable Resources Planning Act, as amended by the National Forest Management Act (NFMA), directs that each national forest develop a comprehensive forest management plan, and that these plans be reviewed and updated every 10 to 15 years, or earlier if conditions change significantly. In addition to the above acts the National Environmental Policy Act of 1969 (NEPA), Government Performance and Results Act of 1993 and the 2015 Revision of the USDA Forest Service Strategic Plan guided the revision process.

The Kisatchie National Forest (hereafter, typically referred to "Kisatchie NF", "KNF", or "Forest") is currently operating under the *Revised Land and Resource Management Plan, August 1999* (hereafter referred to as "forest plan" or "KNF Revised LRMP"). This plan annually monitors and evaluates programs and projects to determine whether they comply with management direction in the forest plan.

Monitoring and evaluation has been an ongoing process since the forest plan became effective in 1999. It is designed to ensure that forest plan goals and objectives (KNF Revised LRMP, page 2-1 to page 2-7) are being achieved, standards and guidelines are being properly implemented, and environmental effects are occurring as predicted. Additionally this process indicates whether the application of management area prescriptions is responding to public issues as well as management concerns. The evaluation of monitoring results allows the forest supervisor to initiate action to improve compliance with management direction where needed and determine if any amendments to the plan are needed to improve resource management.

This monitoring and evaluation report is structured to correspond to the monitoring items listed in Chapter five entitled Monitoring and Evaluation, of the forest plan. These items were developed based on desired future conditions, goals and objectives, and standards and guidelines. Each monitoring item considered in this report references the corresponding monitoring item from Table 5-1 in the forest plan. Additionally this report includes the implementation status of the previous fiscal year's monitoring recommendations, detailed results and an action plan for this year's report.

Sixty two monitoring questions were identified in Chapter five of the forest plan focused on evaluating the Forest's accomplishment toward the eight forest wide desired future conditions goals and objectives. Monitoring is conducted by field reviews of projects and by inventory and survey work conducted by forest service resource specialists and research scientists, universities, state resource agencies, and other cooperators. Addressing the monitoring questions is accomplished by evaluating the results of annual monitoring activities.

Opportunity for Comment

If you have questions or comments regarding the accomplishments for fiscal year 2014, please contact us in writing at Kisatchie National Forest, 2500 Shreveport Highway, Pineville, LA 71360 or contact Mr. David Byrd, Ecosystem Staff Officer, at (318) 473-7059. You may also send an electronic comment by using the following hyperlink to the Forest's website: http://www.fs.usda.gov/contactus/kisatchie/about-forest/contactus.

SECTION 1.0 SUMMARY OF MONITORING AND EVALUATION RESULTS AND FINDINGS

1.1 ECOSYSTEM HEALTH, CONDITION AND SUSTAINABILITY

1.1.1 Forest Health

There continues to be an emphasis on treatments that improve forest health, terrestrial and aquatic wildlife habitat. The Forest's prescribed burning program continues to restore and maintain an open understory with increased ground cover diversity:

- The Forest exceeds forest plan goals of acreage provided in each landscape community except the mixed hardwood-loblolly pine early stages, which are well below forest plan goals. Mid-late succession shortleaf oak hickory is low but has been increasing through time.

- The Forest exceeds forest plan successional stage goals for middle and late successional forest types. Early successional habitat is below forest plan goals.

- Forest restoration efforts continue to be low with 216 acres planted with longleaf pine seedlings and 0.0 acres of shortleaf pine seedlings being planted in 2014. Approximately 23% of the forest plan's longleaf pine and 33% shortleaf and loblolly pine restoration efforts have been implemented since 1999. Reforestation efforts are encouraged across the forest and continue to be a priority in order to create future Red-cockaded Woodpecker (*picoides borealis,* RCW*)* habitat and meet the annual forest plan goals.

- In the last decade, virtually all, bark beetle mortality within the state have been due to Ips, Southern Pine Engraver Beetle. Insect and disease population trends on the Forest were stable and low in FY 2011 and FY 2012 and were predicted to be low through FY 2014 with the possible exception of an increase in scattered Ips beetle attacks as a result of drought.

There continues to be emphasis of prescribe fire use for reduction in fuel loads, forest health and biodiversity improvements. Prescribe burn monitoring is ongoing to determine the effectiveness of the prescribe burns implemented and the response of the native vegetation to this management technique.

- Prescribed fire was applied to approximately 114,157 acres in FY 2014. Approximately 79,682 acres were dormant season burns and 34,475 acres were growing season burns. FY 2014 total burn acres are within the Forest plan goals.

- Prescribe burns are being applied to Land Type Associations (LTA) across the Forest. Dormant season burns were primarily conducted in LTA 1, 2 and 5. Growing season burns were conducted in LTA 2, 3 and 4.

- There continues to be a need to ensure all forest LTAs are receiving prescribed burns across the forest consistent with Forest plan standards and guidelines. The scope and scale of prescribed burning that is needed to move towards restored landscape conditions will be addressed during forest plan revision.

1.1.2 Biodiversity

There continues to be emphasis on enhancing terrestrial and aquatic biodiversity across the forest. One federally endangered species; Red-cockaded woodpecker; one federally threatened species, Louisiana pearlshell mussel (*Margaritifera hembeli*, LPM), and one federal candidate species for federal listing, Louisiana pine snake (*Pituophis ruthveni*, LPS) occur on the Forest. However no known federally threatened or endangered botanical species occurs within the Kisatchie National Forest.

Vegetation

- No known occurrences of threatened or endangered plant species were found on the Forest.
- No specific surveys for botanical Management Indicator Species (MIS) have occurred since 2002. A strategy for updating botanical MIS population and habitat trends is being developed for forest plan revision.
- There is a need to continue to use prescribe fire in all LTAs and follow forest plan standards and guidelines. Prescribe burning is the most efficient management tool along with non-native invasive plant treatments to promote biodiversity of the forest floor.
- The treatment of Non-Native Invasive Plants (NNIP) with fire continues to improve habitat for Threatened, Endangered, Sensitive and Conservation (TESC) species. There is a need to ensure that all vegetation/restoration projects include treatments for NNIP.

Terrestrial and Aquatic Wildlife

- RCW populations remained steady and consistent with population numbers in 2013. A slight population increase occurred on the Vernon Unit and Kisatchie populations. The Catahoula population had a minor decline but overall forest totals are relatively consistent with FY 2013 results.
- The total LPM population on the KNF appears to have a downward trend. This trend decline in the LPM population is believed to be from environmental, biological factors, and management practices outside of the Forest Service boundaries. This region has seen drought years in which one LPM stream on the Catahoula went dry.
- The population trend for the Louisiana pearlshell on the Evangeline Unit of the Calcasieu Ranger District appears to be stable. The Catahoula Ranger District population appears to be on a downward trend. The increased occurrence of drought, predation, and beaver activity are believed to be attributing to this trend. Some land management activities that are occurring off the forest are also believed to have affected the mussels.
- The LPS is a forest sensitive species that is also a candidate species for federal listing as threatened or endangered. The U.S. Fish and Wildlife Service anticipate in FY 2017 to have the determination to list documentation completed. The forest continues to participate in the 2013 *Candidate Conservation Agreement for the Louisiana Pine Snake between the U.S. Fish and Wildlife Service, U.S. Forest Service, Natural Resources Conservation Service, U.S. Department of Defense, Fort Polk and the Joint Readiness Training Center, Texas Parks and Wildlife Department, Louisiana Department of Wildlife and Fisheries and the Association of Zoos and Aquariums*. The Vernon Unit of the Calcasieu Ranger District

and the Department of Defense, Fort Polk and the Joint Readiness Training Center, is developing a cooperative conferencing biological evaluation for the Evaluation of Effects on the Louisiana Pine Snake for Ongoing Military Training at the Joint Readiness Training Center and Fort Polk, Louisiana. It is anticipated the U.S. Fish and Wildlife Service will issue a Conferencing Opinion in 2015.

- The forest plan was signed in 1999 and Management Indicator Species habitat has changed through time. Forest type and forest successional stages, as compared with Management Indicator Species habitat associations, have shown the following forest changes across the landscape:
    - Longleaf Pine: Early successional habitat has changed by 26% which is down and is supported by low restoration efforts as shown in Figure 4.0. Mid to late successional habitat is somewhat up to stable.
    - Shortleaf Pine Oak Hickory: Early successional habitat has changed by 35% which is stable to increasing. Mid to late successional habitat is stable.
    - Mixed Hardwood-Loblolly Pine: Early successional habitat has not changed through the life of the forest plan and has been decreasing. Mid to late successional habitat is increasing to stable.
    - Small Stream Riparian: Early successional habitat has not changed through the life of the Forest plan and has been low. Mid to late successional habitat is slightly increasing to stable.
    - Large Stream Riparian: Early successional habitat has not changed through the life of the Forest plan and has been low. Mid to late successional habitat is slightly increasing to stable.
- Aquatic predator/prey populations across the Forest are sufficient for a sustainable recreational fishery. Young-of-year and recruitment of all age classes is evidence that sediment has not inhibited reproduction of fishes or altered habitat beyond natural conditions.
- Population trends of aquatic MIS suggest that best management practices and streamside habitat protection zones are adequately protecting the integrity and quality of watersheds within the Forest.
- Forest treatments focused on restoring native species composition benefited deer, turkey, quail and rabbits. However, on a statewide-scale, deer populations are and have been considerably below the habitats' carrying capacity and herd densities are too low to provide adequate aesthetic enjoyment for non-consumptive users. Long-term declines have also been occurring in turkey populations in four of five state habitat regions.

Water Quality

Water qualities of nine streams occurring in the Forest are monitored quarterly in cooperation with the Louisiana Department of Environmental Quality (LDEQ). These quarterly samples indicated that streams meet state water quality standards for the parameters that were tested.

Air Quality

All areas of the Forest are in attainment of the National Ambient Air Quality Standards (NAAQS), including those for ozone. There were 114,157 acres burned and all burns were within prescription plans and with appropriate level of smoke management techniques.

1.2 SUSTAINABLE MULTIPLE FOREST AND RANGE BENEFITS

1.2.1 Recreation, Scenery, Minerals

Scenery

Management activities maintained landscapes with high scenic diversity. The forest's scenic integrity objective (SIO) or recreation opportunity class (ROS) were not degraded due to management activities. However, a forest-wide evaluation of the potential change in scenery integrity (as a result of management activities) has not been conducted due to staffing limitations.

Special Interest Areas (SIAs) were managed to the required minimum standard. Management within designated wilderness and wild and scenic rivers moved towards implementing the strategy developed by the Forest.

Lands and minerals

No private land was acquired in 2014 and the forest did not receive any submittals for tripartite exchanges, but will continue to pursue this process as opportunities arise. No new oil and gas wells were drilled. Forest landline maintenance continues to be a need to facilitate the prevention and location of encroachments.

1.2.2 Out Puts- Timber/Range/Other

Timber

The forest plan does allocate ASQ by first and second decade and the ASQ is for the "life" of the plan. There are 308,889 acres of lands classified as suitable for timber production and 268,271 acres of lands classified as unsuitable for timber production, including RCW habitat and lands utilized by the military via special use authorization. The forest plan directs the Forest to offer <u>an average</u> of 9.69 MMCF of suitable timer sale volume on an annual basis. The allowable ASQ from the category "all lands" that is included in the timber commodity outputs and sale schedule is 13.16 MMCF.

- Suitable lands vegetation treatments yielded 8.3 MMCF (83,230 CCF) and approximately 5,744 acres were treated.
- Vegetation treatments on unsuitable lands yielded approximately 4.7 MMCF (46,903 CCF) and approximately 3,230 acres were treated.
- A comparison of FY 2014 to FY 2013, reflects an increase of approximately 1.0 MMCF.
- The average annual output from 2000 to 2014 was approximately 8.9 MMCF annually.
- Neither the suitable or unsuitable volume has been exceeded during the implementation of the Forest plan.

Range Allotments

Three grazing allotments were actively utilized for cattle grazing in 2014. The allotments are meeting the current demand for allotment-based forage resources. How vegetation treatments on the forest have affected and/or improved forage has not been evaluated. The grazing authorizations were evaluated in the forest plan and associated National Environmental Policy Act (NEPA) documentation.

Heritage

- A total of 8,355 acres were inventoried during FY 2014. These acres were in support of timber sales, wildlife and fuels management. Forty-five new sites were added to the Forest's heritage database.
- The Forest continued government-to-government relations with seven federally recognized tribal nations. These include the Caddo Tribe of Oklahoma, the Chitimacha Tribe of Louisiana, the Coushatta Tribe of Louisiana, the Jena Band of the Choctaw Indians, the Tunica Biloxi Tribe, and the Choctaw Tribe of Oklahoma.
- No archaeological resources were reported to have been harmed either internally or externally.

1.3 ORGANIZATIONAL EFFECTIVENESS

1.3.1 Monitoring and Evaluation

The 2014 annual monitoring and evaluation report (and previous years) was made available to the public on the Kisatchie (http://www.fs.usda.gov/main/kisatchie/landmanagement/planning. Monitoring data and information has always has been available by contacting the Forest.

- The forest plan is being kept current based upon information in the annual Monitoring and Evaluation reports.
- During FY 2015, forest plan monitoring questions will reviewed and evaluated for compliance with the new 2012 Planning Rule.

1.3.2 Cooperation, Coordination and Collaboration

The Forest is working with multiple agencies, universities and non-governmental organizations to enhance Forest management activities and incorporate new technologies, information and best available science into management activities.

SECTION 2.0 MONITORING RESULTS AND FINDINGS

Chapter five of the Forest plan established and discusses monitoring questions that are to be addressed over the course of the Forest plan implementation. Monitoring questions address whether the desired conditions, goals and objectives of the Forest plan are being met and whether Forest plan standards are effective.

2.1 ECOSYSTEM HEALTH, CONDITION AND SUSTAINABLITY

2.1.1 Forest Health

Forest health is addressed in the forest plan's Goal one which has associated objectives that contain specific monitoring questions. Sound timber management practices help establish and maintain healthy and productive forests. Forest management activities are proposed to improve forest health by increasing vigor, replacing off-site species with species appropriate to the site, or replacing non-native invasive species with native species. Forest health proposals are designed to eliminate, suppress or reduce infestations of forest insect and disease pests.

Forest Wide Desired Future Condition, Goal 1, Objective 1–5: Manage for productive and healthy forest ecosystems by utilizing comprehensive integrated approaches designed to prevent and minimize resource losses or damage due to insects and disease (KNF Revised LRMP, page 2-4).

Objective 1-5 Monitoring Question 1: Do management practices provide for correct site/species selection, reduce overstocked stands to optimum levels and insure prompt detection and control of insects and diseases? (I)

FY 2014 Findings:

- Approximately 11,411 acres of vegetation was treated, an increase of about 1,000 acres in 2013. Treatments included plantation tree release, non-native invasive removal, bog improvement, range control, mid story removal, restoration and a variety of thinning.
- Approximately 5,744 acres of vegetation was treated on suitable lands yielding 8.3 MMCF (83,230 CCF).
- Approximately 3,230 acres of vegetation was treated on unsuitable lands yielding approximately 4.7 MMCF (46,903 CCF).
- There were no Southern Pine Beetle (SPB) spots reported.
- Timber stand improvements were implemented focused on reducing competition in young longleaf plantations resulting in improving site/species selection.

FY 2015 Recommended Actions:

- Continue to identify restoration and forest health needs through the inventory process.

- Continue to monitor areas for forest decline and bug spots through aerial surveillance flights.

Objective 1-5 Monitoring Question 2: Has management resulted in a decrease of susceptibility of southern pine beetle and other pests? Are pest incidents decreasing with applied integrated management? (E)

FY 2014 Finding: Severe drought has impacted southern yellow pines across the south. Generally, such stressed pines are prone to attack by southern pine engraver beetle. In the last decade, virtually all bark beetle mortality within the state have been due to Ips.

- Insect and disease population trends on the Kisatchie NF were stable and low in FY 2011 and FY 2012 and were predicted to be low through FY 2014 with the possible exception of an increase in scattered Ips beetle attacks as a result of drought.

FY 2015 Recommended Action: Continue to monitor for possible SPB attacks through aerial observations. Expect an increase in scattered pine mortality due to the Ips capitalizing on drought-stressed pines. Field check for increased mortality from Annosus root disease on thinned loblolly stands on high hazard sites.

2.1.2 Prescribed Fire

Prescribed fire is a common practice and occurs on a large majority of the Forest. It is used to mimic natural fire regimes required to maintain the Forest's fire dependent ecosystems. Alterations to the Forest are implemented to mimic natural ecological processes. Visible changes result primarily from stand regeneration, stand improvement practices and the periodic use of prescribed fire. Prescribe fire is addressed in the Forest plan's Goal 1 and 6 which have associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 1, Objective 1–4: Provide a level of wildfire protection which emphasizes cost effective wildfire prevention and suppression while minimizing loss of resources (KNF Revised LRMP, page 2-4).

Objective 1-4 Monitoring Question 1: Is wildfire protection being provided in a cost effective manner? Are losses to wildfire being minimized? (I)

FY 2014 Findings:

- Wildland fire preparedness funding continues to be below the most efficient level determined by the National Fire Management Analysis System (NFMAS) in 2001, but wildfire losses are being minimized. Fire Planning Analysis (FPA) was expected to assist the Forest in determining the most efficient level.

- FPA began in approximately 2003 but has seen very little practical applications and is only useful at the Forest Service Washington Office level.

FY 2015 Recommended Actions:

- The Forest will continue to operate at the current efficiency level until fire preparedness funding is increased, and staff accordingly.
- Replacement analysis tools for National Fire Management Analysis System and Fire Planning Analysis are currently in development to determine the most efficient level.

Objective 1-4 Monitoring Question 2: Are resources identified in NFMAs being made available in accordance with budget funding levels? Are acres lost to wildfire within the range identified by NFMAs for the current budget level? (E)

FY 2014 Findings:

- Resources identified in the maximum efficiency analysis are being made available in accordance with the level of funding.
- The Forest had 51 wildland fires affecting approximately 3,369 acres in FY 2014. The acceptable range identified in the plan is 2,108.

FY 2015 Recommended Actions:

- Manage for productive and healthy forest ecosystems by utilizing prescribed fire to prevent and minimize resource losses to wildland fires.

Forest Wide Desired Future Condition, Goal 6, Objective 6-2: Utilize prescribed fire in fire-dependent ecosystems, including Kisatchie Hills Wilderness, to maintain natural plant communities by varying the timing, frequency, and intensity of fire. Apply prescribed fire on 80,000–105,000 acres annually, with 10–20 percent of the area burned during the growing season. Focus growing season burning on longleaf pine landscapes (KNF Revised LRMP, page 2-6).

Objective 6-2 Monitoring Question 1: Are the prescribed fire regimes being applied to all appropriate landscapes as prescribed, to maintain fire-dependent ecosystems? (I)

FY 2014 Findings:

- The prescribed burning goals in the forest plan range from 80,000 to 105,000 acres annually. In FY 2014, the Forest accomplished 114,157 acres which is above the range estimated in the forest plan, Figure 1.0. This is the third time during the implementation of the Forest Plan that prescribe burn acres have exceeded forest plan goals.
- Approximately 79,682 acres were prescribed burned during the dormant season and 34,475 acres in the growing season, Figure 2.0.
- The Land Type Association (LTA) that prescribed burning was performed in are shown in Table 1.0.

Table 1.0 FY 2014 Acres of Prescribed Fire by Land Type Association		
Land Type Association Units	**Dormant Season (Acres)**	**Growing Season (Acres)**
1	41,577	20,188
2	14,047	4,689
3	6,484	1,878
4	1,083	0.0
5	8,687	5,828
6	5,677	1,892
7	0.0	0.0
8	0.0	0.0
9	2,127	0.0
Total	79,682	34,475

FY 2015 Recommended Actions:

- Continue to monitor the weather and take advantage of every burning opportunity.
- Continue to maximize the implementation of growing season burns on longleaf pine plant community landscapes.
- Continue to maximize burn opportunities in the fall.
- Continue to have two regional fuels helicopters to increase the production and reduce the cost of call when helicopters are needed.
- The acres of prescribed fire needed to move towards habitat desired conditions needs to be assessed during forest plan revision.

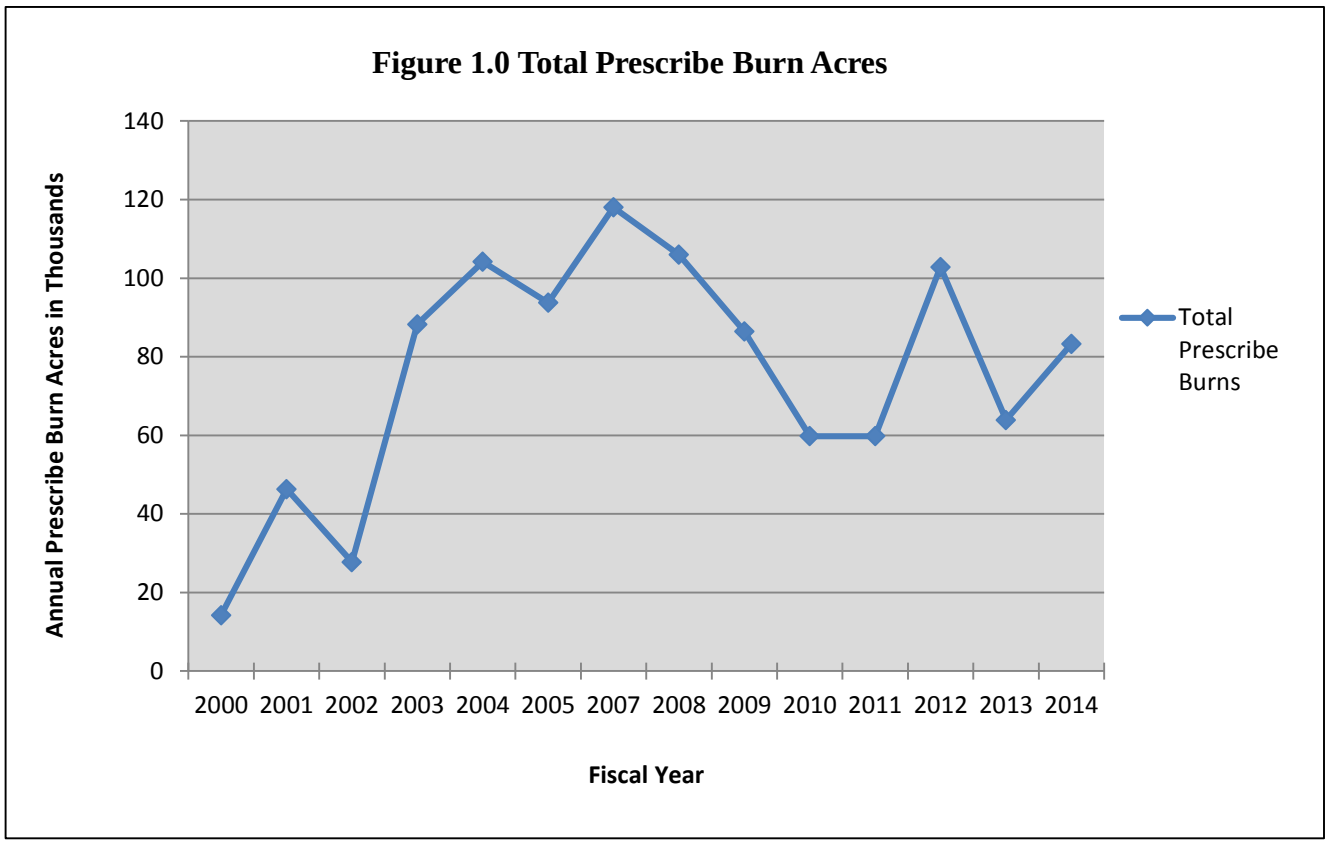


Figure 1.0 Total Prescribe Burn Acres
Annual Prescribe Burn Acres in Thousands
140
120
100
80
60
40
20
0
2000 2001 2002 2003 2004 2005 2007 2008 2009 2010 2011 2012 2013 2014
Fiscal Year
Total Prescribe Burns

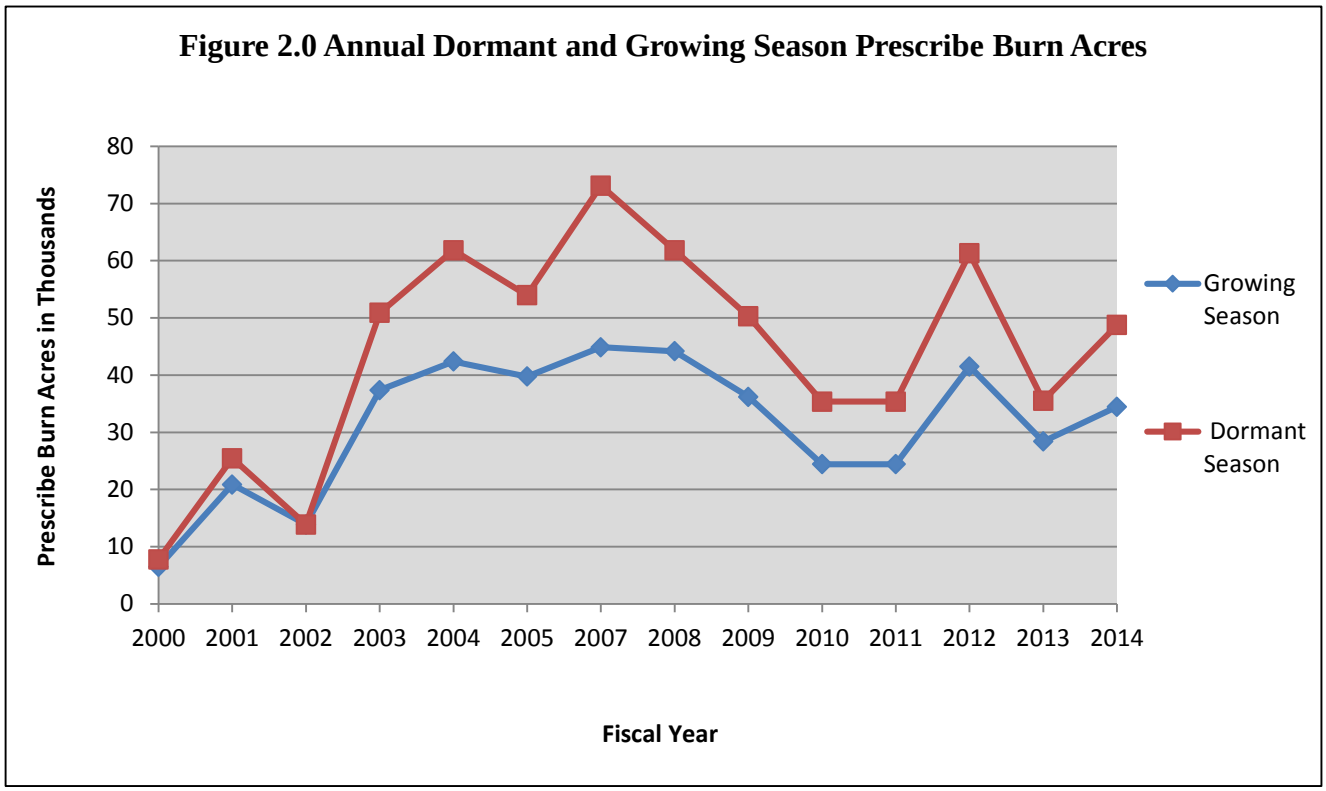


Figure 2.0 Annual Dormant and Growing Season Prescribe Burn Acres
Prescribe Burn Acres in Thousands
80
70
60
50
40
30
20
10
0
2000 2001 2002 2003 2004 2005 2007 2008 2009 2010 2011 2012 2013 2014
Fiscal Year
Growing Season
Dormant Season

Objective 6-2 Monitoring Question 2: Are the natural plant communities being maintained by the prescribed fire regimes? (E)

FY 2014 Findings:

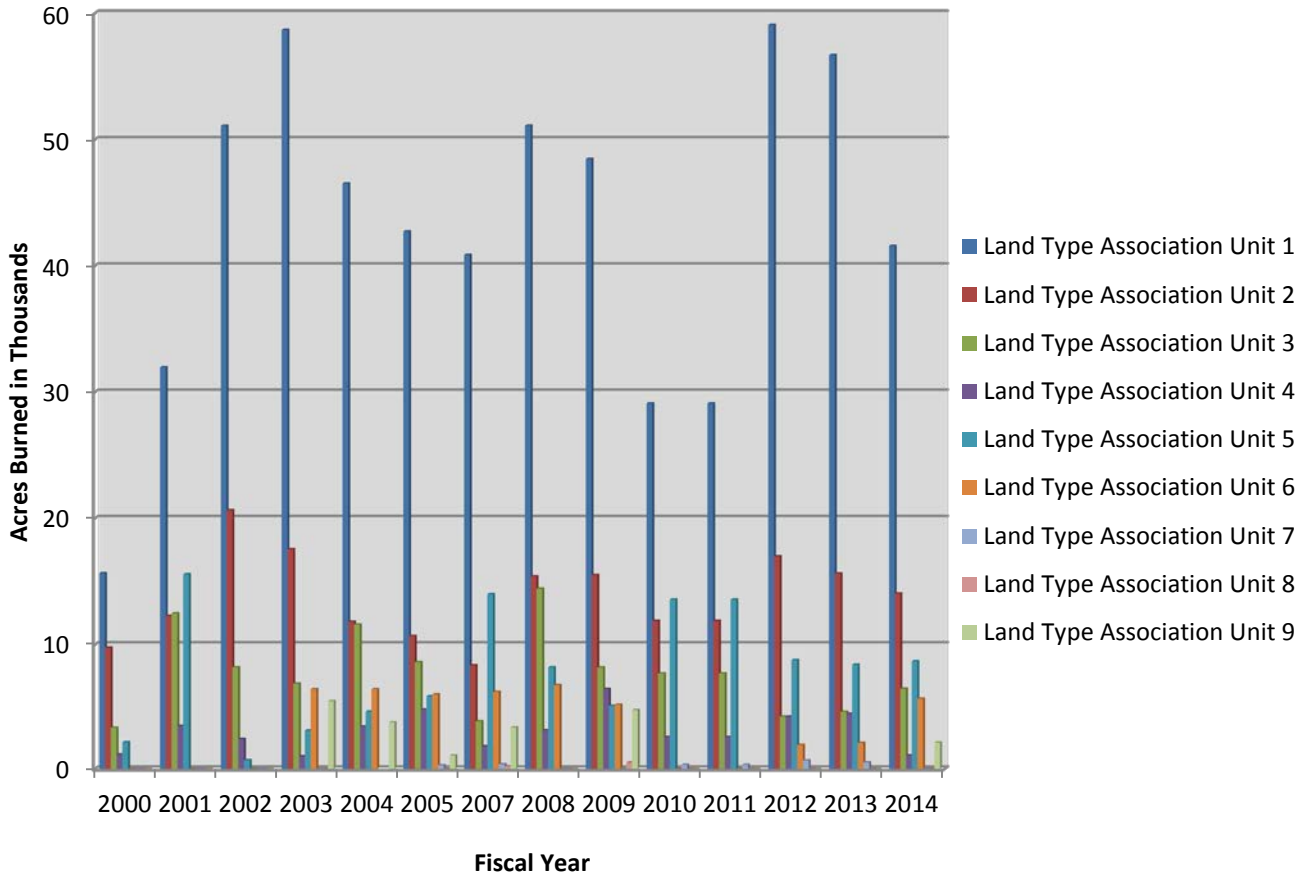
- Movement towards re-establishing desired plant community composition and structure is occurring. Botanical monitoring indicates the Forest's prescribed burning program is the most important practice used for restoration of pre-settlement habitats, which is proving to be very effective in protecting, improving and maintaining TESC species.
- Approximately 79,682 acres were prescribed burned during the dormant season and Figure 3.0 indicates the land type association where prescribed burning was applied through time.
- Approximately 34,475 acres were prescribed burned during the growing season. Figure 4.0 indicates the land type association where prescribed burning was conducted.
- Table 1.0 shows the type of burning and amount of acres in each forest LTA. The list below indicates the last time burns were conducted in LTAs as shown in Figures 3.0 and 4.0:
    - LTA 1 has received annual burns during both dormant and growing since 2000. This LTA on average receives 43,044 acres of dormant season burns and 18,796 acres of growing season burns.
    - LTA 2 has received annual burns during both dormant and growing since 2000. This LTA on average receives 13,752 acres of dormant season burns and 5,097 acres of growing season burns.
    - LTA 3 has received annual burns during both dormant and growing since 2000. This LTA on average receives 7,740 acres of dormant season burns and 5,097 acres of growing season burns.
    - LTA 4 has received annual burns during both dormant and growing since 2000. This LTA on average receives 3,043 acres of dormant season burns and 1,830 acres of growing season burns.
    - LTA 5 has received annual burns during both dormant and growing since 2000. This LTA on average receives 8,028 acres of dormant season burns and 417 acres of growing season burns.
    - LTA 6 has received dormant season burns in FY03-09 and FY13-14. On average 3,343 acres are burned during the dormant season. Growing season burns were conducted during FY00-FY 01, FY03-09, and FY13-14. On average 3,089 acres are burned during the growing season.
    - LTA 7 has received dormant season burns in FY05, FY06 and FY10-13. On average 182 acres are burned during the dormant season. Growing season burns were conducted during FY03-14. On average 2,143 acres are burned during the growing season.

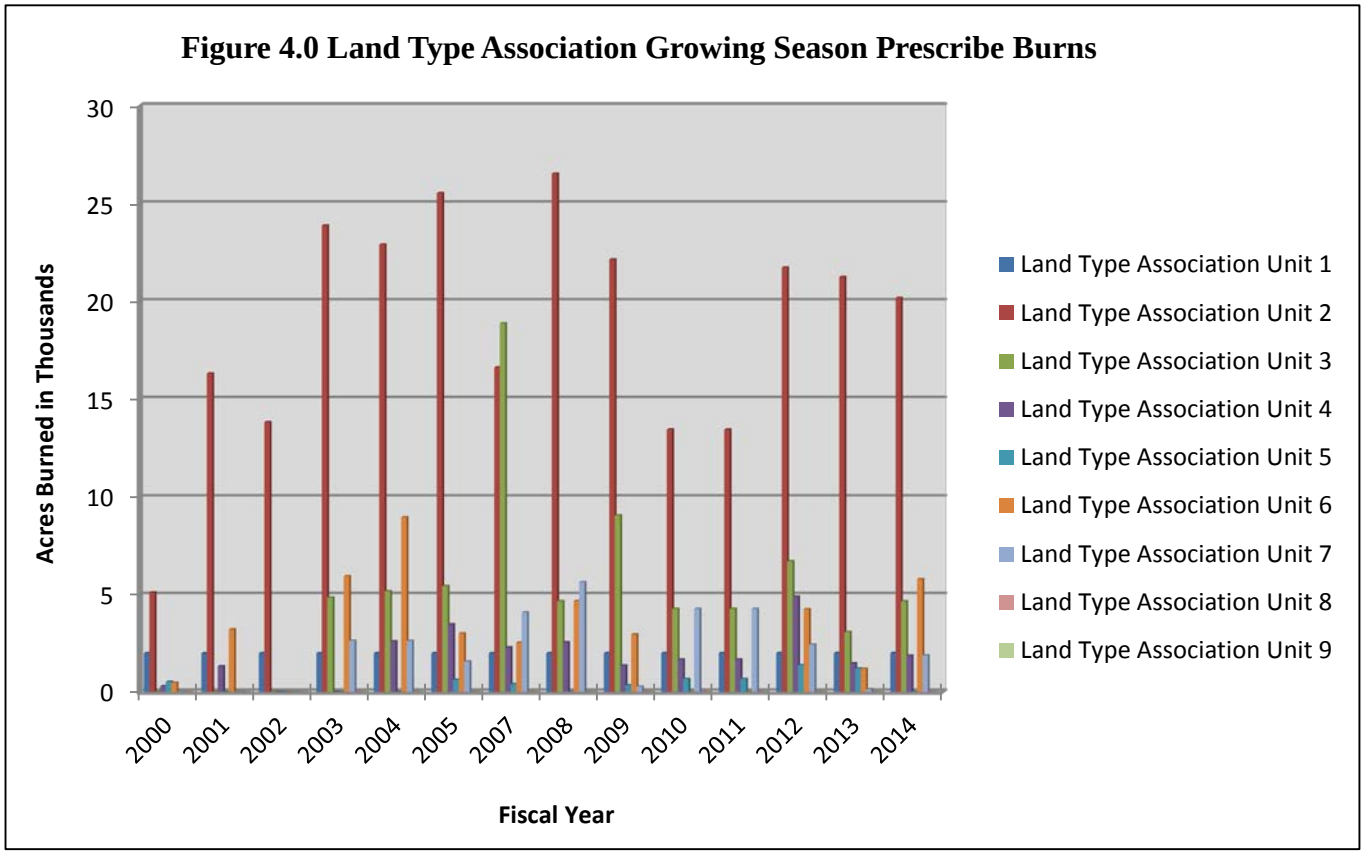
- LTA 8 has received dormant season burns in FY07 and FY09. On average 51 acres are burned during the dormant season. Growing season burns have not been conducted in this LTA.
- LTA 9 has received dormant season burns in FY03-05, FY07 and FY09. On average 1,469 acres are burned during the dormant season. Growing season burns have not been conducted in this LTA.

FY 2015 Recommended Actions:

- Continue the current prescribed burning program. Increase the ratio of growing season burns to dormant season burns, since growing season burns are critical for successful gains in restoration efforts.
- Increase efforts to remove encroaching woody plants in the Winn district prairies and in pitcher plant bogs throughout the forest, as these natural communities provide habitat for many of our TESC species.
- The scope and scale of prescribed burning that is required to move towards restored landscape conditions will be addressed during forest plan revision.

Figure 3.0 Land Type Association Dormant Season Prescribe Burns





2.1.3 Biodiversity

Biodiversity is addressed in the Forest plan's Goal 1, 2 and 6. Each of the goals have associated objectives that contain specific monitoring questions. These questions relate to ecological communities, major forest communities, terrestrial habitats, aquatic habitats and management indicator species. The questions, underlined in the text, are addressed by monitoring projects that directly or indirectly alter these communities, specifically projects that alter the overstory or understory vegetation such as timber sales and prescribed burning.

Forest Wide Desired Future Condition, Goal 2, Objective 2–1: Manage to restore or maintain the structure, composition, and processes of the four major landscape forest ecosystems known to occur on the Forest, and unique or under-represented inclusional communities embedded within them. Long-term objectives for each major forest community are as follows:

- Longleaf pine forest: 263,000 acres;
- Shortleaf pine / oak-hickory forest: 62,000 acres;
- Mixed hardwood-loblolly pine forest: 27,800 acres;
- Riparian forest: 181,000 acres (KNF Revised LRMP, page 2-4).

Objective 2-1 Monitoring Question 1: Are management practices designed to restore or maintain the structure, composition, and processes of the four major landscape forest ecosystems and the embedded plant communities within them being implemented? (I)

FY 2014 Findings:

- One environmental assessment document was completed in FY14 that focused on ecosystem landscape management for RCW habitat, unique and native plant and animal communities, healthy growing forest for plant and animal species, water quality, recreation, enjoyment by the public, and soil conservation. The decision did not propose thinning or regeneration vegetation treatments but did propose other aspects of ecosystem management, such as bush hogging, creating wildlife openings and RCW habitat improvement.

- Approximately 11,411 acres of vegetation was treated, an increase of about 1,000 acres from 2013. Treatments included plantation tree release, non-native invasive removal, bog improvement, range control, mid story removal, restoration and a variety of thinning.

- Other management activities on the forest included wildlife habitat improvement and pine plantation release work.

- Vegetation activities have been designed to maintain the structure and composition of the major landscape forest ecosystems and the embedded plant communities within them. Emphasis continues to be placed on commercial thinning for forest health and RCW habitat improvement.

- The Forest's prescribed burning program focused on restoring and maintaining an open understory that will increase ground cover diversity.

- Pine restoration efforts continue to be low across the forest as shown in Figure 5.0. Forest successional habitat trend, Figure 11.0, indicates steady but low forest acreage for early succession, stable to increasing for mid succession and a steady increase in late succession for all forest types.

FY2015 Recommended Actions:

- Continue to accomplish stand exams on 10 percent of the forest every year and continue preparing environmental documents addressing management practices on as many of these acres as possible.

- Continue to emphasize longleaf and shortleaf restoration in project level management activities.

- Continue to field-check samples of implemented management activities.

Objective 2-1 Monitoring Question 2: Are the management practices successfully restoring or maintaining quality forest ecosystems; and, the structure, composition, and processes of the four major landscape forest ecosystems? (E)

FY 2014 Findings:

- No areas were planted with shortleaf pine seedlings and no areas were site prepped to be planted from clear-cut harvesting. The Forest has approximately 62,000 acres in the shortleaf pine/oak-hickory plant community which has met the forest plan objective for this community type.

- No areas were planted with mixed hardwood-loblolly pine seedlings and no areas were site prepped to be planted from clear-cut harvesting. Currently, the Forest has approximately 339,478 acres in the mixed hardwood-loblolly pine plant community compared to the forest plan's long-term target of 27,800 acres.

- Approximately 216 acres were planted with longleaf pine seedlings in areas that had been cleared by final harvests. The forest plan projected 1,456 acres would receive final harvest annually for longleaf restoration. There is no indication that this target will be met in the future.

- A 40 acre timber stand was harvested as a seedtree cut which left all longleaf pine for a seed source. The Forest has approximately 126,000 acres in the longleaf pine plant community, compared to the forest plan's target of 263,000 acres.

- The Forest has accomplished 24% of the Forest plan goal for longleaf restoration and 34% of the Forest plan goal for pine to mixed restoration. The pine to mixed category includes other pine species and hardwoods identified in the forest plan for each management area. Figure 1.0 shows the annual restoration accomplishments for Longleaf and Shortleaf pine through time.

- Riparian plant communities continue to be maintained in concert with management practices. Typically, riparian zones are excluded from mechanical harvesting activities except where selective thinning (commercial and noncommercial) are needed to improve the hardwood component for wildlife habitat improvement. In these cases, standards and guidelines are followed in order to protect the soil and water resources.

FY2015 Recommended Actions:

- Mixed hardwood-loblolly forest types exceed long-term desired future conditions by 308,207 acres. Prescribe regeneration cuts on off-site stands where there is a high priority for regeneration such as stands damaged by disease, insect or storms or those stands showing signs of decline.

- Continue restoration treatments on shortleaf/hardwood sites where there is high priority for regeneration such as stands damaged by disease, insect or storms as well as those stands showing signs of decline.

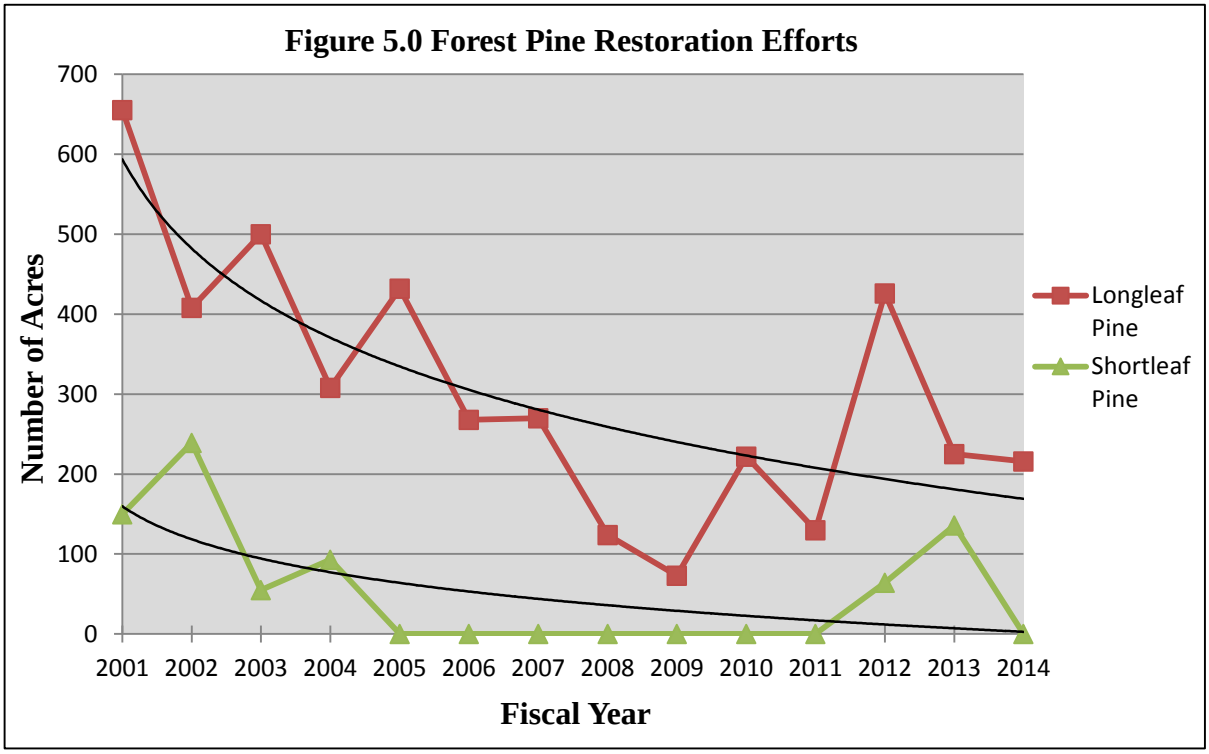
- Strive to increase the number of acres restored to longleaf pine. Continue to monitor sites for additional treatment needs. Thinning prescriptions within RCW Habitat Management Areas (HMAs) should emphasize the longleaf stand composition.

- Continue to monitor management practices being implemented within streamside and riparian area protection zones for compliance with the forest plan, through timber sale contract administration and field checks.

- Continue to consider selective thinning and hardwood planting treatments within riparian areas to encourage hardwood component.

- Post implementation field checks should be done on thinnings to ensure sufficient longleaf emphasis, evaluate species composition changes and update the FSveg database.

- Longleaf and shortleaf regeneration and reforestation efforts are low. Revisit ability to move towards longleaf pine desired future condition. The Forest has approximately 126,000 acres in the longleaf pine plant community, compared to the forest plan's target of 263,000 acres.



Forest Wide Desired Future Condition, Goal 2, Objective 2–2: Provide for healthy populations of all existing native and desirable nonnative wildlife, fish, and plants by managing major forest ecosystems at the scale and distribution appropriate to maintain species viability. In the next 10 years, management indicator habitat objectives are as follows, noting that there will be some overlap of riparian habitat and mixed hardwood loblolly pine, mid-late stages:

- Longleaf pine, all stages: 121,000 acres.
- Shortleaf pine / oak-hickory, early stages: 0 acres.
- Shortleaf pine / oak-hickory, mid-late stages: 16,000 acres.
- Mixed hardwood-loblolly pine, early stages: 42,000 acres.
- Mixed hardwood-loblolly pine, mid-late stages: 252,000 acres.
- Riparian, small streams: 85,000 acres.
- Riparian, large streams: 92,000 acres (KNF Revised LRMP, page 2-4).

Objective 2-2 Monitoring Question 1: Are management practices successfully expanding quality habitats for management indicators? (E)

FY 2014 Findings:

- Based on inventoried forest type acreages, the forest meets or exceeds forest plan goals for acreage provided in each landscape community except the mixed hardwood-loblolly pine early stages, which are insufficient. The following figures indicate the inventoried trends through time and the forest plan successional acreage goal for each community type:
    - Longleaf Pine community, Figure 6.0, all stages in 2014 had 128,054 acres inventoried as compared to the Forest plan acreage goal of 121,000 acres. Since 2005 inventoried acres on this community type has been above the forest plan goal.
    - Shortleaf Oak-Hickory community, Figure 7.0, early succession in 2014 had 1,032 acres inventoried as compared to the forest plan acreage goal of 0.0 acres. Since 2004 inventoried acreage on this community type has been above the forest plan goal.
    - Shortleaf Oak-Hickory community, Figure 8.0, mid-late succession in 2014 had 14,737 acres inventoried as compared to the forest plan acreage goal of 16,000 acres. Since 2004 inventoried acreage on this community type has been above the Forest plan goal.
    - Mixed Hardwood-Loblolly community, Figure 9.0, early succession in 2014 had 1,120 acres inventoried as compared to the Forest plan acreage goal of 42,000 acres. Since 2004 inventoried acreage on this community type has been well below the Forest plan goal.
    - Mixed Hardwood-Loblolly community, Figure 10.0, mid-late succession in 2014 had 374,395 acres inventoried as compared to the forest plan acreage goal of 252,000 acres. Since 2004 inventoried acreage on this community type has varied but overall has been well above the Forest plan goal.
- Figure 11.0 shows the trend in acres of successional habitat types from fiscal years 2004 through 2014. Early successional habitat in 2014 was 5,707 acres which has been relatively consistent since 2008 and overall is low compared to the forest plan's goal of less than 20,000 acres. Mid successional habitat in 2014 was 85,204 acres which was similar to 2013 and overall is high compared to the forest plan's goal of less than 50,000 acres. Late successional habitat in 2014 was 315,680 acres and overall is high compared to the forest plan's goal of less than 75,000 acres.
- Table 2.0 compares successional classes in all forest types from 1999 to 2014. Based on this information the forest continues to have a deficiency of early successional habitat in all forest types except Shortleaf pine Oak Hickory. Currently all forest types exceeds forest plan goals for mid to late successional habitat in comparison to forest plan acreage goals for management indicator species habitat. Based on the forest type and successional stages, as compared with MIS habitat associations, forest type changes through time were determined:

- Longleaf Pine Landscape type, see Figure 12.0.
    - Early successional has changed 25% but remains low as compared to forest plan goals.
    - Mid successional (11-30 years) has changed 68% but remains high as compared to forest plan goals.
    - Mid successional (31-80 years) has changed 81% but remains stable to increasing as compared to forest plan goals.
    - Late successional (81years and up) has changed 13% but remains high as compared to forest plan goals.
- Shortleaf Pine Oak Hickory, see Figure 13.0 and 14.0.
    - Early successional has changed 35% but remains stable to increasing as compared to forest plan goals.
    - Mid successional (11-30 years) has changed 18% but remains high as compared to forest plan goals.
    - Mid successional (31-80 years) has changed 56% but remains stable to increasing as compared to forest plan goals.
    - Late successional (81years and up) has changed 35% but remains high as compared to forest plan goals.
- Mixed Hardwood Loblolly Pine, see Figure 15.0 and 16.0.
    - Early successional has changed 0% but remains low as compared to forest plan goals.
    - Mid successional (11-30 years) has changed 11% but remains high as compared to forest plan goals.
    - Mid successional (31-80 years) has changed 54% but remains stable to increasing as compared to forest plan goals.
    - Late successional (81years and up) has changed 35% but remains high as compared to forest plan goals.
- Small Stream Riparian, see Figure 17.0.
    - Early successional has changed 0% but remains low as compared to forest plan goals.
    - Mid successional (11-30 years) has changed 12% but remains high as compared to forest plan goals.
    - Mid successional (31-80 years) has changed 49% but remains stable to increasing as compared to forest plan goals.

        - Late successional (81years and up) has changed 30% but remains high as compared to forest plan goals.

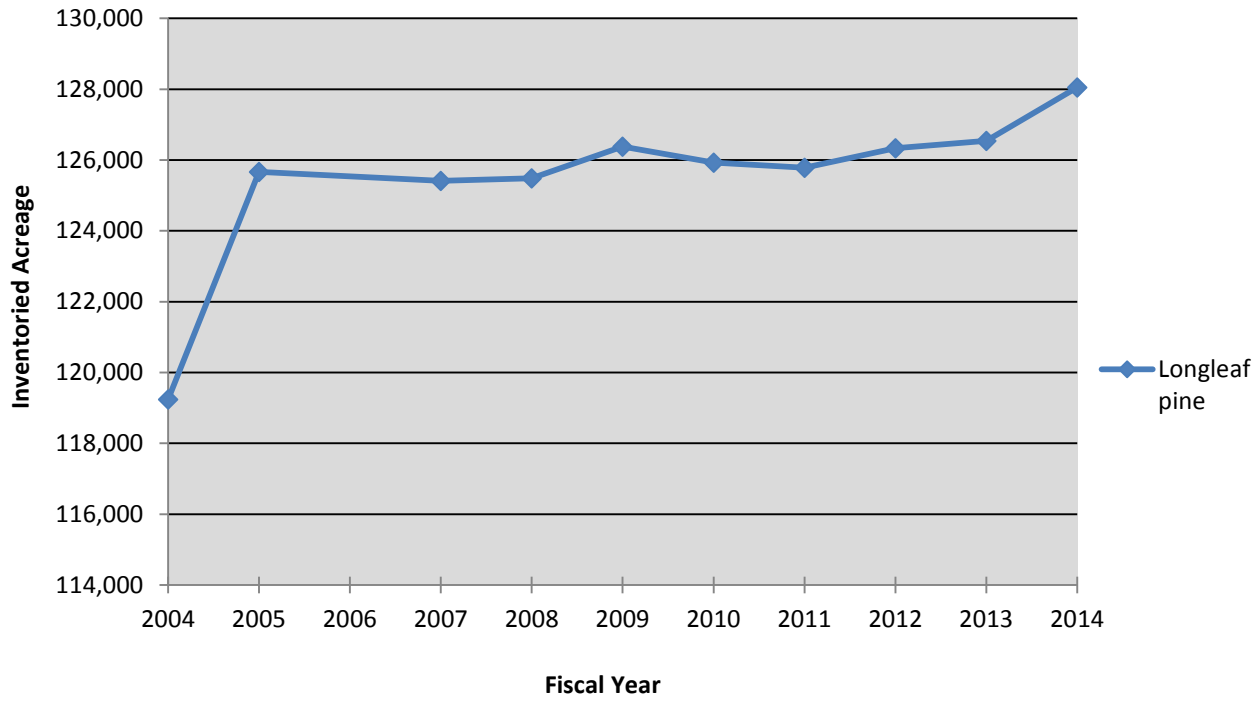
    - Large Stream Riparian, see Figure 18.0.

        - Early successional has changed 0% but remains low as compared to forest plan goals.
        - Mid successional (11-30 years) has changed 8% but remains high as compared to forest plan goals.
        - Mid successional (31-80 years) has changed 36% but remains stable to increasing as compared to forest plan goals.
        - Late successional (81years and up) has changed 34% but remains high as compared to forest plan goals.

FY 2015 Recommended Actions:

- Continue to adhere to forest plan guidance.

Figure 6.0 Longleaf Pine Landscape Community



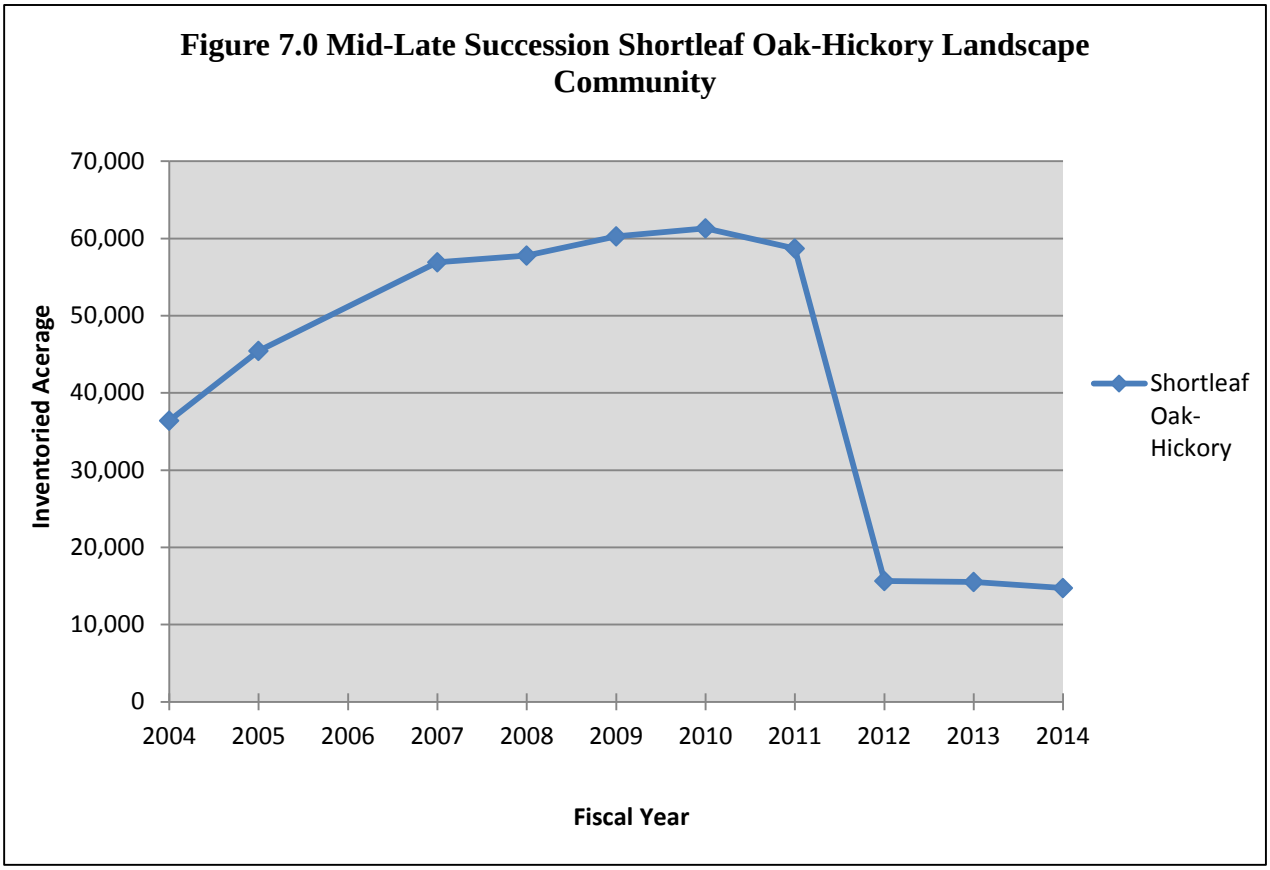


Figure 7.0 Mid-Late Succession Shortleaf Oak-Hickory Landscape Community
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Inventoried Acerage
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Fiscal Year
Shortleaf Oak-Hickory

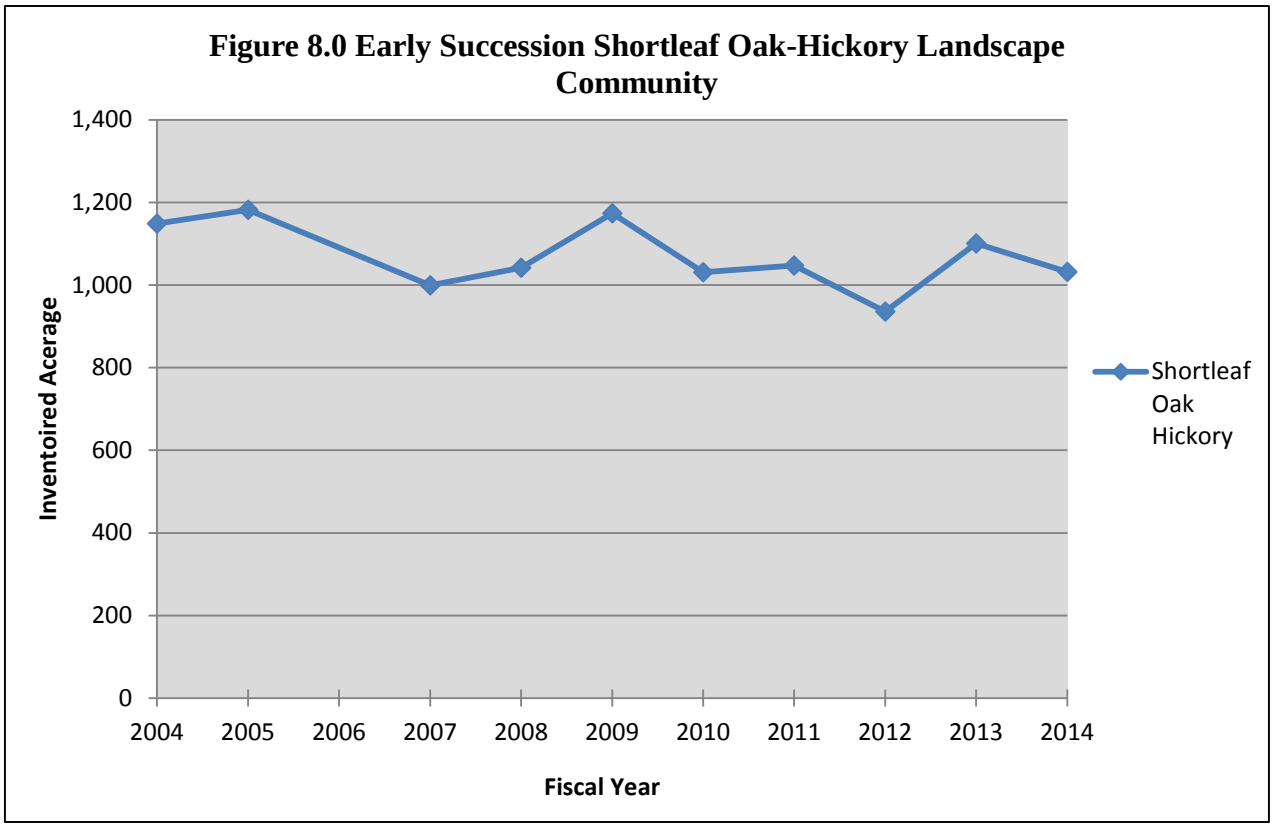


Figure 8.0 Early Succession Shortleaf Oak-Hickory Landscape Community
1,400
1,200
1,000
800
600
400
200
0
Inventoired Acerage
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Fiscal Year
Shortleaf Oak Hickory

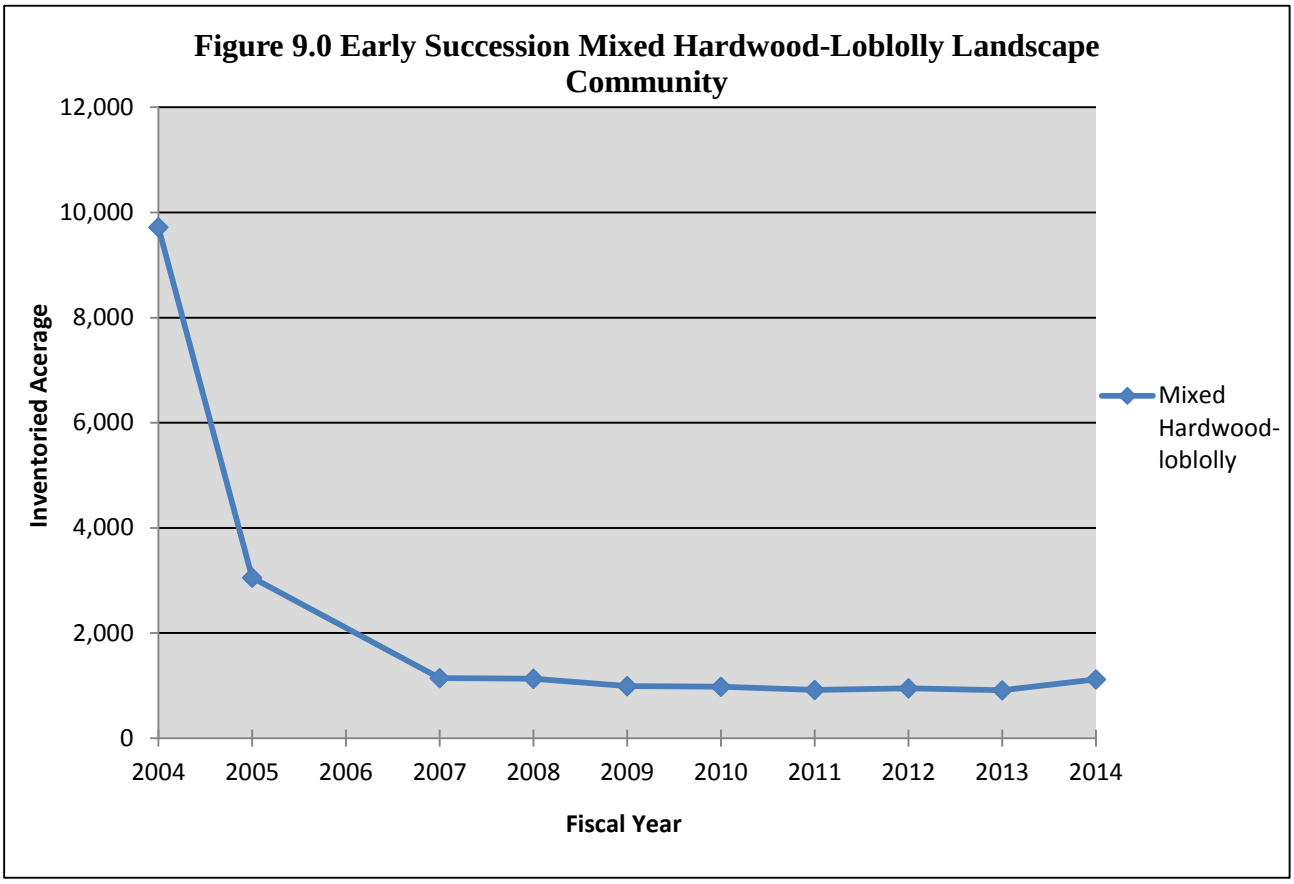


Figure 9.0 Early Succession Mixed Hardwood-Loblolly Landscape Community
12,000
10,000
8,000
6,000
4,000
2,000
0
Inventoried Acerage
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Fiscal Year
Mixed Hardwood-loblolly

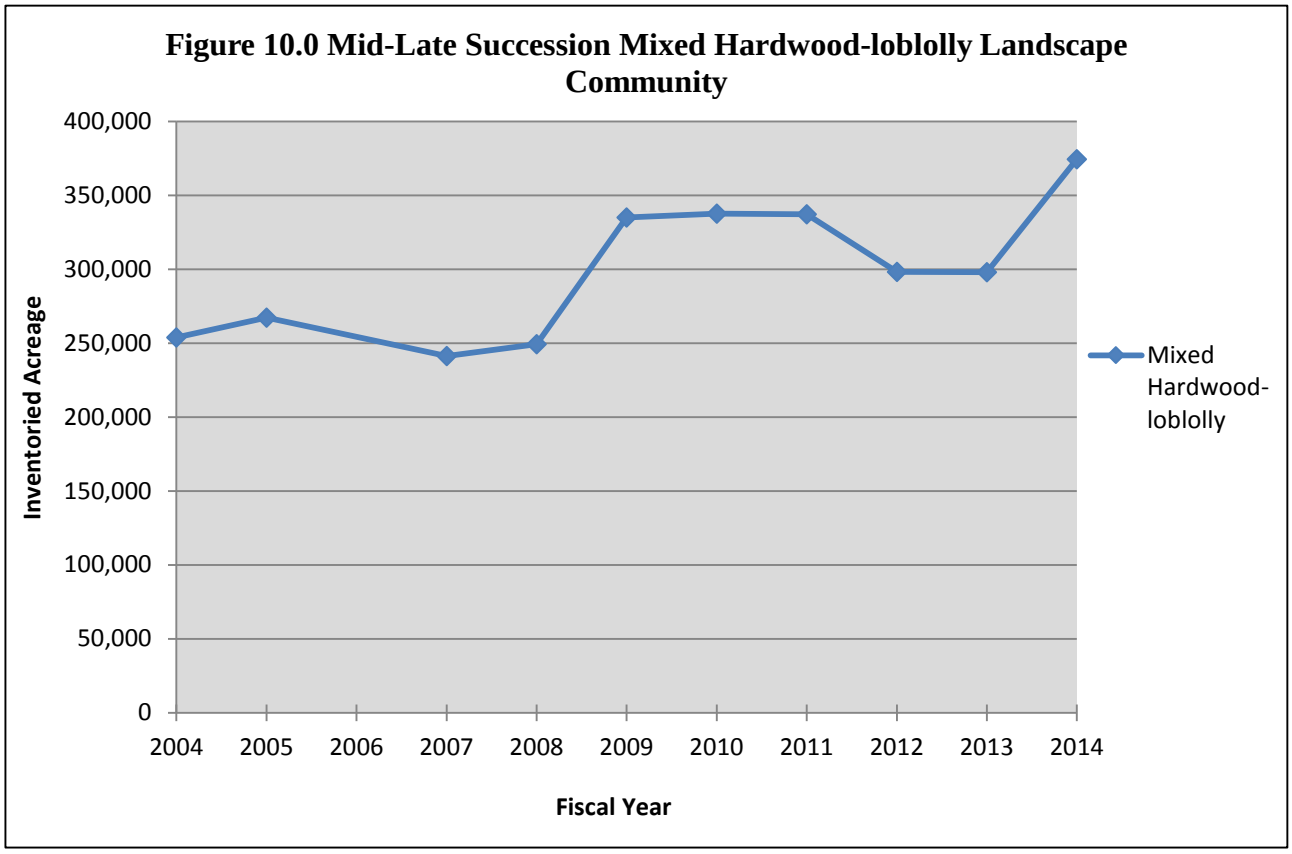


Figure 10.0 Mid-Late Succession Mixed Hardwood-loblolly Landscape Community
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Inventoried Acreage
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Fiscal Year
Mixed Hardwood-loblolly

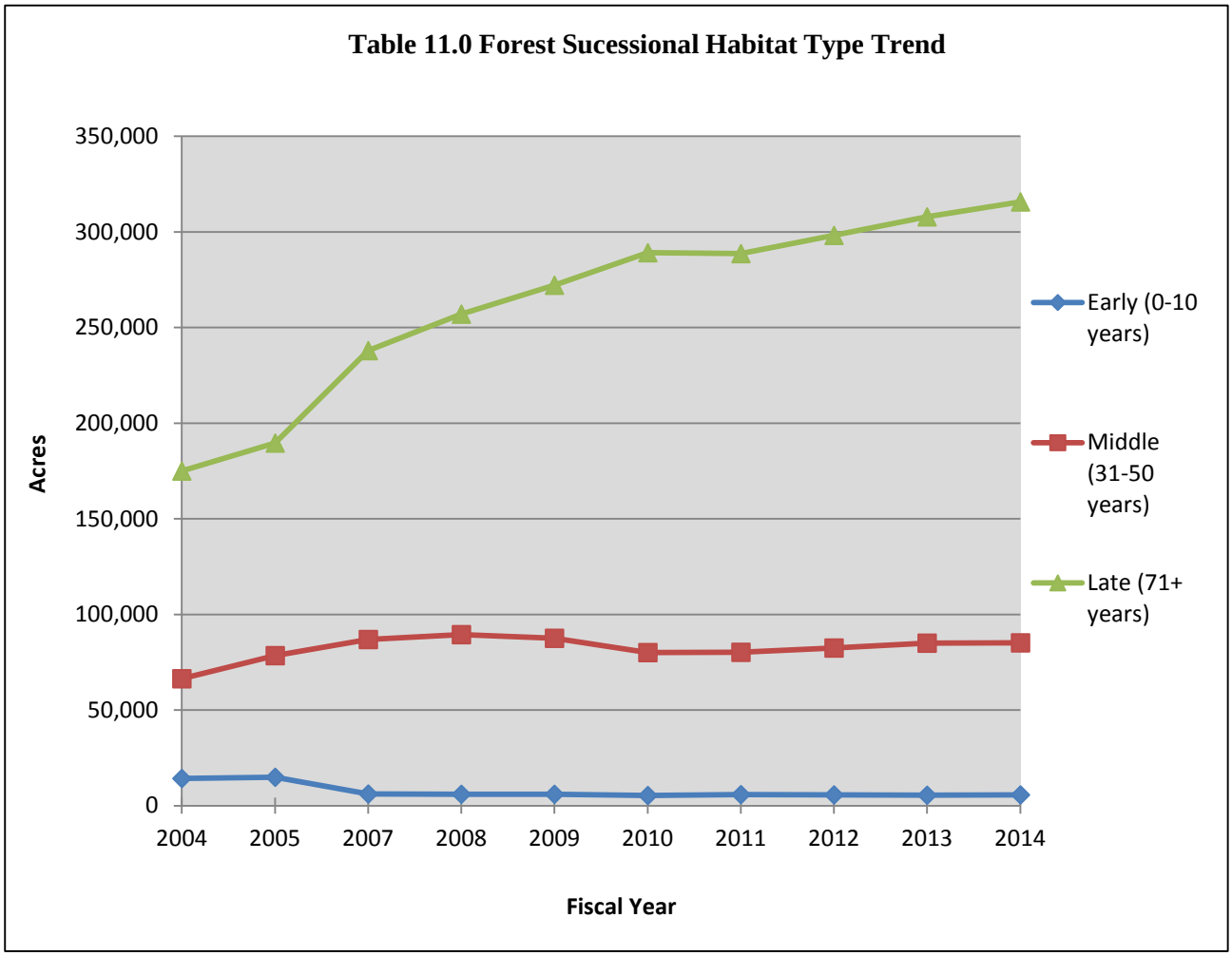


Table 11.0 Forest Sucessional Habitat Type Trend
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Acres
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
Fiscal Year
Early (0-10 years)
Middle (31-50 years)
Late (71+ years)

Table 2.0 Management Indicator Species Habitat												
Management Indicator Species	**Early Successional**			**Mid Successional**						**Late Successional**		
	1999 Acres 0-10	**2014 Acres 0-10**	**Change (%)/ Habitat Trend**	**1999 Acres 11-30**	**2014 Acres 11-30**	**Change (%)/ Habitat Trend**	**1999 Acres 31-80**	**2014 Acres 31-80**	**Change (%)/ Habitat Trend**	**1999 Acres 81+**	**2014 Acres 81+**	**Change (%)/ Habitat Trend**
Longleaf Pine												
Bachman's Sparrow	13,614	3,481	26%/ Down									
Northern Bobwhite				10,179	14,933	68% /Up	95,690	77,073	81% /Stable-Up	4,162	32,567	13%/ Up
Prairie Warbler												
RCW												
Red-headed woodpecker												
Shortleaf Pine Oak Hickory												
Prairie Warbler	1,200	423	35% Stable-Up									
yellowed billed cuckoo				7,551	41,833	18%/ Up	40,095	22,539	56%/ Stable - Up	12,667	35,596	35%/Up
Pileated woodpecker												
Wood thrush												
RCW												
hooded warbler												

Mixed Hardwood-Loblolly Pine												
White-eyed Vireo	371	0	0%/ Down									
Eastern Wood pewee				2,958	26,897	11%/ Up	25,071	13,543	54%/ Stable - Up	8,229	23,581	35%/ Up
Pileated Woodpecker												
Summer Tanager												
RCW												
Small Stream Riparian Landscape												
Acadian Flycatcher	522	0	0%/ Down	2,752	22,694	12%/ Up	24,809	12,188	49%/ Stable - Up	5,480	17,806	30%/ Up
Louisiana water thrush												
White-eyed Vireo												
Yellow-billed Cuckoo												
Large Stream Riparian Landscapes												
Kentucky Warbler	311	0	0%/ Down	2,664	31,726	8%/ Up	29,917	10,732	36%/ Stable- Up	12,045	35,567	34%/ Up
Warbling Vireo,												
Northern Parula												
Pileated Woodpecker												
White-breasted Nuthatch												
Worm-eating Warbler												

The baseline data for 1999 was derived from Table 3-6 in the KNF Revised LRMP, page 3-23: Pine: 460,134 acres, Mixed Hardwood: 61,889 acres, Hardwood: 78,500 acres. Acres are based on 606,745 acres (KNF Revised LRMP, Appendix B-1, Table B-1, Stage 1)

Objective 2-2 Monitoring Question 2: Are the habitat objectives for selected management indicators providing for healthy populations of all existing native and desirable nonnative wildlife, fish, and plants? (V)

FY 2014 Findings:

Botanical Management Indicator Species

- No specific surveys for botanical MIS have occurred since 2002. A strategy for updating botanical MIS population and habitat trends is being developed for forest plan revision.
- There is a need to continue to use prescribed fire in all LTAs while following forest plan standards and guidelines. Prescribed burning is the most efficient management tool along with non-native invasive plant treatments to promote biodiversity of the forest floor.

Aquatic Management Indicator Species

- Aquatic MIS appear to be viable and stable in the protected habitats and refuges across the forest. Although numbers of largemouth bass and sunfish on the forest are not indicative of eutrophic systems, viable populations do exist for a sustainable sport fishery. Forest-wide trends of largemouth bass and sunfish populations may fluctuate, but this is due to natural variability.

Terrestrial Management Indicator Species

- Monitoring of distribution and abundance of breeding forest birds is an important aspect of the Forest Service commitment to providing habitats for these important indicators of habitat quality and stability. Avian point count data has been collected since 1998 across the forest. Annually points are surveyed during the spring at fixed points throughout the forest. Annual evaluation of MIS trends across the forest are shown in Figures 12.0-18.0 for each habitat type on the forest.
- During FY 2014 the avian point count database underwent some changes which affected the reporting formats and features. Figures 12.0-18.0 contain trend data collected from 1998 through 2013 and reported as shown in past forest monitoring and evaluation reports. Table 3.0 shows FY 2014 data which has been extrapolated from the avian monitoring database in the new reporting format. The revised reporting format incorporates the best available science for generating the report. Future monitoring and evaluation reports will utilize this new reporting format and previous trend data will not be shown.

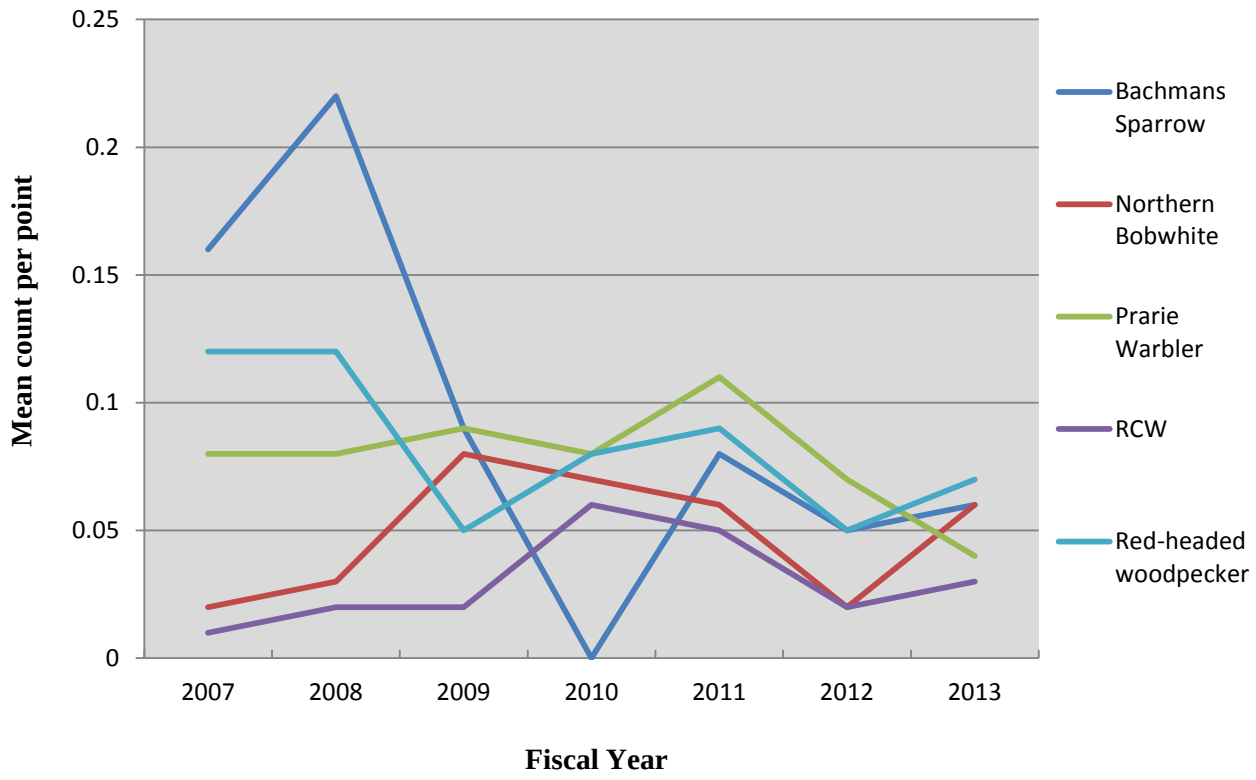
FY 2015 Recommended Actions:

- The management indicator species list for plants should be modified by considering the following criteria:
    - Species occurs in a habitat that we are likely to affect through our management, or in an area that drives our management direction.
    - Species is closely associated with the habitat of interest, and population levels respond to changes in that habitat (ecological indicator species).
    - Basic biology or ecology (habitat requirements, threats, demography, etc.) is known for species or habitat.

- Species is not so rare or obscure that its populations can't be monitored with a reasonable amount of effort.
- Species, or habitat, occurs at a scale that allows us to monitor population in replicate treatments and control units.

- Continue to monitor the health of lake and stream fisheries.
- Continue avian surveys across the Forest.
- Resume botanical MIS surveys.
- Revisit aquatic MIS data and validate habitat and population trends.

Figure 12.0 Longleaf Pine Avian MIS Trend



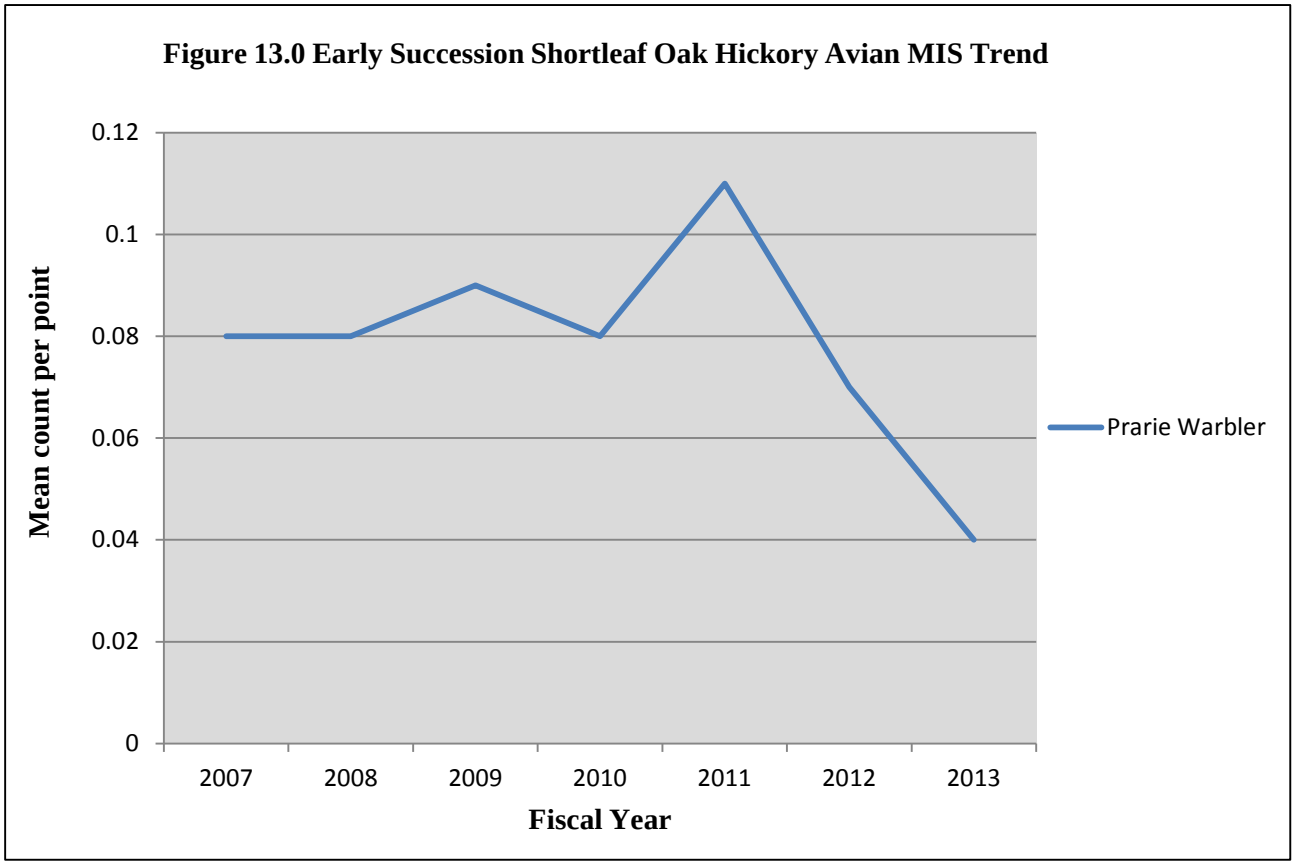


Figure 13.0 Early Succession Shortleaf Oak Hickory Avian MIS Trend
Mean count per point
0.12
0.1
0.08
0.06
0.04
0.02
0
2007
2008
2009
2010
2011
2012
2013
Fiscal Year
Prarie Warbler

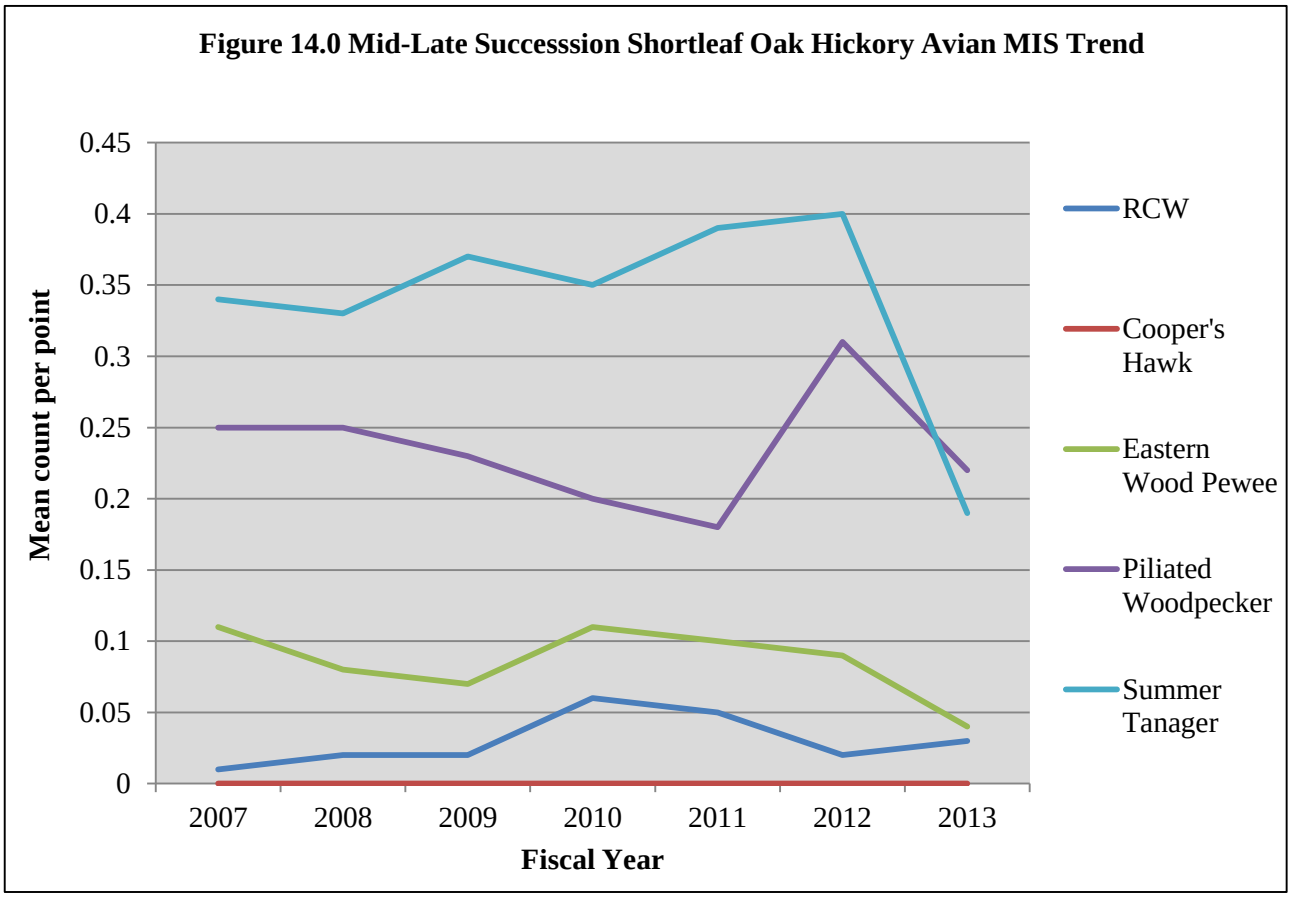


Figure 14.0 Mid-Late Successsion Shortleaf Oak Hickory Avian MIS Trend
Mean count per point
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
2007
2008
2009
2010
2011
2012
2013
Fiscal Year
RCW
Cooper's Hawk
Eastern Wood Pewee
Piliated Woodpecker
Summer Tanager

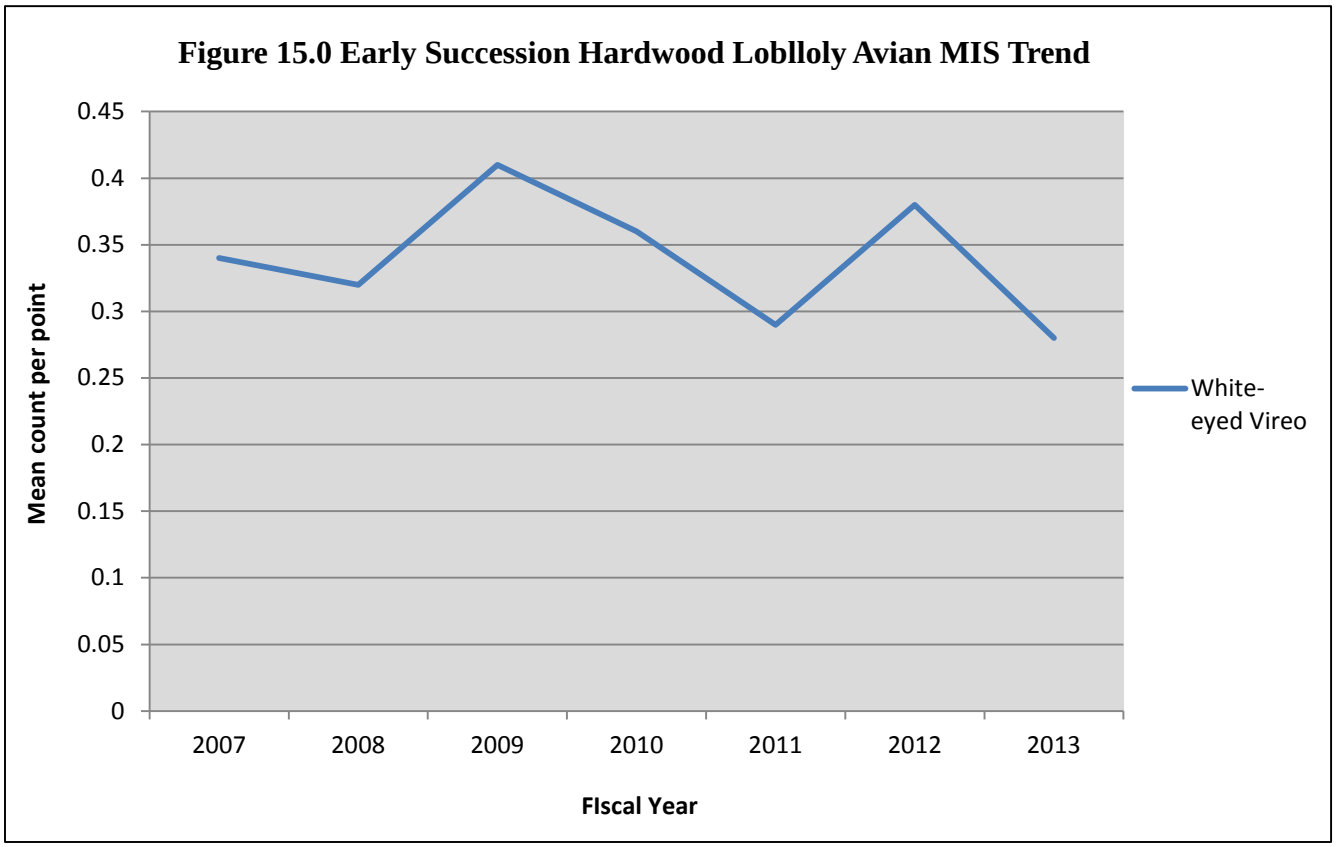


Figure 15.0 Early Succession Hardwood Loblloly Avian MIS Trend
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Mean count per point
2007
2008
2009
2010
2011
2012
2013
FIscal Year
White-eyed Vireo

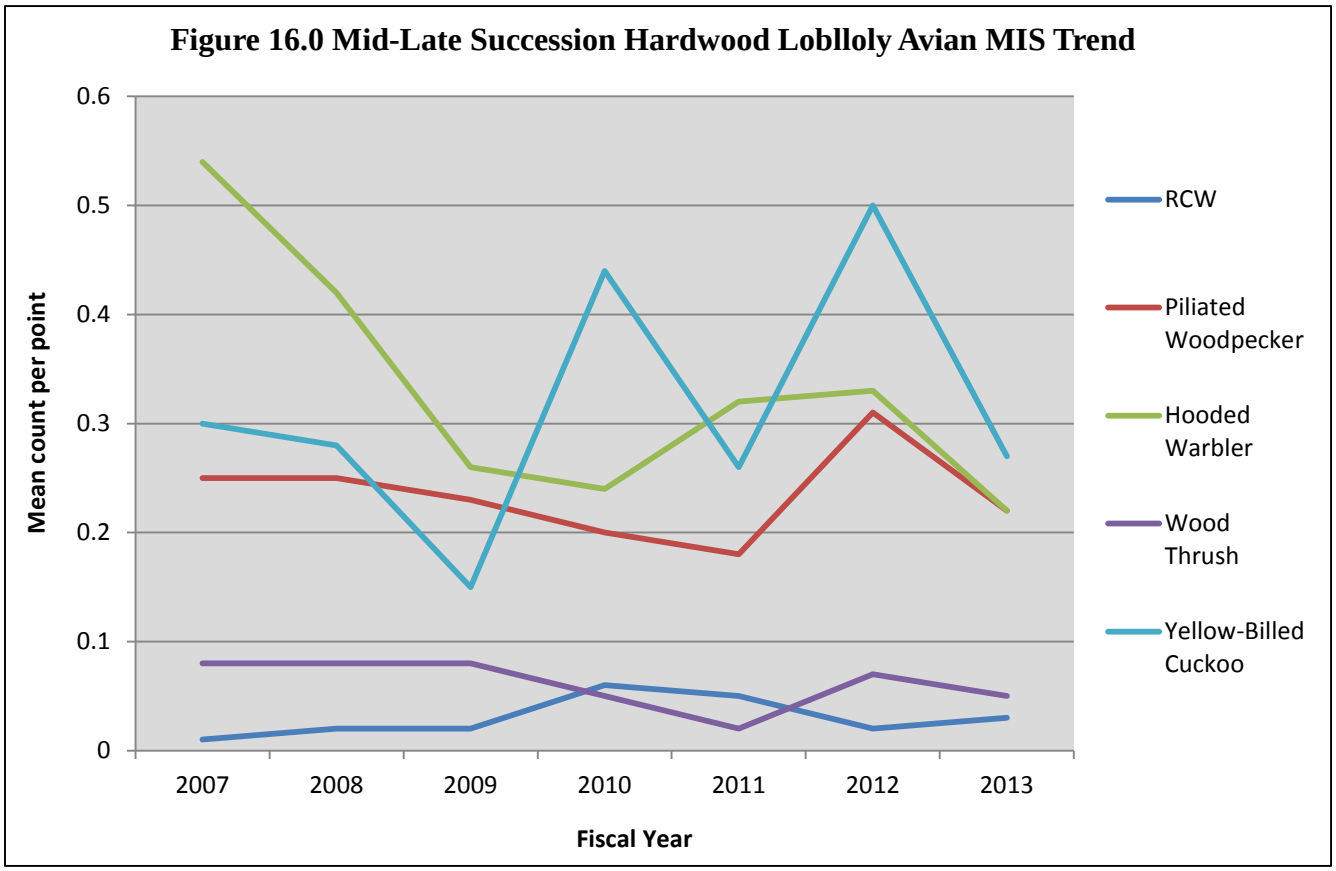


Figure 16.0 Mid-Late Succession Hardwood Loblloly Avian MIS Trend
0.6
0.5
0.4
0.3
0.2
0.1
0
Mean count per point
2007
2008
2009
2010
2011
2012
2013
Fiscal Year
RCW
Piliated Woodpecker
Hooded Warbler
Wood Thrush
Yellow-Billed Cuckoo

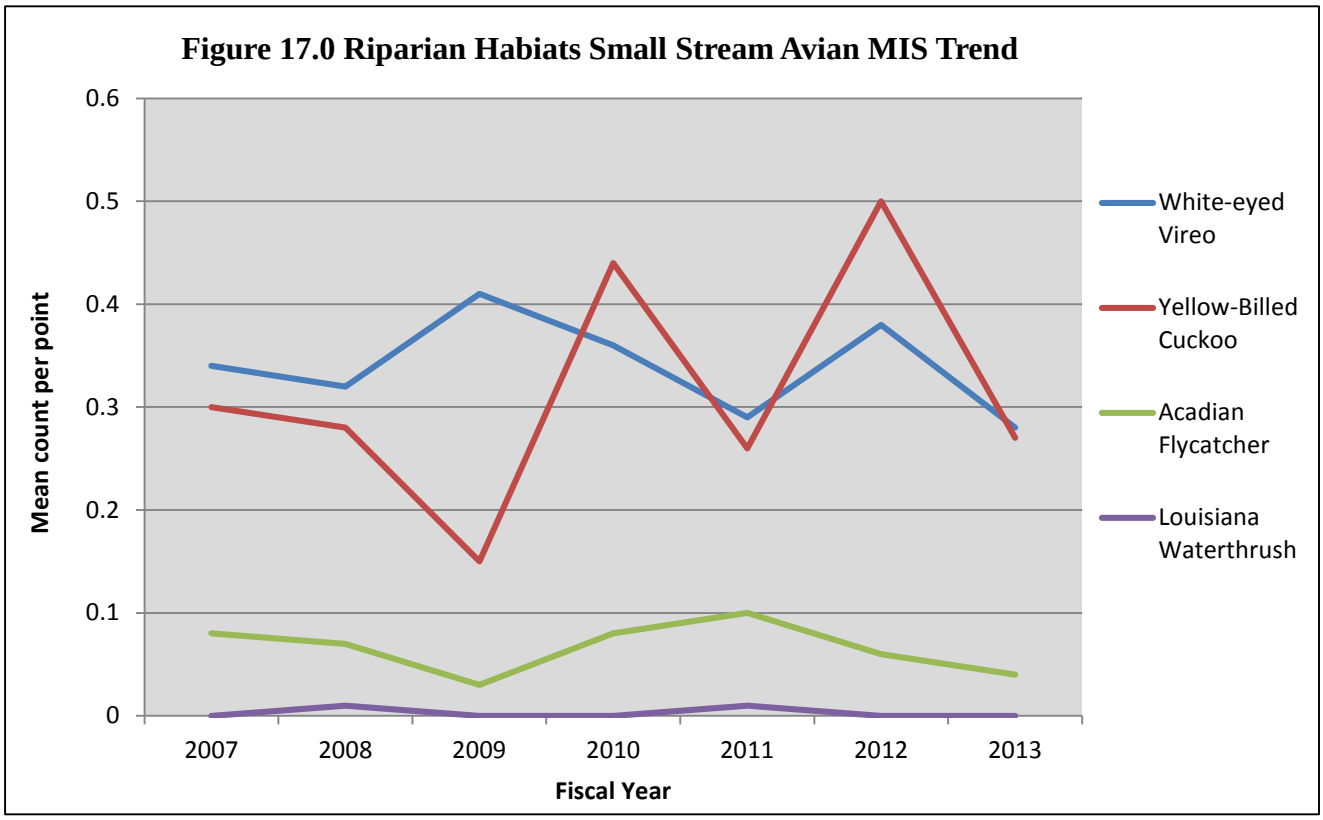


Figure 17.0 Riparian Habiats Small Stream Avian MIS Trend
0.6
0.5
0.4
0.3
0.2
0.1
0
Mean count per point
2007
2008
2009
2010
2011
2012
2013
Fiscal Year
White-eyed Vireo
Yellow-Billed Cuckoo
Acadian Flycatcher
Louisiana Waterthrush

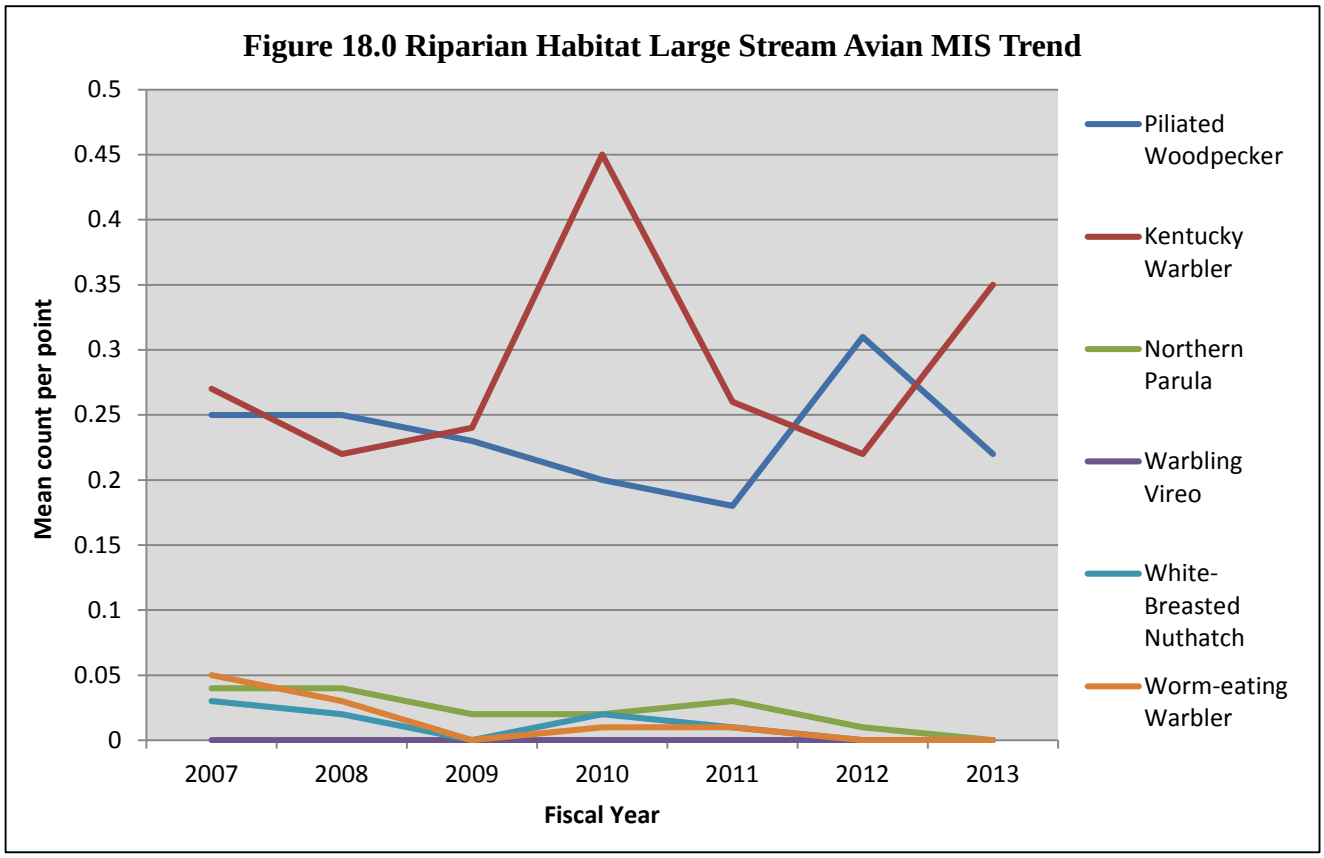


Figure 18.0 Riparian Habitat Large Stream Avian MIS Trend
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Mean count per point
2007
2008
2009
2010
2011
2012
2013
Fiscal Year
Piliated Woodpecker
Kentucky Warbler
Northern Parula
Warbling Vireo
White-Breasted Nuthatch
Worm-eating Warbler

Table 3.0 Abundance Trends of Terrestrial Management Indicator Species		
Terrestrial MIS	Found in Habitat Types	Kisatchie NF Abundance Trend by Year 2014
ACADIAN FLYCATCHER	Riparian habitats small stream	6
BACHMAN`S SPARROW	Long Leaf Pine all stages	4
EASTERN WOOD-PEWEE	Shortleaf/oak-hickory mid-late succession stage	6
HOODED WARBLER	Hardwood-loblloly mid &late successional stage	27
KENTUCKY WARBLER	Riparian habitats large stream	39
LOUISIANA WATERTHRUSH	Riparian habitats small stream	0
NORTHERN BOBWHITE	Long Leaf Pine all stages	5
NORTHERN PARULA	Riparian habitats large stream	4
COOPER'S HAWK	Shortleaf/oak-hickory mid-late succession stage	0
WARBLING VIREO	Riparian habitats large stream	0
PILEATED WOODPECKER	Shortleaf/oak-hickory mid-late succession stage, Hardwood-loblloly mid &late successional stage, Riparian habitats large stream	25
PRAIRIE WARBLER	Long Leaf Pine all Stages, shortleaf/oak-hickory early succession stage	8
RED-COCKADED WOODPECKER	Long Leaf Pine all Stages, shortleaf/oak-hickory mid-late succession stage, Hardwood-loblloly mid &late successional stage	5
RED-HEADED WOODPECKER	Long Leaf Pine all stages	14
SUMMER TANAGER	Shortleaf/oak-hickory mid-late succession stage	41
WHITE-BREASTED NUTHATCH	Riparian habitats large stream	0
WHITE-EYED VIREO	Hardwood-loblloly early successional stage, Riparian habitats small stream	43
WOOD THRUSH	Hardwood-loblloly mid &late successional stage	9
WORM-EATING WARBLER	Riparian habitats large stream	0
YELLOW-BILLED CUCKOO	Hardwood-loblloly mid &late successional stage, Riparian habitats small stream	55

Forest Wide Desired Future Condition, Goal 2, Objective 2–3: Manage to protect, improve, and maintain habitat conditions for all threatened, endangered, sensitive, and conservation species occurring on the Forest. Manage habitat conditions on 303,000 acres of pine and pine-hardwood within 5 established Red-cockaded woodpecker (RCW) habitat management areas to achieve a long-term forest -wide RCW population of 1,405 active clusters (KNF Revised LRMP, page 2-4).

Objective 2-3 Monitoring Question 1: Are management practices designed to protect, improve, and maintain threatened, endangered, sensitive, and conservation species being implemented? Are

management strategies designed for red-cockaded woodpecker habitat management being implemented within designated habitat management areas? (I)

FY 2014 Findings:

- The Forest's prescribed burning program is the most important practice used for botanical restoration of pre-settlement habitats, which is proving to be very effective in protecting, improving and maintaining TESC species.
- Treatment of non-native invasive species continues to improve habitat for TESC species. Approximately 65 acres were treated to remove non-native invasive plants.

FY 2015 Recommended Actions:

- Continue the current prescribed burning program of 80,000 to 105,000 acres per year.
- Increase the ratio of growing season burns to dormant season burns, since growing season burns are critical for successful gains in our botanical restoration efforts.
- Increase efforts to remove encroaching woody plants in the Winn district prairies and in pitcher plant bogs throughout the forest, as these natural communities provide habitat for many of our TESC species.
- Continue increased emphasis on RCW management across the Forest. Identify and prioritize thinning of foraging habitat, improvement and expansion of RCW clusters, and mid-story removal projects.
- Continue to monitor all LPM beds on the forest.
- Continue to implement LPS Candidate Conservation Agreement terms and conditions within management practices.

Objective 2-3 Monitoring Question 2: Are habitat conditions for threatened, endangered, sensitive, and conservation species improving? (E)

FY 2014 Findings:

- No known occurrences of threatened or endangered plant species are known to exist on the forest.
- The Forest's prescribed burning program is the most important practice used for restoration of pre-settlement habitats, which is proving to be very effective in protecting, improving and maintaining TESC species. Selected prairies and 9 acres of bogs were managed for the benefit of sensitive and conservation species. Encroaching shrubs and trees were removed.
- Additionally, treatment of non-native invasive species continues to improve habitat for TESC species. In FY 2014, approximately 65 acres were treated to remove non-native invasive plants.
- Kisatchie NF District personnel are required to design and implement management activities according to NEPA standards. Kisatchie NF ecosystem conservation staff provides assistance as requested.

FY 2015 Recommended Actions:

- Continue prescribed burning of 80,000 to 105,000 acres per year.
- Increase the ratio of growing season burns to dormant season burns, since growing season burns are critical for successful gains in our restoration efforts.
- Increase efforts to remove encroaching woody plants in the Winn district prairies and in pitcher plant bogs throughout the forest, as these natural communities provide habitat for many of our TESC species.

Objective 2-3 Monitoring Question 3: Are red-cockaded woodpecker and Louisiana pearlshell mussel population trends responding positively to management strategies? (V)

FY 2014 Findings

Louisiana pearlshell mussel

- Louisiana pearlshell mussel surveys are performed every three years on the Catahoula Ranger District and the Evangeline Unit of the Calcasieu District.
- The population trend for the Louisiana pearlshell on the Evangeline Unit of the Calcasieu Ranger District appears to be stable, see Figure 19.0. The Forest is working with the U.S. Fish and Wildlife Service (USFWS) and several partners to maintain an active task force with a panel of experts and interested parties for the betterment of the pearlshell.
- The Catahoula Ranger District population appears to be on a downward trend, see Figure 20.0. The increased occurrence of drought, predation and beaver activity are believed to be attributing to this trend. Some land management activities that are occurring off the KNF are also believed to have affected the mussels. These mussels are confined to a small number of streams and beds and the population can be affected within a short period of time.
- The total LPM population on the KNF appears to be on a downward trend, see Figure 21.0. The downward trend of the LPM population is believed to be from environmental and biological factors, as well as, management practices outside of the Forest Service boundaries. This region has seen drought years in which one LPM stream on the Catahoula went dry.
- The Natchitoches National Fish Hatchery (NNFH), with the support of the Forest Service and the Louisiana Department of Wildlife and Fisheries, has been conducting research on the LPM in an attempt to better understand the mussel's lifecycle so that propagation techniques can be developed. We now know their spawning habits and the host fish. We are moving forward with propagation techniques.
- The USDA Animal and Plant Health Inspection Service (APHIS) monitored streams for beaver activity and dams. Thirteen dams and 12 beavers were removed from the Evangeline unit. The Catahoula Ranger District was surveyed but no dams or beavers were removed.
- Water samples taken on mussel streams indicated good water quality.

Red-cockaded woodpecker

- RCW populations remained steady and consistent with population numbers in 2013. A slight population increase occurred on the Vernon Unit and Kisatchie populations. The Catahoula District population had a minor decline but overall forest totals are relatively consistent with past year trends, see Figure 22.0.
    - Catahoula District population total number 69.
    - Evangeline District population total number 130.
    - Kisatchie District population total number51.
    - Winn District population total number 32.
    - Vernon Unit population total number 157.

FY 2015 Recommended Actions:

- Continue to monitor LPM streams that are prone to drought and investigate streams that are experiencing depredation. Control beaver activity and enforce regulations prohibiting off-road vehicles (ORVs) from damaging LPM habitat. Continue implementation of BMP's and streamside habitat protection zones (SHPZs). Rehabilitate areas that are contributing to LPM habitat damage. Encourage collaboration from other agencies, partners, private landowners and volunteers to help protect the LPM. Provide assistance to the USFWS and interested parties with monitoring and research efforts.
- Continue emphasis on RCW management across the Forest.
- Identify and prioritize thinning of foraging habitat, improvement and expansion of RCW clusters, and mid-story reduction projects.
- Work with the USFWS to prioritize future projects and identify habitat needs.

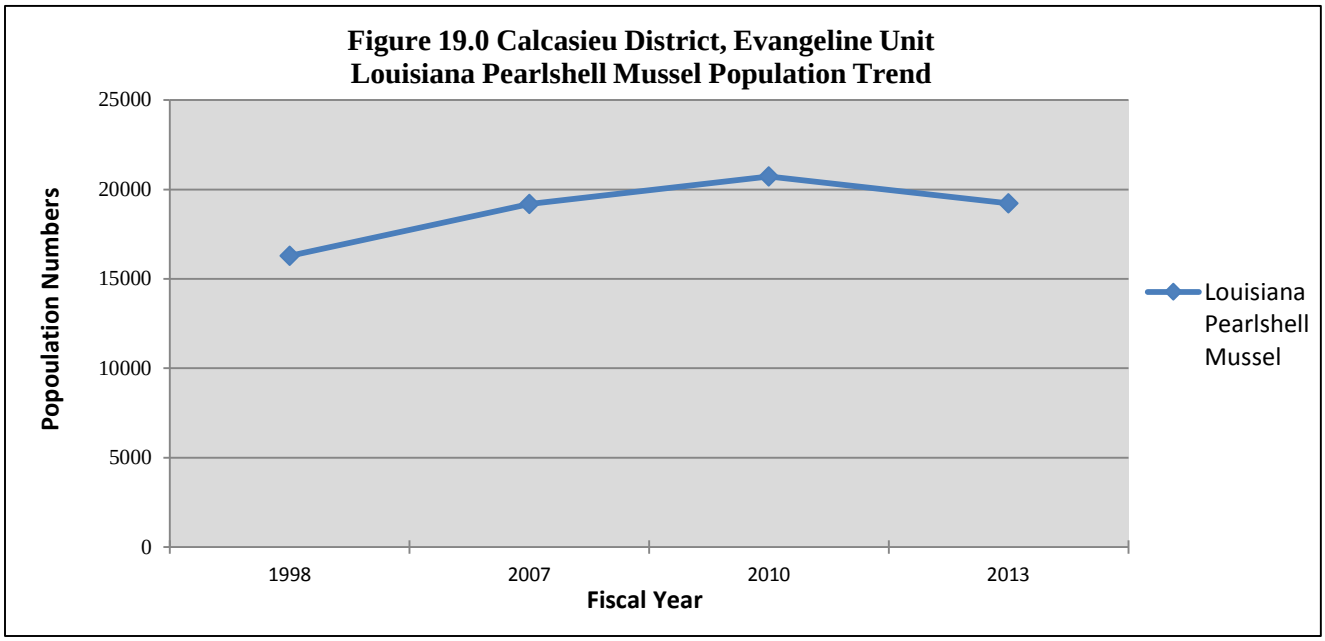


Figure 20.0. Catahoula District
Louisiana Pearlshell Mussel Population Trend

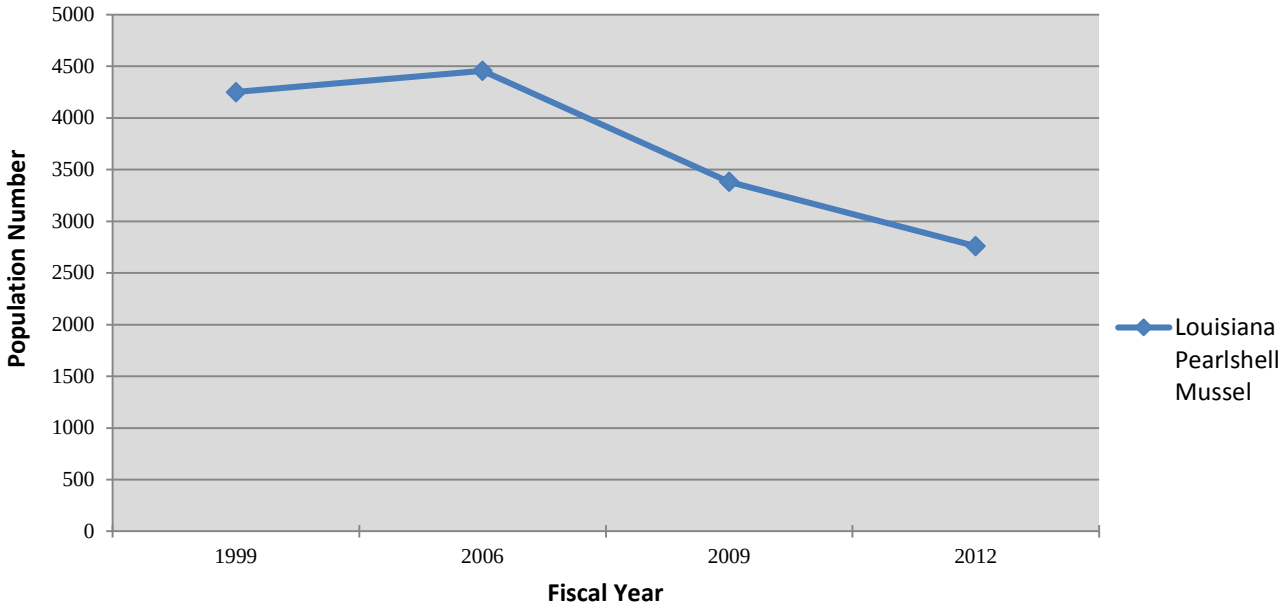
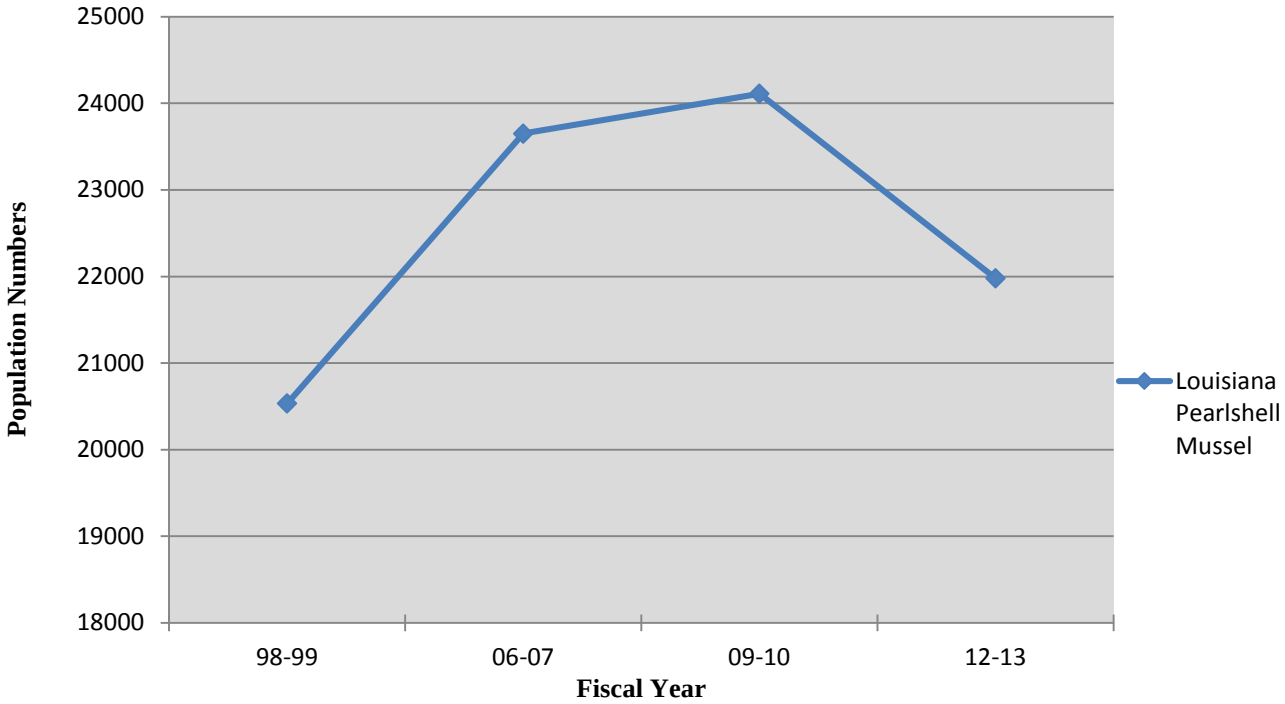
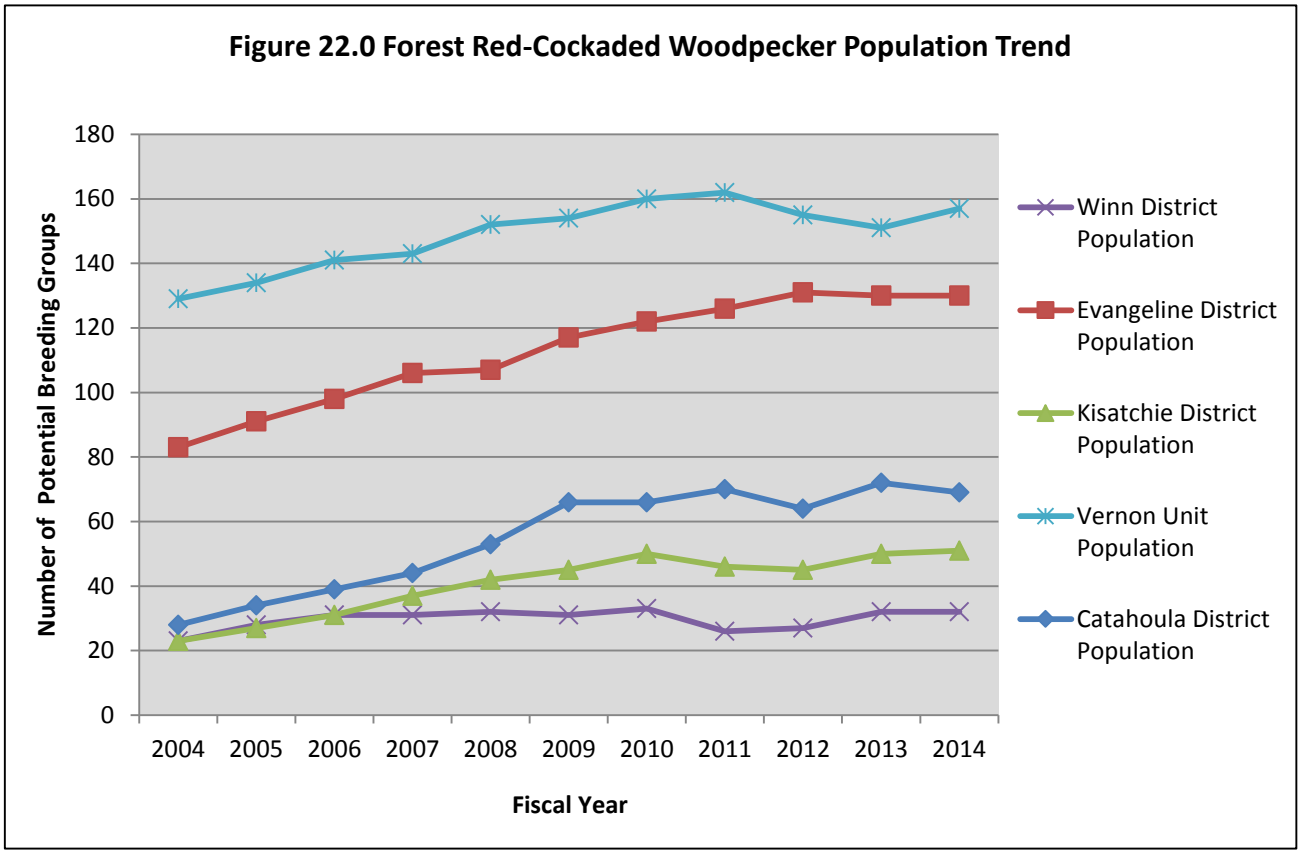


Figure 21.0. Forest Louisiana Pearlshell Mussel Population Trend





FY 2015 Recommended Actions:

- Continue monitoring all known RCW populations. Prescribe burn the RCW nesting and foraging habitat as much as feasible. Engage in RCW translocations to bolster populations, if feasible. Continue to work closely with the USFWS.
- Continue to monitor LPM streams that are prone to drought and investigate streams that are experiencing depredation. Control beaver activity and enforce regulations prohibiting off-road vehicles (ORVs) from damaging LPM habitat.
- Continue implementation of best management practices and streamside habitat protection zones (SHPZs) in LPM habitat. Rehabilitate areas that are contributing to LPM habitat damage.
- Encourage collaboration from other agencies, partners, private landowners and volunteers to help protect the LPM. Provide assistance to the USFWS and interested parties with monitoring and research efforts.

Forest Wide Desired Future Condition, Goal 2, Objective 2–4: Develop or maintain old-growth forest attributes, for their contribution to biological and visual diversity, habitats for plant and animal species, and maintenance of a natural gene pool, within designated patches on approximately 13 percent of the Forest based upon representation of the major forest ecosystems and old-growth community types. Long-term old-growth forest objectives are as follows:

Longleaf pine forest dominated patches: 48,800 acres

- Coastal plain upland mesic hardwood: 2,550 acres
- Upland longleaf, woodland, and savanna: 45,350 acres
- Southern wet pine forest, woodland, and savanna: 780 acres
- Dry and xeric oak forest, woodland, and savanna: 120 acres

Shortleaf pine/oak-hickory forest dominated patches: 13,500 acres

- Coastal plain upland mesic hardwood: 1,290 acres
- Dry and dry-mesic oak-pine forest: 11,630 acres
- Dry and xeric oak forest, woodland, and savanna: 60 acres
- Xeric pine and pine-oak forest and woodland: 50 acres
- Seasonally wet oak-hardwood woodland: 350 acres
- River floodplain hardwood forest: 120 acres

Mixed hardwood-loblolly pine forest dominated patches: 6,100 acres

- Coastal plain upland mesic hardwood: 700 acres
- Seasonally wet oak-hardwood woodland: 300 acres
- Dry and dry-mesic oak-pine forest: 4,650 acres
- River floodplain hardwood forest: 450 acres

Riparian forest dominated patches: 12,700 acres

- Coastal plain upland mesic hardwood: 1,820 acres
- River floodplain hardwood forest: 1,180 acres
- Cypress-tupelo swamp forest: 1,400 acres
- Eastern riverfront forest: 6,400 acres
- Seasonally wet oak-hardwood woodland: 1,400 acres
- Dry and dry-mesic oak-pine forest: 500 acres (KNF Revised LRMP, page 2-4 to page 2-5)

Objective 2-4 Monitoring Question 1: Are management practices designed to develop old-growth forest attributes being implemented? (I)

The 2006 Comprehensive Evaluation Report noted, "Although these are considered long-term objectives, restoration of old growth areas is occurring at a slower pace than originally expected. This has been partially due to less emphasis than expected, since restoring upland longleaf for HMA improvement was typically the priority in project proposals and decisions. Another factor appeared to be a reluctance to improve old-growth characteristics due to uncertainties on how to effectively create or maintain old growth communities at the site level" (USDA 2007). Currently,

there are very limited activities planned in old-growth patches. Commercial thinning in dense stands of timber within designated old growth areas are planned in order to maintain healthy conditions to grow the stands for the long term. These actions meet Plan standards and guidelines for old-growth management.

FY 2014 Findings:

- Progress has been made since 1999 on developing old growth (trees that may meet some but not all criteria) towards forest plan desired conditions through active vegetation management. The purpose of most vegetation and prescribed fire projects has been to improve the vegetation structure within RCW HMA.
- Treatments have been designed to restore species diversity and composition by increasing acres of native longleaf pine; to promote growth of trees into the larger, older age class to sustain RCW nesting and roosting habitat; and to move toward the historic disturbance regime by returning fire to the landscape.

FY2015 Recommended Actions:

- Continue to consider old growth areas during project level proposals and interdisciplinary team meetings.
- Evaluate old growth characteristics in project level NEPA analysis.

Objective 2-4 Monitoring Question 2: Are the management practices successfully developing or maintaining forest attributes similar to those found in old-growth? (E)

FY 2014 Findings:

- Figure 11.0 compares Kisatchie NF habitat acres by forest type, successional class, and acres from 1999 through 2014. Older stands of pine and hardwood have increased the most since 1999 when the forest plan was signed.

FY2015 Recommended Actions:

- Continued emphasis on tracking and reporting old growth allocations at the project and landscape scale.
- Continue prescribed fire and commercial thinning in some old growth patches in the uplands to enhance the old-growth attributes and help mold appropriate overstory and understory composition.
- Increase the ratio of growing season burns to dormant season burns, since growing season burns are critical for successful gains in restoration efforts.
- Increase efforts to remove encroaching woody plants in the Winn district prairies and in pitcher plant bogs throughout the forest, as these natural communities provide habitat for many of our TESC species.
- Adhere to the land management practices described in the forest plan which calls for relatively older timber stands.

Forest Wide Desired Future Condition, Goal 2, Objective 2–5: Manage to protect or enhance the unique plant and animal communities, special habitat features, habitat linkages and corridors, and aquatic ecosystems associated with streamside habitat and riparian areas (KNF Revised LRMP, page 2-5).

Objective 2-5 Monitoring Question 1: Are streamside habitat protection zones and riparian area protection zones being delineated and managed as prescribed? (I)

FY 2014 Findings:

- No unacceptable impacts to plant and animal habitat communities within streamside protected zones have been detected.
- Best management practices were monitored on two vegetation management, two fire management, and one grazing management activity. The Forest Service's national BMP monitoring protocol was used, and a composite score of excellent was achieved for all those monitored.

FY 2015 Recommended Actions:

- Continue implementation of forest plan standards and guidelines.
- Continue to use the national BMP protocol for monitoring.

Objective 2-5 Monitoring Question 2: Are these zones successfully protecting or enhancing unique plant and animal communities, special habitat features, habitat linkages, and aquatic ecosystems? (E)

FY 2014 Findings

- Best management practices were monitored on two vegetation management, two fire management, and one grazing management activity.
- The Forest Service's national BMP monitoring protocol was used, and a composite score of excellent was achieved for all those monitored.

FY 2015 Recommended Action:

- Continue to use the Forest Service's National Best Management Practices protocol for monitoring.

2.1.4 Watershed Conditions

Forest Wide Desired Future Condition, Goal 1, Objective 1–1: Maintain or improve the Forest's long-term soil productivity. This is accomplished through land management practices designed to meet requirements for minimizing soil erosion and compaction, by not exceeding allowable soil loss for any given soil, by revegetating disturbed areas, and by restoring degraded areas to a natural condition (KNF Revised LRMP, page 2-3).

Objective 1-1 Monitoring Question 1: Are management practices designed to minimize soil erosion, compaction and loss of soil productivity being applied? (I)

FY 2014 Findings:

- Design features and BMP's are part of all NEPA analyses and decisions.
- BMP's were monitored on two vegetation management, two fire management, and one grazing management activity. The Forest Service's national BMP monitoring protocol was used, and a composite score of excellent was achieved for all those monitored.

FY 2015 Recommended Actions:

- Continue to use the Forest Service's national best management practices protocol for monitoring.

Objective 1-1 Monitoring Question 2: Is allowable soil loss being exceeded? Are disturbed and degraded areas being restored and revegetated to a natural condition? (E)

FY 2014 Findings:

- BMP's were monitored on two vegetation management, two fire management, and one grazing management activity. The Forest Service's national BMP monitoring protocol was used, and a composite score of excellent was achieved for all those monitored.
- 375 acres of watershed improvement work was improved/restored.
- Projects included restoration of user created trails, streambank restoration, and hog removal.

FY 2015 Recommended Actions

- Continue to monitor BMP implementation and effectiveness. Restore and revegetate disturbed areas as needed.

Objective 1-1 Monitoring Question 3: How do timber management practices, especially timber harvesting and consequent compaction, affect soil productivity? (V)

FY 2014 Findings:

- The "Long Term Soil Productivity Study" is a national study being conducted to evaluate the effects of various timber management practices on the productivity of soil. Research plots are located at various locations around the United States including the Catahoula and Calcasieu Ranger Districts. Preliminary findings from the study conducted by the Southern Research Station indicate that when sites located on several soil types with a severe compaction hazard rating were subjected to experimental compaction, bulk densities recovered to near original undisturbed levels within ten years and pine productivity was unaffected.
- Preliminary results also indicate that soil productivity may be decreased by slash removal or increased by phosphorus fertilization on phosphorus-deficient sites. In general, less productive sites are more susceptible to detrimental harvesting impacts than highly productive sites.

- BMP's were monitored on two vegetation management, two fire management, and one grazing management activity. The Forest Service's national BMP monitoring protocol was used, and a composite score of excellent was achieved for all those monitored.

FY 2015 Recommended Actions:

- Continue to coordinate with and assist the Southern Research Station with the Long Term Soil Productivity Study.
- Continue to monitor BMP's for implementation and effectiveness. Restore and revegetate disturbed areas as needed.

Forest Wide Desired Future Condition, Goal 1, Objective 1–2: Maintain or improve the integrity of aquatic ecosystems to provide for high water quality, stream-channel stability, natural flow regimes, water yield, and aquatic resources by managing in accordance with the Clean Water Act and by meeting all state and federal water quality standards (KNF Revised LRMP, page 2-3 to page 2-4).

Objective 1-2 Monitoring Question 1: Are management practices designed to minimize contamination, sedimentation, and maintain stream channel stability being applied? (I)

FY 2014 Findings:

- Design features and best management practices are part of all NEPA analyses and decisions.
- BMP's were monitored on two vegetation management, two fire management, and one grazing management activity. The Forest Service's national BMP monitoring protocol was used, and a composite score of excellent was achieved for all those monitored.

FY 2015 Recommended Action:

- Continue to use the Forest Service's National Best Management Practices protocol for monitoring.

Objective 1-2 Monitoring Question 2: Are state water quality standards and state anti-degradation policies being met? Is water quality being degraded? (E)

FY 2014 Findings:

- Water quality in nine streams on the KNF has historically been monitored quarterly in cooperation with the Louisiana Department of Environmental Quality (LDEQ). Formerly, water samples were collected and sent to the LDEQ water chemistry laboratory in Baton Rouge for extensive chemical analysis. However, LDEQ closed their laboratory in 2009, and they no longer accept samples for analysis. The Kisatchie has ample documentation indicating that Forest streams meet state water quality standards for the parameters that were tested. The expense of continued extensive chemical analysis at a commercial laboratory on a quarterly basis is prohibitive; therefore, extensive water chemistry analysis ceased on the Kisatchie National Forest in 2009.
- Water quality on a select number of streams is monitored quarterly for the following parameters: temperature, Sp Conductivity (µS/cm), pH, turbidity (NTU) and dissolved

oxygen (DO (mg/L)). All monitored streams have populations of the Louisiana Pearlshell mussel except for Saline Bayou. Saline Bayou is a "Louisiana Natural and Scenic River" and a "National Scenic Stream". The quarterly samples indicate that streams meet state water quality standards for the parameters that were tested.

- Bi-weekly testing of fecal coliform levels at Stuart, Kincaid, and Caney Lakes swim beaches indicated that water quality standards for protection of public health and safety were commonly met.

FY 2015 Recommended Action:

- In lieu of extensive water chemistry analysis of forest streams, monitor the same streams for temperature, Sp Conductivity (µS/cm), pH, turbidity (NTU) and DO (mg/L) via a portable water quality probe. Continue required monitoring for coliform bacteria at KNF swim beaches.

Forest Wide Desired Future Condition, Goal 2, Objective 2–6: Manage perennial and intermittent streams as well as natural and man-made lakes, reservoirs, and ponds for native and desirable nonnative fish species and aquatic communities (KNF Revised LRMP, page 2-5).

Objective 2-6 Monitoring Question 1: Are lake predator-prey populations in balance? Are management practices sufficiently protecting stream and lake habitats? Are primary aquatic food chain organisms being impacted by siltation? (I)

FY 2014 Findings:

- Predator/prey populations across the Forest are sufficient for a sustainable recreational fishery. Lakes were stocked with Florida strain bass.

- Water quality was within acceptable norms, BMP monitoring had composite scores of excellent, and population trends of MIS suggest that BMPs are adequately protecting the integrity and quality of watersheds within the Forest.

- Young-of-year and recruitment of all age classes is evidence that sediment has not inhibited reproduction of fishes or altered habitat beyond natural conditions.

FY 2015 Recommended Actions:

- Establish size and creel limits on the Forest if needed to ensure recruitment and sustainability of the resource. Continue to monitor and stock when needed.

- Continue to monitor water quality and BMP implementation and effectiveness to insure that stream and lake habitats are being protected.

- Continue to monitor for the health of stream and lake ecosystems.

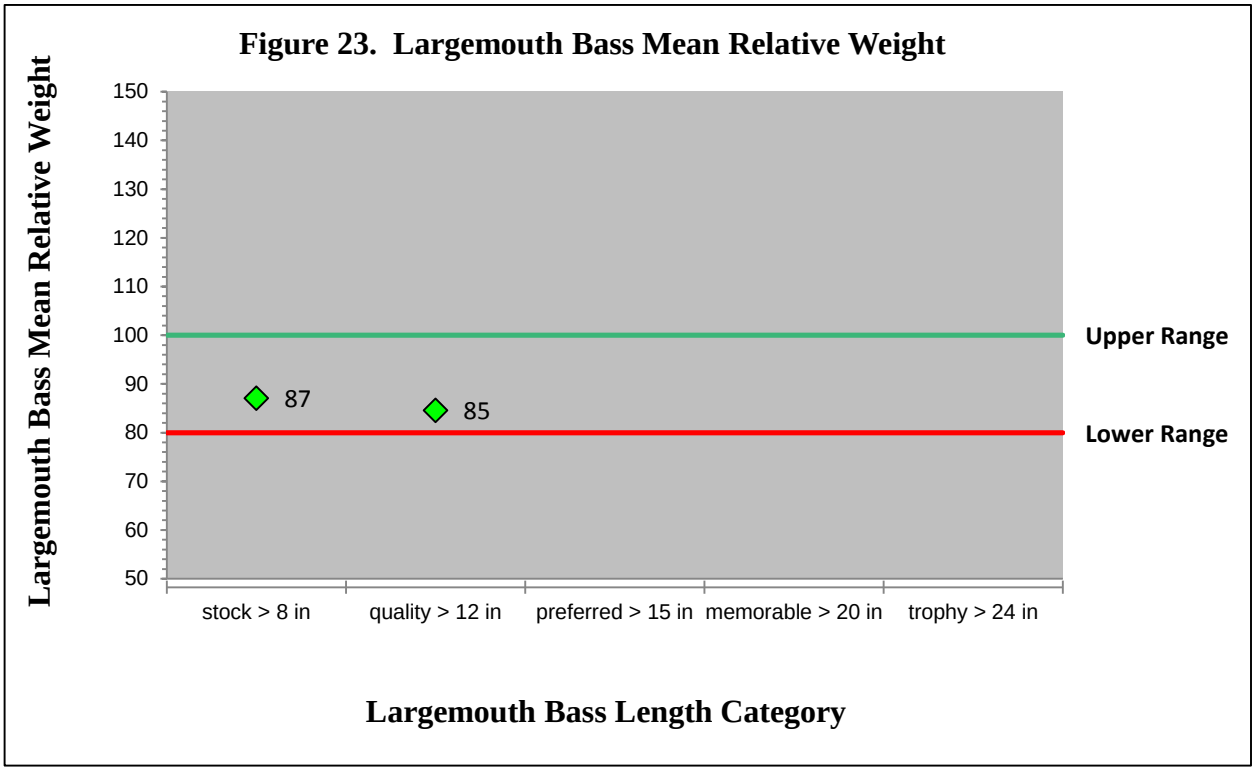
Objective 2-6 Monitoring-Question 2. Are lake populations healthy? Are nonnatives and / or generalist-omnivore natives affecting lake biomass and balance? Is lake habitat sufficient? (E)

FY 2014 Findings:

- The mean relative weights of largemouth bass on Gum Springs fall within the upper and lower ranges of healthy fish indicating a healthy population and an adequate forage base, Figure 23.0. There was no evidence of primary or secondary infections and disease.
- Valentine and Corney lakes were drawn down to manage aquatic weeds and to allow decomposition of the "muck" on the benthos layer, or lake floor.
- The grass carp in Caney Lake continue to manage the growth of *hydrilla verticillata* and other aquatic vegetation.
- Grass carp were stocked in Fullerton lake to help control aquatic weeds.
- Corney lake needs to be treated with herbicides to control aquatic weeds.

FY 2015 Recommended Actions:

- Continue to monitor the health of lake fisheries.
- Continue to monitor for nonnatives and generalist-omnivore natives. Stock catfish fingerlings when available and necessary.
- Continue management practices to maintain and enhance lake habitat.



2.1.5 Air Quality

The Forest's fundamental resources are conserved and protected. They continue to provide the basic elements for healthy, functioning ecosystems. Class II air quality is maintained. Smoke from prescribed fire occurs frequently and may temporarily affect air quality in localized areas. Mitigating smoke management practices, however, provide for effective smoke dispersal. Air quality is addressed in the Forest plan's Goal 1 and the goal has associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 1, Objective 1–3: Manage for air quality consistent with the Clean Air Act by implementing practices which are designed to meet state air quality standards and are consistent with maintaining the general forest area in Class II air quality (KNF Revised LRMP, page 2-4).

Objective 1-3 Monitoring Question 1: Are Forest Service and the La. Dept. of Agriculture & Forestry's smoke management guidelines and regulations being applied? Are performance requirements concerning air quality being incorporated in permitted activities?(I)

FY 2014 Finding:

- The Forest followed the direction and parameters of the "Louisiana Smoke Management Voluntary Guidelines" (LSU Agriculture Center 2013). A burn plan is prepared for each proposed prescribed fire. In addition, smoke sensitive areas, site specific concerns, and smoke management criteria for the individual burn units are identified in the burn plan.

FY 2015 Recommended Action:

- Continue to follow the direction and parameters of the "Louisiana Smoke Management Voluntary Guidelines'. Continue preparation of burn plans for prescribed fires.

Objective 1-3 Monitoring Question 2: Does air quality meet NAAQS and state standards? (E)

FY 2014 Finding:

- Louisiana Department of Environmental Quality has monitoring stations in Alexandra, Shreveport, and Monroe. All areas of the Forest are in attainment of the National Ambient Air Quality Standards, including those for ozone.

FY 2015 Recommended Actions:

- Continue to coordinate with LDEQ Air Quality Department on monitoring.

2.2 SUSTAINABLE MULTIPLE FOREST AND RANGE BENEFITS

2.2.1 Outdoor Recreation Opportunities

The Forest provides a wide variety of outdoor recreation opportunities and experiences. Historically hunting, camping, driving for pleasure, swimming, and fishing have been the five most popular outdoor recreation activities. Outdoor recreation is addressed in the Forest plan

Goals two, four and one which has associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 2, Objective 2–7: Provide quality habitat for game and fish populations (KNF Revised LRMP, page 2-5).

Objective 2-7 Monitoring Question 1: Are management practices successfully expanding quality habitats for game and fish species? (E)

FY 2014 Finding:

- Figure 11.0 shows the trend in acres of successional habitat types from fiscal years 2004 through 2014. The forest has a shortage of early successional habitat and has an excess of mid-late successional habitat as compared to the forest plan goals.

FY 2015 Recommended Actions:

- Continue to implement vegetation treatments that would move toward achieving forest plan goals for expanding habitats for game and fish species.

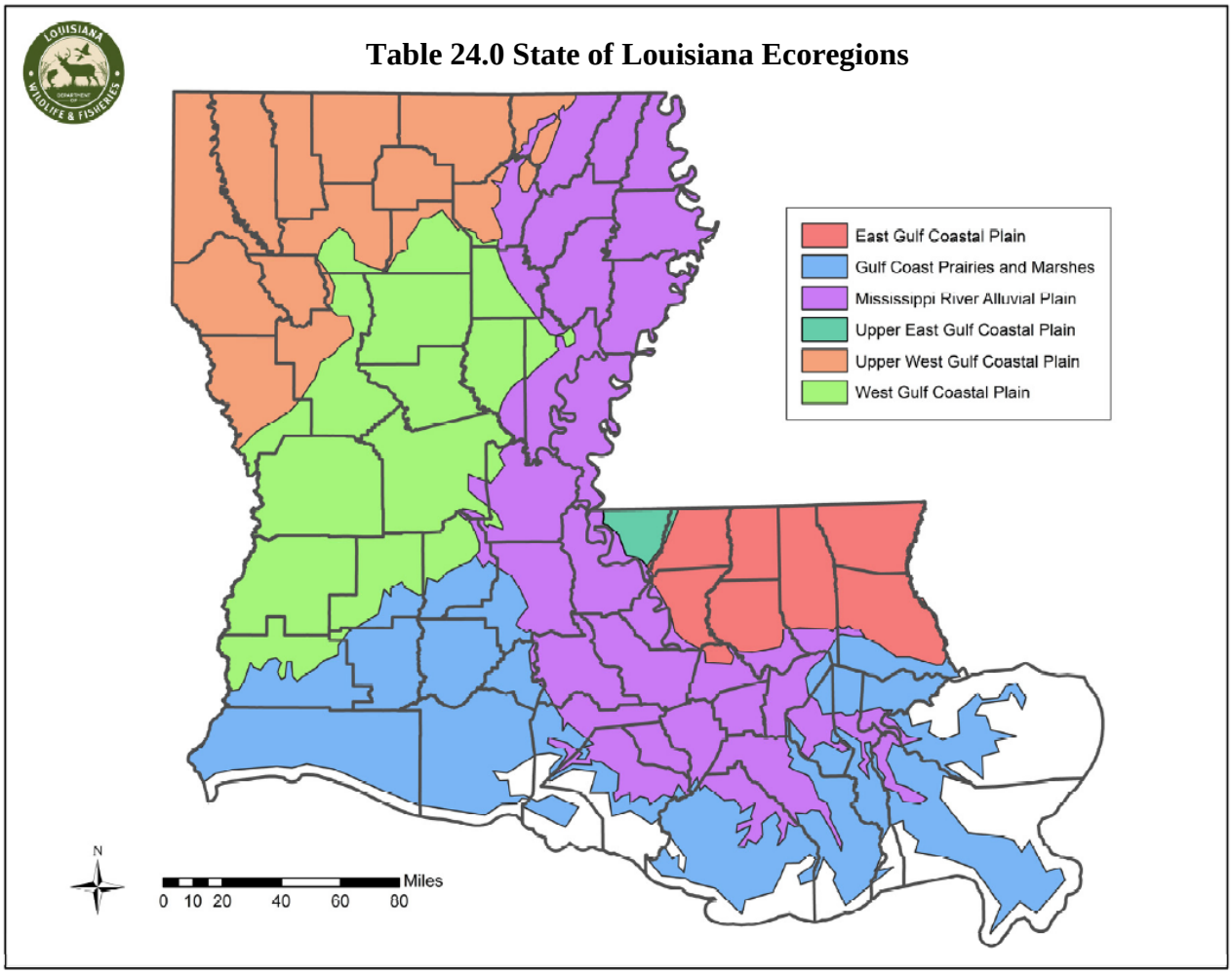
Objective 2-7 Monitoring Question 2: Are habitat objectives for selected demand species management indicators providing game and fish populations sufficient for quality recreational opportunities? (V)

FY 2014 Findings:

Louisiana contains a highly diverse ecological landscape and the physiographic distribution of species often corresponds to ecological boundaries. Areas which share similar ecological attributes such as vegetation, soils, geology, climate, hydrology, and wildlife can be classified as ecoregions, Figure 1.0. The Kisatchie NF occurs within two ecoregions based on the location of the Forest districts. The Calcasieu, Kisatchie, Catahoula and Winn Ranger Districts are within the West Gulf Coastal Plain and the Caney Ranger District is within the Upper West Gulf Coastal Plain.

The West Gulf Coastal Plain is distinguished by a wide range of natural community types but is primarily known for its Longleaf Pine woodlands. In the central portion of this ecoregion, Western Upland Longleaf Pine Woodlands are found in association with Hardwood Slope Forests and Mixed Hardwood-Loblolly Forests. Bayhead Swamps and Western Hillside Seepage Bogs occur along slopes and at lower elevations.

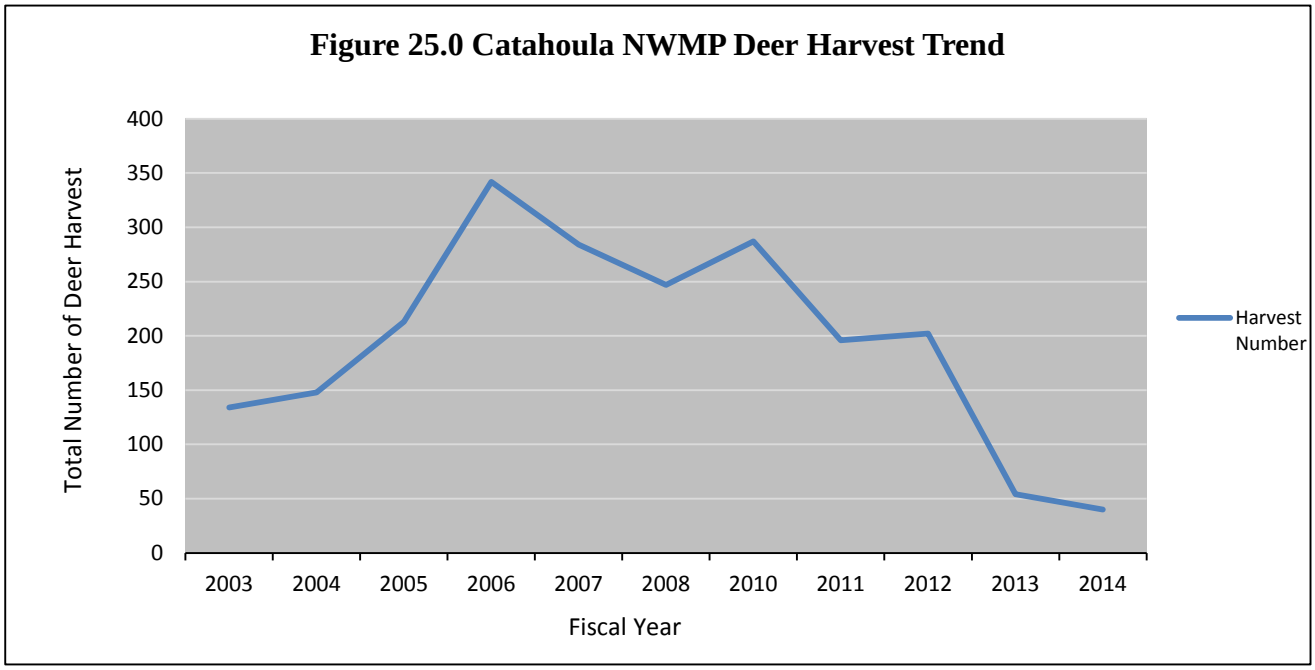
The Upper West Gulf Coastal Plain was once recognized as the Shortleaf Pine-Oak-Hickory Woodland region of Louisiana, existing on sandy and clayey uplands north of the range of Longleaf Pine in the West Gulf Coastal Plain (Newton, 1972). Upon settlement, the majority of the Shortleaf Pine was logged and has been replaced most recently by Loblolly Pine plantations. However, some natural stands of Shortleaf Pine-Oak-Hickory Woodland still exist in this ecoregion. Xeric Sandhill Woodlands occur on xeric sands in the Upper West Gulf Coastal Plain. Hardwood Slope Forests and Mixed Hardwood-Loblolly Forests develop on more mesic soils. Wet bottomlands include natural communities such as Bayhead Swamps, Small Stream Forests, Bottomland Hardwood Forests, and Cypress-Tupelo-Blackgum Swamps.

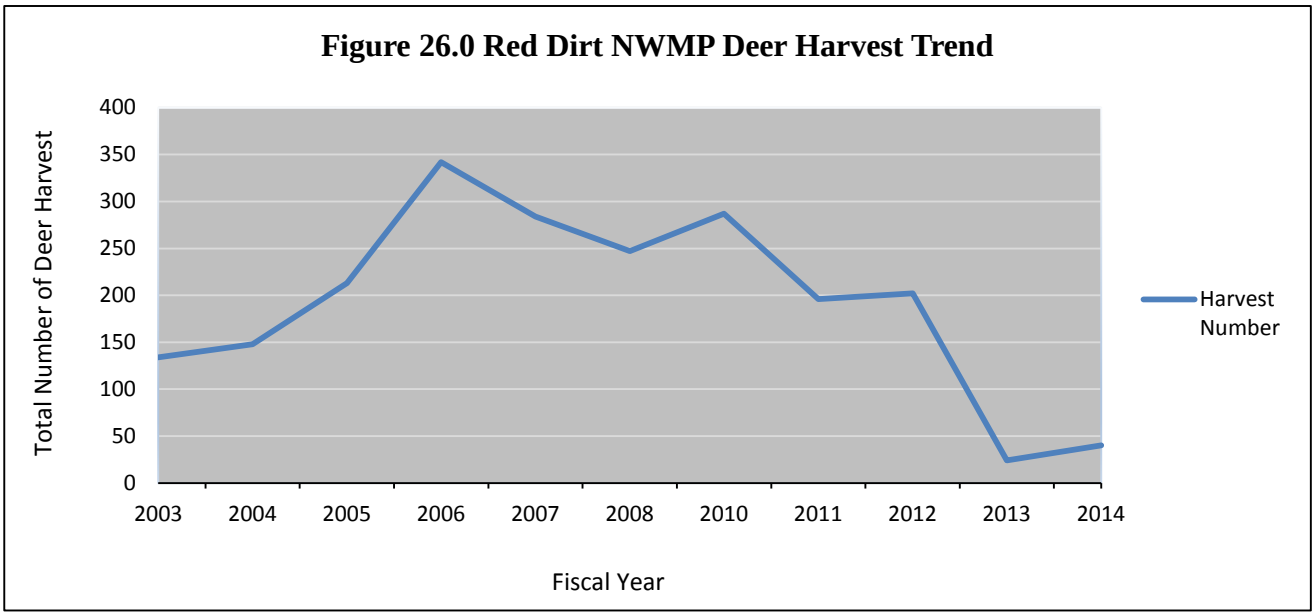


FY 2014 Finding:

- **Whitetail Deer Habitat**

No specific forest-wide data is available in areas outside the wildlife management preserves for whitetail populations. Deer harvest data collected from Red Dirt National Wildlife Management Preserve (NWMP) and Catahoula National Wildlife Preserve (NWMP) from 2003 to 2014 is shown below in Figures 25.0 and 26.0. Whitetail deer herd health and ratio of hunters that make a harvest on the two preserves is similar to numbers on Louisiana Department of Wildlife and Fisheries Wildlife Management Areas.





- ***Turkey Habitat***

Wild turkey brood surveys are valuable for examining population trends in various forest habitat regions of the state. These brood surveys are used to monitor poults per hen (PPH) which serves as an index to annual production. Prior to 1994, there were no statewide organized observations or recordings of wild turkey recruitment. As a result, there were only educated guesses based on weather patterns and casual observations. Beginning in 1994, the first standardized statewide survey was developed and implemented by Louisiana Department of Wildlife and Fisheries (LDWF), Wildlife Division personnel.

The Kisatchie's five ranger districts occur within the two of five habitat/geological regions in the state. The Calcasieu, Catahoula, Kisatchie, Winn and the Vernon Unit of the Calcasieu district occur within the Western longleaf pine habitat area. Soils located in this region are of the Coastal Plains, Mississippi Terrace and Loessial Hills, Flatwoods, Coastal Prairies, and Recent Alluvium types. The Coastal Plains soils have permeable to moderately permeable subsoils in gently rolling areas. The Flatwoods consist of the poorly drained forested soils, while the Coastal Prairie areas consist of prairie soils with very slowly permeable subsoils. The Recent Alluvium soil area was derived from the older and recent sediments of the Mississippi and Red rivers. Historically, the major timber type was longleaf pine, but more recent timber practices have converted this area to loblolly pine plantations. Approximately 600,000 acres (13.0%) of the 4,593,000 of forested habitat are publicly owned. Bottomland hardwoods and cypress are found in the Recent Alluvium soils areas. Wild turkey populations have done very well in all parishes in this region except in the parishes of Jefferson Davis and Evangeline. Lack of a suitable habitat is believed to be the main reason for lack of or low populations in these parishes.

The Caney District occurs within the Northwest Loblolly/shortleaf/hardwood habitat area. Wild turkeys are found throughout this region with the highest populations located in Bienville, Claiborne, Jackson, Lincoln, Union, and Webster parishes. Coastal Plain, Flatwoods, and Recent Alluvium soil areas are found in this region. These include soils with permeable and moderately permeable subsoils in the rolling hills area of the Coastal Plain, poorly drained forested soils in the Flatwoods areas, and alluvial soils derived from the Red and Mississippi rivers in the recent alluvium forest habitat. There are 4,000,000 acres of forested habitat in this region, and 270,000 (6.8%) are publicly owned. General forest habitats consist of Loblolly/Shortleaf pine and Oak-Hickory. Loblolly pine is the dominant commercial tree species in this region.

The 2014 Summer Wild Turkey Survey indicates a decrease in average poult production for the Northwest Loblolly/Shortleaf/Hardwood habitat region over last year's index. The Western Longleaf Pine habitat regions remained stable. Long-term (20-year) declines ($P \leq 0.0001$) have been occurring in turkey PPH production for four of five habitat regions in the state and these regions are producing fewer poults each year.

The LDWF also looked at the number of poults per hen, for only hens that had poults. This information tells us if production is changing for those hens that do reproduce. In both habitat types, the Kisatchie hens are producing fewer poults than they have in the past.

- ***Quail Habitat***

LDWF 2014 upland survey data was used to evaluate population trends in quail. The 2014 regional indices (calls per stop) remain below the long-term averages. The LDWF report states adverse weather and habitat deterioration have reduced bobwhite quail abundance over the last 20 years. The longleaf region of western and central Louisiana was historically one of the best areas of bobwhite habitat.

Habitat quality in this region has deteriorated as more land is subject to intensive pine management practices. The decreased use of prescribed burning as a forest management tool on private and industrial lands is probably the most important change in this area in the past several years. The report concludes that on the Forest, burning is still common and maintains favorable plant species composition across a large area. However, burns are conducted in blocks that limit post burn proximal cover needed by quail. This area has been identified in the NBCI 2.0 plan as most likely to benefit from quail specific habitat management (Duguay and Stafford 2013). Figure 27.0 shows the trend from 1984 to 2014 in longleaf pine which is representative for the Forest.

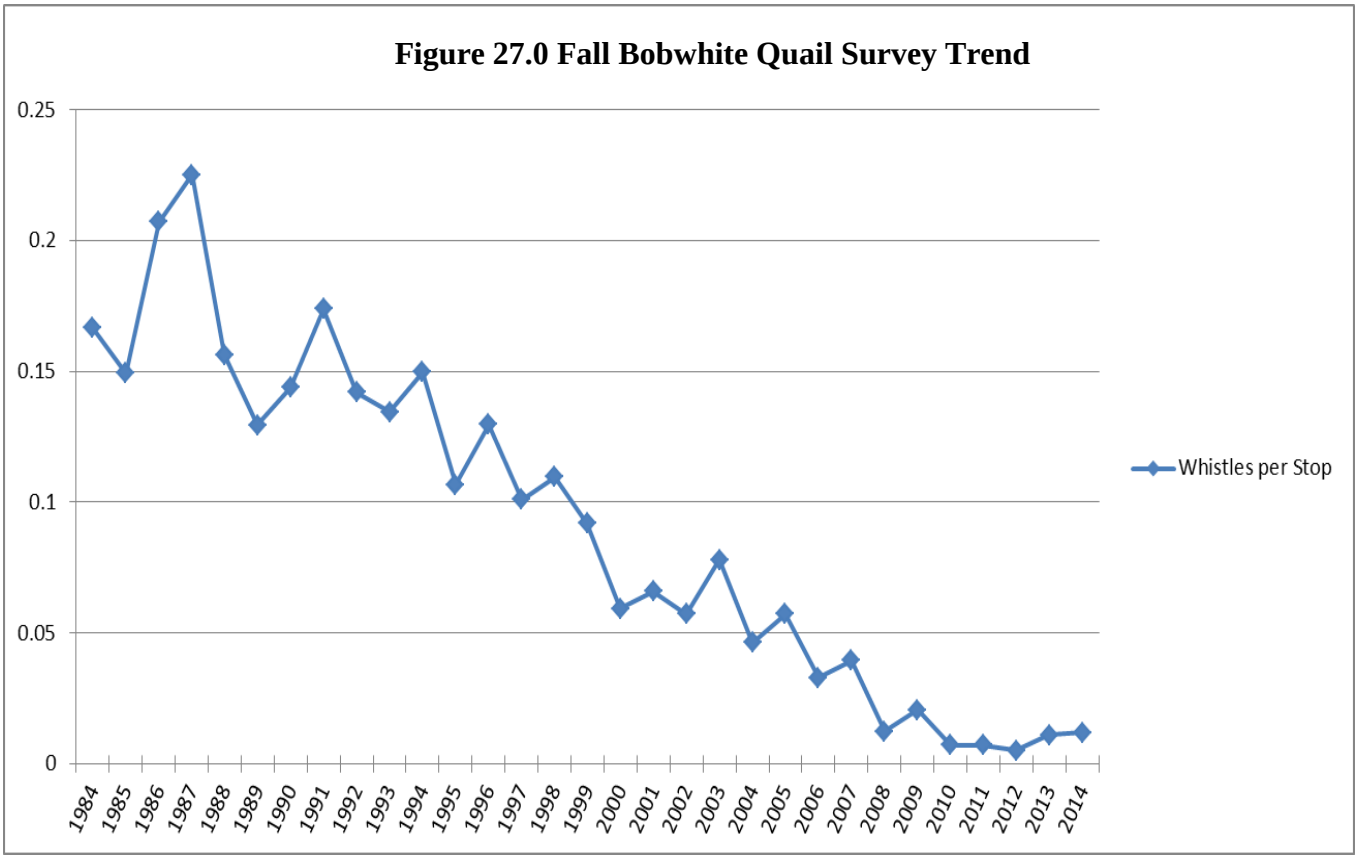
Year to year fluctuations are due largely to weather conditions. However, deteriorating habitat conditions are thought to be responsible for the long-term decline (Duguay and Stafford 2013). Table 4.0 shows the results of fall bobwhite whistling surveys conducted in 2014 on selected Wildlife Management Areas (WMA) and the Vernon Unit on the Calcasieu Ranger District. The 2014 regional indices (calls per stop) remain below the long-term averages.

In addition to the random routes, fall bobwhite whistling surveys were conducted on two WMAs and a portion of the Kisatchie NF, Figure 4.0. The highest index was recorded from Peason Ridge and Jackson-Bienville WMAs.

Table 4.0 2014 Fall Bobwhite quail Whistling Surveys Results

Route	Calls per stop 2013	Calls per stop 2014	Long-term mean Calls per stop*
Camp Beauregard WMA	0.00	0.00	0.03
Ft. Polk WMA	-	0.15	0.22
Jackson-Bienville WMA	0.10	0.10	0.30
Peason Ridge WMA	0.15	0.10	0.24
South Peason Ridge WMA	-	0.00	-
Vernon Unit #1	0.05	0.00	0.11
Vernon Unit #2	0.05	0.00	0.09

*Baseline years vary by route and do not include current year: Camp Beauregard WMA 1990-2013; Ft. Polk WMA 1983-2013; Jackson-Bienville WMA 1990-2013; Peason Ridge WMA 2003-2013; South Peason Ridge WMA 2014; Vernon Units #1 and #2 1990-2013.



FY 2015 Recommended Actions

- Adhere to the Kisatchie NF Revised Land and Resource Management Plan guidance.
- Continue to emphasize longleaf and shortleaf pine restoration.
- Continue working with LDWF in collecting and monitoring sample harvest data.
- Continue collaborating with LDWF in planning and implementing projects that improve and expand suitable wild turkey habitat.

Forest Wide Desired Future Condition, Goal 2, Objective 2–8: Protect, restore, maintain, acquire, and improve habitat on the Forest for waterfowl and wetland wildlife, as stated in the North American Waterfowl Management Plan (KNF Revised LRMP, page 2-5).

Objective 2-8 Monitoring Question 1: Are management practices designed to protect, restore, maintain, and improve waterfowl and wetland wildlife being implemented? (I)

FY 2014 Findings:

- Approximately eight percent of the Kisatchie NF is categorized as riparian/bottomland hardwoods.
- Forest plan standards and applicable guidelines are included in management activities and associated project NEPA documents.

FY 2015 Recommended Action:

- Adhere to the Kisatchie NF Revised Land and Resource Management Plan guidance.

Objective 2-8 Monitoring Question 2: Are these management practices successfully providing for waterfowl and wetland wildlife? (E)

FY 2014 Findings:

- Approximately 8 percent of the Kisatchie NF is categorized as riparian/bottomland hardwoods.
- Compared to 2011, there is approximately a 3 percent decrease as shown in Table 5.0.

Table 5.0 Forest Riparian/Bottomland Habitat						
Year	**2003**	**2004**	**2005**	**2008**	**2010**	**2011**
Acres	48,483	45,509	49,336	49,097	48,763	66,814

FY 2015 Recommended Action:

- Adhere to the Kisatchie NF Revised Land and Resource Management Plan guidance.

Forest Wide Desired Future Condition, Goal 4 Objective 4–1: Manage the Forest to create and maintain landscapes having high scenic diversity, harmony, and unity for the benefit of society through the application of the Scenery Management System, and consistent with assigned scenic integrity objectives (SIO). The SIOs are as follows:

- Very high: 8,699 acres;
- High: 93,980 acres;
- Medium: 89,155 acres;
- Low: 415,020 acres;
- Very low: 1,278 acres (KNF Revised LRMP, page 2-5 to page 2-6).

Objective 4-1 Monitoring Question 1: Is the Forest being managed in accordance with the assigned SIOs? (I)

FY 2014 Findings:

- Consultations with district staff reveal recent management actions do consider SIOs.

FY 2015 Recommended Actions

- Continue to review proposed projects for SIO compliance.
- Work with districts to implement new scenery management system (SMS) guidelines.
- Encourage better participation at interdisciplinary team meetings.

- Ensure that Scenery management is included in the Pace It project evaluation process.

Forest Wide Desired Future Condition, Goal 4, **Objective 4–2**: Provide visitors the opportunity to pursue a wide variety of developed and dispersed recreation activities, with a minimum amount of regulation, consistent with the assigned recreation opportunity spectrum (ROS) class. The Forest s ROS class objectives are as follows:

- Primitive: 8,700 acres;
- Semiprimitive nonmotorized: 57,269 acres;
- Semiprimitive motorized: 89,963 acres;
- Roaded natural-appearing: 217,152 acres;
- Roaded natural modified: 191,671 acres;
- Rural: 6,162 acres (KNF Revised LRMP page 2-6).

Objective 4-2 Monitoring Question 1: Has class eligibility shifted significantly? (E)

FY 2014 Findings:

- Comparisons were not made due to continued staffing limitations. However, shifts in ROS class eligibility are not likely to have occurred because only minor road construction or decommissioning was planned and accomplished.
- ROS class eligibility changes are primarily dependent on changes in road density and OHV management status.

FY 2015 Recommended Action:

- Continue to monitor for changes annually as the MVUM is monitored and updated.

Forest Wide Desired Future Condition, Goal 4,Objective 4–3: Develop, maintain, and protect existing and potential developed and dispersed recreation sites and trails consistent with public use and demand through construction, operation, maintenance, and rehabilitation activities (KNF Revised LRMP, page 2-6).

Objective 4-3 Monitoring Question 1: How satisfied are our recreation customers? Are recreation resources managed in a manner that is responsive to public recreation needs yet as cost effective as possible, in accordance with the negotiated recreation program of work based on Meaningful Measures standards? (I)

FY 2014 Findings:

- Recreation site inventories were completed and data was updated to the corporate INFRA database and critical standards are being met.
- Full compliance with all standards is not possible at current funding level. Stephen F. Austin University completed the 2010 National Visitor Use Monitoring (NVUM) Survey.

- Customer service response has continued to improve. The customer service representative receives requests, questions, or complaints. The representative answers or refers to appropriate district or source for best response.

FY 2015 Recommended Actions:

- Continue the annual update of INFRA data. Continue management of the recreation program using the IWEB INFRA system and the recreation realignment process. Implement the "Pace It" process for all recreation and trails projects to ensure design compliance, feasibility and good customer service.

- Continue to improve customer service through the customer service representative. The recreation program manager will assist with customer service requests and also assist with the INFRA database and inventory needs. Review the NVUM results and use that information to assist in meeting visitor needs.

- Prepare to start the next round of NVUM surveys Oct 1.

2.2.2 Infrastructure

The Forest's transportation system provides a broad spectrum of facility types and service levels to all users and visitors. Forest roads provide convenient access to developed recreation sites, trail heads, scenic areas, wilderness, lakes and streams, and wildlife management areas; and basic access requirements for management and protection. Infrastructure is addressed in the Forest plan Goal 3, which has associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 3, Objective 3–7: Manage the transportation system to ensure that any roads constructed are designed according to standards appropriate to the planned uses (KNF Revised LRMP, page 2-5).

Objective 3-7 Monitoring Question 1: Is the transportation facility serviceable by the intended user? (E)

FY 2014 Findings:

- Eighteen miles of local roads were reconstructed which was an increase in 4.0 miles from 2012 and 2013.

- Of all of the roads reviewed, 100 percent of the road length was observed to be serviceable by the intended user and required no significant increase in the level or frequency of maintenance. Table 6.0 illustrates the comparison through time of road reconstruction, construction and monitoring miles.

Table 6.0 Forest Road Reconstruction and Construction								
Functional Class	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
	Local/ Collector	Local/ Collector	Local/ Collector	Local/ Collector	Local/ Collector	Local/ Collector	Local/ Collector	Local/ Collector
Road Reconstruction/ Construction (miles)	0.22/0.09	1.77/0.0	0.11/0.0	5.13/0.0	22.0/0.0	14/0.0	14/0.0	18.0/0.0
Roads Monitored (miles)	0.22/0.09	1.77/0.0	0.11/0.0	5.13/0.0	22.0/0.0	14/0.0	14/0.0	18.0/0.0
Roads requiring increased level/frequency of maintenance or not serviceable by use (miles)	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0

FY 2015 Recommended Action:

- During FY 2015, reconstruct or construct 19.0 miles of local and collector roads as indicated in Table 7.0.
- Review 100 percent of the roads, reconstructed or constructed, to ensure they are serviceable by the intended user and require no significant increase in the level or frequency of maintenance.
- Continue to complete transportation specialist reports for project level NEPA analysis.

Table 7.0 Forest Recommend Road Reconstruction and Construction			
Functional Class	FY2015		Totals
	Local	Collector	
Road Reconstruction/Construction (miles)	19.0	0.0	19.0
Roads Monitored (miles)	19	0.0	19.0
Roads requiring increased level/frequency of maintenance or not serviceable by use (miles)	0.0	0.0	0.0

2.2.3 Human Influences

Forest Wide Desired Future Condition, Goal 1, Objective 1–6: Manage national forest lands in an efficient manner to provide for the future needs of society by pursuing opportunities to make land ownership adjustments that improve management effectiveness and enhance public benefits through land consolidation; acquiring rights-of-way that facilitate efficient management; issuing land use authorizations necessary to meet public and private needs only when no viable alternative to long-term commitments on Forest land exists; and establishing and maintaining all landline boundaries (KNF Revised LRMP, page 2-4).

Objective 1-6 Monitoring Question 1: Are non-federal lands being acquired to enhance public benefits and improve management effectiveness? Are acquired rights-of-way achieving better Forest management? Are land use authorizations being issued only after all other alternatives are explored to provide goods and services? How well are landline boundaries being established, maintained, and protected from obliteration? (I)

FY 2014 Findings:

- The Forest is continuing to monitor the progress of the Collins Camp legislated sale, introduced in Congress as H.R. 940 on February 10, 2009 (although this has stalled in Congress). No right-of-ways were identified as needed or acquired in 2014.
- No private land was acquired in 2014.
- The Forest has not received any submittals for tripartite exchanges but will continue to pursue this process as opportunities arise.

FY2015 Recommended Actions:

- Continue to manage and monitor the lands program to the level that funding will allow.
- Pursue tripartite exchanges to acquire lands.

Objective 1-6 Monitoring Question 2: Are newly acquired lands compatible with management practices in the Management Area where they are located? Are encroachments discouraged by well-defined property lines? (E)

FY 2014 Findings:

- No land acquisitions were completed in 2014.
- Funding was available to survey two parcels that had not previously been surveyed to administrative standards.

FY2015 Recommended Actions:

Increase maintenance of landlines to facilitate the prevention and location of encroachments, and support a surveyor position if additional funding is received.

Forest Wide Desired Future Condition, Goal 3, Objective 3–6: Assist local Forest communities in diversifying and enhancing existing economies with an emphasis on the conservation of natural, cultural, and recreational resources of the Forest and the State (KNF Revised LRMP, page 2-5).

Objective 3-6 Monitoring Question 1: Are programs and opportunities for improving rural economies and social conditions being developed? (I)

FY 2014 Findings:

- The Forest has not received any Economic Recovery grant proposals since 2004. This is a result of the funding cuts.
- See response to Objective 3-1, question 1 for other opportunities for improving rural economies and social conditions.

FY2015 Recommended Actions: None

Objective 3-6 Monitoring Question 2: Are programs and opportunities improving sustainable local economies and social conditions? (E)

FY 2014 Findings:

- The Forest has not provided any Economic Recovery grants since 2004. This is a result of the funding cuts.
- See response to Objective 3-1, question 1 for other opportunities for improving rural economies and social conditions.

FY2015 Recommended Actions:

- Continue emphasis on new communities and capacity building projects that result in increased local job opportunities and local incomes.

2.2.4 Roadless Areas/Wilderness/Wild and Scenic Rivers

Emphasize maintaining and protecting the enduring resource of wilderness as one of the multiple uses of Kisatchie National Forest while providing a wide range of suitable wildlife habitats for all native wildlife. The majority of trail system within the Wilderness is maintained to support hiking and equestrian uses. Infrastructure is addressed in the Forest plan Goal 5, which has associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 5, Objective 5–6: Manage each Special Interest Area as an integral part of the Forest, with emphasis on protecting, enhancing, or interpreting its unique values (KNF Revised LRMP, page 2-6).

Objective 5-6 Monitoring Question 1: Is Forest plan SIA direction being applied? (I)

FY 2014 Findings:

- The realignment process is assisting the recreation staff in identifying projects that may be associated with SIAs. The public is learning more about these areas through educational efforts.
- Trails Unlimited will be assisting the forest with maintenance of Saline Bayou. The realignment process continues to assist in this area. Updated information was entered into the Wild and Scenic River IWEB database.

FY 2015 Recommended Actions:

- Continue to update and add information to the new Wild and Scenic River IWEB database.
- Continue with the planned maintenance tasks with Trails Unlimited.
- Work with district personnel to determine needs and work towards solutions for SIA management.

Forest Wide Desired Future Condition, Goal 5, Objective 5–7: Manage the Kisatchie Hills Wilderness to enhance and perpetuate wilderness as a resource. Avoid resource damage resulting from overuse (KNF Revised LRMP page 2-6).

Objective 5-7 Monitoring Question 1: Is Kisatchie Hills Wilderness being managed to enhance and perpetuate wilderness values? Are natural processes allowed to operate freely? Is Forest plan direction that would ensure the above being applied? (I)

FY 2014 Findings:

- National meaningful measures standards for wilderness management have been completed. The Forest developed a 10-Year Strategy Plan to bring Kisatchie Hills Wilderness into compliance working with the Wilderness Strategy Group. The Forest is in compliance with minimum standards.
- The Forest continues to update contents for all six education kits for the districts and the supervisor's office

FY 2015 Recommended Actions:

- Continue to promote the area and educate users.
- Maintain minimum standards.
- Move towards implementing the strategy developed by the Forest and implement more standards (above the minimum).
- Prepare for the next phase of strategy called the Wilderness Stewardship Performance for future standards.
- Continue to have a representative from the Kisatchie Ranger District as a member of the SWAG.

2.2.5 Timber

The Kisatchie provides timber products to a 30-parish market area within central and northern Louisiana. Within that area, national forest timber supply competes with timber from private ownerships. Timber is addressed in the Forest plan Goal three and 6, which have associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 3 Objective 3-1: Provide for long-term sustainable production of commodities for economies, local community stability, and people (KNF Revised LRMP, page 2-5).

Objective 3-1 Monitoring Question 1: How does the flow of commodity outputs to local economies and people compare with the Forest plan projections? (I)

FY 2014 Findings:

- The forest plan timber sale volume is an average of volume sold on an annual basis (KNF Revised LRMP, Objective 3-2, page 2-5). There are 308,889 acres of lands classified as suitable for timber production and 268,271 acres of lands classified as unsuitable for timber production (KNF Revised LRMP, Table B-2 and Table 8-3). The forest plan (Objective 3-2) directs the Forest to offer an average of 9.69 MMCF of timber in the first decade and 11.43 MMCF of timber in the second decade of the plan on an annual basis (average annual Allowable Sale Quantity). The ASQ is from the category "suitable lands" that is included in the timber commodity Outputs and Sale Schedule (KNF Revised LRMP, Table A-3). Timber volume from "all lands" includes the ASQ as well as timber harvest from unsuitable lands to meet forest stewardship needs and the personal use by local citizens. Figure 28.0 shows the trend over time of the Forest timber volume by production area and the volume thresholds as identified in the Forest Plan. Neither the suitable or unsuitable volume has been exceeded during the implementation of the Forest Plan.

- Vegetation treatments on suitable lands yielded 8.3 MMCF (83,230 CCF) and approximately 5,744 acres were treated.

- Vegetation treatments on unsuitable lands (including RCW habitat and lands utilized by the military via special use authorization) yielded approximately 4.7 MMCF (46,903 CCF) and approximately 3,230 acres were treated.

- A comparison of FY 2014 to FY 2013 reflects an increase of approximately 1.0 MMCF. The average annual output from 2000 to 2014 was approximately 8.9 MMCF annually.

- Figure 29.0 shows the Forest timber volume sold and target trend over time. The Forest met the FY 14 timber target of 129,400 CCF and volume sold totaled 130,266 CCF, including forest stewardship and personal use sales.

- Figures 30.0-34.0 show the timber volumes and target trends for each of the Ranger Districts. The following lists the Ranger District and the district timber target and volume sold in 2014:

    - Catahoula Ranger District Timber Target 23,650 CCF; Volume Sold 23,364 CCF

    - Calcasieu Ranger District Timber Target 39,750 CCF; Volume Sold 44,073 CCF

    - Kisatchie Ranger District Timber Target 10,917 CCF; Volume Sold 11,323 CCF

    - Winn Ranger District Timber Target 38,333 CCF; Volume Sold 38,413 CCF

    - Caney Ranger District Timber Target 16,750 CCF; Volume Sold 13,093 CCF

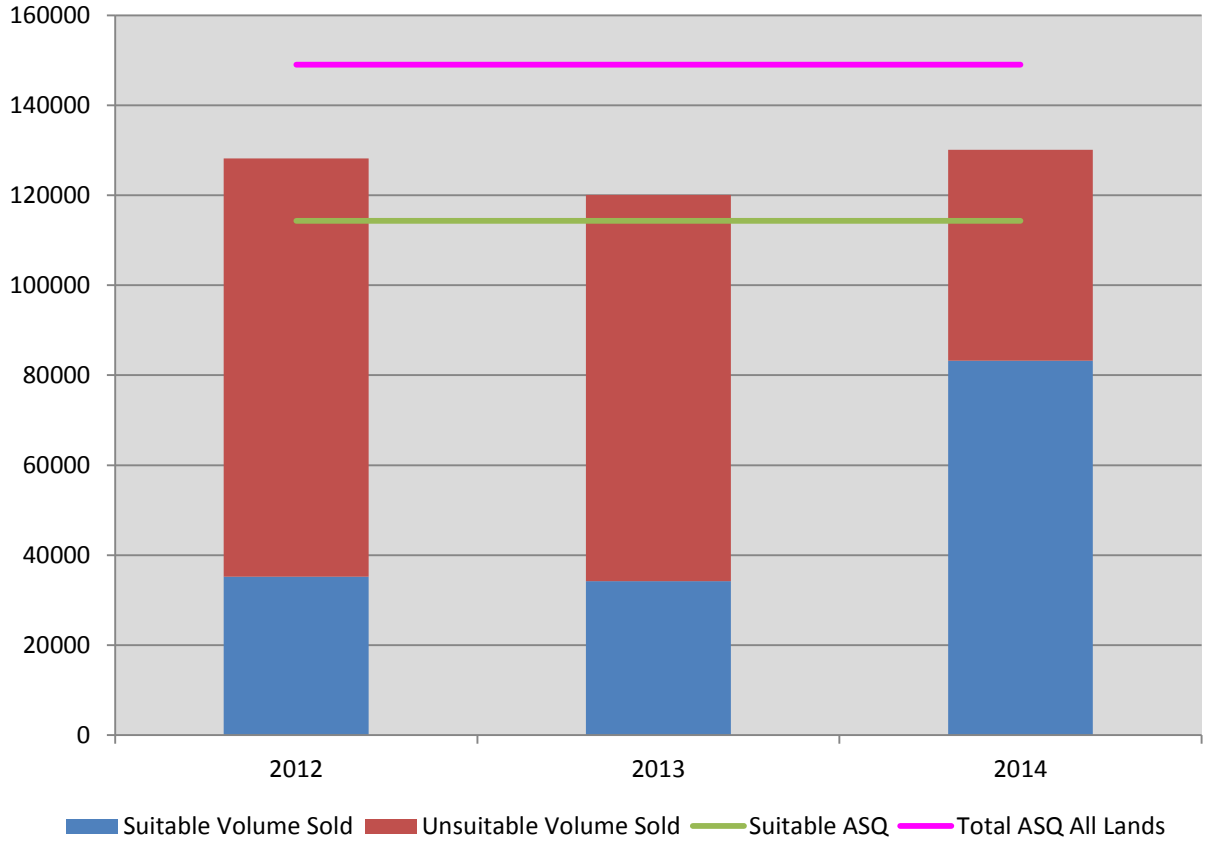
- Prices and markets continue to drive the demand for wood products. The future demand is uncertain, as housing starts have begun to recover, and new markets such as wood pellets are starting to increase. Funding is constraining the program's ability to increase and achieve the average of the offer/sold levels outlined in the forest plan.

- The Secure Rural Schools and Community Self Determination Act, passed in 2000 and extended in 2007, has provided parishes with a steady income in lieu of taxes. Although 2007 was the last year for this to be in effect, a revised version was included in the Emergency Economic Stabilization Act of 2008, and parishes were allowed to re-enroll in the program for 4 more years (through 2012). Although there were some significant changes in the type of projects allowed, as well as the method of funding, the parishes still elected to spend 15 percent of the funds they receive on projects that will benefit the National Forests and rural communities. These projects must either: 1) be associated with wildfire protection, 2) provide for protection, restoration, and enhancement of fish and wildlife habitat, or 3) improve the maintenance of existing infrastructure, enhance forest ecosystems, and restore land health and improve water quality. These are all consistent with the forest plan objectives.

FY2015 Recommended Actions:

- Continue to monitor opportunities and impacts for providing economic products to local communities.

Figure 28.0 Forest Timber Volume by Suitable and Unsuitable Production Area



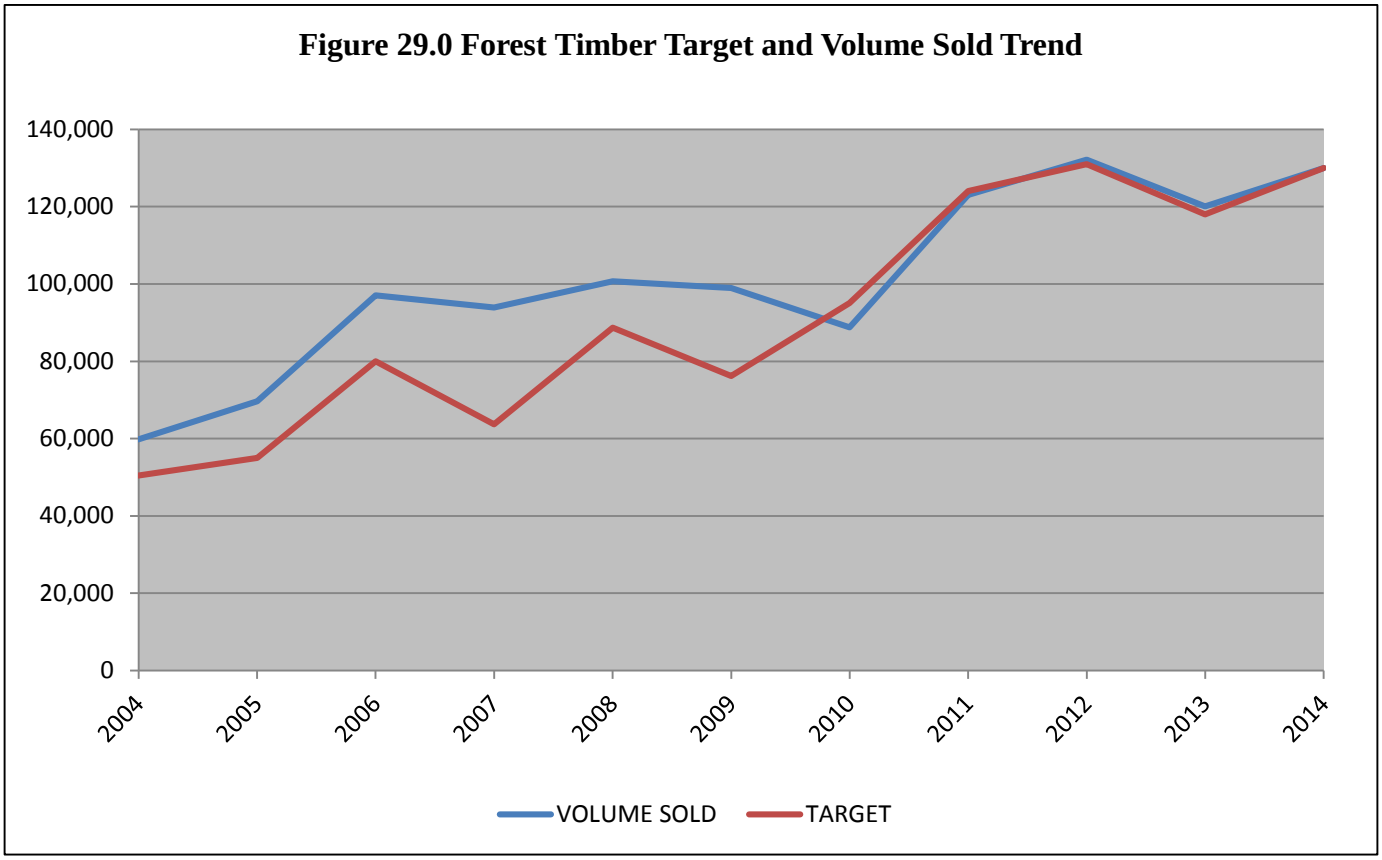


Figure 29.0 Forest Timber Target and Volume Sold Trend
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
VOLUME SOLD
TARGET

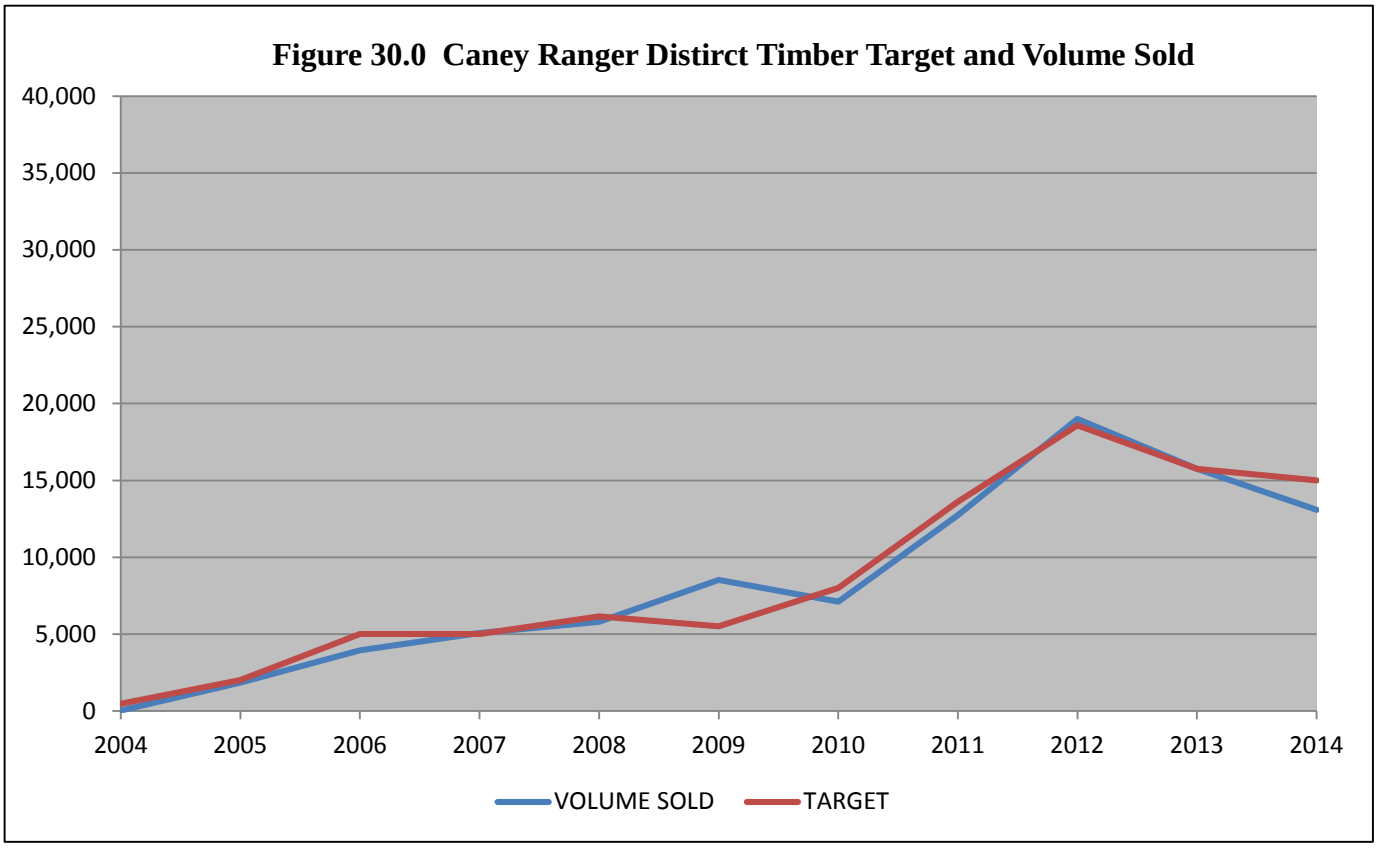


Figure 30.0 Caney Ranger Distirct Timber Target and Volume Sold
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
VOLUME SOLD
TARGET

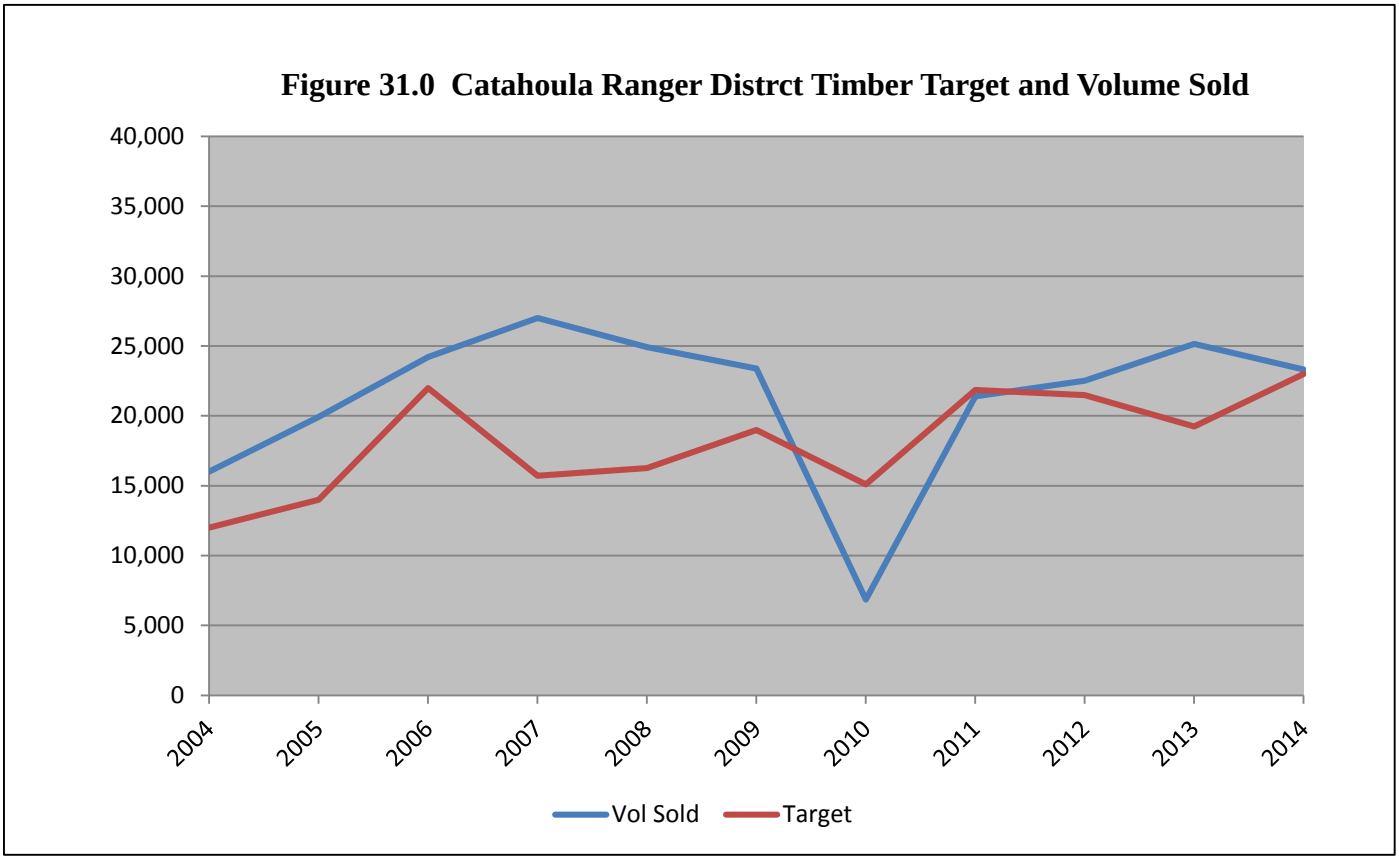


Figure 31.0 Catahoula Ranger Distrct Timber Target and Volume Sold
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Vol Sold
Target

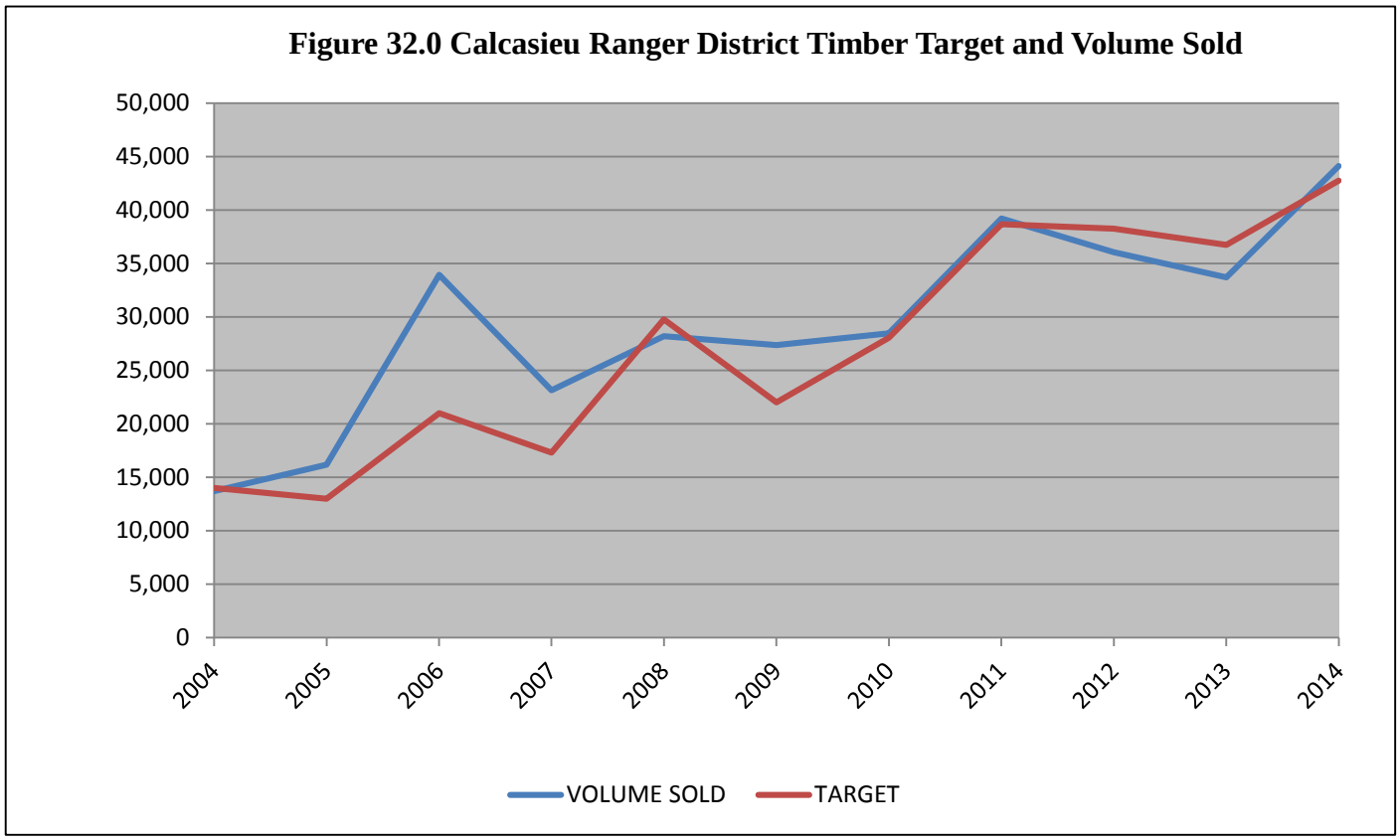


Figure 32.0 Calcasieu Ranger District Timber Target and Volume Sold
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
VOLUME SOLD
TARGET

Figure 33.0 Kisatchie Ranger Distirct Timber Target and Volume Sold

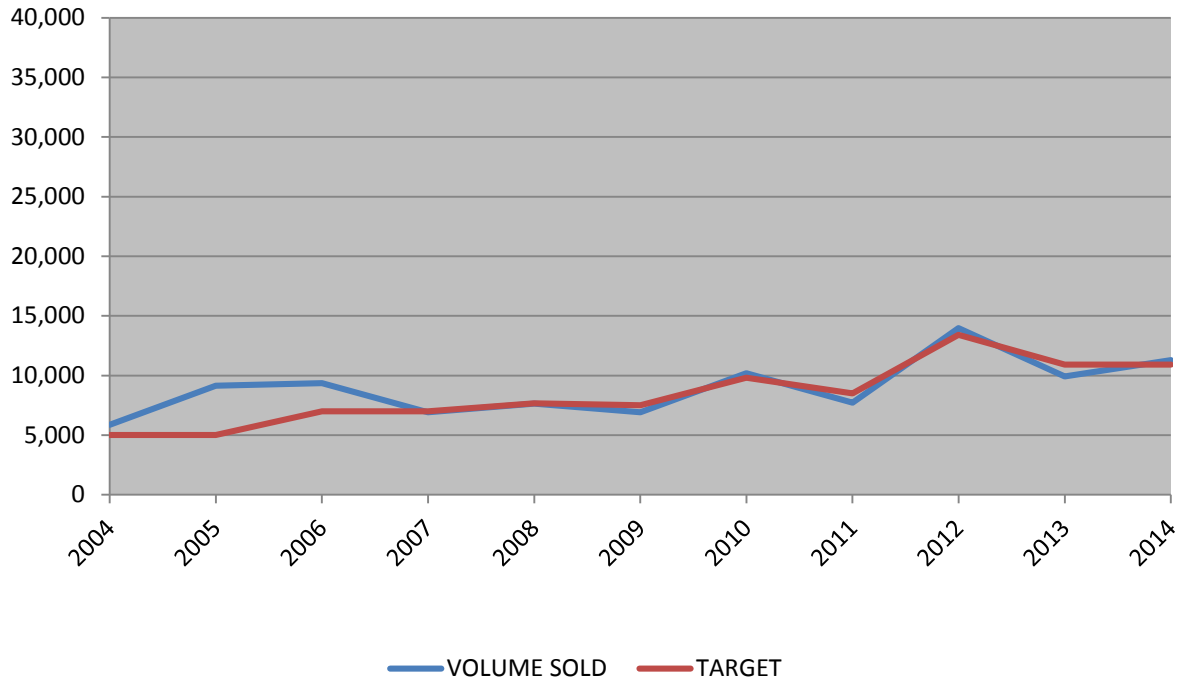


Figure 34.0 Winn Ranger District Timber Target and Volume Sold

Forest Wide Desired Future Condition, Goal 3, Objective 3–2: Offer for competitive bid an average of 9.69 million cubic feet of timber sale volume on an annual basis for the first decade of the Plan (KNF Revised LRMP, page 2-5).

Objective 3-2 Monitoring Question 1: Is the Forest providing for competitive bid the average annual allowable sale quantity it projected for the first decade? (I)

FY 2014 Findings:

- See response to objective 3-1, question 1.

FY 2015 Recommended Action:

- Continue to monitor opportunities and impacts for providing economic products to local communities.

Forest Wide Desired Future Condition, Goal 6, Objective 6-1: Manage the Forest to achieve a mixture of desired future conditions using even-aged, two-aged, and uneven-aged silvicultural systems and regeneration methods; and a variety of manual, mechanical, prescribed fire, and herbicide vegetation management treatments. Apply the uneven-aged silvicultural system on a minimum of 32,000 acres (KNF Revised LRMP, page 2-6).

Objective 6-1 Monitoring Question 1: Are management practices designed to achieve a mixture of desired future conditions being applied? (I)

FY 2014 Findings:

- Movement toward vegetation structure and composition continued in three of four landscape community types. The desired quantity of mixed hardwood-loblolly early stages and longleaf pine remains below forest plan desired conditions. At the pace and scale of treatments, forest plan desired conditions are not likely to be met during the life of the plan.

- Older stands of pine and hardwood have increased the most since 1999 when the forest plan was signed. There is a need to continue tracking of old growth allocations at the project and landscape (forest) level.

FY2015 Recommended Actions:

- Increase scope and scale of longleaf pine restoration where applicable.

- Continue to complete field exams and prescriptions to meet Forest plan goals.

- Increase scope and scale of longleaf pine restoration.

- Identify how many acres of native forest community will be improved in each vegetation analysis/project. More emphasis over the last few years has been placed on commercial thinnings for forest health and RCW habitat improvement. This has indirectly resulted in less emphasis on the restoration of the native forest communities.

- Assure that treatment of NNIP is interwoven into each vegetation project.

2.2.6 Forage

Forage production is only one component of providing forage for livestock consumption. The other aspect requires adequate structural improvements (fences, stock watering facilities, etc.) to facilitate herd management and resource protection. Regulated grazing allotments were established on the Forest in 1967. Earlier, domestic livestock were grazed on all districts except the Caney on an open range basis. Range is addressed in the Forest plan Goal three and has associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 3, Objective 3–4: Maintain or improve forage resources for domestic livestock grazing on 86,000 acres within designated grazing allotments to meet the needs of local demand (KNF Revised LRMP, page 2-5).

Objective 3-4 Monitoring Question 1: Are forage resources being maintained or improved on the designated allotments? (I)

FY 2014 Findings:

- A 28-year trend of decreasing demand from the public for grazing resources continues. Only three grazing allotments were actively used for cattle grazing in 2014.
- Grazing resources are declining in acreage available due to the lack of management and use.

FY 2015 Recommended Action:

- Evaluate management needs and decline in use of these resources.

Objective 3-4 Monitoring Question 2: Are active allotments meeting the needs of the local demand for forage resources? (E)

FY 2014 Finding:

- The three active allotments are meeting the current demand for allotment-based forage resources.

FY 2015 Recommended Action:

- Given the continued non-use of the majority of Kisatchie NF allotments, carefully scrutinize future expenditure as to their cost-effectiveness.

2.2.7 Other Products

Other Forest products include minerals development, firewood, pine straw also add to the local economy and contribute towards community stability. Local communities continue to increase their economic diversity. Timber is addressed in the Forest plan Goal three which has associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 3, Objective 3–3: Make all U.S. minerals available for lease except in areas where consent has been legislatively or administratively withdrawn. Development of federal minerals will be allowed within the constraints of the lease and accompanying stipulations and restrictions. To the extent legally possible, manage surface occupancy to avoid or minimize environmental effects where reserved and outstanding mineral

rights exist. As allowed by state and federal law and under the terms of the severance deed, ensure that surface resources will not be adversely affected to an unacceptable degree by the exercise of reserved and outstanding mineral rights (KNF Revised LRMP, page 2-5).

Objective 3-3 Monitoring Question 1: Are parcels being made available for lease according to U.S. ownership and management restrictions? Are applications for minerals exploration and development being processed according to directions and in a timely manner? Are operating plans for exploration of private minerals being reviewed for compliance with existing state and federal laws? (I)

FY 2014 Finding:

- Approximately 334,603 federal mineral acres are under Bureau of Land Management (BLM) leases, with an additional 76,000 acres waiting to be issued. The Forest Service continues to offer federal minerals for lease through the BLM Federal oil and gas leasing program. Approximately 130,000 mineral acres are reserved or outstanding.

FY 2015 Recommended Actions:

- Continue to improve working relationship with BLM and eastern states in responding to "Expressions of Interest" in a timely manner.
- Work to streamline responses to BLM Expressions of Interest and other leasing questions by upgrading the minerals database on the Forest. The Forest will offer mineral acres for leasing in areas showing mineral interest.

Forest Wide Desired Future Condition, Goal 3, Objective 3-5: Provide other forest products such as firewood and pine straw as available, as long as their use does not impair ecosystem health or the achievement of other resource objectives (KNF Revised LRMP, page 2-5).

Objective 3-5 Monitoring Question 1: How does management of these products compare with Forest plan direction? (I)

FY 2014 Finding:

- The interest in special wood products from the Forest remains steady. The number of permits issued year to year is about the same.
- A few more permits were issued on those districts which had suffered storm damage and were in need of the removal of downed material.

FY 2015 Recommended Action:

- Continue offering biomass as an optional product in timber sales to determine a value.

Objective 3-5 Monitoring Question 1: Is the Forest providing opportunities for other specialty forest products without negatively impacting forest health or other resources? (V)

FY 2014 Findings:

- The interest in special wood products from the Forest remains steady. The number of permits issued year to year is about the same.
- The number of permits issued year to year is about the same. The demand for woody biomass continues to remain low. Demand is directly tied to the price of fuel in the marketplace.
- The Forest did not offer any green biomass for sale from 2011 to 2014.
- There were no known negative impacts on forest health or resources noted.
- Low demand for forest botanical products continued. The majority of permit requests were for personal plant collection which is handled with a FS-2400-8, "Forest Products Free Use Permit".

FY 2015 Recommended Action:

- Continue offering biomass as an optional product in timber sales to determine a value.

2.2.8 Heritage Resources

Significant heritage resources are protected, managed, and interpreted to provide visitors an understanding of the cultural heritage of the Forest. Heritage resources are addressed in the Forest plan Goal 5 and have associated objectives that contain specific monitoring questions.

Forest Wide Desired Future Condition, Goal 5,Objective 5–1: Manage the nonrenewable heritage resources of the Forest in a spirit of stewardship for the American public. Include the Louisiana State Historic Preservation Officer (LA SHPO) and interested federally recognized tribes as primary partners in managing the Forest's heritage resources (KNF Revised LRMP page 2-6).

Objective 5-1 Monitoring Question 1: Are significant archeological and historical sites being identified, prior to project decisions, through inventories conducted in consultation with the Louisiana State Historic Preservation Officer (SHPO) according to the National Historic Preservation Act (NHPA), 36 CFR 800, NEPA, and the Southern Regional Heritage Programmatic Agreements (PA)? (I)

FY 2014 Finding:

- All compliance reviews and consultations pursuant to Section 106 of the National Historic Preservation Act (NHPA) were completed prior to agency decisions. FY 2014 saw an increase in request for surveys.
- Approximately 8,355 acres were inventoried during FY 2014. These acres were in support of timber sales, wildlife and fuels management. Forty-five new sites were added to the Forest's heritage database.
- The Forest continued government-to-government relations with seven federally recognized tribal nations. These include the Caddo Tribe of Oklahoma, the Chitimacha Tribe of Louisiana, the Coushatta Tribe of Louisiana, the Jena Band of the Choctaw Indians, the Tunica Biloxi Tribe, and the Choctaw Tribe of Oklahoma.

FY 2015 Recommended Actions:

- Continue current planned direction for pre-decisional inventories and consultations.
- Continue working with interested tribes to establish required government-to-government relations and partnerships.
- Make amendments to the Programmatic Agreement as needed.

Forest Wide Desired Future Condition, Goal 5, Objective 5–2: Provide protection for heritage resource sites that preserves the integrity of scientific data that they contain, for the benefit of the public and scientific communities (KNF Revised LRMP, page 2-6).

Objective 5-2 Monitoring Question 1: Is law enforcement and heritage support provided at sufficient levels to protect significant heritage sites from internal and/or external activities? (I)

FY 2014 Findings:

- No archaeological resources were reported to have been harmed.
- Current funding levels are insufficient for law enforcement officers and heritage specialists to physically monitor all sites at risk.

FY 2015 Recommended Action:

- Current strategies for site and buffer zone delineation appear effective and should be continued.

Objective 5-2 Monitoring Question 2: Are protection measures effective at preventing unacceptable damage? (E)

FY 2014 Findings:

- Contracting Officer Representatives (CORs, inspectors and paraprofessionals) are doing an effective job of monitoring projects.

FY 2015 Recommended Actions:

- Current strategies for site and buffer zone delineation appear effective and should be continued.

Forest Wide Desired Future Condition, Goal 5, Objective 5–3: Reduce the existing backlog of heritage sites needing formal evaluation so that the overall number decreases each year (KNF Revised LRMP, page 2-6).

Objective 5-3 Monitoring Question 1: Are sufficient numbers of significant or potentially significant sites being evaluated so that the number of backlogged properties decreases each year? (I)

FY 2014 Findings:

- The number of backlogged sites has decreased to 202. All cemetery sites were removed from this category as there is not a need to conduct cultural site formal testing.

- The Forest was not able to satisfy compliance with Section 110 of the National Register of Historic Places (NHPA) which requires assessments of NRHP eligibility for all known cultural properties. This is largely due to the FY14 funding and staffing levels.

FY 2015 Finding:

- Current strategies for site and buffer zone delineation appear effective and should be continued.
- Continue to request additional funds needed to conduct cultural site evaluations for all sites in backlogged status.

Forest Wide Desired Future Condition, Goal 5, Objective 5–4: Enhance and interpret appropriate sites and heritage values to the American public (KNF Revised LRMP, page 2-6).

Objective 5-4 Monitoring Question 1: Are sites and heritage values being identified for public interpretation? (I)

FY 2014 Finding:

- The Forest is considering interpretation of the Drake's Salt Works Complex on the Winn Ranger District. A PhD candidate from the University of Alabama is working with the Forest on this potential project.

FY2015 Recommended Actions:

- Continue to offer Passport in Time (PIT) projects as possible given funding constraints, and remain as a primary partner with the LA SHPO in Louisiana Archaeology Month. Work with partners to interpret the Fullerton site.
- Continue to strengthen the relationship between recreation and heritage Resources to provide interpretive opportunities between the two resources, such as the continued efforts on the Old LSU Site trail and interpretive area.

Objective 5-4 Monitoring Question 2: Has interpretation enhanced awareness of heritage values among the general public? (E)

FY 2014 Finding:

- Public responses from public presentations indicate a general increase in awareness and sensitivity about the nonrenewable cultural resource base.

FY 2015 Recommended Actions:

- Continue to offer PIT projects, classroom and civic organization presentations, and partner with the LA SHPO in Louisiana Archeology Month.

Forest Wide Desired Future Condition, Goal 5, Objective 5–5: Provide an ongoing interpretive services program that accurately and adequately develops an interest in and understanding for the natural and cultural environment of the Forest and the mission of the Forest Service in managing it (KNF Revised LRMP, page 2-6).

Objective 5-5 Monitoring Question 1: Does the interpretive services program provide usable information to the public about the full scope of forest management practices and philosophy? (I)

FY 2014 Findings:

- The interpretive services program covers a wide range of program directed to school age children and adults. The Forest utilizes everything from school class room visits to morning talks shows to increase the interest in and knowledge about the great outdoors.
- The Forest is a regular on the morning talk show for the local NBC affiliate. "Jambalaya" airs each morning from 6-7 am. KNF is a regular on the ABCs "Good Morning Cenla". Stills and video are brought to the stations. Many subjects are covered such as wildfire fighting, prescribed burning, timber management, wildlife management, recreation opportunities and a host of other subjects.
- The Forest is a regular on several morning radio programs. Articles, often on the front page, appear in the Alexandria Town Talk newspaper.
- The Forest continues to participate in numerous school visits and provide presentations at events such as Forestry Awareness Week and 4-H Achievement Day to increase awareness about recreation and how it is integrated with other resources such as heritage resources, timber, etc.

FY 2015 Recommended Actions:

- Continue to provide funding for high-profile and effective interpretive programs such as Passport In Time, Audubon Zoo Earthfest, Audubon Nature Center Demonstration, Tensas Wildlife Refuge Fire Demonstration and Outdoor Education Classroom with Louisiana School for the Deaf.

Objective 5-5 Monitoring Question 2: Has interpretive services increased measurable public support of Forest Service resource management goals and objectives? (E)

FY 2014 Finding:

- The Forest has public support on a wide range of issues and management activities including silvicultural work, prescribed fire, recreation management, transportation management and a host of other activities.

FY 2015 Recommended Actions:

- Increase environmental education projects, printed materials and video productions.
- Increase presentations to civic groups; increase participation with non-profit organizations such as Boy Scouts and Girl Scouts; travel to destinations outside the Forest boundary to reach various user groups and work with nontraditional audiences.

2.3 ORGANIZATION EFFECTIVENESS

In order to keep the revised Forest plan dynamic and responsive to changing conditions an annual Monitoring and Evaluation Report is completed evaluating the results of our management. This

report includes the implementation status of the previous fiscal year monitoring recommendations as well as the detailed results and action plan of the fiscal year being monitored. Evaluation of new information is addressed in the Forest plan Goal 7 and 8, which have associated objectives that contain specific monitoring questions.

2.3.1. Monitoring and Evaluation

Forest Wide Desired Future Condition, Goal 7, Objective 7–1: Monitor and document the annual progress towards accomplishment of Forest goals, objectives, and desired future conditions (KNF Revised LRMP, page 2-6).

Objective 7-1 Monitoring Question 1: Is the Forest preparing and distributing a yearly monitoring and evaluation report to the public? (I)

FY 2014 Finding:

- This annual report documents monitoring results for FY 2014 activities and provides recommendations for FY15.
- The annual monitoring and evaluation report is available to the public on the Kisatchie National Forest (http://www.fs.usda.gov/main/kisatchie/landmanagement/planning) and Southern Region's Forest Service website. Information from previous monitoring reports has always been available by contacting the Forest.

FY 2015 Recommended Actions:

- Consolidate and evaluate various forest mailing lists and seek input from interested parties on preferred methods of receiving information and the type of media.
- Begin using the Mailing List Manager application for public scoping and collaboration efforts during project level planning and environmental analysis.

Forest Wide Desired Future Condition, Goal 7, Objective 7–2: Evaluate new information and monitoring results; adapt management accordingly (KNF Revised LRMP, page 2-6).

Objective 7-2 Monitoring Question 1: Is the Forest plan being kept current through timely changes as identified in the annual M&E Report? (I)

FY 2014 Findings:

- The forest plan is being kept current. No forest plan amendments were planned, completed or implemented in 2014. See Appendix B for a complete list of forest plan amendments.
- The Northern Long-eared Bat was once a common resident of forests from the Atlantic coast and west as far as eastern Wyoming and Montana. Unfortunately, this particular bat is one of the species hardest hit by the white-nose syndrome. It is anticipated that white-nose syndrome will spread throughout this bat's range and that impacts will be the same as those documented in areas already affected by white-nose syndrome. Due to the disease, this species is being considered by the U.S. Fish and Wildlife Service to be listed as a threated or endangered status under the Endangered Species Act.

- On April 9, 2012, the U.S. Department of Agriculture adopted new final planning regulations for the National Forest System at 36 CFR part 219 (77 FR 21161). The 2012 Planning Rule was effective on May 9, 2012**.** These regulations, known collectively as the 2012 Planning Rule, provide broad programmatic direction in developing and implementing land management plans. The Forest's current monitoring plan will be evaluated with the compatibility with the new 2012 planning rule. Appendix A provides additional information on the new planning rule.

FY 2015 Recommended Actions:

- Evaluate monitoring and evaluation questions for incorporation of climate change, socioeconomic and focal species direction per the 2012 Planning Rule.
- Evaluate all MIS Reports and determine if updates are needed. Clarify acres of forest wide habitat for each MIS species.
- Revisit ability to move towards longleaf pine and shortleaf pine restoration efforts in project level planning.
- Continue reviewing timber outputs and prescribed fire accomplishments to document forest plan compliance. Movement toward forest plan desired future conditions is dependent on the use of fire.
- Evaluate consistency for including old growth analysis as part of site-specific project analyses.

2.3.2. Cooperation, Coordination and Collaboration

Forest Wide Desired Future Condition, Goal 8, Objective 8–1: Benefit from research information, technical assistance and technology development by maintaining a close, continuous working relationship with scientists at the Southern Research Station, academic institutions, and Forest Health Protection units (KNF Revised LRMP, page 2-6).

Objective 8-1 Monitoring Question 1: Are cooperative relationships being developed and maintained? (I)

FY 2013 Finding:

- See response to Objective 9-1 monitoring question 1 and Objective 9-2 monitoring question 1.

FY 2014 Recommended Action:

- Continue partnerships.

Forest Wide Desired Future Condition, Goal 8, Objective 8–2: Continue to identify research needs as the Forest implements the Plan (KNF Revised LRMP, page 2-6).

Objective 8-2 Monitoring Question 1: Are research needs being identified in a timely manner? (I)

FY 2014 Findings:

- The Kisatchie NF is working with multiple agencies, universities and non-government organizations to stay consistent with the best available science.
- The Kisatchie NF accommodates and recommends research activities on the Forest.

FY 2015 Recommended Actions and Future Research Opportunities:

- Evaluate management impacts on soil productivity and the resulting longleaf pine ecosystem.
- Evaluate effectiveness of the Kisatchie NF standards and guidelines in reducing non-point source pollution.
- Reduce soil loss due to prescribed burning on erosive soils, particularly sensitive soils that are vulnerable to management activities.
- Support the Biomax research project to increase alternative energy sources for the Winn Ranger District.
- Work with the Southern Research Station and the regional office to evaluate monitoring questions that address climate change and the focal species requirements of the 2012 Planning Rule.

Forest Wide Desired Future Condition, Goal 9, Objective 9–1: Continue coordination and cooperation efforts with other federal and State agencies, such as the U.S. Department of Interior, Fish & Wildlife Service, the Louisiana Department of Wildlife and Fisheries, the Louisiana Department of Environmental Quality, Louisiana Department of Agriculture and Forestry, and the Louisiana SHPO on issues of mutual concern (KNF Revised LRMP, page 2-6).

Objective 9-1 Monitoring Question 1: Are coordination and cooperation efforts being conducted with federal and state agencies? (I)

FY 2014 Findings:

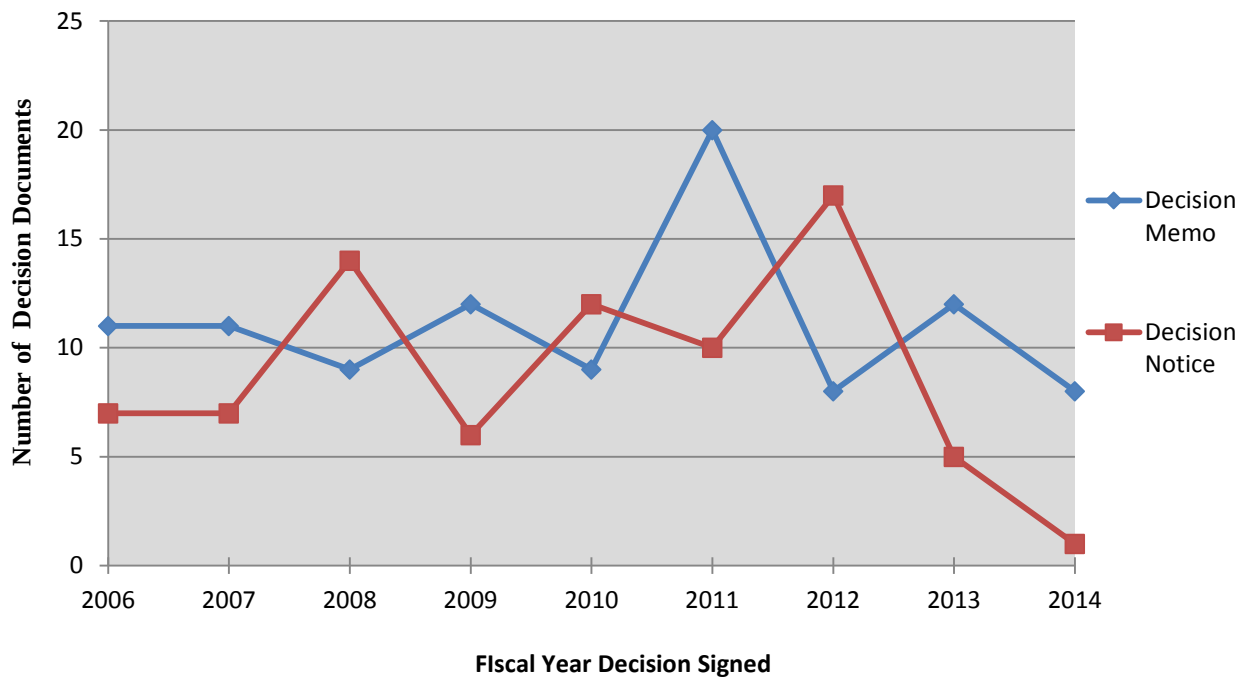
- Federal and state agencies were consulted as new project level proposals were developed and evaluated through the National Environmental Policy Act process. Three Environmental Assessments were initiated for projects on the Forest. Federal and state agencies were provided an opportunity for comment during the public scoping period for each of these NEPA documents. There is a long history of providing project level coordination and cooperation efforts with federal and state agencies through the NEPA process. Public scoping is completed for each level of NEPA. The lowest level of NEPA, categorical exclusions, will result in a Decision Memo and a Decision Notice is completed for an Environmental Assessment. Figure 30.0 shows the number of NEPA decisions completed since 2004.

FY2015 Recommended Actions:

- Continue coordination with tribal, federal, and state agencies as needed for project level proposals.

- Continue participation in the candidate conservation agreement for the LPS with private, local, state and federal partners**.**
- Continue participation in Special use authorizations with the Department of Defense, Fort Polk and the Joint Readiness Training Center, U.S. Air Force Reserve at Barksdale Air Force Base, and the State of Louisiana Army National Guard.

Figure 35.0 Forest Project Level Decisions



Forest Wide Desired Future Condition, Goal 9,Objective 9–2: Seek to increase the participation of other federal and State agencies, academic institutions, federally recognized Native American tribes, organizations and individuals in the accomplishment of Forest goals and objectives through the use of memorandums of understanding, cooperative agreements, partnerships, and challenge cost share agreements (KNF Revised LRMP, page 2-7).

Objective 9-2 Monitoring Question 1: Are memorandums of understanding, cooperative agreements, partnerships, and challenge cost share agreements being developed? Are we increasing the participation of groups and individuals in the accomplishment of Forest plan goals and objectives? (I)

FY 2014 Findings:

- In FY 14 the following agreements were developed:
  - Louisiana Department of Agriculture and Kisatchie National Forest Cooperative Fire Protection Agreement.
  - Louisiana Department of Agriculture and Caney Ranger District Prescribe Burning Agreement.
  - Memorandum of Understanding between Grant Parish Police Jury and Catahoula Ranger District for a shared radio tower.
  - Winn Parish and Winn Ranger District Road Improvement Agreement.
  - Louisiana State University and Kisatchie National Forest Feral Hog contamination sampling Agreement.
  - Catahoula District cooperative Law enforcement agreement with the Town of Pollock Police Department.
  - National Wild Turkey Federation and Kisatchie National Forest cooperative position Agreement.
  - Winn District and Winn Parish Sheriff Department Cooperative law enforcement Agreement.
  - Vernon Parish Sheriff's Department and Kisatchie National Forest cross designation of Forest Service Law Enforcement Officer Agreement.
  - Natchitoches Parish Sheriff's Department and Kisatchie National Forest cross designation of Forest Service Law Enforcement Officer Agreement.
  - Louisiana Department of Wildlife Fisheries and Kisatchie National Forest Master Stewardship Agreement.
  - Louisiana National Guard and the Kisatchie National Forest Memorandum of Understanding.
  - Southern Forest Heritage Museum and Kisatchie National forest Civilian Conservation Corps Historic Cabin Museum Agreement.
  - Comanche Nation of Oklahoma and Kisatchie National Forest paraprofessional archeological phase I survey Agreement.
  - Veterans Administration Medical Center Fire Department and Kisatchie National Forest Fire Suppression Services Agreement.
  - Participation in Special use authorizations with the Department of Defense, Fort Polk and the Joint Readiness Training Center, U.S. Air Force Reserve at Barksdale Air Force Base, and the State of Louisiana Army National Guard.

- Participation in the candidate conservation agreement for the Louisiana pine snake with private, local, state and federal partners**.**
- Coordination with the Forest Service Region 8 Regional Office concerning the potential listing of the Northern-long eared bat.

FY 2015 Recommended Action:

- Continue to accommodate interested partners who wish to form partnerships, cooperative agreements, memorandums of agreements and memorandums of understanding consistent with Forest Plan goals and objectives.

SECTION 3.0 EVALUATION OF OUTCOMES ON THE LAND

This section evaluates the perceived outcome of the monitoring results for this reporting fiscal year 2014. The effectiveness of much of the plan's direction during its first five years of implementation was evaluated during the Comprehensive Evaluation Report (or 5-Year Review), which was done in FY 2006 (USDA 2006). Based on FY 2012 monitoring results, the following observations were made:

Biodiversity

- In FY14, movement towards vegetation structure, composition, disturbance regime and desired conditions continued in three of four landscape community types. The desired quantity of mixed hardwood-loblolly early stages and longleaf pine remains below the forest plan desired conditions, although older stands of pine and hardwood have increased since 1999 when the forest plan was signed.

- There is a need to improve tracking of old growth allocations at the project and landscape scale.

- There is a need to increase the pace and scope of longleaf pine restoration. There is a need to reduce the acres of mid and late successional mixed hardwood loblolly pine by prescribing regeneration cuts on off-site stands where there is a high priority for regeneration, such as stands damaged by disease, insect or storms and stands showing signs of decline.

- There is a need to increase the acreage of mixed hardwood loblolly pine early successional stage that is currently deficit. In prairies and pitcher plant bogs throughout the Forest, there is a need to move towards native plant community composition and structure desired conditions by removing encroaching woody plants. These natural communities provide habitat for many TESC species.

- In addition to commercial thinning, use of prescribed fire continues to be critical to achieving and maintaining natural communities and quality habitat. The prescribed burning program is the most important practice used for restoration of pre-settlement habitats, which is effectively protecting, improving and maintaining TESC species habitat. The treatment of non-native invasive plants continues to improve habitats for TESC species. However, there are opportunities to include non-native invasive plants treatments in all vegetation projects and there is a need to annually evaluate how projects are incorporating NNIP treatments.

- RCW populations were comparable to population numbers in 2013 with a slight increase overall.

- The total LPM population on the KNF appears to be on a downward trend. The downward trend of the LPM population is believed to be from environmental and biological factors, as well as, management practices outside of the Forest Service boundaries. This region has seen drought years in which one LPM stream on the Catahoula went dry.

- The Natchitoches National Fish Hatchery, with the support of the Forest Service and the Louisiana Department of Wildlife and Fisheries, has been conducting research on the LPM in an attempt to better understand the mussel's lifecycle so that propagation techniques can

be developed. We now know LPM spawning habits and the host fish. We are moving forward with propagation techniques.

- Habitat objectives for selected botanical management indictors are being met mainly as a result of the forest's prescribed burn program; however, current baseline data and survey methods have not proven effective for analyzing trends in specific botanical MIS species.
- Habitat objectives for selected terrestrial management indicators are being met for mid-late successional habitats on the forest; however, early succession habitat is low for longleaf pine, mixed hardwood loblolly pine and small and large stream riparian landscapes.
- Aquatic MIS appear to be viable and stable in the protected habitats and refuges across the forest.
- Management practices have supported the forest plan desired conditions for long term soil productivity and aquatic ecosystem integrity.
- Management practices strive to satisfy customers by meeting critical public health and safety standards in developed recreation sites, having a transportation system that was serviceable, responding to special use permit requests in a timely manner and maintaining landlines as funding allowed. Predator/prey populations across the Forest are sufficient for a sustainable recreational fishery.

Forest Health

- Vegetation treatments on suitable lands yielded 8.3 MMCF (83,230 CCF) and approximately 5,744 acres were treated.
- Vegetation treatments on unsuitable lands yielded approximately 4.7 MMCF (46,903 CCF) and approximately 3,230 acres were treated.
- There were no SPB spots reported during FY2014.
- Timber stand improvements reduced competition in young longleaf plantations, improving the site/species selection.

Watershed Conditions

- Population trends of aquatic MIS suggest that best management practices and streamside habitat protection zones are adequately protecting the integrity and quality of watersheds within the Forest.
- Water quality in nine streams occurring in the Forest are monitored quarterly in cooperation with the Louisiana Department of Environmental Quality. These quarterly samples indicated streams meet state water quality standards for the parameters that were tested.
- The USDA Animal and Plant Health Inspection Service monitored streams for beaver activity and dams. There were no beavers or dams removed.
- Water samples taken on mussel streams indicated good water quality.

Outdoor Recreation Opportunities

- Shifts in ROS class eligibility are not likely to have occurred because only minor road construction or decommissioning was planned and accomplished. ROS class eligibility changes are dependent, primarily, on changes in road density and OHV management status.
- Densities of select game species on the forest vary. Populations of deer, turkey and quail are below carrying capacity.
- Recreation site inventories were completed and data was updated to the corporate INFRA database and critical standards are being met.
- Full compliance with all standards is not possible at current funding level. Stephen F. Austin University completed the 2010 National Visitor Use Monitoring Survey.
- Customer service response has continued to improve. The customer service representative receives requests, questions, or complaints. The representative answers or refers to appropriate district or source for best response.

Infrastructure

- All roads were found to be serviceable by the intended user and required no significant increase in the level or frequency of maintenance.

Human Influences

- No land acquisitions were completed in 2014. With the continued decrease in funding, property lines will not be well-defined, which will lead to encroachments.

Timber

- A comparison of FY14 to FY13 reflects an increase of approximately 1.0 MMCF. The average annual output from 2000 to 2014 was approximately 8.9 MMCF annually.
- Regeneration harvests continue to be far below the anticipated forest plan outputs.

Forage

- A 30-year trend of decreasing demand from the public for grazing resources continues. Three active allotments are meeting the current demand for forage resources. Given the continued non-use of the majority of KNF allotments, carefully scrutinize future expenditures for cost-effectiveness.

Other Products

- No oil and gas wells were drilled in FY 2014.

Heritage Resources

- All compliance reviews and consultations pursuant to Section 106 of the National Historic Preservation Act were completed prior to agency decisions. An increase in request for surveys occurred during FY 2014.

- A total of 8,355 acres were inventoried during FY 2014. These acres were in support of timber sales, wildlife and fuels management. Forty-five new sites were added to the Forest's heritage database.

- The Forest continued government-to-government relations with seven federally recognized tribal nations. These include the Caddo Tribe of Oklahoma, the Chitimacha Tribe of Louisiana, the Coushatta Tribe of Louisiana, the Jena Band of the Choctaw Indians, the Tunica Biloxi Tribe, and the Choctaw Tribe of Oklahoma.

Evaluation of New Information

- Federal and state agencies were consulted as new proposals were developed and underwent the NEPA process. SHPO and Tribal Historic Preservation Officials contributed during the preparation and analysis done for EAs. The USFWS provided consultation and effects analysis for game and non-game animals potentially affected by project proposals.

- New planning rules were published in 2012 and changed Forest plan monitoring program requirements. During FY 2015 the forest's monitoring program will be evaluated for compliance as stated in 36 CFR 219.12.

SECTION 4.0 SUMMARY OF MONITORING AND EVALUATION PLANNED FOR 2015

This section of the report provides information on all monitoring items that need action during FY 2015. In addition to the specific recommended actions listed below, the general recommendation for FY 2015 is to continue implementing the revised forest plan using guidance provided in Chapters 2 and 3 of the forest plan in order to reach the objectives stated. Long-term goals for the Forest are to reach the desired future conditions for individual management and sub-management areas. In order for the forest to reach planned goals and objectives, individual project proposals should consider the guidance provided for each management area, use appropriate NEPA procedures to evaluate the site-specific effects of the proposal and alternatives, and reach a decision consistent with forest plan direction. Recommendations for those items that need attention follow:

4.1 FOREST HEALTH

Objective 1-3:

- Use the national BMP protocol to evaluate how Louisiana Smoke Management Guidelines are being followed.
- Continue to coordinate with LDEQ air quality department for monitoring.
- Continue to monitor prescribe burn plan compliance.

Objective 1-4:

- The Forest will continue to operate at the current efficiency level until fire preparedness funding is increased, and staffed accordingly. Analysis tools for NFMAS and FPA are currently in development to determine the most efficient level.
- Manage for productive and healthy forest ecosystems by utilizing prescribed fire to prevent and minimize resource losses to wildland fires.

Objective 1-5:

- Continue to monitor for possible SPB attacks through aerial observations. Anticipate an increase in scattered pine mortality due to the *Ips* capitalizing on drought-stressed pines.
- Field check for increased mortality from Annosus root disease on thinned loblolly stands on high hazard sites.

4.2 WATERSHED CONDITIONS

Objective 1-1:

- Continue to use the Forest Service's national best management practices protocol for monitoring.
- Continue to monitor BMP implementation and effectiveness. Restore and revegetate disturbed areas as needed.
- Continue to coordinate with and assist the Southern Research Station with the Long Term Soil Productivity Study.
- Continue to monitor BMP's for implementation and effectiveness. Restore and revegetate disturbed areas as needed.

Objective 1-2:

- Continue to use the Forest Service's National Best Management Practices protocol for monitoring.
- In lieu of extensive water chemistry analysis of forest streams, monitor the same streams for temperature, Sp Conductivity (µS/cm), pH, turbidity (NTU), DO (mg/L) via a portable water quality probe. Continue required monitoring for coliform bacteria at KNF swim beaches.

Objective 2-6:

- Establish size and creel limits on the Forest if needed to ensure recruitment and sustainability of the resource. Continue to monitor and stock aquatic species when available and needed.
- Continue to monitor water quality and BMP implementation and effectiveness to insure that stream and lake habitats are being protected.
- Continue to monitor for the health of stream and lake ecosystems.

4.3 BIODIVERSITY

Objective 2-1:

- Continue to accomplish stand exams on 10 percent of the forest every year and continue preparing environmental documents addressing management practices on as many of these acres as possible. Emphasize longleaf and shortleaf restoration where possible. The forest silviculturist should continue to field-check samples of implemented project decisions.
- Strive to increase the number of acres restored to longleaf pine. Continue to monitor sites for additional treatment needs. Thinning prescriptions within RCW habitat management areas should emphasize the needed longleaf stand composition. Post implementation field checks should be done on thinnings to ensure sufficient longleaf emphasis and evaluate species composition changes, update the FSveg database with these changes.

- Continue restoration treatments on shortleaf/hardwood sites where there is high priority for regeneration such as stands damaged by diseases, insects or storms as well and stands showing signs of decline.
- Mixed hardwood-loblolly forest types exceed long-term desired future conditions by 308,207 acres. Prescribe regeneration cuts on off-site stands where there is a high priority for regeneration, such as stands damaged by diseases, insects or storms and stands showing signs of decline.
- Continue to track old growth allocations at the project and landscape scale.
- Continue to monitor management practices being implemented within streamside and riparian area protection zones for compliance with the forest plan through timber sale contract administration and field checks.
- Continue to consider selective thinning and hardwood planting treatments within riparian areas to encourage hardwood component in appropriate management and sub management areas.

Objective 2-2:

- Continue to adhere to the forest plan guidance.
- Continue avian surveys on the forest.
- Resume botanical MIS surveys and provide effective, meaningful and appropriate habitat and population trend data.
- Revisit aquatic MIS data and validate habitat and population trends.

Objective 2-3:

- Continue increased emphasis on RCW management across the Forest. Identify and prioritize thinning of foraging habitat, improvement and expansion of RCW clusters and mid-story reduction projects.
- Continue monitoring all known RCW populations. Prescribe burn the RCW nesting and foraging habitat as much as feasible. Engage in RCW translocations to assist populations, if feasible. Continue to work closely with the USFWS.
- Continue to work with the USFWS to prioritize future projects and identify habitat needs. Identify all LPM beds on the Forest, and develop means of stream improvement projects and continue monitoring the number of mussels on a recurring basis.
- Continue to monitor LPM streams that are prone to drought and investigate streams that are experiencing depredation. Control beaver activity and enforce regulations prohibiting off-road vehicles from damaging LPM habitat.
- Continue implementation of best management practices and streamside habitat protection zones in LPM habitat. Rehabilitate areas that are contributing to LPM habitat damage. Encourage collaboration from other agencies, partners, private landowners and volunteers to help protect the LPM. Provide assistance to the FWS and interested parties with monitoring and research efforts.

Objective 2-4:

- Continue the current prescribed burning program. Increase the ratio of growing season burns to dormant season burns, since growing season burns are critical for successful gains in restoration efforts.
- Evaluate whether a forest plan amendment is needed to increase annual prescribed fire acres.
- Increase efforts to remove encroaching woody plants in the Winn District prairies and in pitcher plant bogs throughout the forest, as these natural communities provide habitat for many of our TESC species.
- Adhere to the land management practices described in the forest plan which calls for relatively older timber stands.

Objective 2-5:

- Document the streamside habitat protection zones and mitigation actions needed to manage in and near these areas. Delineate these areas in the prescription stand maps and in GIS.
- Use the national BMP protocol for monitoring.
- Continue to monitor prescribed burning and timber management activities for implementation of forest plan standards and guidelines.

Objective 2-6:

- Establish size and creel limits on the Forest if needed to ensure recruitment and sustainability of the resource. Continue to monitor and stock when needed.
- Continue to monitor water quality and BMP implementation and effectiveness to insure that stream and lake habitats are being protected.
- Continue to monitor for the health of stream and lake ecosystems.
- Continue to monitor the health of lake fisheries.
- Continue to monitor for nonnatives and generalist-omnivore natives. Stock catfish fingerlings when available and necessary.
- Continue management practices to maintain and enhance lake habitat.

Objective 6-1:

- Increase the scope and scale of longleaf pine restoration.
- Continue to complete field exams and prescriptions to meet Forest plan goals.
- Identify the number of acres of native forest communities which would be improved in each vegetation analysis/project. More emphasis over the last few years has been placed on commercial thinnings for forest health and RCW habitat improvement. This has indirectly resulted in less emphasis on the restoration of the native forest communities.

- Ensure treatment of NNIP is integrated into each vegetation project. Evaluate and monitor the effectiveness of the treatments.

Objective 6-2:

- Continue to monitor the weather and take advantage of every burning opportunity.
- Strive to maximize the implementation of growing season burns on longleaf pine plant community landscapes.
- Strive to maximize burn opportunities in the fall.
- The Forest will have two regional fuels helicopters to increase the production and reduce the cost of call when helicopters are needed.
- The acres of prescribed fire needed to move towards habitat desired conditions needs to be assessed during plan revision.

4.4 OUTDOOR RECREATION OPPORTUNITIES

Objective 2-7:

- Continue to implement vegetation treatments that would move toward achieving forest plan goals for expanding habitats for game and fish species.
- Continue working with LDWF in collecting and monitoring sample harvest data.
- Continue collaborating with LDWF in planning and implementing projects that improve and expand suitable wild turkey habitat.

Objective 2-8:

- Adhere to the Kisatchie NF Revised Land and Resource Management Plan guidance.

Objective 4-1:

- Continue to review proposed projects for SIO compliance.
- Work with districts to implement new scenery management system (SMS) guidelines.
- Encourage better participation at interdisciplinary team meetings.
- Ensure that Scenery management is included in the Pace It project evaluation process.

Objective 4-2:

- Continue to monitor for changes annually as the MVUM is monitored and updated.

Objective 4-3:

- Continue the annual update of INFRA data. Continue management of the recreation program using the IWEB INFRA system and the recreation realignment process.

Implement the “Pace It” process for all recreation and trails projects to ensure design compliance, feasibility and good customer service.

- Continue to improve customer service through the customer service representative. The recreation program manager will assist with customer service requests and also assist with the INFRA database and inventory needs. Review the NVUM results and use that information to assist in meeting visitor needs.
- Prepare to start the next round of NVUM surveys Oct 1st.
- In FY 2015, reconstruct or construct 19 miles of local and collector roads. Of this total, review all 19 miles and 100 percent of the road length to check for this compliance: Observed to be serviceable by the intended user and require no significant increase in the level or frequency of maintenance.

4.5 HUMAN INFLUENCES

Objective 1-6:

- Continue to manage and monitor the lands program to the level that funding will allow.
- Pursue tripartite exchanges to acquire lands.

4.6 TIMBER

Objective 3-1:

- Continue to monitor opportunities and impacts for providing economic products to local communities.

Objective 3-6:

- Continue emphasis on new communities and capacity building projects that result in increased local job opportunities and local incomes.

4.7 ROADLESS AREAS/WILDERNESS/WILD AND SCENIC RIVERS

Objective 5-6:

- Continue to update and add information to the new Wild and Scenic River IWEB database.
- Continue with the planned maintenance tasks with Trails Unlimited.
- Work with district personnel to determine needs and work towards solutions for SIA management.

Objective 5-7:

- Continue to promote the area and educate users.
- Maintain minimum standards.
- Move towards implementing the strategy developed by the Forest and implement more standards (above the minimum).
- Prepare for the next phase of strategy called the Wilderness Stewardship Performance for continued future standards.
- Continue to have a representative from the Kisatchie Ranger District as a member of the SWAG.

4.8 FORAGE

- Evaluate management needs and the decline in use of these resources.

Objective 3-4:

- Given the continued non-use of the majority of KNF allotments, carefully scrutinize future expenditures for cost-effectiveness.

4.9 OTHER PRODUCTS

Objective 3-3:

- Continue to improve working relationship with BLM and eastern states in responding to "Expressions of Interest" in a timely manner. Work to streamline responses to BLM Expressions of Interest and other leasing questions by upgrading the minerals database on the Forest. The Forest will review mineral acres for oil and gas leasing when an Expression of Interest (EOI) is received.
- Continue offering biomass as an optional product in timber sales to determine a value. Low demand for forest botanical products continued. The majority of permit requests were for personal plant collection which is handled with a FS-2400-8 Forest Products Free Use Permit. There were no known negative impacts on forest health or resources noted.

Objective 3-5:

- Continue offering biomass as an optional product in timber sales to determine a value.

Objective 3-6:

- Continue emphasis on new communities and capacity building projects that result in increased local job opportunities and local incomes.

4.10 HERITAGE RESOURCES

Objective 5-1:

- Continue current planned direction for pre-decisional inventories and consultations.
- Continue working with interested tribes to establish required government-to-government relations and partnerships.
- Make amendments to the Programmatic Agreement as needed.

Objective 5-2:

- Current strategies for site and buffer zone delineation appear effective and should be continued.

Objective 5-3:

- Current strategies for site and buffer zone delineation appear effective and should be continued.
- Continue to request additional funds needed to conduct cultural site evaluations for all sites in backlogged status.

Objective 5-4:

- Continue to offer Passport in Time (PIT) projects as possible given funding constraints, and remain as a primary partner with the LA SHPO in Louisiana Archaeology Month. Work with partners to interpret the Fullerton site.
- Continue to strengthen the relationship between recreation and heritage resources to provide interpretive opportunities between the two resources, such as the continued efforts on the Old Louisiana State University (LSU) Site trail and interpretive area.

Objective 5-5:

- Continue to provide funding for high-profile and effective interpretive programs such as Passport In Time, Audubon Zoo Earthfest, Audubon Nature Center Demonstration, Tensas Wildlife Refuge Fire Demonstration and Outdoor Education Classroom with Louisiana School for the Deaf.
- Increase environmental education projects, printed materials and video productions.
- Increase presentations to civic groups; increase participation with non-profit organizations such as Boy Scouts and Girl Scouts; travel to destinations outside Forest boundary to reach various user groups and work with nontraditional audiences.

4.11 ORGANIZATIONAL EFFECTIVENSS

Objective 7-1:

- Consolidate and evaluate various forest mailing lists and seek input from interested parties on preferred method of receiving information and the type of media.
- Begin using the Mailing List Manager application for public scoping and collaboration efforts during project level planning and environmental analysis.

Objective 7-2:

- Evaluate monitoring and evaluation questions for incorporation of climate change, socioeconomic and focal species direction per the 2012 Planning Rule.
- Evaluate all MIS Reports and determine if updates are needed. Clarify acres of forest wide habitat for each MIS species.
- Revisit ability to move towards longleaf pine and shortleaf pine restoration efforts in project level planning.
- Continue reviewing timber outputs and prescribed fire accomplishments to document forest plan compliance. Movement toward forest plan desired future conditions is dependent on the use of fire.
- Evaluate consistency for including old growth analysis as part of site-specific project analyses.

Objective 8-1:

- Continue partnerships.

Objective 8-2:

- Evaluate management impacts on soil productivity and the resulting longleaf pine ecosystem.
- Evaluate effectiveness of the Kisatchie NF standards and guidelines in reducing non-point source pollution.
- Reduce soil loss due to prescribed burning on erosive soils, particularly sensitive soils that are vulnerable to management activities.
- Support the Biomax research project to increase alternative energy sources on the Winn Ranger District.
- Work with the Southern Research Station and the regional office to evaluate monitoring questions that address climate change and the focal species requirements of the 2012 Planning Rule.

Objective 9-1:

- Continue coordination with tribal, federal, and state agencies as needed for project level proposals.
- Continue participation in the candidate conservation agreement for the LPS with private, local, state and federal partners.

- Continue participation in Special use authorizations with the Department of Defense, Fort Polk and the Joint Readiness Training Center, U.S. Air Force Reserve at Barksdale Air Force Base, and the State of Louisiana Army National Guard.

Objective 9-2:

- Continue to accommodate interested partners who wish to form partnerships, cooperative agreements, memorandums of agreements and memorandums of understanding consistent with Forest Plan goals and objectives.

SECTION 5.0 STATUS OF FY2013 MONITORING AND EVALUATION REPORT RECOMMENDATIONS

5.1 IMPLEMENTED RECOMMENDED ACTIONS IN 2014

All the objectives listed below were implemented in FY 2014.

Objective 1-3:

- Used the national BMP protocol to evaluate how Louisiana Smoke Management Guidelines are being followed.
- Continued to coordinate with LDEQ Air Quality Department for monitoring.
- Continued to monitor burn plan compliance.

Objective 1-4:

- The Forest continued to operate at the current efficiency level for fire preparedness funding.
- Managed for productive and healthy forest ecosystems by utilizing prescribed fire to prevent and minimize resource losses to wildland fires.

Objective 1-5:

- Continued to monitor for possible SPB attacks through aerial observations.
- Field checked for increased mortality from Annosus root disease on thinned loblolly stands on high hazard sites.

5.2 WATERSHED CONDITIONS

Objective 1-1:

- Continued to use the national BMP protocol for monitoring (USDA 2012)
- Continued monitoring prescribed fire management and timber management activities for implementation of forest plan standards and guidelines.
- Continued to restore and revegetate disturbed areas.
- Continued to coordinate with and assist the Southern Research Station with the Long Term Soil Productivity Study (USDA FS 2013).

Objective 1-2:

- Continued to monitor prescribed burning and timber management activities for implementation of Standards and Guidelines.

- Continued to use the national BMP protocol for monitoring (USDA 2012).
- Continued to monitor nine streams for dissolved oxygen, pH, temperature, turbidity, and conductivity via a portable water quality probe. Continued monitoring for coliform bacteria at the Forest's swim beaches.

Objective 2-6:

- Continued to monitor and stock fish when needed.
- Continued to monitor and assess the effectiveness of management strategies on the Forest concerning aquatic resources.
- Continued to monitor and identify any future restoration projects.
- Continued to monitor the health of lake fisheries.
- Continued to monitor for nonnatives and generalist-omnivore natives. Stock catfish fingerlings when available and necessary.
- Continued management practices to maintain and enhance lake habitat.
- Corney and Valentine lakes were drawn down to manage aquatic weeds and to allow decomposition of the "muck" on the benthos layer, or lake floor.
- Stocked grass carp at Fullerton Lake for long-term aquatic weed control.

5.3 BIODIVERSITY

Objective 2-1:

- Continued to accomplish stand exams on 10 percent of the forest every year and continue preparing environmental documents addressing management practices on as many of these acres as possible. Emphasize longleaf and shortleaf restoration. The forest silviculturist should continue to field-check samples of implemented project decisions.
- Encouraged restoration of longleaf pine. Continued to monitor sites for additional treatment needs.
- Thinning prescriptions within RCW habitat management areas emphasized the needed longleaf stand composition. Post implementation field checks should be done on thinnings to ensure sufficient longleaf emphasis and evaluate species composition changes. Changes were documented and updated in the FSveg database.
- Continued restoration treatments on shortleaf/hardwood sites where there is high priority for regeneration, such as stands damaged by disease, insects or storms.
- Continued to track old growth allocations.
- Continued to monitor management practices being implemented within streamside and riparian area protection zones for compliance with the forest plan through timber sale contract administration and field checks.

- Continued to consider selective thinning and hardwood planting treatments within riparian areas to encourage the hardwood component in management areas.

Objective 2-2:

- Continued to adhere to forest plan guidance.
- Continued avian surveys on the forest.
- Did not resume botanical MIS.
- Revisited aquatic MIS data and validated habitat and population trends.
- Clarified forest-wide habitat acres by species.

Objective 2-3:

- Continued increased emphasis on RCW management across the Forest. Identified and prioritized thinning of foraging habitat, improvement and expansion of RCW clusters, and mid-story reduction projects.
- Continued monitoring all known RCW populations. Prescribed burned the RCW nesting and foraging habitat. Engaged in RCW translocations and continued to work closely with the USFWS.
- Continued to work with the USFWS to prioritize future projects and identify habitat needs. Identified all LPM beds on the Forest, develop means of stream improvement projects and continue monitoring the number of mussels on a recurring basis.
- Continued to monitor LPM streams that are prone to drought and investigate streams that are experiencing depredation. Controled beaver activity and enforce regulations prohibiting off-road vehicles from damaging LPM habitat.
- Continued implementation of best management practices and streamside habitat protection zones in LPM habitat. Rehabilitate areas that are contributing to LPM habitat damage. Encouraged collaboration from other agencies, partners, private landowners and volunteers to help protect the LPM. Provided assistance to the FWS and interested parties with monitoring and research efforts.

Objective 2-4:

- Continued the current prescribed burning program. Increase the ratio of growing season burns to dormant season burns, since growing season burns are critical for successful gains in restoration efforts.
- Evaluated whether a forest plan amendment is needed to increase annual prescribed fire acres.
- Increased efforts to remove encroaching woody plants in the Winn District prairies and in pitcher plant bogs throughout the forest, as these natural communities provide habitat for many of our TESC species.

- Adhered to the land management practices described in the forest plan which calls for relatively older timber stands.

Objective 2-5:

- Documented the streamside habitat protection zones and mitigation actions needed to manage in and near these areas. Delineated these areas in the prescription stand maps and in GIS.
- Continued using the national BMP protocol for monitoring.
- Continued to monitor prescribed burning and timber management activities for implementation of forest plan standards and guidelines.

Objective 2-6:

- Continued to monitor the weather and take advantage of every burning opportunity. Strive to maximize the implementation of growing season burns on longleaf pine plant community landscapes.
- Continued to maximize the prescribe burn opportunities in the fall. Continue to have two regional fuels helicopters to increase the production and reduce the cost of call when helicopters are needed.
- Continued the current prescribed burning program.

5.4 OUTDOOR RECREATION OPPORTUNITIES

Objective 2-7:

- Continued providing habitat for game and fish populations and continue to implement the ecosystem management practices utilized in 2013.
- Continued working with LDWF in collecting and monitoring harvest data.
- Continued collaborating with LDWF in planning and implementing projects that improve and expand suitable wild turkey habitat.

Objective 2-8:

- Adhered to forest plan guidance.

Objective 4-1:

- Continued to review proposed projects for SIO compliance. Work with districts to implement SMS guidelines. Encourage participation at interdisciplinary team meetings.

Objective 4-2:

- Continued to monitor for changes as the travel management rule continues to be implemented.

Objective 4-3:

- Continued the annual update of INFRA data. Continue management of the recreation program using the IWEB INFRA system and the recreation realignment process. Implement the "Excellence by Design" process for all recreation and trails projects to ensure design compliance, feasibility and good customer service. Continue to improve customer service through the customer service representative. Reviewed the NVUM results and used that information to assist in meeting visitor needs.

- Prepared to start prework for the next Infrastructure.

Objective 3-7:

- Reconstructed/constructed 9 miles of local and collector roads. Reviewed all 9 miles and 100 percent of the road length to check for this compliance: Observed to be serviceable by the intended user and required no significant increase in the level or frequency of maintenance.

5.5 HUMAN INFLUENCES

Objective 1-6:

- Continued to manage and monitor the lands program to the level that funding will allow.

- Increased maintenance of landlines to facilitate the prevention and location of encroachments.

Objective 3-1:

- Continued to monitor opportunities and impacts for providing economic products to local communities.

5.6 ROADLESS AREAS/WILDERNESS/WILD AND SCENIC RIVERS

Objective 5-6:

- Continued to update and add information to the new Wild and Scenic River IWEB database.
- Continue planned maintenance tasks with Trails Unlimited.
- Worked with district personnel to determine needs and work towards solutions for SIA management.
- Continued implementing the wilderness education kits at Forest districts and the supervisor's office.
- Continued to promote the area and educate users.
- Maintained minimum standards.

- Moved towards implementing the strategy developed by the Forest and implement more standards (above the minimum).
- Prepared for the next phase of strategy being developed for future standards.

5.7 TIMBER

Objective 5-7:

- Increased scope and scale of longleaf pine restoration.
- Assured that treatment of non-native invasive species is interwoven into each restoration project. Evaluated integration on an annual basis.

5.8 FORAGE

Objective 3-4:

- Given the continued non-use of the majority of KNF allotments, carefully scrutinize future expenditures for cost-effectiveness in the range program.

5.9 OTHER PRODUCTS

Objective 3-3:

- Continued to improve working relationship with BLM and eastern states in responding to "Expressions of Interest" in a timely manner. Worked to streamline responses to BLM Expressions of Interest and other leasing questions by upgrading the minerals database on the Forest. The Forest reviewed mineral acres for oil and gas leasing when an Expression of Interest (EOI) is received.

5.10 HERITAGE RESOURCES

Objective 5-1:

- Continued the current course of pre-decisional inventories and consultations. Continue working with interested tribes to establish required government-to-government relations and partnerships. Make amendments to the PA as needed.
- Continued strategies for site and buffer zone delineation which appeared effective and should be continued.
- Continued to request additional funds needed to conduct cultural site evaluations for all sites in backlogged status.
- Continued to offer PIT projects given funding constraints. Worked with partners to interpret the Fullerton site.

- Continued to strengthen the relationship between recreation and heritage resources to provide interpretive opportunities between the two resources, such as the continued efforts on the Old Louisiana State University Site trail and interpretive area.
- Continued to offer PIT projects, classroom and civic organization presentations, and partner with the LA SHPO in Louisiana Archeology Month.

Objective 5-5:

- Continued to provide funding for high-profile and effective interpretive programs such as Passport In Time, Audubon Zoo Earthfest, Audubon Nature Center Demonstration, Tensas Wildlife Refuge Fire Demonstration and Outdoor Education Classroom with Louisiana School for the Deaf.
- Continued to expand types of audiences reached with educational presentations, such as schools from the larger cities. Continue to increase efforts with the Louisiana State University Agricultural Center and 4H groups.
- Provided increased funding for environmental education projects, printed materials and video productions. Increased presentations to civic groups and non-profit organizations such as Boy Scouts and Girl Scouts. Traveled to destinations outside Forest boundary to reach various user groups and work with nontraditional audiences. Commitments to the New Orleans Earthfest and the Shreveport State Fair should be renewed.

5.11 ORGANIZATION EFFECTIVENESS

Objective 7-2:

- Evaluated monitoring and evaluation questions for incorporation of climate change and focal species direction per 2012 Planning Rule.
- Evaluated all MIS Reports and determine if updates are needed. Clarify acres of forest-wide habitat for each MIS species.
- Revisited ability to move towards longleaf pine desired future condition.
- Continued reviewing timber outputs (suitable and unsuitable categories) and prescribed fire accomplishments to document forest plan compliance. Movement toward restoration and forest plan desired future conditions is dependent on the use of fire. The scope and scale of prescribed burning that is needed to move towards restored landscape conditions will be addressed during forest plan revision.
- Evaluated consistency for including old growth analysis (as appropriate) as part of site-specific project analyses.

Objective 8-1:

- Evaluated effectiveness of the Kisatchie NF standards and guidelines in reducing non-point source pollution.
- Reduced soil loss due to prescribed burning on erosive soils, particularly the Kisatchie severely eroded soil type.

- Supported the Biomax research project to increase alternative energy sources for the Winn Ranger District.
- Worked with the Southern Research Station and region 8 to evaluate monitoring questions that address climate change and the focal species requirements of the 2012 Planning Rule.
- Continued participation with cooperators and partners such as LDWF, National Wild Turkey Federation (NWTF), Louisiana Wildlife Federation (LWF) and in the Non-point Source Interagency Committee with LDEQ, NRCS, LDWF, NWTF, Louisiana Department of Forestry and other agencies under the Forest's Memorandum of Agreement (MOA) with the State of Louisiana on Non-Point Source Pollution Control.

Objectives 9-1 and 9-2:

- Continued participation with cooperators and partners such as LDWF, NWTF, LWF and in the Non-point Source Interagency Committee with LDEQ, NRCS, LDWF, NWTF, Louisiana Department of Forestry and other agencies under the Forest's MOA with the State of Louisiana on Non-Point Source Pollution Control.
- LPM surveys were conducted on the Evangeline Unit. The FS assisted the Natchitoches National Fish Hatchery and FWS Ecological Field Office with ongoing life history studies.
- Smoke management activities associated with prescribe burning were monitored.
- LDEQ air quality staff was contacted concerning NAAQS.
- Coordination is ongoing with the Southern Research Station with the Long Term Soil Productivity Study.
- Monitoring was performed for both prescribed burning and timber management activities.
- All streams, swim beaches, lakes and streams were monitored and Stuart Lake was closed as needed to respond to a water quality issue.
- Fish were stocked in lakes and habitat improvements were made.
- Continued the MOA with the State of Louisiana on Non-Point Source Pollution Control.
- Scenery Integrity Objective c (SIO) classes were considered in project design and will continue to be incorporated in projects that may affect SIOs.
- The monitoring recommendation to continue to strengthen the relationship between recreation and heritage resources to provide interpretive opportunities between the two resources, such as the continued efforts on the Old LSU Site trail and interpretive area has been implemented and continued.

5.12 RECOMMENED 2014 ACTIONS REQUIRING ADDITIONAL ATTENTION

- Establish size and creel limits on the Forest if needed to ensure recruitment and sustainability of the resource. Botanical MIS surveys were not resumed. Revisit aquatic MIS data and validate habitat and population trends.
- Post previous annual monitoring and evaluation reports that are not currently on the Forest’s website.

- Consolidate and evaluate various forest mailing lists and seek input from interested parties on preferred method of receiving information (and what type).
- Evaluate management impacts on soil productivity.
- Revisit ability to move towards longleaf pine desired future condition. The Forest has approximately 126,000 acres in the longleaf pine plant community, compared to the forest plan's target of 263,000 acres. In 2012, approximately 490 acres of longleaf pine (that had been cleared for final harvest) was restored through planting. Approximately 64 acres of shortleaf pine was planted.
- For purposes of documenting movement towards native forest community desired conditions, identify how many acres of native forest community will be improved in each vegetation environmental analysis/project.
- Assure that treatment of non-native invasive plants is interwoven into each restoration/vegetation project.
- Evaluate consistency for including old growth analysis (as appropriate) as part of site-specific project analyses.

SECTION 6.0 LIST OF ACRONYMS

Acronym	Word or Phrase
APHIS	Animal and Plant Health Inspection Service
ASQ	Allowable Sale Quantity
BLM	Bureau of Land Management
BMP	Best Management Practice(s)
CCA	Candidate Conservation Agreement
CCF	100 Cubic Feet
CER	Comprehensive Evaluation Report
CWN	Call When Needed
FY	Fiscal Year
GIS	Geospatial Information System
FPA	Fire Planning Analysis
HMAs	Habitat Management Areas
INFRA	Forest Service database used to manage information on resources including buildings, trails, roads, wilderness areas and water systems
IPS	Southern Pine Engraver Beetle
IWEB	USDA grants and agreements database
Kisatchie NF	Kisatchie National Forest
KNF LRMP	Kisatchie National Forest Revised Land and Resource Management Plan
LDEQ	Louisiana Department of Environmental Quality
LDWF	Louisiana Department of Wildlife and Fisheries
LPM	Louisiana Pearlshell Mussel
LTA	Land Type Association
LSU	Louisiana State University
LWF	Louisiana Wildlife Federation
MA	Management Area
MIS	Management Indicator Species
MMCF	Million cubic feet
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NBCI	National Bobwhite Conservation Initiative
NEPA	National Environmental Policy Act
NFMAS	National Fire Management Analysis System
NHPA	National Historic Preservation Act
NNFH	Natchitoches National Fish Hatchery
NNIP	Non-Native Invasive Plant

Acronym	Word or Phrase
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NVUM	National Visitor Use Monitoring
NWMP	National Wildlife Management Preserve
NWTF	National Wild Turkey Foundation
ORVs	Off-Road Vehicles
PA	Programmatic Agreement
PIT	Passport In Time
PPH	Poults Per Hen
RCW	Red-cockaded woodpecker
ROS	Recreation Opportunity Spectrum
SPB	Southern Pine Beetle
SHPZ	Streamside Habitat Protection Zone
SHPO	Louisiana State Historic Preservation Office
SIA	Special Interest Areas
SIO	Scenic Integrity Objective
SMS	Scenery Management System
SMA	Sub-Management Area
TESC	Threatened, Endangered, Sensitive and Candidate Species
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WMA	Wildlife Management Area

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2014 Monitoring and Evaluation Report Appendix

Appendix A

2012 Planning Rule

On April 9, 2012, the U.S. Department of Agriculture adopted final planning regulations for the National Forest System at 36 CFR part 219 (77 FR 21161). The 2012 Planning Rule was effective on May 9, 2012. These regulations, known collectively as the 2012 Planning Rule, provide broad programmatic direction in developing and implementing land management plans. The rule explicitly directs the Chief of the Forest Service to establish planning procedures in the Forest Service Directives System (36 CFR 219.2(b)(5)(i)). Responsible Officials implementing the 2012 Planning Rule shall follow the regulations at 36 CFR part 219 and the revised planning directives.

The purpose of forest plan monitoring is to provide information about the effects of plan implementation which "enable the responsible official to determine if a change in plan components or other plan content that guide management of resources on the plan area may be needed" (§ 219.12(a)(1)). The plan monitoring program consists of a set of monitoring questions and associated indicators to evaluate whether and management activities are maintaining or achieving progress toward future desired conditions. The rule states that the responsible official shall "modify the plan monitoring program within 4 years of the effective date of this part, or as soon as practicable, to meet the requirements of this section" (36 CFR 219.12(c)(1)).

The purpose of forest plan monitoring is to provide information about the effects of plan implementation that "enable the responsible official to determine if a change in plan components or other plan content that guide management of resources on the plan area may be needed" (§219.12(a)(1)). The plan monitoring program consists of a set of monitoring questions and associated indicators to evaluate whether plan components and management activities are maintaining or achieving progress toward desired conditions and objectives for the plan area.

The purpose of this process is to evaluate the 1999 Kisatchie National Forest monitoring plan and it's compatibility with the 2012 Planning Rule requirements for monitoring plans. The Kisatchie National Forest plan needs to be in compliance with the monitoring plan requirements, as stated in 36 CFR 219.12, by May 9, 2016.

The Forest Service Handbook 1909.12 Chapter 30 Section 32.1 Developing the Plan Monitoring Program states the following:

The Responsible Official has discretion to set the scope, scale, and priorities for plan monitoring within the financial and technical capabilities of the administrative unit, but shall include one or more monitoring question(s) and associated indicator(s) for the eight items set out in the Planning Rule at 36CFR 219.12(a)(5).

(5) Each plan monitoring program must contain one or more monitoring questions and associated indicators addressing each of the following:

i. The status of select watershed conditions.

ii. The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.

iii. The status of focal species to assess the ecological conditions required under §219.9.

iv. The status of select set of the ecological conditions required under §219.9 to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern.

v. The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.

vi. Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.

vii. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.

viii. The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)). (36 CFR 219.12(a))

The number of monitoring questions and indicators is not fixed; however, all items in 36 CFR 219.12(a)(5)(i) through (viii) must be covered.

Appendix B

Forest Plan Amendments

Amendment Number	Effective Date	Level of Significance	Amendment Summary
1	09/2002	Non-significant	Clarified direction for the preparation of site-specific biological evaluations including inventory requirements for proposed, threatened, and endangered species (PETS)
2	05/2003	Non-significant	Increased the land allocation for U.S. Air Force uses under permit
3	08/2004	Non-significant	Revised the percent of the Forest open to off-road vehicles and specified percent of Forest that is open to motorized vehicles on designated trails only. Prohibited off road vehicle use in the Red Dirt Wildlife Management Preserve
4	08/2004	Non-significant	Revised the percent of the Forest open to off-road vehicles. Prohibited off road vehicle use on the Calcasieu District
5	10/2005	Non-significant	Added new direction and modified direction in response to the 2003 Recovery Plan for the red-cockaded woodpecker issued by USDI USFWS
6	04/2006	Non-significant	Modified trail users to exclude horses and include motorcycles
7	11/2007	Non-significant	Designated a motorized transportation system (and season of use) of over 2,000 miles of roads and 264 miles of trails. Prohibited motorized use off designated routes forest-wide. Designated dispersed camping and big game retrieval corridors
8		Non-significant	Revised the percent of the Forest open to off-road vehicles. Limited off road vehicle use on the Calcasieu District to designated routes and areas
9	02/2012	Non-significant	Added a new standard prohibiting the use of dogs to hunt deer on the Forest and retained guideline FW-707