



United States  
Department of  
Agriculture



2014  
National Forests  
in Mississippi

## Record of Decision

*Final Environmental Impact Statement for  
the Land and Resource Management Plan*



Forest  
Service

Region 8

National Forests  
in Mississippi

R8-MB 144 D

August 2014

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# **Record of Decision**

## **Final Environmental Impact Statement for the Revised Land and Resource Management Plan**

### **National Forests in Mississippi**

Lead Agency: USDA Forest Service

Responsible Official: Liz Agpaoa  
USDA Forest Service, Southern Region  
1720 Peachtree Road, NW  
Atlanta, Georgia 30309

For information, contact: Forest Supervisor  
National Forests in Mississippi  
200 South Lamar St., Suite 500-N  
Jackson, MS 39201  
601-965-1600



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# Introduction

This Record of Decision (ROD) documents my decision and rationale for approving the Revised Land and Resource Management Plan (Revised Forest Plan) for the National Forests in Mississippi (NFs in MS), which will provide management direction for approximately 1.2 million acres of land in Mississippi. The previous Land and Resource Management Plan for the NFs in MS was approved in 1985.

This Revised Forest Plan is part of the long-range resource planning framework established by the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), the Government Performance and Results Act of 1993 (GPRA), and the 2007 Revision of the USDA Forest Service Strategic Plan. The National Forest Management Act of 1976 (NFMA) requires all units of the National Forest System to develop plans that direct resource management activities on the forests.

The Revised Forest Plan establishes a framework for future decision-making by outlining a broad, general program for achieving desired conditions and objectives for the NFs in MS over the next 10 to 15 years. Once approved by this decision, the Revised Forest Plan is carried out at the “project level” by implementing specific projects at specific locations (such as relocating a trail, prescribed burning an area, or harvesting timber), over time, ensuring each project is consistent with the guiding direction in the Revised Forest Plan.

The Revised Forest Plan does not direct specific management activities to occur at specific locations, nor does it dictate day-to-day administrative activities needed to carry on the Forest Service’s internal operations (i.e., personnel matters, law enforcement, fleet equipment, or internal organization changes).

The Final Environmental Impact Statement (FEIS) that accompanies the Revised Forest Plan provides analytical data that discloses the environmental consequences of the alternative management strategies considered and discusses how these alternatives respond to issues and concerns.

The Final Environmental Impact Statement and Revised Forest Plan were developed according to the NFMA, its implementing regulations at 36 Code of Federal Regulations (CFR) 219, the National Environmental Policy Act of 1969 (NEPA), and the Council on Environmental Quality (CEQ) regulations at 40 CFR 1500-1508. The current Planning Rule, published on April 9, 2012, at 36 CFR 219.17(b)(3) allows for plan revisions initiated before May 9, 2012 to be revised in conformance with the provisions of the prior planning regulations, including its transition provisions. According to 36 CFR 219.35 and Appendix B to 219.35 of those prior regulations (see 36 CFR 219, published at 36 CFR parts 200 to 299, revised as of July 1, 2010), the responsible official may elect to use the provisions of the 1982 planning regulations to prepare plan amendments and revisions. For this revision of the NFs in MS Land and Resource Management Plan, I have elected to follow the provisions of the 1982 planning rule as published on September 30, 1982 and subsequently amended.)

This decision applies only to National Forest System lands of the National Forests in Mississippi. It does not apply to any other Federal, State, or private lands, although the

effects of these lands and the effects of my decision on lands surrounding the national forest are also considered.

## **My Decision**

I have selected Alternative C from the FEIS as the Revised Land and Resource Management Plan for the National Forests in Mississippi. My decision is described below and is supplemented by maps and information in the FEIS and the project record.

### **Components of the Decision**

The FEIS and Revised Forest Plan were developed according to the National Forest Management Act of 1976 (NFMA) and its implementing regulations, 36 CFR 219 (1982 planning regulations). Components of forest plan decisions are outlined in the National Forest Management Act (1976). The decisions I am making in this Record of Decision for the Revised Forest Plan are:

#### **Establishment of forestwide multiple-use goals, desired conditions and objectives (36 CFR 219.11(b))**

This management direction is intended to provide for ecological sustainability, multiple use and sustained yield of the products and services people use from the Forest, including outdoor recreation, timber, water, wildlife, fish, and wilderness. The Revised Forest Plan establishes the desired conditions for the NFs in MS in Chapter 2 and the objectives needed to work toward those desired conditions are established in Chapter 3.

#### **Establishment of forestwide management requirements (standards and guidelines) (36 CFR 219.11(c) & 219.27)**

Forestwide standards and guidelines are found in Chapter 4 of the Revised Forest Plan. Standards are limitations on actions or thresholds not to be exceeded. Guidelines are requirements that should be followed unless a different management action demonstrably achieves the same intent as the guideline. To simplify the Revised Forest Plan, direction that would duplicate laws, policies, Forest Service Manual, and Forest Service Handbook direction or other regional directives is not included.

#### **Establishment of management areas and the management prescriptions applied to those areas (36 CFR 219.11(c)).**

Management areas reflect biological, physical, and social differences; and management prescriptions reflect different desired conditions. Management areas and prescriptions are described in Chapter 4 of the Revised Forest Plan. The Revised Forest Plan identifies two different types of management areas. There are ecosystem-based management areas that are based upon the primary theme of restoring and sustaining the different native ecological communities within the NFs in MS. The other types of management areas are geographically-based. The geographic-based management areas are:

- Red-cockaded Woodpecker Habitat Management Areas (HMAs)
- Administrative Areas
- Developed Recreation Areas



- Botanical Areas
- Scenic Areas
- Wild and Scenic Rivers
- Wilderness Areas
- Archaeological Site
- Recreational Areas
- Experimental Forests
- Research Natural Areas

The ecologically-based management areas do not have precise boundaries and may contain less-common ecosystems or other designated geographic areas. Where there is an overlap in management areas, the most restrictive plan direction would apply.

**Determination of land that is suitable for timber production (36 CFR 219.14) and establishment of the allowable sale quantity (ASQ) of timber (36 CFR 219.16).**

The determination of lands suitable for timber production is found in Chapter 4 of the Revised Forest Plan. Approximately 954,265 acres or 81 percent of the NFs in MS is identified as suitable for timber production.

The Revised Forest Plan establishes an ASQ of 178.7 MMCF (million cubic feet) for the next 10 years (see also Appendix B of the Revised Forest Plan).

**Recommendations for non-wilderness allocations and recommendations for wilderness status (36 CFR 219.17).**

As is documented in Appendix C to the FEIS, no areas were found in the NFs in MS that met the criteria for inclusion in the inventory of potential wilderness areas.

Consequently, no areas were evaluated and there are no areas to recommend for additions to the National Wilderness System within the NFs in MS.

**Recommendations for wild and scenic rivers and other special use designations.**

There is one Congressionally-designated Wild and Scenic River located on the NFs in MS, the Black Creek Scenic River. No rivers outside of Black Creek have been identified as eligible for further study. The Revised Forest Plan establishes the Black Creek Corridor Scenic Management Area, which is a corridor along Black Creek that extends approximately 41 miles. This Corridor includes both the Congressionally-designated Scenic River portion, as well as non-designated portions. All portions of this Corridor will have the same management emphasis.

Based upon the recommendations of Alternative C in the FEIS, this Record of Decision establishes the following areas as Research Natural Areas (RNAs):

- Nutmeg Hickory RNA (Bienville District, 307 acres)
- Granny Creek Bay RNA (De Soto District, 127 acres)

The following areas will also be designated as Botanical Areas on the NFs in MS:

- Laurel Oak Botanical Area (Chickasawhay District, 277 acres)
- Railroad Creek Titi Botanical Area (De Soto District, 451 acres)
- Little Florida Botanical Area (De Soto District, 121 acres)
- Pitcher Plant Botanical Area (De Soto District, 251 acres)
- Buttercup Flat Botanical Area (De Soto District, 164 acres)
- Loblolly Bay Botanical Area (De Soto District, 93 acres)
- Ragland Hills Botanical Area (De Soto District, 237 acres)
- Wyatt Hills Botanical Area (De Soto District, 100 acres)
- Cypress Bayou Botanical Area (Delta District, 262 acres)
- LA-2 Botanical Area (Holly Springs District, 12 acres)
- LA-6 Botanical Area (Holly Springs District, 158 acres)
- Sandy Creek Botanical Area (Homochitto District, 300 acres)
- Shagbark Hickory Botanical Area (Tombigbee District, 109 acres)
- Choctaw #4 Botanical Area (Tombigbee District, 45 acres)
- Prairie Mount Botanical Area (Tombigbee District, 370 acres)
- Bogue Cully Botanical Area (Tombigbee District, 500 acres)

These RNAs and Botanical Areas are described in Chapter 4 of the Revised Forest Plan and identified on the Revised Forest Plan Maps (see Revised Plan, Appendix F).

#### **Designation of lands suitable for grazing (36 CFR 219.20).**

The grazing program on the NFs in MS has declined to the point that an active range allotment program is no longer feasible. The only active range allotments occur on the De Soto NF and these existing allotments will continue until their permits expire. No new allotments will be authorized unless a significant increase in demand is realized and the Revised Forest Plan amended to allow for such authorization.

#### **Establishment of monitoring and evaluation requirements (36 CFR 219.11 (d)).**

Monitoring and evaluation requirements are found in Chapter 5 of the Revised Forest Plan. Specific monitoring questions are identified and directly linked to the Revised Forest Plan desired conditions, objectives, standards, and specific regulatory requirements. These requirements ensure that the Revised Forest Plan is adaptive and that sustainability is being achieved or adjustments will be made.

#### **Determination of lands administratively available for oil and gas leasing (36 CFR 228.102 (d))**

In August 2010, the National Forests in Mississippi renewed its decision for Lands Available for Oil and Gas Leasing (USDA Forest Service 2010) and the results of that decision are incorporated into the Revised Forest Plan. The 2010 decision did, however, defer making a leasing decision on the Sandy Creek RARE II Further Study Area. As a result of this FEIS, it has been determined that the 2,558 acres within the Sandy Creek RARE II Further Study Area will be available for oil and gas leasing. The approximately 300 acre Sandy Creek Botanical Area within the Further Study Area will be available for

leasing with a no-surface occupancy stipulation, and the remaining lands within the Further Study Area (which is also identified as an inventoried roadless area) will be available for leasing while still meeting the road construction/reconstruction limitations contained in the 2001 Roadless Area Conservation Rule.

## **Highlights of the Selected Alternative**

### **Overarching Themes of the Final Plan**

The NFs in MS worked with stakeholders through an iterative process to identify important issues and desired conditions. While many different desired conditions were identified by stakeholders, widespread support among the public, Forest Service staff, other agencies, and interested parties for native ecosystem restoration, species diversity and habitat improvement for threatened and endangered (T&E) species made this the foundation for the overall direction taken in the final Plan. Public comments received on the proposed revised plan generally affirmed the collaborative consensus on the overarching themes that are the focus of the final Revised Plan.

- 1. Restore native ecological systems** –Restoration of native ecological systems is a major desired condition for stakeholders and serves as the primary framework for the final Revised Plan. Twenty-four native ecological systems were identified on the NFs in MS, including 9 unique communities or uncommon local features. Desired conditions include conversion of loblolly and slash pine stands to longleaf pine and shortleaf pine-oak ecosystems, restoration of floodplain forests, and continued maintenance and enhancement of native hardwood ecosystems and unique communities such as native prairies and bogs. Over the next 10 years, proposed objectives include the conversion of approximately 23,000 acres to appropriate ecosystems and structural, age, and species improvements on approximately 150,000 acres.
- 2. Protect diversity of species** – One of the basic tenets of the final Revised Plan is that managing for a diversity of healthy native ecosystems is integral to providing appropriate ecological conditions for a diversity of plant and animal species. In developing the Plan, a list of all potential species that could occur on the NFs in MS was developed and analyzed through a series of collaborative meetings with technical experts and taxonomic specialists familiar with the plant and animal species across Mississippi. Species that could possibly occur on the NFs in MS were further evaluated through a series of iterative screenings which identified federal T&E species, sensitive species, and locally rare species. As the direction of the final Plan was developed, the specific needs and habitats of species were addressed, primarily through the desired conditions and objectives for managing ecosystem diversity, and also through integrated program objectives for soils, water, fire regimes, and other resource areas. T&E species protection and habitat enhancement are emphasized in the final Plan, particularly the needs of the ten T&E species identified as potentially occurring on the NFs in MS (Dusky Gopher Frog, Mississippi Sandhill Crane, Red-cockaded Woodpecker, Gulf Sturgeon, Pallid Sturgeon, Louisiana Black Bear, Gopher Tortoise, Louisiana Quillwort, Pondberry, and Indiana Bat).

3. **Manage for healthy forests** – The final Revised Plan emphasizes a shift in the primary focus from commodity production to native ecosystem restoration and forest health. Vegetation management practices support a variety of integrated desired resource management conditions, including the restoration of historically occurring ecosystems, the creation of a diversity of habitats, the improvement of resilience to natural disturbances and a changing climate, the reduction of impacts from insects and diseases, the control of non-native invasive species, and the production of quality timber commodities.
4. **Conserve old growth communities** – A diversity of tree ages, from regeneration to old growth, is emphasized in the final Revised Plan to support a sustainable mix of ecological conditions across the landscape. The overall strategy is to have a distribution of old growth stands in all ecological systems and all districts, with approximately 10% of each forest ecosystem in old growth conditions.
5. **Restore historic fire conditions** – On the NFs in MS, periodic prescribed burning is the most important tool for recreating historic fire regimes and reducing the risk of catastrophic fires while restoring conditions that favor desirable native ecosystems and habitats for T&E species. The final Revised Plan objectives for prescribed fire total 220,000 acres on average each year. The frequency of return intervals for prescribed burns and the percent of burns conducted during the growing season will vary depending on the ecosystem and habitat needs.
6. **Manage for healthy watersheds** – Productive soils, clean water, and clean air were important desired conditions identified by stakeholders and are essential to sustaining the ecological function and productive capacity of NFs in MS lands. Final Revised Plan standards and guidelines focus on using best management practices for sustaining and improving watershed areas within the national forest. Control and management approaches are identified to work cooperatively with other agencies and landowners to improve statewide watershed health. The final Plan emphasizes desired outcomes that relate to improving or sustaining a diversity of aquatic species and water-related ecosystems.
7. **Maintain sustainable infrastructure and access** – The desired conditions and objectives of the final Revised Plan focus on providing for the safety and maintenance of the existing roads, trails, and facilities that make up the NFs in MS infrastructure. This includes objectives for backlogged repairs and upgrades, improvements for environmental protection, disposal of facilities that are no longer needed, and rehabilitation of user-created trails and roads. The desired condition for the trails system is to sustain a forest-wide network of trails for a variety of uses across the state. The objective is to maintain existing designated trails to standard. Partnerships with other agencies, communities, and special interest groups were identified as key to offering additional seasonal access to wildlife management areas and expanding or adding new trails.
8. **Maintain sustainable recreation** – The final Revised Plan emphasizes sustaining outdoor recreation opportunities on the NFs in MS under anticipated funding levels. The desired conditions and objectives focus on maintaining and improving

existing dispersed recreation opportunities and developed recreation sites, with the addition of new facilities and amenities dependent on expanding local and state-wide partnerships. Instead of sustaining a full mix of recreation opportunities on every unit, recreation use would be considered from a forest-wide perspective with an emphasis on sustainable programs and infrastructure that minimize impacts to the environment. Although the revision process included a thorough review of lands for potential wilderness, no areas were identified as potential wilderness areas and there are no wilderness recommendations.

9. **Provide stable economic benefits** – The national forest activities that generate the majority of the revenues that feed back into the local economy in Mississippi come from timber, minerals, and recreation. As a result of restoring native ecosystems to appropriate sites and maintaining healthy and resilient forests (the final Plan has an objective to harvest 91 MMBF [million board feet] annually); there should be a steady flow of economic benefits back to local communities.
10. **Adapt to changing conditions** – An increase in extreme weather events is the climate change factor most likely to affect the NFs in MS in the next 10-15 years. In response to potential effects from climate change, the final Revised Plan includes desired conditions that will reduce vulnerability by maintaining and restoring resilient native ecosystems, enhance adaptation by reducing impacts from serious disturbances and taking advantage of disruptions, use preventative measures to reduce risk of forest pests, and mitigate greenhouse emissions by reducing carbon loss from hurricanes.

## **Background**

The National Forests in Mississippi (NFs in MS) encompass approximately 1.2 million acres located in six national forests dispersed across the state of Mississippi. The lands that make up the NFs in MS are not only representative of the ecological diversity of the different portions of the state but also serve as a cross-section of Mississippi's natural and cultural heritage.

Statewide, pine-dominated stands, many of which resulted from extensive reforestation efforts in the 1930s, are the most common forest communities. Large tracts of loblolly pine represent the most prevalent forest type, but there are also less-extensive communities of longleaf pine along the Gulf coastal plain and shortleaf pine on more Northern sites. Oaks and hickories dominate the dry slopes and ridges in the northern half of the state, and along the Mississippi River Delta, approximately 60,000 acres of forested wetlands constitute the only bottomland hardwood national forest in the National Forest System (NFS). Other unique ecological systems within the NFs in MS include stands of bald cypress imbedded along oxbow lakes and sloughs, pitcher plant bogs, open grassy prairies, herbaceous seeps and flats, and xeric sandhills.

The six proclaimed national forests that make up the NFs in MS are administratively managed as seven ranger districts. Although each forest has unique characteristics and conditions, they all contribute to forest-wide desired conditions and are managed under one Land and Resource Management Plan. The seven ranger districts or national forests that make up the NFs in MS are:

- Bienville National Forest
- Chickasawhay Ranger District of the De Soto National Forest
- De Soto Ranger District of the De Soto National Forest
- Delta National Forest
- Holly Springs National Forest
- Homochitto National Forest
- Tombigbee National Forest

## **Purpose and Need for Action**

The proposed action is to produce a revised forest plan which will guide resource management activities on the National Forests in Mississippi for the next 10-15 years. Forest plans are required by the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA). The NFMA regulations require forest plans to be revised on a 10-15 year cycle or sooner when significant changes in conditions or demands occur in the forest plan coverage area. The current forest plan for the National Forests in Mississippi went into effect in 1985 and has been amended 18 times to date. Periodic reviews have identified numerous areas where conditions have changed since 1985. In some cases, new scientific understanding evolved, monitoring direction needed to shift to more important resource concerns, or current direction was not having the intended outcome. For other issues, there were new public priorities, and new desired conditions were needed. In recent years, restoration and maintenance of biodiversity, old-growth forest habitats, and ecosystem management have gained public and scientific interest and have emerged as forest management issues. The amount of time since the implementation of the 1985 forest plan, new scientific understanding, and shifting public interests have all contributed to the need to revise the forest plan.

The National Forests in Mississippi began revision of the 1985 forest plan in 2000 under the existing requirements of the NFMA. In July 2005, the Forests transitioned the forest plan revision process to new 2005 planning rule requirements (36 CFR Part 219). After the 2005 rule was remanded and replaced with a new planning rule in March 2008, the Forests converted to the requirements under the 2008 rule. The 2008 planning regulations were also successfully challenged in court, and the Forests subsequently elected to use the September 1982 version of the NFMA planning regulations (36 CFR 219) to complete the forest plan revision.

## **Public and Other Agency Involvement**

The original Land and Resource Management Plan for the NFs in MS was signed in 1985. The revision process began in 2000 and was interrupted several times by changing planning rules and recovery from Hurricane Katrina. Since the revision process has covered a long time period, the NFs in MS has received input from thousands of Mississippi residents, visitors, conservation groups, recreation groups, industry representatives, community leaders, other agencies, and interested parties about the future they want to see for the six national forests within the state. Forest Service resource specialists and forest managers worked with universities, researchers, and other agencies

to take into account the latest scientific findings, consider evolving management practices, and include new emerging issues such as urban expansion and climate change. Over 40 public meetings and workshops were held at various libraries, community centers, district offices, and local auditoriums across the state. Multiple communication tools were used, including facilitated public workshops, audiovisual presentations, newsletters, flyers, posters, mailings, and the NFs in MS website. Over the course of various delays and transitions, a special effort was made to ensure that earlier public feedback was included and considered as the revision process continued.

The Revised Plan establishes a strong commitment to an all-lands approach to conserve high priority forest ecosystems and landscapes in Mississippi. The Plan promotes achievement of many state-wide goals and objectives identified in Mississippi's Assessment of Forest Resources and Forest Resource Strategy (July 2010) including: restore and manage longleaf pine within its historical range; suppress and eradicate non-native and invasive plants and pests; restore fire-adapted lands and reduce risk of wildfire impacts; protect and enhance water quality; protect, conserve, and enhance fish and wildlife resources; and manage forests to mitigate and adapt to global climate change.

The Draft Revised Forest Plan and associated Draft Environmental Impact Statement were released for notice and comment in February 2013. A Notice of Availability (NOA) was published in the *Federal Register* on February 8, 2013. The forest hosted seven public workshops (meetings across the State) during the ninety-day comment period. The Content Analysis and Response Application (CARA) was utilized to record and document comments received. A total of nineteen unique comment letters were received on the Draft Plan and associated Draft Environmental Impact Statement resulting in a total of 311 public comments. Overall comments were generally supportive of the proposed plan direction with several commenters expressing a desire for increased management objectives to achieve desired conditions at a faster pace.

These comments and our responses are documented in Appendix A of the Final EIS. Appendix A further documents the public involvement process, and complete details are in the process record.

## Alternatives

Five alternatives were analyzed in detail in the EIS.

### **Alternative A – Custodial Management**

This alternative allows natural succession to dominate the landscape with minimal intervention by active management practices. Resource management activities would focus on the protection of natural resources and meeting legally mandated requirements. Management for the conservation and recovery of threatened and endangered species and their critical habitat would dominate as the primary management focus or emphasis. Ecosystem management strategies would favor natural succession and implementation of low intensity forest health management practices. Best management practices and regulations would be followed to protect water quality and riparian areas, but watershed restoration efforts would be limited. Recreation opportunities would emphasize low

impact recreation opportunities (favor nonmotorized activities). Roads not needed for legal requirements and other resource needs would be closed or obliterated.

### **Alternative B – No-Action (Current Management)**

This alternative would continue implementation of the original 1985 Forest Plan, as amended and consistent with expected budget and staffing levels. This alternative serves as a baseline to measure opportunity cost trade-offs associated with proposed changes to management direction. Production of both commercial wood products and creation of a variety of wildlife habitats would be emphasized. Developed and dispersed recreation opportunities would be in a variety of settings—both natural and managed. Water quality and riparian areas would be protected through implementation of best management practices and streamside management zones, with minor investment in small watershed restoration projects. Access would be developed, maintained, and used as needed to meet the goals of balanced age classes, wildlife habitat, and production of timber products.

### **Alternative C – Proposed Action (Selected Alternative)**

The proposed action alternative is biologically based and driven, with emphasis on restoring natural resources and natural processes and creating and maintaining diverse wildlife habitats. Restoration of native ecological communities would be based on the ecological potential and capability of the land. Restoration activities would provide a mix of wildlife habitat conditions favorable for game and non-game species. Restoration activities would produce both large and small openings. Water quality and riparian areas would be protected through implementation of best management practices and streamside management zone, with minor investments in priority watershed restoration projects. A variety of recreation settings and opportunities would occur in areas where they would be compatible with restoration activities and in areas where restoration is not occurring. Access would be reduced, as needed, to restore and protect aquatic systems, soils, and plant and animal communities. Funding levels would be comparable to Alternative B having budget allocations similar to recent levels and held constant.

### **Alternative D – Accelerated Restoration**

This alternative, like the proposed action alternative, is biologically based and driven, with emphasis on restoring natural resources and natural processes, and creating and maintaining diverse wildlife habitats. Restoration of native ecological communities would be based on the ecological potential and capability of the land, and the pace of restoration would be accelerated by additional regeneration activities. Restoration of native ecosystems would provide a mix of wildlife habitat conditions favorable for game and non-game species, and both large and small openings would be produced. This alternative directs additional resources toward meeting these accelerated native ecosystem restoration efforts. However, management activities contributing toward improved forest health, while greater than current management projections, would be less than that projected for Alternative C. Water quality and riparian areas would be protected through implementation of best management practices and streamside management zone, with minor investments in priority watershed restoration projects. A variety of recreation opportunities and settings would occur in areas where they would be compatible with restoration activities and in areas where restoration is not occurring. Access would be



reduced, as needed, to restore and protect aquatic systems, soils, and plant and animal communities.

### **Alternative E – Enhanced Forest Health**

This alternative is biologically based and driven, with emphasis on restoring natural resources and natural processes and creating and maintaining diverse wildlife habitats. Restoration of native ecological communities would be based on the ecological potential and capability of the land, and the pace of restoration would be further accelerated by increasing both regeneration and thinning activities. The vegetation management program of this alternative would be around 75% of the estimated long-term sustained yield capacity for the National Forests in Mississippi land base. Management activities would provide a mix of wildlife habitat conditions favorable for game and non-game species and produce both large and small openings. This alternative directs additional resources toward the increased emphasis on improving healthy forest conditions while also achieving an increase in native ecosystem restoration objectives across the forest. While these restoration efforts would be greater than those in Alternative C, they would be less than Alternative D's projected restoration objectives. Water quality and riparian areas would be protected through implementation of best management practices and streamside management zone, with additional investment in priority watershed restoration projects. A variety of recreation opportunities and settings would occur in areas where they would be compatible with restoration activities and in areas where restoration is not occurring. Access would be reduced, as needed, to restore and protect aquatic systems, soils, and plant and animal communities.

## **Alternatives Considered but Eliminated From Detailed Study**

A broad range of alternatives was originally considered during the analysis process. Management scenarios for potential alternatives were analyzed for a variety of issues including effectiveness in meeting desired conditions, policy requirements, and implementation feasibility. Early in the revision process, comments were made to consider a strong commodity-driven focus that would emphasize production of high levels of goods and services for local markets. Under this scenario, timber management would provide a greater sustained yield of wood products with an emphasis on high-quality sawtimber, as well as providing public demand for game species for hunting. In a similar manner, comments were also made to expand developed and dispersed recreation opportunities to a broader variety of settings across the state. Based on analysis, these options were considered but eliminated from further study. Although the Forest is capable of producing a sustained yield at a much higher level of timber production, and expanded recreation opportunities are possible within the land base, maximization of these resources would come at the expense of other resources. Anticipated agency funding levels would not support higher levels of timber production or expanded recreation facilities with their associated increase in operational and maintenance costs. Also, the multiple-use mandate would not be met in emphasizing singular resource programs. While these alternatives were not carried forward, portions of these scenarios were incorporated into alternatives C, D, and E.

Another similar alternative considered but eliminated addressed comments about the low levels of timber harvest on the Forest and recommendations to at least harvest an amount equal to the annual growth. This alternative was not considered in detail because it would not be physically or biologically sustainable over the long term. At this level of timber harvest, there would be soil and water concerns for erosion damage, increased sedimentation, and reduction of water quality. There would also be biological concerns for reduction of species diversity and loss of habitat for threatened and endangered species. In addition, this alternative was not considered feasible because it would not meet the long-term sustained yield requirements of the NFMA. Another related alternative that considered production near long-term sustained yields was not carried forward because of similar unacceptable levels of environmental impact and lack of funding and staffing for these more intensive management levels.

Other alternatives considered looked at expanded emphasis on red-cockaded woodpecker (RCW) habitat. Comments were made during the plan revision process to consider emphasizing thinning existing forest settings for RCW and forgoing regeneration and restoration of longleaf pine ecosystems to accommodate immediate habitat improvement. While this alternative would provide appropriate habitat in the short term, it was not considered in detail because it would not sustain optimal habitat over the long term. A mix of thinnings and regeneration is needed to sustain optimal habitat for RCW populations.

Another RCW alternative considered the potential to supplement habitat for RCW populations located on the Noxubee National Wildlife Refuge adjoining the Tombigbee National Forest (NF). Work is underway on the Noxubee Refuge to increase RCW populations, and this scenario would shift NFs in MS resources to the Tombigbee to support this expansion. This option was closely examined and modeled and found to be a possible opportunity in the future but not a viable option at this time. As population objectives are reached on the Noxubee in coming years, expanded habitat on the Tombigbee may be appropriate, but until RCW populations reach higher levels, this alternative would pull limited NFs in MS resources from other areas and impede the recovery efforts for RCW populations on existing habitat management areas (HMAs) on the NFs in MS.

## **Rationale for Decision**

My decision to select Alternative C for implementation is based on a careful and reasoned comparison of the environmental consequences of and responses to issues and concerns for each alternative. I selected Alternative C because it represents the best mix and balance of management strategies that: 1) are responsive to the issues, concerns, and opportunities expressed by the public and other agencies; 2) establish ambitious but achievable objectives for ecosystem management and restoration and the management of the forest's multiple uses; and 3) makes appropriate recommendations for Special Area designations.

Five alternatives were evaluated in detail in the final environmental impact statement. The emphases of these alternatives are described above in an earlier section of this document. Alternatives A, B, D and E were not selected for the following reasons:

I did not select Alternative A because community diversity and species viability would likely decline.

- It does not provide for restoration of native ecosystems.
- A long-term reduction in the level of habitat management activities may negatively affect threatened and endangered species populations.
- An across the board reduction in ecosystem services and recreation opportunities does not address nor satisfy public expectations or desires.

Alternative B was not selected because continuation of current management direction would not result in an improvement in community diversity and species viability.

- No new special management areas would be established.
- Continuation of current management direction does not incorporate best science practices for threatened and endangered species management nor old growth conservation.
- Red-cockaded woodpecker habitat management areas would remain set to their tentative boundaries.
- A comprehensive old growth conservation management strategy would not be implemented.

Alternative D and E were not selected primarily because additional funding necessary to support and sustain the projected level of management practices is currently not available nor anticipated in the foreseeable future. Total annual federal discretionary spending levels are not expected to increase in the near future. As a result our budget authority is expected to remain flat or decline during this plan cycle. These two alternatives do however, provide information on the opportunity costs and trade-offs involved if additional funding and program level increases were to become available during the plan period.

Alternative C, as reflected in the Revised Forest Plan, is responsive to the Forest Service's National Strategic Plan (2007), and it meets our legal obligations to the people and environment that surrounds them. The optimal implementation rate for the Revised Forest Plan could require higher funding levels in some areas than those currently allocated; however, I believe the management direction changes envisioned in the Revised Plan can be implemented under current budget levels. The attainment of desired conditions and outputs in some areas, however, may be delayed or reduced if future budgets decrease.

In summary, I believe Alternative C sets the framework for future decisions better than the other alternatives because it:

- Includes reasonable strategies to implement endangered species recovery plans,
- Restores native ecosystems at a reasonable pace
- Integrates application of vegetation management practices and prescribed fire to achieve restoration of fire dependent ecosystems on a landscape scale
- Assures habitats are adequate to support positive trends for community diversity and species viability
- Develops strategies for sustaining rare communities and species by providing special interest areas as a refuge
- Includes reasonable strategies for treating non-native invasive species and addressing forest health concerns
- Provides appropriate management and protection for cultural resources
- Reduces risks to life, property and other resources from wildland fire
- Emphasizes the collaboration with local communities and governments, other federal and state agencies to create a shared vision about the cultural and environmental attributes that make this area special
- Responsibly addresses the need for resilient and adaptable ecosystems in the face of climate change
- Adequately responds to comments on the Draft EIS and Proposed Plan.

My conclusion is based on a review of the record that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk.

## **Response to the Issues**

Issues, concerns, and opportunities are described in Chapter 1 of the Final Environmental Impact Statement under the heading Purpose and Need. The proposed action was developed to address the issues, concerns, and opportunities identified during the collaborative planning process. Alternatives to the proposed action were developed when unresolved conflicts remained concerning alternative uses of limited resources, or to address issues with significant environmental impacts. The following issues and concerns were identified from the early stages of the planning process that followed publication of the Notice of Intent to revise the plan: (1) Native Ecosystem Restoration; (2) Biodiversity and Species Viability; (3) Forest Health; (4) Vegetation Management for Timber; (5) Fire Management; (6) Old Growth; (7) Watersheds and Water, Soils, Aquatic Resources, Riparian Environments; (8) Access Management; (9) Recreation; (10) Special Area Designations; (11) Land Use and Ownership; (12) Climate Change; (13) Minerals Management; and (14) Economic Benefits.

## **Native Ecosystem Restoration**

Ultimate desired conditions for the ecosystem-based management areas did not vary under the five alternatives, but the rate at which these conditions were achieved and the management actions and resources required were major distinguishing factors. In some locations on the Forests, the distribution of native ecosystems systems is close to what should occur based on landscape characteristics and soil classifications; however, in other settings, major regeneration activities and many decades will be needed to restore desirable native communities. In comparing the alternatives, restoration of native ecosystems will be slowest and restore the fewest acres over the life of the forest plan under alternative A – Custodial Management. Under the alternative A scenario, restoration changes would primarily result from natural succession, which would favor hardwood components over time. Alternatives B and C assume agency funding levels similar to current conditions but with more emphasis and integration of restoration actions under alternative C. Alternative D depicts a faster rate of progress toward desired conditions (more acres restored) by adding regeneration activities. Alternative E further increases restoration progress and forest health by treating more acres of dense forest that need thinning to be more resilient to damage from insects such as southern pine beetle and to survive severe storms. Alternatives D and E are projected to require additional funding opportunities and staffing above current budget levels but would make faster progress toward desired conditions.

## **Biodiversity and Species Viability**

Under Alternative A, community diversity and species viability would likely decline over time. This alternative would promote a tendency towards late succession with locally reduced species richness and minimal management practices to prevent species loss. Red-cockaded woodpecker resource management activities would do the minimum necessary to sustain populations and would be focused only in designated red-cockaded woodpecker habitat management areas. Population expansion potential for gopher tortoise would be reduced compared to other more intensive alternative management themes.

Under alternatives C, D, and E, forest and woodland ecosystems would be managed to restore or maintain native communities that would provide the desired composition, structure and function. Emphasis would be placed on maintaining forest and plant community types not abundant on private lands. Expanded opportunities for additional red-cockaded woodpecker population growth would be provided on suitable areas outside of designated habitat management areas. Expansion of red-cockaded woodpecker habitat management areas would extend across the entire district on the Bienville and Chickasawhay Ranger Districts. Conservation management areas would be developed on the De Soto Ranger District for sandhill crane. Expanded opportunities for conservation and recovery of gopher tortoise populations would be provided by promoting improved habitat conditions on additional suitable habitat areas due to higher levels of vegetation management and prescribed fire application.

## **Forest Health**

A shift in focus from commodity production to native ecosystem restoration and forest health was emphasized. Vegetation management practices support a variety of integrated resource strategies including converting loblolly and slash pine plantings to native ecosystems, creating a diversity of habitats, improving resilience to natural disturbances and a changing climate, reducing impacts of insects and diseases, controlling non-native invasive species, and producing quality timber commodities.

## **Vegetation Management for Timber**

Under the custodial management focus of Alternative A, there would be minimal use of active management practices, natural succession would result in a greater hardwood component, longleaf pine restoration efforts would be limited to habitat management areas on the Bienville, De Soto, and Homochitto National Forests, and occurrence of shortleaf and loblolly pines would be reduced. Average annual timber production would be reduced from current levels and would be a byproduct from red-cockaded woodpecker habitat maintenance and enhancement and salvage and sanitation harvests from wind or southern pine beetle occurrences.

Alternative B is the no-action alternative and would continue current direction and levels of vegetation management. The average annual timber production level in Alternative B lists production levels for recent years under amendments to the 1985 forest plan and reflects reduced output and available management resources from the original forest plan.

Alternatives C, D, and E focus on restoring a variety of native ecosystems and habitats and creating healthier, more sustainable forests. Longleaf pine would be restored within its natural range; hardwood, and pine and hardwood management types would be grown and maintained where ecologically feasible on all districts; hardwood, and pine and hardwood management types would be grown and maintained on appropriate sites, and there would be an emphasis on restoration of shortleaf based on ecological potential and land capability. Forest products are produced as a result of vegetation management practices although they do not drive the process. Alternative C would move toward desired conditions at a realistic pace under current agency funding levels. Alternative D restores more native ecosystem acres through regeneration activities, and Alternative E further improves forest health through thinning. Alternative E would result in achieving desired conditions in the shortest (biologically feasible) timeframe while also ensuring compliance with the multiple-use sustained yield act requirements of non-declining sustained yields. However, alternatives D and E would require additional funding and management resources above current levels.

## **Fire Management**

Alternative A would generate the lowest prescribed burn program and would be limited to threatened and endangered habitat management requirements and response to wildland fire occurrences. Alternatives C, D, and E would focus on burning historically maintained fire ecosystems to preserve natural diversity and would have annual prescribed fire levels slightly greater than under current management (Alternative B). Increased prescribed fire applications under C, D, and E would be necessary to support expanded ecosystem restoration goals and objectives.

## **Old Growth**

Diversity of tree ages, from regeneration to old growth, was emphasized to support a sustainable mix of ecological conditions across the landscape. A strategy to have a distribution of old-growth stands in all ecological systems and all districts, with approximately 10 percent of each forest ecosystem in old-growth conditions was incorporated into alternatives C, D and E.

## **Watersheds and Water, Soils, Aquatic Resources, Riparian Environments**

Productive soils, clean water, and clean air were important desired conditions identified by stakeholders and are essential to sustaining the ecological function and productive capacity of National Forest System lands. Use of best management practices for sustaining and improving watershed areas within national forest control while working cooperatively with other agencies and landowners to improve statewide watershed health were included in all alternatives. Desired outcomes that relate to improving or sustaining a diversity of aquatic species and water-related ecosystems were also emphasized.

## **Access Management**

The main priorities for managing the roads, trails, and facilities that make up the Forests infrastructure are safety and maintenance of existing systems. This includes addressing backlogged repairs and upgrades, improvements for environmental protection, disposal of facilities that are no longer needed, and rehabilitation of user-created trails and roads. For the remainder, there will be an emphasis on improving the maintenance of existing roads and trails, with a particular focus on improvements to important public safety and ecological features, such as bridges and stream culverts. The emphasis for the trails system is on sustaining a forestwide network of trails for a variety of uses across the state and bringing existing designated trails up to improved conditions. Partnerships with other agencies, communities, and special interest groups are identified as key to offering additional seasonal access to wildlife management areas and expanding or adding new trails.

## **Recreation**

Forest management strategies for recreation considered an appropriate mix of sustainable recreation opportunities that would balance increasing and changing demands with concerns for public health and safety and ecosystem protection. For the National Forests in Mississippi, anticipated budget and staffing levels required the focus to be on maintaining current infrastructure and recreation opportunities rather than expanding and adding new facilities. This approach did not vary significantly by alternative, but there were slight differences between Alternative A, which would emphasize low impact recreation opportunities and minimal management, and alternatives C, D, and E, which would include the addition of a Backcountry special emphasis area on the Tombigbee National Forest.

## **Special Area Designations**

Under alternatives A and B, current special areas would be retained but no additional designations would be planned. Alternatives C, D, and E would add sixteen new

botanical areas and establish two new research natural areas. Management actions under alternatives C, D, and E would also include expansion of current red-cockaded woodpecker habitat management areas. Under alternatives A and B, new mineral leases in the Sandy Creek RARE II Further Study Area/Inventoried Roadless Area (IRA) would not be authorized. Under alternatives C, D, and E the Sandy Creek RARE II Further Study Area/IRA would become available for new oil and gas leasing with a No Surface Occupancy stipulation on the 300-acre Sandy Creek Botanical Area and a stipulation that prohibits road construction or reconstruction for newly leased areas within the Sandy Creek inventoried roadless area.

### **Land Use and Ownership**

The population of Mississippi was approximately 2.5 million in the 1980s. Currently, the State population is over 2.9 million, with over 3 million residents projected by 2030. With an increasing population, development of private lands adjacent to the Forests has increased dramatically since 1985. This is particularly true for the De Soto National Forest close to the Gulf Coast and portions of the Holly Springs National Forest close to Memphis, Tennessee. The wildland-urban interface was not an issue in 1985 but is a growing factor in management decisions today. Also, land acquisition priorities in the 1985 forest plan were on consolidating ownership to meet the timber demands more efficiently and provide access for removal of market goods. Land acquisition priorities today still focus on consolidating ownership, but the intent is to reduce fragmentation of forest communities, provide protected habitat for wildlife, protect heritage sites, and preserve desirable ecological communities. Today's land ownership focus also includes lands that may not be contiguous but would preserve and enhance high-value habitats, rare species, or critical watersheds.

### **Climate Change**

An increase in extreme weather events is the climate change factor most likely to affect the Forests in the next 10-15 years. In response to potential effects from climate change, strategies in the alternatives include reducing vulnerability by maintaining and restoring resilient native ecosystems, enhancing adaptation by reducing impacts from serious disturbances and taking advantage of disruptions, using preventative measures to reduce opportunities for forest pests, and mitigating greenhouse emissions by reducing carbon loss from hurricanes.

### **Minerals Management**

In August 2010, the National Forests in Mississippi renewed its decision for Lands Available for Oil and Gas Leasing (National Forests in Mississippi - Lands Available for Oil and Gas Leasing Environmental Assessment, August 2010). The 2010 oil and gas leasing decision authorized all lands on the National Forests in Mississippi to be available for Federal oil and gas leasing through the Bureau of Land Management (BLM), except for congressionally designated wilderness areas (Black Creek and Leaf) and it deferred making a decision on the Sandy Creek RARE II Further Study Area. These lands, approximately 1.2 million acres, would be administratively available subject to 1) management direction in the National Forests in Mississippi Forest Plan, 2) oil and gas lease stipulations, 3) the wide range of laws and regulations that require environmental



protections for oil and gas exploration and development and 4) site-specific environmental analysis as detailed exploration proposals are made by lease holders. Additionally, all administratively available lands will be available for lease by the BLM, subject to the standard USDA stipulations, and the environmental requirements of the standard federal lease terms detailed in Appendix B of the National Forests in Mississippi Lands Available for Oil and Gas Leasing Environmental Assessment, August 2010.

A decision regarding oil and gas leasing availability on the Sandy Creek RARE II Further Study Area/IRA was evaluated and addressed in this Final EIS for the Revised Forest Plan. Alternatives A and B would not authorize new oil and gas leasing in the 2,558 acre Sandy Creek Further Study Area/IRA. However, alternatives C, D, and E would permit new oil and gas leasing in the Sandy Creek Further Study Area/IRA subject to the 2001 Roadless Area Conservation Rule restrictions. These restrictions include no new road construction or reconstruction permitted in the inventoried roadless area; therefore only existing system roads would be utilized as access for lease activities. (It should be noted that part of this area, approximately 140 acres, is currently under lease.)

### **Economic Benefits**

The national forest activities that generate the majority of the revenues that feed back into the local economy in Mississippi come from timber, minerals, and recreation. As a result of restoring native ecosystems to appropriate sites and maintaining healthy and resilient forests, there should be a steady flow of economic benefits back to local communities.

### **Management Concerns**

In addition to the planning issues and public comments, the following factors were considered in making my decision:

- Consistency with applicable laws, policies, manual, and handbook direction that govern the development of a Forest Plan and management of national forest lands.
- Promotion of rural economic development and a quality rural environment.
- The effects on the people who use and depend on forest resources.
- Consistency with plans and policies of local, State, and other national government agencies.
- Operational and budget needs to fully implement the Plan decision.

### **Net Public Benefits**

The 1982 National Forest Management Act (NFMA) implementing regulations (36 CFR 219.1) state that forest plans must "...provide for multiple-use and sustained yield of goods and services from the National Forest System in a way that maximizes long-term net public benefits in an environmentally sound manner." Net public benefits are defined as the overall long-term value to the Nation of all outputs and positive effects (benefits), less all associated inputs and negative effects (costs), whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than by a single measure or index. The maximization of net public benefits is consistent with the principles of multiple use and sustained yield (36 CFR 219.3).

Net public benefits have two components – priced and non-priced benefits and costs. Prices for outputs and uses were estimated in the FEIS for each alternative and displayed in Chapter 4 of the FEIS and in FEIS, Appendix B. The Present Net Value (PNV) was used to measure the economic efficiency of each alternative and Alternative C provides the highest PNV among the alternatives. Most of the benefit value is derived from recreational uses, primarily hunting and fishing. Timber is a negative contributor to present net value at the program levels of Alternative A and B, but becomes positive at the program levels of Alternatives C through E.

Alternative C has a higher calculated PNV than Alternatives D and E because the present value costs by program for range, minerals, recreation and wildlife were assumed to increase for Alternatives D and E because of the increased level of management activity occurring under these alternatives. However, there were no anticipated increases in present value benefits for those corresponding program areas. In conducting a sensitivity test, even if the budgets for range, minerals, recreation and wildlife were held constant with those estimated for Alternative C, the PNVs for Alternatives D and E would slightly increase, but they would still not be higher than Alternative C. This indicates that the other program costs associated with the increased level of management activities in Alternatives D and E also exceed the additional revenues that would be gained from those higher activity levels. With respect to the non-priced benefits and costs, Alternatives C, D, and E incorporate an integrated resource management approach that restores native ecosystems, restores habitats for threatened and endangered species, reduces the threat from wildland fire, and conserves special interest areas for future generation to enjoy.

I believe that Alternative C provides direction to manage the national forest to produce goods, services, and use opportunities in a way that maximizes net public benefits. I believe Alternative C, the Selected Alternative, achieves a balance between the economic benefits and environmental issues and concerns voiced by the public. I believe the Selected Alternative will increase public benefits by moving the NFs in MS towards improved forest health through its emphasis on restoring native ecosystems and through its special attention to unique plant and animal habitats. I believe the Selected Alternative will contribute to the local economies through outputs of forest products and outstanding recreation opportunities. I am also confident that the management direction in the Revised Forest Plan is within the physical and biological capability of the land and can be accomplished without reducing that capability.

## **Environmentally Preferable Alternative**

The Council on Environmental Quality has defined the “environmentally preferable” alternative as: “...the alternative that will promote the national environmental policy as expressed in NEPA’s section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.”

Alternative C, D and E incorporate management strategies that restore native ecosystems through implementation of integrated management activities to effectively accomplish natural resource management objectives while incorporating best science and best management practices. These three action alternatives adopt a common vision, collaboratively developed, that improves community diversity and species viability. All

three action alternatives incorporate fire management practices to promote and preserve natural diversity in fire-dependent ecosystems. They each promote conservation and recovery of threatened and endangered species. They also implement a common old-growth management strategy designed to achieve a balanced mix of small, and medium-sized old-growth forest community types.

Alternative C, D, and E all promote improved forest health conditions; with restoration of native ecosystems, improvement in community diversity and species diversity, and restoration of historic fire regimes in fire-dependent ecosystems. All three action alternatives protect, preserve, and enhance historic, cultural and natural resources. They all promote positive environmentally preferred attributes. However, Alternative E makes progress towards and achieves ecological and forest health desired conditions across the landscape at a more positive and sustained pace than the other action alternatives. Therefore, Alternative E with its emphasis on promoting and enhancing healthy forest conditions in an environmentally sound basis makes it the environmentally preferred alternative.

## **Science Consistency**

The ecological sustainability framework used to support forest plan revision for the National Forests in Mississippi is built on a foundation of ecological system diversity. By restoring and maintaining the key characteristics, conditions, and functionality of native ecological systems, the National Forests in Mississippi should be able to not only improve ecological system diversity but also provide for the needs of diverse plant and animal species on the forest.

Much of the information used in establishment of our ecological sustainability framework was derived from data compiled by NatureServe under a participating agreement with the Forest Service. Our partnership with NatureServe was sought as a means to ensure that the best available information on species status and habitat relationships was used. Under this agreement, NatureServe staff engaged numerous species experts and state heritage programs to develop a relational database that includes relevant information on species' status, habitat relationships, and threats to viability.

Experts knowledgeable about ecological conditions and species in Mississippi participated in identifying key characteristics and performance measures. Experts reviewed lists and definitions of ecological systems and suggested important ecological characteristics and performance measures. Final determinations of ecological sustainability components were based on consideration of expert input, subsequent additional information from a variety of sources, and needs of associated species.

This provided the basis for development of an ecological sustainability evaluation database and evaluation tool from which the overall framework for many of the forest plan components and the systems-based direction in the revised forest plan was derived. The ecological sustainability evaluation database and evaluation tool will also be an important source of data and guidance for sustaining native ecological systems and species when implementing the revised forest plan.

The National Forests in Mississippi provides habitat for ten federally listed threatened and endangered species. The plan revision process facilitated a comprehensive review of

the long-term resource management activities on National Forest System lands. The revision process updated and clarified desired resource conditions, resource management practices, levels of resource production and management, and the availability of suitable land for resource management, and monitoring and evaluation requirements for effective implementation.

As a result, threatened and endangered species habitat conditions and their respective conservation measures were reviewed and incorporated. The revised plan incorporates the most recent threatened and endangered species recovery plan conservation measures for species known to occur on National Forests in Mississippi administered lands. The revised plan establishes habitat management areas for red-cockaded woodpeckers and cooperative management units for the dusky gopher frog and the Mississippi sandhill crane. The establishment of cooperative management units creates a focus point for management needs to ensure the latest most relevant conservation measures are implemented and that the spatial extent of their respective range supports population expansion.

Creating appropriate fire regimes for native ecological communities is recognized as a necessary part of the desired conditions and objectives for ecosystem diversity. The revised plan fire management strategy reflects an increasing knowledge of the critical role of fire in restoring habitats for fire-dependent species such as red-cockaded woodpecker and gopher tortoise, and maintaining desirable stands of longleaf and shortleaf pines and rare communities such as prairies and pitcher plant bogs. Management of wildfires and prescribed burns can serve to restore and maintain native ecosystems while also protecting national forest and adjacent lands from the negative effects of fire. The revised plan fire management direction is consistent with and implements the policies and science-based strategies of the National Cohesive Wildland Fire Management Strategy and its companion National Action Plan developed and adopted by the National Fire Leadership Council.

The National Forests in Mississippi recognize climate change may affect the future biodiversity and function of forest ecosystems. In developing management strategies to deal with a changing climate, forests can play an important role in both mitigating and adapting to climate change. However, there are uncertainties about the direction of change, especially at the local level, on how natural ecosystems will respond to future natural and human-induced pressures.

The National Forests in Mississippi identified a key area of climate change most likely to be a concern to the Forest in the next 10 – 15 years and that was an increase in extreme weather events and other natural disasters. Recent studies following Hurricane Katrina indicate that longleaf is less damaged from storms than loblolly, appears to have less insect and pathogen problems, and has greater fire resistance. Restoration of longleaf pine on appropriate sites serve multiple useful strategies for achieving desired ecosystem and species diversity conditions, enhancing resilience to climate change, and mitigating carbon loss.

Based on native site conditions, longleaf pine would be expected to have higher resilience to a changing climate that is warmer, dryer, and likely to have higher fire hazards. Recent research indicates that longleaf pines appear to outgrow other pine species beyond

25 years, may capture more carbon below ground, and may have a higher wood specific gravity – all of which potentially increase carbon sequestration. Restoration of other native ecosystems such as shortleaf pines, oaks, bogs, savannas, and prairies would also move the forest toward desired conditions while enhancing resilience.

These and other scientific information were also used:

- To inform the collaborative planning group of the need to change various other management approaches such as the need to increase prescribed burning and to treat non-native invasive species. This in turn served to inform the development of plan components to address these needs.
- As source material for descriptions of the affected environment and environmental consequences evaluations in all relevant sections of the Environmental Impact Statement (EIS); and to inform the Terrestrial Species Viability Evaluation, the Aquatic Species Viability Evaluation, and the Biological Assessment.

One of the basic tenets of the revised Plan is that managing for a diversity of healthy native ecosystems is integral to providing appropriate ecological conditions for a diversity of plant and animal species. As was mentioned previously, there were a series of collaborative meetings with technical experts and taxonomic specialists familiar with the plant and animal species across Mississippi. These experts reviewed the definitions of ecological systems and suggested important ecological characteristics and performance measures, which lead to the development of the Plan's desired conditions. A list of all potential species that could occur on the NFs in MS and their habitat needs were also developed and analyzed.

Management direction for addressing the restoration of longleaf pine was coordinated with the Southern Research Station, and the Southern Research Station was also instrumental in the analysis of climate change effects to the NFs in MS, and in the development of responses to those impacts.

## **Findings Related to Other Laws and Authorities**

I have considered the statutes governing management of the National Forests in Mississippi, and I believe that this decision represents the best possible approach to both harmonizing and reconciling the current statutory duties of the USDA Forest Service. Following are summaries of how the Revised Forest Plan addresses the Clean Air Act, Clean Water Act, National Historic Preservation Act, and Endangered Species Act.

### **Clean Air Act**

As discussed in the FEIS, Chapter 3 and Chapter 4, Air Resources section, all lands managed by the National Forests in Mississippi are currently in attainment with National Ambient Air Quality Standards. According to the Clean Air Act of 1990 and the Organic Administration Act of 1897, the USDA Forest Service has the responsibility to protect the air, land, and water resources from the impacts of air pollutants produced within the national forest boundaries and to work with states to protect those same resources from degradation associated with the impacts of air pollution emitted outside of the national forest.

Prescribed burning is the activity most likely to contribute air emissions. Smoke emissions from prescribed fires are managed through best available smoke management practices. These practices are conducted in accordance with the Clean Air Act, the State Implementation Plan, and the Southern Smoke Management Guidebook. Since air issues are often regional in nature, the Forest Service also works cooperatively with State and Federal air management agencies and regional haze reduction organizations to improve air quality for the region.

### **Clean Water Act**

The Revised Forest Plan contains direction to ensure all projects meet or exceed State Best Management Practices prepared under guidance of the Clean Water Act. Direction for the protection of water resources is located in the Standards and Guidelines section of the Revised Forest Plan. Implementation of the Revised Forest Plan is expected to contribute to protecting or restoring the physical, chemical, and biological integrity of waters of the United States in accordance with the Clean Water Act.

### **National Historic Preservation Laws**

The Revised Forest Plan is a programmatic action and does not authorize any site-specific projects. The Plan does designate Special Areas which include areas that will be managed with an emphasis on historic and cultural preservation and protection. Projects undertaken in response to direction in the Forest Plan will fully comply with the Plan Standards and Guidelines as well as the laws and regulations that require consideration of cultural resources. The Forest Plan contains direction for cultural resource management, including direction to integrate cultural resource management with other resource management activities.

The Mississippi State Historic Preservation Office (SHPO) was consulted during the development of this plan. The Forest Plan tiers to the Programmatic Agreement among the USDA Forest Service, the Mississippi State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the process for compliance with Section 106 of the National Historic Preservation Act. It is my determination that the Revised Forest Plan complies with the National Historic Preservation Act, the Archaeological Resources Protection Act and other statutes that pertain to the protection of cultural resources.

### **Endangered Species Act Section 7: Consultation**

A Biological Assessment (BA) was prepared for the Revised Forest Plan and submitted to the USDI Fish and Wildlife Service Jackson Field Office requesting formal consultation under section 7 of the Endangered Species Act (ESA). Subsequently, the USDI Fish and Wildlife Service (USFWS) issued a programmatic Biological Opinion (BO) that outlines the consultation approach that will be followed during plan implementation. The Biological Opinion, issued on April 14, 2014, concurred with the findings of “*may affect, not likely to adversely affect*” for the Louisiana black bear, Mississippi sandhill crane, Red-cockaded woodpecker, Gulf sturgeon, Pallid sturgeon, Gopher tortoise, Louisiana quillwort and Pondberry.

With respect to the Indiana bat and Dusky gopher frog, the Biological Assessment determined that the Revised Plan “*may affect, likely to adversely affect*” the Indiana bat

and Dusky gopher frog. In the BO, the USFWS anticipates the incidental take of the Indiana bat and the Dusky gopher frog as a result of implementing the Revised Plan, and identifies reasonable and prudent measures necessary and appropriate to minimize the take of the Indiana bat and the Dusky gopher frog. The BO then concludes that this level of expected take is not likely to result in jeopardy to the Indiana bat or destroy or adversely modify its critical habitat. Similarly, the BO also concluded that the actions conducted under the Revised Plan will support the survival and recovery of the Dusky gopher frog and are not likely to result in jeopardy to the species or destruction or adversely modification of its critical habitat.

In order to be exempt from the prohibitions of Section 9 of the ESA, the Forest Service must comply with the terms and conditions of the incidental take statements in the Biological Opinion, which implement the reasonable and prudent measures. These terms and conditions are non-discretionary. A copy of the Biological Opinion's Incidental Take Statement (with its accompanying terms and conditions) is included in Appendix G of the Revised Forest Plan.

## **Compatibility with Goals of Other Public Agencies and Indian Tribes**

The Revised Forest Plan has been developed with public participation that involved coordination and comments from Federal, State, and local agencies including the USDI Bureau of Land Management; USDI Fish and Wildlife Service; Mississippi Department of Wildlife, Fisheries and Parks; the Mississippi Forestry Commission; and local community leaders. Contact with the Chickasaw Nation and the Choctaw Nation of Oklahoma clarified that their interests are largely addressed through project-level analysis as the plan is implemented in the years to come.

## **Environmental Justice**

Executive Order 12898 (59 Federal Register 7629, 1994) directs federal agencies to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects on minority populations and low-income populations in the local communities. I have determined, from the analysis disclosed in the FEIS, that the Revised Forest Plan is in compliance with Executive Order 12898 and that there are no disproportionate environmental or health effects to minority or low-income populations anticipated from implementing the selected alternative.

## **Effective Date and Plan Implementation**

The Revised Forest Plan will become effective 30 days from the date that the Environmental Protection Agency's Notice of Availability of the Final Environmental Impact Statement appears in the *Federal Register*.

Forest Plans are permissive in that they allow, but do not mandate, the occurrence of certain activities. The Revised Forest Plan will be implemented through a series of project-level decisions based on site-specific environmental analysis and public involvement. The Revised Forest Plan seeks to guide management activities and projects by establishing a clear desired condition for the National Forests in Mississippi and for each management area, rather than by establishing schedules for actions. This approach leaves more flexibility for managers to adapt program and project selection as changes take place in budgets, resource capabilities, and management priorities.

Outputs in the FEIS are projections of probable outcomes. They were used to approximate activities and practices, in order to estimate the likely environmental effects of following the direction provided by the Revised Forest Plan.

During implementation, specific projects and activities will be proposed and analyzed. These analyses will be documented in the appropriate NEPA documents, i.e., Environmental Assessments, Environmental Impact Statements, or Categorical Exclusions. Projects, practices, and activities will be designed to achieve the desired conditions, objectives, and applicable standards and guidelines as described in the Revised Forest Plan.

## **Transition to the Revised Forest Plan**

Revised Forest Plan direction will apply to all projects that have decisions made on or after the implementation date of this Record of Decision.

The National Forest Management Act (NFMA) requires that "permits, contracts, and other instruments for the use and occupancy" of National Forest System lands be "consistent" with the current Land and Resource Management Plan [16 U.S.C. 1604(i)]. In the context of a Revised Forest Plan, NFMA specifically qualifies this requirement in three ways: 1) these documents must be revised only "when necessary", 2) these documents must be revised "as soon as practicable", and 3) any revisions are "subject to valid existing rights."

There are many management actions that have decisions made before the effective date of this ROD. These "pre-existing actions" were considered part of the baseline in developing each alternative and the Revised Forest Plan. The projected effects of these actions are part of the cumulative effects analyses documented in the FEIS and Biological Assessment. Additional review concluded that the continued implementation of these previously decided actions would still be consistent with the desired conditions, objectives and management requirements of this Revised Forest Plan.

I have not identified any need to modify any agency actions involving permits, contracts, or other instruments for the use and occupancy of National Forest System lands due to conflicts with the Revised Forest Plan. These actions will be implemented according to



the terms of the applicable instrument. However, should the need arise, the Forest Supervisor has the discretion to modify these permits, contracts, or other instruments for the use and occupancy of National Forest System lands.

After approval of the Revised Plan, the Forest Supervisor shall ensure that future permits, contracts, and other instruments for the use and occupancy of the affected National Forest System lands will be consistent with the Revised Plan.

## **Monitoring and Evaluation**

Monitoring and evaluation is used to assess the degree to which on-the-ground management is maintaining or making progress toward the goals, desired conditions, and objectives in the plan. The monitoring program is described in Chapter 5, “Monitoring and Evaluation”, of the Revised Forest Plan. This monitoring program was developed with public participation and focuses on key plan components where management projects and activities are likely to cause a change over time.

Specific monitoring questions are identified and directly linked to Revised Forest Plan desired conditions, objectives, standards, and specific regulatory requirements. Only selected desired conditions, objectives, and standards are monitored. Relevancy to issues, compliance with legal and agency policy, scientific credibility, administrative feasibility, long- and short-term budget considerations, and impact on work force all influence monitoring priorities.

Monitoring information will be evaluated and used to update inventory data, improve current and future mitigation measures, and assess the need to change the Revised Forest Plan. Evaluation of monitoring results is directly linked to the decision maker’s ability to respond to changing conditions, emerging trends, public concerns, and new information and technology. No single monitoring item or parameter automatically triggers a change in Revised Forest Plan direction. An interdisciplinary approach is used to evaluate information and decide what changes are needed.

## **Plan Amendments**

The Revised Forest Plan is a dynamic instrument that can be changed with appropriate public involvement and environmental analysis. Through the life of the Revised Forest Plan, amendments may be needed to incorporate new information, new policy and direction, or changing values and resource conditions. Amendments will keep the Revised Forest Plan current, relevant, and responsive to agency and public concerns. Amendments are needed whenever any of the Revised Forest Plan decisions should be changed due to any of the above conditions. The Revised Forest Plan also can be amended for specific projects if during project design it is determined that the best method of meeting goals and objectives conflicts with existing plan direction. There will be opportunities for the public to be involved in any future changes to the Revised Forest Plan.

## Appeal Information

This decision is subject to administrative review. According to 36 CFR 219.17(b)(3), if the responsible official chooses to complete an ongoing planning process under the provisions of the prior planning regulation, the responsible official can choose to allow for either an administrative appeal or can follow the objection process identified in 36 CFR Subpart B. For this decision, I have decided to use the administrative appeal process. Under the prior planning regulations at Appendix A to 36 CFR 219.35 (see 36 CFR part 219, published at 36 CFR parts 200 to 299, revised as of July 1, 2010), when the option is made to proceed under the 1982 regulations and to follow the administrative appeal process, the “Optional Appeal Procedures Available during the Planning Rule Transition Period” (the former 36 CFR 217 appeal procedures that were in effect prior to November 9, 2000) are to be used.

A written notice of appeal must be filed in duplicate and postmarked or received within 90 days after the date the legal notice of this decision is published in the newspaper of record (*Clarion-Ledger, published daily in Jackson, MS*). The appeal must clearly state that it is a Notice of Appeal being filed pursuant to the Optional Appeal Procedures. Appeals must meet the content requirements of Section 9 of the Optional Appeal Procedures, which are available for review at:

<http://www.fs.fed.us/emc/applit/includes/PlanAppealProceduresDuringTransition.pdf>

Appeals must be filed with the Chief of the Forest Service at:

Address for UPS and Federal Express deliveries:

USDA - Forest Service  
Attn: Administrative Reviews (EMC/2<sup>nd</sup> Floor Central)  
201 14<sup>th</sup> Street, SW  
Washington, DC 20250

*(Note: If a phone number is needed for carrier delivery, use 202-205-1449)*

Regular Mail:

USDA - Forest Service  
Attn: Administrative Reviews  
1400 Independence Avenue, SW  
Mail Stop #1104  
Washington, DC 20250

Appeals may also be faxed (Fax number is 202-649-1172) or appeals may be mailed electronically in a common digital format to:

[appeals-chief@fs.fed.us](mailto:appeals-chief@fs.fed.us)

Requests to stay the approval of this Revised Forest Plan shall not be granted (Section 10 of the Optional Appeal Procedures).

Final decisions on proposed projects implementing the Revised Forest Plan will be made on a site-specific basis using appropriate analysis and documentation in compliance with NEPA. Project decisions may be subject to an objection process at that time.

## Contact Information

For additional information concerning this decision or the Forest Service appeal process, contact:

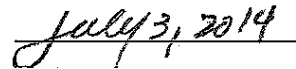
Forest Supervisor  
National Forests in Mississippi  
200 South Lamar St., Suite 500-N  
Jackson, MS 39201  
601-965-1600

## Approval

I am pleased to announce my decision to select Alternative C for the Revised Land and Resource Management Plan (Forest Plan) for the National Forests in Mississippi. This Revised Forest Plan has been built on a strong foundation of science along with collaboration and engagement with members of the public, conservation agencies and organizations.



LIZ AGPAOA  
Regional Forester  
Southern Region, USDA Forest Service



Date