Appendix A -
Response to Comments

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Appendix A - Response to Comments

A.1 Summary of Process

On Friday, February 8, 2013 the Notice of Availability for the Draft Environmental Impact Statement on the Revised Land and Resource Management Plan for the National Forests in Mississippi was published in the Federal Register (78 FR 9388) initiating a 90 day public comment period. The public comment period ended on Wednesday, May 8, 2013. The draft environmental impact statement and proposed plan were distributed for public comment and review. Six public meetings were held across the State of Mississippi, one near each Ranger District.

Delta National Forest, April 2, 2013

Holly Springs National Forest, April 4, 2013

Tombigbee National Forest, April 9, 2013

De Soto National Forest, De Soto Ranger District, April 11, 2013

Homochitto National Forest, April 16, 2013

Bienville National Forest Service, April 18, 2013

De Soto National Forest, Chickasawhay Ranger District, April 25, 2013

A content analysis team was commissioned to collect comments for input into a database utilized by the National Forests in Mississippi. The final environmental impact statement and revised plan were then prepared based upon the public comments received and further agency review.

Comment Analysis and Response Application (CARA) was the database utilized to record, review and respond to public comments received during the 90 day public comment period. CARA facilitated the process used to review, categorize, and respond to comments both individually and collectively.

This appendix documents the comments received during the 90 day comment period and our response to those comments. The original comment letters are presented in the format originally received and in the order they were received and entered into the CARA database. Each letter was assigned a numerical number and then the individual comments in each letter were identified and numbered sequentially by the CARA database. During our initial review of individual comments each comment was assigned to various categories to help facilitate grouping and addressing similar comments as a whole.

There are cross references to individual comments inserted in the text of the original comment letters. The comment number cross references are enclosed in [brackets] at the end of each comment (e.g., [Comment 3-1:]). Using these cross references, you can navigate to the individual comments and responses (beginning on page 49); where you can review the text of each numbered comment, followed by a table showing the categories assigned to the comment (e.g., Trails Management (152)), and the response to the comment. The category labels section (beginning on page 107) displays listings of the comment numbers assigned to each category e.g.:

Trails Management (152)

Comment	Comment
3-1:	7-1:

A.2 Original Comment Letters on Draft Revised Plan and DEIS

Eighteen individual comment letters were received during the 90 day public comment period on the draft environmental impact statement and proposed plan. The comment letters came in various forms, from e-mails to formal letters. Each comment letter is presented in this section in the original format as received.

Comment letters begin at number 3 because during setup of the Comment Analysis and Response Application (CARA) database the first two letters received in the data base were generated internally to ensure proper setup of the public comment database prior to the public comment period beginning.

The letters are listed as follows:

Letter Number 3:	Skipper Anding, Jackson Audubon Society
Letter Number 4:	Jean Public, anonymous public commenter
Letter Number 5:	Claude Jones, public commenter
Letter Number 6:	Ronisha Hodge, Community Planner, Columbus Air Force Base
Letter Number 7:	Eric Bray, public commenter
Letter Number 8:	Christine Leicht, Child Welfare Information Gateway
Letter Number 9:	Cary Norquist, USDI Fish and Wildlife Service, Mississippi Field Office
Letter Number 12:	Becky Stowe, Mississippi Chapter of the Nature Conservancy
Letter Number 13:	Glenn Hughes, Extension Forestry Professor, Mississippi State University
Letter Number 14:	Robert Smistik, public commenter
Letter Number 15:	Randy Miller, public commenter
Letter Number 16:	George Collins, Franklin County Board of Supervisors
Letter Number 17:	Charles Chapman, public commenter
Letter Number 18:	Steve Brewer, Professor, Department of Biology, University of Mississippi
Letter Number 19:	Heinz J. Mueller, Chief, NEPA Office Program, United States Environmental Protection Agency
Letter Number 20:	Frank Moore, Migratory Bird Research Group, University of Southern Mississippi

Letter Number 3:

Recreation

Cooperation with the Natchez Trace Parkway would be really wonderful. In Virginia the Blue Ridge Parkway, sister of the Natchez Trace, goes through 5 or more National Forests. This give the visitor a chance to enjoy the beauty of the forest with full measure. One can stop and walk away from the roadway at any point you choose and be away from the sounds of passing vehicles. Such an experience would greatly enhance the Parkway across the state of Mississippi and make it a true National Treasure like the Blue Ridge. Perhaps a land swap could help facilitate acquiring land along the Trace. [Comment 3-1:]

Old Growth

Old Growth Areas enhance the hiking experience with their scenic nature and support threatened ecosystems by preserving the diversity of plants and animals. They also help in water retention. [Comment 3-2:]

Forest Mix

Increased hardwoods makes an area more scenic and helps support a greater population and diversity of birds, etc. [Comment 3-3:]

Nature Trails and Lakes

Nature Trails and Lakes are very valuable to the public for recreation, enjoyment, and better knowledge of the outdoors. [Comment 3-4:]

Thank you for the opportunity to express our needs in the Forest Plan.

Skipper Anding

Jackson Audubon Society

Letter Number 4

i do not want a slash an d burn plan for these sites. i think you need to ban new roads and take out of use all roads that can be eliminated. too many roads. [Comment 4-1:] i ask for wilderness and wild and scenic river designations wherever possible. [Comment 4-2:] you need to be reminded this is national land, paid for by american taxpayers 325 million strong, and it does not only belong to local despoilers or profiteers who want some of it to maek money on. stop all burning because such burnin of vegetation creates dirty pollutd air. it isnt the smoke you have to worry about, its the fine particulate matter whch is microscopic. that gets picked up by the atmospthere and carried all the way to the east in america. many are sent to hospitals or die from the fine particulate matter which enters the body and causes pneumonia, allergies, asthma, strokes, heart attacks and LUNG CANCER. [Comment 4-3:]

WE OPPOSE LOGGING. WE OPPOSE TRAPPING AND HUNTER, THESE SITES WERE SAVED EXPRESSLY FOR WILDLIFE. [Comment 4-4:] SOMEHOE THE GUN WACKO PSYCHO MURDERERS SEEM TO HAVE TAKEN ALL THE LAND SAVED FOR WILDLIFE AND COME IN WITH THEIR LEAD SHOT WHICH IS TOTALLY DESTRUCTIVE AND THEY KILL AND THEY KILL AND THEY KILL. THERE IS SOMETHING WRONG WITH THEIR BRAINS WHEN YOU KILL AN INNOCENT ANIMAL THAT IS NOT HURTING ANYBODY. WHEN YOU JUST GO OUT TO THE WOODS TO KILL.

FORTUNATELY, WILDIFE WATCHERS FAR FAR OUTNUMBER THOSE PSYCNOT DEPRAVED GUN WACKOS AND THEY NEED TO HAVE PEACEFUL TIME TO USE THESE SITS, ALONG WITH HIKERS, BIKERS, PHOTOGRAPHERRS AND HORSE BACK RIDERS. [Comment 4-5:] THEY ARE PEACEFUL USERS OF THE PARK. THEY SPEND TEN TIMES THE MONEY THE CHEAP PSCYO WILDLIFE MURDERING HUNTERS S DO SO IT IS USEFUL TO MAKE SURE THEY HAVE MAJORITY OF TIME TO ALLOW THESE PEACEFUL VISITORS TO COME TO THESE SITES. THESES PEOPLE ARE IN TH EMAJORITY IN AMERICA. EVERY YEAR THE NUMBER OF WILDLIFE MURDERING HUNTERS GOES DOWN, SO THEY NEED LESS AREA TO KILL IN.

NO TOXIC CHEMICALS SHOULD BE USED IN ANY OF THESE SITES. IT RUNS INTO THE WATER AND POLLUTES THE WATER. WE WANT CLEAN UP PLEASE. [Comment 4-7:] THIS COMMENT IS FOR THE PUBILC RECORD. JEAN PUBLIC

Anon

Letter Number 5

Thank you for the detailed proposal for the management of the Mississippi National Forest. Many of us are very interested in the National Forest of Mississippi because we see it as the only opportunity to preserve the natural habitat of Mississippi in order that our children and grandchildren may experience what our forefathers who settled this region encountered when they arrived.

I have a few suggestions (recommendations) to enhance the plan presented. I will specifically address the Holly Springs National Forest and the Tombigbee National Forest because I am more familiar with these two entities.

There has been a long time proposal to Re-River the Little Tallahatchie River in the Holly Springs National Forest. The proposal is to breech the low-head dam at the Cypress Creek-Puscus Creek and the Tallahatchie Canal. The low-head dam turns the normal flow from the Cypress Creek and Puscus Creek into the Little Tallahatchie Canal to flow into Sardis Lake. The breeching of the low-head would turn the normal flow of the two creek into the old river run of the Little Tallahatchie River. The old river run meanders 22 miles down the bottom land hardwoods before empting into Graham Lake which is a part of Sardis Lake. The Channelized Tallahatchie Canal runs the same bottom but is only 13 miles in length. The old river run is primarily intact with only three known obstructions that could easily be dislodged with "ditching" Dynamite. The old river run and the proximity bottom-land hardwood are in pristine condition and would make an ideal scenic river for canoeing and hiking. There would be little initial expense and almost no maintenance cost. The Friends of the Upper Sardis Wildlife Management Area has proposed a detailed concept of the re-river of the Little Tallahatchie River. [Comment 5-1:]

I continue to be concerned with the cutting of old grow timber on the Holly Springs and Tombigbee National Forest. The soil is predominately sandy and the cutting of roads for hauling logs and the damage of logging skidders used to pull logs to bunching sites promote erosion and permanent washes and future gullies on the land. [Comment 5-2:]

Davis Lake in the Tombigbee National Forest has the potential to be a prominent campsite and bass fishing draw in all of Mississippi. The Davis Lake website on the National Forest Website is pathetic. It neither promotes the great fishing nor the quiet, serene setting of the campsite.

Puscus Lake in the Holly Springs National Forest has outstanding campsites, picnic areas, walking trails and good fishing. The problem is the lake has so silted it is only 3-5 feet deep in almost all the lake. The area is worth investment to improve the facilities. [Comment 5-3:]

Please feel free to contact me @ . I am Sec., Treasure of Friends of Upper Sardis WMA and have access to the plans to re-river the Little Tallahatchie. This is a worth while project and the cost is minimal. Friends of Upper Sardis WMA has secured some funding and also has the cooperation of the University of Mississippi Hydrology Lab to aid in the determination of the amount of flow needed to maintain floatable water in the old river run.

The changing of the water flow in the old river run and the canal will have no impact on the flooding or the Sardis Lake Level. The low head dam allows water into the old run when the water is high in the canal. The same water flows in one or the other. All the water flows to the same destination of Sardis Lake. [Comment 5-1:]

Thank you for the opportunity to respond.

Claude Jones

Letter Number 6

Comment from Columbus AFB located in Columbus, MS…

In the past Columbus AFB has received a call when projects such as these are in the vicinity of our Military Training Routes(MTRs). Columbus AFB will generally close our MTRs for that period of time, especially if there are helicopters flying in the vicinity. We ask that you continue this process. [Comment: 6-1] Please call 662-434-3011 or email 14oss.osop@columbus.af.mil, so we can have the appropriate timing to take the appropriate actions.

Thank You,

Ronisha Hodge | Community Planner 14 CES/CENPP

Letter Number 7

Interested in receiving any information on trail systems. [Comment 7-1:]

Eric Bray

Letter Number 8

Any of these updates should be forwarded to the NFCAD updates team headed up by [redacted] and [redacted]. I have cced them on this message so I'm sure whoever on the team has that State will make the update in the directory. [Comment 8-1:]

Thanks again!

Phyllis

Please open the attached document. It contains a copy of a Transmitted/Received Fax. :

Below is the contact information for State adoption and foster care officials contained in the *National Foster Care & Adoption Directory* for Colorado:

For each listing, please verify that the following information is correct:

- Basic contact information (agency's name, address, and phone and FAX numbers)
- Email address (**please provide email address** if one is missing and indicate any Statewide changes to the format of email addresses if applicable)
- Website address

Please return this document with changes to Child Welfare Information Gateway, National Foster Care and Adoption Updates, **nfcadupdates@childwelfare.gov** at your earliest convenience. ***Thank you again*** for your invaluable assistance!!

Letter Number 9

APR – 1 2013

MISSISSIPPI
DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS

Sam Polles, Ph.D.
Executive Director

March 26, 2013

National Forests in Mississippi
Proposed Forest Plan
P. O. Box 1919
Sacramento, CA 95812

To whom it may concern,

Please find the attached comments from the Mississippi Department of Wildlife, Fisheries, and Parks concerning the Draft Revised Land and Resource Management Plan for National Forests in Mississippi.

The Plan was reviewed by our staff from the Fisheries and Wildlife Bureaus as well as the staff at the Mississippi Museum of Natural Science. We appreciate the opportunity to make comment on a management plan that will influence wildlife habitat on Mississippi's National Forest lands.

Sincerely,

Sam Polles, Ph.D.
Executive Director
Mississippi Dept. of Wildlife, Fisheries, & Parks

1505 Eastover Drive • Jackson, Mississippi 39211-6374 • (601) 432-2400

Comments to the Draft Revised Land and Resource Management Plan for National Forests in Mississippi

Overall, this management plan is very good. Our primary concern is that this plan is far too ambitious to be realistic when one considers the state that the forests are currently in. The 10- year goals laid out in the Strategies are probably attainable, but even if accomplished, these practices would only be a small step towards accomplishing the Desired Conditions laid out in Chapter 2. In short, most of the Desired Conditions appear to be written to appease the reader rather than to actually guide the management of the forest. [Comment 9-21:]

Forest openings are mentioned in the plan at various points. Forest openings of greater than three acres in size on appropriate sites (e.g., dry ridge tops and areas with poor or thin soils) should be emphasized across all upland forest types to provide early successional habitat to game and non-game species. Supplemental food plantings should be deemphasized or abandoned all together.

General Comments in regard to Prescribed Bums on all habitat types requiring burns (Specifically 2.3.1, 2.3.6, 2.3.13, 2.3.14, 2.3.17, 2.3.18, 2.6.3, 3.2.1, and possibly others). The majority of USFS prescribed burns occur during the cool season (early months) rather than later, warmer months. Ecologically, these ecosystems would be better served with a significant portion of the burns occurring in the warm/hot season, which would more effectively control shrubs, invasive species, and non-adapted hardwoods. Several of these habitat types will likely be too wet to carry cool season bums (i.e. wet pine savannah, seepage bogs and flats, etc.). In addition, early season burns may cause problems with rare breeding and migrating amphibians, such as gopher frogs and Webster's salamanders (the latter of which is provided as an example of an uncommon species in multiple habitats within this document). Additionally, there needs to be some consideration for smaller-scale (<=100 acres) burns at least within the boundaries of Wildlife Management Areas. That could be something to take the cooperative MDWFP/USFS agreement a step further. These smaller burn units can reduce potential productivity limitation on some wildlife when large very blocks are burned at once. [Comment 9-22:]

1.1.2 Management Challenges, Page 3. We suggest including fragmentation of forest lands by new road construction and increased difficulty in conducting management activities, particularly fire, due to this fragmentation. These construction projects also often result in a loss of habitat for listed and SGCN species. [Comment 9-23:]

1.3 Plan Purpose, Page 5. We suggest adding, as an important factor in guiding management actions, the following purpose decision statement:

To incorporate state-of-the-art management practices designed to optimize habitat productivity for native wildlife in all silvicultural activities.

Given the laudable goal expressed on Page 7, Paragraph 5, Line 2 which states"...a focus on restoring and sustaining the native ecological communities…", the development and incorporation of the above statement as an additional management guide would be a significant addition assisting in realizing the concept of restoring and sustaining native ecological communities. [Comment 9-24:]

Chapter 2. Vision. The premise of this chapter is somewhat confusing. It is difficult to tell whether it is describing the "desired condition" or the current condition of the forest. For the purposes of this review, we assume the author is describing the "desired future condition". Perhaps if the verb tenses were not present tense it would be easier to discern. [Comment 9-25:]

The plan states "These desired conditions reflect the ecological, economic, and social attributes that we expect to exist on the National Forests in Mississippi in the future." This needs more explanation. Based on the Desired Conditions as they are written, it appears that the USFS plans to manage for an unnaturally high level of mature timber, which will likely spoil. In this case it appears the goals of ownership are dominated less by ecological and economic objectives and more by social and aesthetic objectives. There should be some discussion of this decision making process and exactly how the USFS arrived at the Desired Conditions so that the reader understands that the Forest Service: 1) is not simply making up numbers to appease the public and 2) does not believe that managing 60-80% of forests in mature timber is a sustainable condition over the long-term or ecologically and economically efficient [Comment 9-26:]

2.2 Forestwide Desired Conditions, Page 8. The document states that gopher tortoises are growing and thriving in restored habitats. Tortoises are doing exceptionally well in only a few areas within FS lands. Surveys indicate that most priority soils parcels do not harbor thriving gopher tortoise populations, but rather a decline in recruitment (as noted later in the management document). [Comment 9-27:]

2.3 Ecosystem Diversity, Page 12, Table 2. We suggest that this table be modified to reflect current ecological systems within each unit of the forest followed by desired conditions. Line 1 of Paragraph 2 on Page 12 indicates that "Table 2 displays the approximate current and desired percentage of each ecological system...", but it appears that the table only reflects draft plan "desired conditions." It is difficult to perform constructive review without existing conditions classified ecologically by unit of the system using the same classification criteria used for the presented desired conditions. We concur with utilizing a range of values but withhold specific comment on the appropriateness of specific management unit percentages until existing conditions, expressed as percentages, can be reviewed. The language provided addressing current conditions in sections 2.3.1 - 2.3.24 is rather general in nature and does not provide the needed specific information to complete constructive review of this extremely important table. [Comment 9-28:]

2.3.2 Shortleaf Pine-Oak Forest, Page 15. In paragraph 2, first sentence, Northern Bobwhite is misspelled northern bob-white. [Comment 9-29:]

The Desired Condition for these forest types consist of mature forest with less than 80% canopy closure, a sparse mid-story, and dense grasses and forbs in the understory. This condition is conducive to many species of wildlife, indeed. The burn rotation described may be adequate to maintain such a forest, but creating these conditions from the current forest conditions will be difficult to impossible. Current conditions of many of these forests have greater than 90% canopy closure with a dense mid-story of shade tolerant hickories and other saplings. If timber harvests are conducted to open the canopy, the shade-tolerant mid-story will be released.

Foresters should give some consideration to herbicide treatments where dense mid-stories exist prior to overstory manipulations. We recommend adding these intermediate steps. [Comment 9-30:]

2.3.6 Northern Dry Upland Hardwood Forest, Page 17. The stated desired condition for this forest is a closed canopy stand with a sparse mid-story and regenerating hardwoods. Certainly any regeneration in this condition would be shade tolerant and not indicative of the current overstory condition. We recommend giving better attention to future regeneration practices to promote a mixed oak-hardwood forest. [Comment 9-31:]

Additionally, sites within this forest type are suitable for restoration of upland oak savannahs consisting of more fire-tolerant hardwoods with an open and grassy understory. This type of forest

type was once prevalent in North Mississippi. Upland oak savannahs should be considered as a restoration goal on appropriate sites. [Comment 9-32:]

2.3.9 Southern Mesic Slope Forest, Page 19, Paragraph 1, Last Sentence. We concur with the general observation that fire intensity and frequency has played a role in increasing pine composition within this ecosystem beyond probable historic composition. In its purest form, this ecosystem is highly valuable to native wildlife. Degradation to this system, caused in part by fire, could possibly affect local wildlife habitat productivity. The specific strategies presented for this community on Page 50 addressing use of fire may need to be further restricted using parameters such as high fuel moisture levels before fires are introduced. [Comment 9-33:]

2.3.10 Northern Mesic Hardwood Forest, Page 19, Last Sentence. This sentence states "Abundance of this system generally falls within the mid- to upper-end of the desired range as depicted in Table 2." The absence of specific current conditions within the draft document makes it impossible to constructively address this statement. Based upon intimate staff knowledge of the existing condition of these systems within some units of the National Forest, revising this statement to a low-to-mid range may be more appropriate. Furthermore, it may be that fire intensity and frequency has also played a role in increasing pine composition within this community – certainly that has been the case in some localized areas and a similar statement to that suggested for the Southern Mesic Slope Forest may be appropriate. Once again, the specific management strategies for this ecosystem detailed on Page 51 may not go far enough to reverse this observed trend toward a greater pine component. [Comment 9-34:]

2.3.11 Desired Conditions for Floodplain Forest, Page 20, and 2.3.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 21. Both systems are classified in their respective sections as having"...canopy closure in mature examples of this system being greater than 80 percent." If the intent of these sections entitled "Desired Conditions" in the draft plan is to describe the plan's long term objective for these ecosystems (not describing current conditions), we strongly advise revising the >80% to a range of values such as 70-75% as a desired condition. We refer you to the Lower Mississippi Valley Joint Venture (LMVJV) publication entitled Restoration, Management and Monitoring of Forest Resources in the Mississippi Alluvial Valley: Recommendations for Enhancing Wildlife Habitat which provides ample scientific evidence of the increasingly negative impact to native wildlife as forest canopy closure exceeds 80%. Such higher rates of canopy closure frequently result in reduced ground and midstory cover within the forest severely impacting stand diversity and, hence, wildlife habitat productivity (see comments provided later in our review on the same topic). Furthermore, high canopy closure rates (consistently >80%) across large forested tracts for long periods of time frequently result in stand midstories becoming dominated by shade tolerant shrubs and trees. This condition usually is undesirable from a silvicultural and wildlife habitat standpoint. When this condition occurs (and it usually does in these systems given long periods of time in a closed canopy condition), regeneration efforts are generally restricted to extensive use of clear cutting as the only tool available that has a possibility of success. Land managers are essentially relegated to use of this type of silvicultural technique because shade-tolerant species likely would capture any small hole within the canopy. We suggest that modifying stand closure to the recommended levels and implementing treatments/thinning as needed to maintain these levels across stand life will slowly begin to provide other less intensive regeneration opportunities and approaches such as group selection (<2 acre clear cuts) or shelterwoods (two stage regeneration removals). Either approach has distinct, long-term advantages to achieving ecological objectives and retaining stand-wide habitat values. [Comment 9-35:]

2.3.14 Xeric Sandhills, Page 22. This habitat type often does not contain the fuels to carry a cool season bum. We recommend growing season bums to control shrubbery and invasive hardwoods. [Comment 9-36:]

2.3.22 Ephemeral Ponds and Emergent Wetland, Page 27. We recommend seasonally appropriate bums for gopher frog basins, which are typically in the summer when the ponds are dry, and the gopher frogs have dispersed from the site. Additionally, cool season bums could pose negative impacts on this species. There are anecdotal incidences of gopher frog mortality due to inappropriately timed burning that coincided with gopher frog migrations. In addition, tiger salamanders are mentioned as a species found in this habitat, but we have no occurrences. [Comment 9-37:]

2.3.23 Cypress-dominated Wetlands, Page 27. These can also be found on the Desoto Ranger District. [Comment 9-38:]

2.4.1 Threatened and Endangered Species, Page 29. Should also include *Graptemys jlavimaculata* (Yellow-blotched map turtle)- Threatened. [Comment 9-39:]

The majority of gopher tortoise nest predation appears to be due to fire ants. Fire ants are much more abundant in under burned or cool season burned habitats where logs and limbs remain abundant on the ground. Metabolic bone disorder is often referred to as the disease issue with gopher tortoises on DNF lands. In Florida, it has been documented that calcium may be tied up in woody shrubs that would be better controlled with warm/hot season bums, such as gallberry, and unavailable to the plants eaten by gopher tortoises or invertebrates eaten by RCWs. [Comment 9-40:]

2.4.3 Management Indicator Species, Page 31. First, we have concerns with using longleaf pine community status (acreage) as a long term plan indicator "species." Certainly, there- establishment of this community to its former range on Forest Service ownership in Mississippi is a commendable goal entirely supported by the MDWFP. At face value, however, the simple exercise of measuring acreage change in longleaf community status does little to measure and track plant and animal diversity along with ecological changes associated with draft plan implementation. Stated another way, re-establishment of 'x' acres across a plan period to a particular community type in no way provides a measure of the ecological health and trends of the species dependent upon the community type. It tells the land manager nothing about what has achieved ecologically and what actions needs to be modified, continued, or abandoned to move toward described desired conditions for this community. We respectively request that you reconsider this selection and target using actual indicator species. [Comment 9-42:]

Second, the exclusive use of red-cockaded woodpecker (RCW) as an indicator species to measure ecological function and plant and animal diversity in pine forests leaves a lot to be desired. Even though it is clearly understood that RCWs must and should be a priority in pine communities, there is a large array of plant and animal species not dependent upon the target habitat conditions for optimum RCW habitat. We suggest consideration be given to utilizing at least one additional species as an indicator in these upland communities. [Comment 9-42:]

Finally, we strongly suggest adding additional species specific to the hardwood communities and recommend wood duck *(Aix sponsa),* fox squirrel *(Sciurus niger),* Swainson's warbler *(Limnothlypis swainsonni)* and red eyed vireo *(Vireo olivaceus).* The rationale and thought behind why these species are recommended can be provided if desired. The existing list of indicator species does nothing to track ecological health of the extremely important hardwood forest communities. [Comment 9-42:]

Furthermore, indicator species were selected "because population changes are believed to indicate the effects of management activities." Rather than selecting individual species, it might be more relevant

to look at guilds of species. For instance; it might be more relevant to look at grassland birds as a guild rather than the RCW as an individual animal. RCWs have a very specific niche. It is very likely that management practices, such as timber harvest and burning, may eliminate habitat for RCWs during the short-term, but will create habitat for these species along a successional gradient. This is impossible to quantify when looking at a single species, but if you look at the guild of similar species as a whole (i.e., pine-grassland obligates vs. shrub- scrub birds), it might be more useful. If indicator species are required or selected for use, we recommend using a grassland or open-forest grassland bird in addition to RCW that inhabits a wider geographic rang of the national forests in Mississippi (i.e., Northern Bobwhite, Bachman's Sparrow, etc.). [Comment 9-42:]

Largemouth bass *(Micropterus salmoides)* may indeed be a useful indicator for lentic systems on Forest Service property managed for recreational sport fishing. We cannot recommend largemouth bass as an adequate indicator for aquatic systems managed with biodiversity or natural ecosystem function in mind, especially for lotic systems. Largemouth bass are primarily lentic species that can adapt well to lotic environments and exhibits a broad and very adaptive diet. For these reasons, largemouth bass population trends could fail to indicate large shifts in the ecology of aquatic systems resulting from various practices. MDWFP's State Wildlife Action Plan (SWAP), formerly known as Comprehensive Wildlife Conservation Strategy (CWCS), provides a list of species (not all of which are considered rare) sensitive to many factors known to negatively impact biodiversity and natural ecosystem function (e.g., siltation, increased turbidity, increased nutrient loads, and altered hydrology). It is our recommendation that the Forest Service consult the MDWFP and/or the SWAP (CWCS) document to identify fishes that better serve as indicators of healthy biodiversity and natural ecosystem function relative to largemouth bass. The document in its current published form is available at: www.mdwfp.com/media/63792/cwcs.pdf. [Comment 9-42:]

2.7.1 Roads, Page 37. We recommend treating invasive species along USFS road corridors as soon as they are detected. [Comment 9-46:]

2.7.2 Trails, Page 38. See previous comment under Roads. [Comment 9-46:]

3.2.3 Loblolly Pine Forest, Page 46, Last Sentence. The last sentence states "Other communities such as upland hardwoods and mesic slope forests will also be converted from loblolly sites as well." We endorse this change or conversion but are troubled that the following page lists no target objective for this change by ecological system type and ranger district.

Please provide such a planning target in the objectives. In addition, the objectives for the loblolly pine forest state that all acreage (351,000) "…of this fire-dependent ecosystem have received a fire return interval of 1 to 4 years…." Successful conversion to upland hardwood/mesic slope mixed species hardwoods will likely, in some cases, require at least some modification in the normal bum regime proposed in both frequency and intensity. Reduced short-term bum frequency for 10- 20 years during and following conversion actions and long-

term modification to reduce bum intensity will be important to maintaining this hardwood community and selecting against greater pine component. Please see Page 19 of the draft plan and our comments on this subject above. It is doubtful that the upland mesic hardwood forest, in its purest form, can be classed as fire dependent, the classification given on Page 47 for the entire loblolly pine ecosystem. [Comment 9-47:]

2.9 Minerals Management, Page 42. We recommend including contingency measures for emergency spill situations. [Comment: 9-48]

3.2 Upland Longleaf Pine Forest and Woodland, Page 44-45. Key characteristics of upland longleaf were referenced including "abundance, fire regime, canopy structure, and tree age diversity"; however, the document did not emphasize the management regime to sustain canopy structure and tree age diversity, especially regarding role of regeneration strategy and management. [Comment 9-49:]

It is stated that of the acreage suitable for the longleaf pine ecosystem (251,000 ac), it is burned on a 1 - 4 year rotation with 40% of the bums conducted in the growing season. A combination of dormant season and growing season bums may be beneficial to manage longleaf pine and wildlife habitat. A patchwork of growing season bums can eliminate encroaching woody vegetation, and promote openings, grasses, and forbs, which support some wildlife associates. The current plan may want to consider including prescribed fire as one of the highest priorities of managing upland pine forests along with "restoration of longleaf pine" to achieve its restoration to a functioning "ecological system". Fire may be just as critical to restoration as establishment, since the two are usually not mutually exclusive of one another in natural history. [Comment 9-50:]

An understory restoration strategy may also be appropriate in developing the longleaf ecological system. We recommend specifying an understory vegetation monitoring and understory restoration strategy. Furthermore, we recommend including the identification and control of invasive species in this section of the plan. [Comment 9-51:]

3.2.5 Slash Pine Forest, Page 48, Last Sentence. The last sentence of this section states "... we have identified slash pine as a candidate for regeneration to shortleaf pine-oak or hardwood ecological systems...." As in the comment above, we suggest that target objectives for the conversion be provided in acres by ecological-system type and by ranger district. [Comment 9-57:]

It is stated that "maintaining a sustainable mix of tree ages is vital to long-term stability of the ecological system...", a statement that reflects either all aged management in even aged units, or an uneven aged management regime, which mimics the natural growth pattern of longleaf pine and can meet objective of providing wildlife habitat. Meeting objectives for timber and wildlife in longleaf pine stands may include thinning stands every 6 - 10 years with basal areas between 40 - 70 sq^2 per acre, depending on targeted wildlife species. [Comment 9-52:]

3.2.6 Northern Dry Upland Hardwood Forest, Page 48, Line 5,

3.2.7 Southern Dry Upland Hardwood Forest, Page 49, Line 8,

3.2.9 Southern Mesic Slope Forest, Page 50, Line 10,

3.2.10 Northern Mesic Hardwood Forest, Page 51, Line 10,

3.2.11 Floodplain Forest, Page 52, Lines 4-7,

3.2.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 52, Line 5.

Repeated references are made throughout Section 3.2 to "closed canopy" hardwood forests as a positive stand attribute for wildlife habitat production. If the intent of this statement is to describe a forest stand where the canopy exists at a level that provides closure due to density (for example, canopy cover of the overstory consistently greater than 80 percent or basal areas consistently greater than 80 square feet), we strongly disagree that this condition is conducive to desired conditions for most species of native wildlife (game and nongame) that inhabit these systems. Briefly, a closed canopy severely limits sunlight penetration greatly restricting both quantity and quality of ground,

understory and midstory vegetation. Frequently, such stands exhibit open, park-like understory with little internal, horizontal or vertical diversity which severely limits wildlife habitat productivity for most all species. The science is very clear. Open, park-like conditions resulting from a uniformly closed overstory canopy severely restricts wildlife habitat productivity, including recruitment from nesting/foraging forest birds that utilize these canopy layers for their life cycle to utilization by game species such as deer and turkeys. Secondly, closed canopy hardwood forests tend to develop significant stocking of shade tolerant shrubs and trees which dominate the midstory. The shade tolerants can develop to the point that they immediately capture any gap which occurs, thereby significantly impacting future management options along with lowering species diversity. If the intent of this statement in these sections is a reference instead to a fully stocked stand (in comparison to low stocking rates associated with an RCW cluster site, for example), then please provide stocking rates intended and other canopy closure measures. Otherwise, it is suggested that such statements be deleted from the document as a desired condition of the hardwood forests in Mississippi. The draft plan stipulates that the Forest Service strategies for sustaining species diversity include providing ecological conditions that "support a diversity of native plant and animal species over the long term (Page 57, Paragraph 4). A uniformly closed-canopy forest is counterproductive to this objective and could negate achieving many of the long-term objectives. Also, see previous comment concerning this subject provided in item 5. [Comment 9-58:}

3.2.9 Southern Mesic Slope Forest, Page 50. A 1 to 6 year bum plan for Southern Mesic Slope Forest may be too frequent. A 6 to 20 year interval based on fuel conditions is more favorable. In addition, fire should not be pushed into the slope. [Comment 9-59:]

3.2.11 Floodplain Forest, Page 52, Line 8. Line 8 states "Natural processes will contribute significantly to attaining the desired conditions within this system...." Please explain what is meant by this statement. In the absence of unusually high stem mortality, unthinned, mature hardwood forests tend to develop closed-canopy, park-like conditions that typically provide relatively limited internal stand diversity. Consequently, these stands exhibit low-to-poor wildlife habitat values for most all species. Also, see previous comment on this subject. [Comment 9-60:]

3.2.11 Floodplain Forest, Page 52, Objective Bullet 3. The third objective bullet states "approximately 600 acres of floodplain forest have reduced overstory density and a species composition shifted toward desired characteristic species for this ecological system...." Please describe what constitutes these desired characteristic species for this ecosystem. [Comment 9-61:]

3.2.11 Floodplain Forest, Page 52, Objective Bullet 4. The fourth bullet objective states "Approximately 1,300 acres of the 97,000 total acres of floodplain forest are in the 0- to 10-year age class ... and approximately 88,000 acres are in mature forest condition (60 years or older)." These statistics indicate little, if any, planned thinning or stand silvicultural treatments other than 2-stage regeneration cuts (if we understand the intent correctly). If this is the planned management approach, we respectively submit that optimum wildlife habitat productivity will not be achieved on these forests other than minimum amounts of primary habitat on 1-2% of the ecosystem ownership. The math is simple-90% of the ecosystem in Forest Service ownership will exist as closed-canopy stands providing significantly lowered habitat productivity across the planning period. It is imperative that Forest Service staff consider intermediate thinning (contingent upon crown closure variables and multiple other stand attributes and agency objectives at that time, of course) across the life of the stand in order to create and maintain internal stand structure provided by multi-tier canopies and abundant ground cover. [Comment 9-62:] The draft plan repeatedly states objectives to support a diversity of native plant and animal species focusing on "restoring composition, structure and relative abundance" (Page 57). Without periodic disturbance (10-20 year intervals) associated with low-intensity thinning throughout the life of the stands, most areas will

offer little intrinsic habitat value for many native species. As stated previously, the science is clear. The Forest Service is referred, once again, to the LMVJV document which summarizes and provides adequate peer-reviewed reference material. The Forest Service in Mississippi has a unique opportunity in development of this new plan to incorporate current, state-of-the-art forest management approaches that will significantly enhance wildlife habitat productivity throughout the hardwood ecosystem in its ownership. We are suggesting consideration of approaches that will achieve these objectives. What is being suggested is not maximizing or skewing the draft plan to a wildlife habitat management plan. We fully understand that the Forest Service does not singularly manage for wildlife. The MDWFP, however, as the state's principle wildlife agency, has the responsibility to request that other public land managing agencies consider the best science and sound habitat management practices that optimize wildlife outputs from lands within state boundaries contingent upon agencies' mandates and policies. The above and similar comments are offered in that light. [Comment 9-63:]

3.2.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 52, Line 5. This line states "Mature closed-canopy hardwood forests...." See previous comment. [Comment 9-63:]

Line 10. This line states, in part **"…**condition, and low intensity fires may be utilized to accomplish ecosystem objectives**…."** Please explain this statement. Other than use of fire as a site prep in a clearcut, controlling invasive species, or maintenance of a unique community, it is unclear what positive role fire would play in MAV hardwood ecosystem management. In contrast, it is very clear what negative impacts could occur if applied at stand-level scale. [Comment 9-64:]

3.2.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 53, Objective Bullet 3. This bullet states "Approximately 6,500 acres...have improved species composition**…"** We assume this 6,500 acres across the plan's 15-year life (roughly 400 acres per year) reflects periodic management treatments/thinning for stand and habitat improvements. If the 6,500 acres reflect periodic treatments, we suggest this acreage be increased to about 15,000 acres across the plan's life expectancy (contingent upon individual stand conditions and other plan requirements, of course). We, once again, refer the Forest Service to the LMVJV document referenced above which enumerates ecologically-based, habitat-driven, sustainable management strategies for floodplain hardwoods reflecting many decades of highly-successful efforts across hundreds of thousands of acres of state- and federally-owned bottomland hardwood forestland. [Comment 9-65:]

3.3.4 Management Indicator Species, Page 62. See previous comment concerning indicator species. [Comment 9-42:]

3.7.1 Recreation, Page 75, First Line. The first line states that "Where appropriate, additional access for hunters by seasonally opening some routes on the National Forests in Mississippi will also be considered**…."** We encourage the Forest Service to continue to allow the off-road or off- trail use of OHVs by hunters to retrieve harvested deer and hogs on the 14 wildlife management areas on Forest Service lands in Mississippi. The off-road use of OHVs to retrieve harvested animals, such as deer and hogs, is necessary to encourage the harvest of these animals. The regulated harvest of deer provides the only effective means of controlling populations, ideally, at or below the carrying capacity of the forest habitat. The MDWFP's experience with managing public lands has demonstrated that hunters are significantly more likely to harvest deer if they can more easily transport the animal after harvest. Likewise, hunters are more apt to harvest hogs when motorized transportation is available for retrieval of these animals. For obvious reasons, the control or eradication of nuisance hogs should be a key objective to any management plan for Forest Service lands. Based upon our experience, off -road use of OHVs for retrieval of deer and hogs has not caused any adverse impacts to wildlife or other natural resources on wildlife management areas managed by the MDWFP because such retrieval is (1) low in frequency- only occasional to rare, (2) usually not concentrated to the same sites, (3) not

occurring during the time of year when most wildlife species are raising their young, and (4) used in a utilitarian manner that minimizes impacts to the resources. This type of use is minimally invasive compared to traditional, recreational uses of OHVs. [Comment 9-67:]

While we endorse the limited and infrequent off-road or off-trail use of OHVs for deer and hog retrieval by hunters, we recommend that all other OHV use be limited to designated gated roads or trails specified and developed for use by OHVs. The use of OHVs for outdoor recreation in this state has increased in popularity in the past decade. We recognize that the Forest Service tries to accommodate the request for recreational use of OHVs and balance that use with the obligation to protect and conserve wildlife resources. However, the general, unrestricted, off- road use of OHVs on Forest Service lands is not compatible with the best interests of the wildlife resources on those lands. Some of the problems inherent in allowing unrestricted, off-road use of OHVs include the following: (1) resource damage to sensitive soil types such as those susceptible to rutting in wetter, bottomland sites, (2) soil disturbance which could increase the levels of siltation into adjacent waterways and contribute to higher levels of turbidity, negatively affecting the biological health of aquatic systems, (3) damage to rare, threatened or endangered plant communities, (4) direct disturbance to wildlife and the accompanying noise pollution which can displace wildlife in certain circumstances, (5) use of OHVs to facilitate the illegal taking of wildlife, (6) difficulty of enforcing regulatory compliance and adherence to wildlife regulations because of motorized access, and (7) increased litter and dumping of potentially harmful debris. [Comment 9-68:]

4.2.1 Vegetation, Wildlife, and Fisheries, Page 81, Guideline 1, Line 5. Line 5 states that "Generally, hardwood regeneration harvests will not be made prior to age 90." We encourage the Forest Service staff to consider routinely incorporating group selection holes (tree removals < 2 acres) in all treatments/thinning where stand conditions permit the application of this less obstructive technique. Implementation of such an approach has proven highly successful in obtaining desired regeneration, including shade-intolerant red oaks, on many thousands of acres of public land across the MAV. Such approach also avoids the long-term, negative impacts associated with a larger clearcut area losing habitat productivity for long periods of time following canopy closure. [Comment 9-70:]

4.2.1 Vegetation, Wildlife, and Fisheries, Page 82, Guideline 3. See previous comments above. [Comment 9-70:]

4.2.1 Vegetation, Wildlife, and Fisheries, Page 83, Guideline 8. See previous comments above. [Comment 9-70:]

4**.2.1 Vegetation, Wildlife, and Fisheries, Page 83, Guideline 19.** When referencing planting wildlife food plots, we recommend emphasizing native vegetation management as opposed to, or in conjunction with planting food plots. Especially in the typical low quality soil of the longleaf forest, food plot plantings could be a big expense. Prescribed fire and disking has proven to promote native vegetation in the understory that is just as beneficial, or more so, than a food plot planting. Furthermore, large food plots may concentrate predators, which could be negative on some wildlife populations, such as northern bobwhite quail. Periodic thinnings, a carefully planned fire regime, and disking in the appropriate season to promote native grasses and forbs for cover and forage, have proven to be beneficial for wildlife. [Comment 9-71:]

4.2.1 Vegetation, Wildlife, and Fisheries, Page 83, Guideline 32. To insure that only certified triploid grass carp are stocked, all grass carp vendors should be asked if they participate in the USFWS Grass Carp Certification Program or if they obtain their grass carp from suppliers that participate in this program. Without the receiving receipt of a USFWS triploid grass carp certification statement for each grass carp shipment that the USFS receives, it cannot stated that only certified grass carp were

stocked. Many fish producers in Mississippi are selling triploid grass carp, but only one actually has USFWS triploid certification statements for the fish they sell. Fish eggs may be subjected to methods (pressure and temperature shock) that are known to induce triploidy but usually a percentage of such offspring (5-30%) are determined to be diploid through ploidy testing. [Comment 9-72:]

4.2.4 Fire, Page 88, Guideline 5. We suggest that alluvial sites of significant size (perhaps> 40 acres) be excluded, where possible, by modifying bum unit configurations except as noted in the last line of this item; or only included in bum units when fuel conditions will not permit intense fires. [Comment 9-73:]

4.2.5 Invasive Species, Page 89. Guidelines for Invasive Species practices should include cleaning tools and vehicles before and after use in natural areas.

We recommend including a section to address the impacts of wild hog damage to native wildlife habitats within National Forests. The impacts from wild hog damage on Mississippi's National Forests and consequently, some MDWFP WMAs, are of concern. There is opportunity for a cooperative plan between the USFS and the MDWFP to work collectively to reduce wild hog damage on National Forests that contain MDWFP WMAs. Regardless, the MDWFP suggests that wild hog impacts on wildlife habitats should be addressed within National Forests in Mississippi.

Wild hog populations continue to increase at alarming rates statewide. Wild hog populations are threatening native wildlife habitats, timber, agriculture, water quality, roads, and levees not only in Mississippi, but all across the United States. Wild hogs are not native to North America and are classified as a "nuisance animal" in Mississippi by state statute. Wild hog populations can naturally expand rapidly due to their prolific reproductive potential, adaptability to survive in virtually any type of habitat, and lack of natural predators. Populations have un-naturally expanded throughout the United States by illegal transportation and release into the wild by people who regard them for sport hunting more so than their potential to damage natural resources. Due to the severity of problems created by wild hog populations the MDWFP initiated wild hog trapping and removal efforts on all state-owned WMAs to reduce damage caused to wildlife habitats in 2012. [Comment 9-74:]

4.3.1 Ecosystem-based Management Areas, Page 94, Upland Longleaf Pine Forest and Woodland. It is stated that "three - four thinnings would occur throughout the life of the stand, with stand replacement around age 120" (page 94). The three- four thinning model is not the only option for longleaf pine. In fact, it may be beneficial to consider other models for management. Longleaf is well suited for uneven aged management, especially with the devotion to prescribed fire in longleaf stands. Two common methods to consider are the Stoddard-Nee! method, where up to 90% of the annual growth can be cut periodically, and the basal area- maximum dbh-q (BDq) method developed by the USFS. Regeneration is encouraged in the created openings, which can maintain a vigorous forest, and, with the proper fire regime, wildlife habitat for a number of game and nongame species.

5.3.1 Monitoring Questions and Performance Measures, Page 112, Table 12, B.3. The performance measures for the question "Are species diversity and game abundance supporting nature viewing and quality hunting opportunities?" are listed as Wildlife Census, Statewide game population estimates, and Visitor use monitoring. We recommend changing the three performance measurement. Completing a wildlife census on free-ranging wildlife populations is all but impossible. We recommend using Wildlife Surveys. Additionally, statewide game population estimates may not be indicative of game populations on National Forest lands, especially when there are no harvest estimates for these areas. We recommend site-specific estimates and monitoring implemented within each National Forest unit. Additionally, more detail is needed on the visitor use monitoring to determine "quality hunting opportunities". [Comment 9-75:]

Letter Number 10

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Richard B. Russell Federal Building
75 Spring Street, S.W.
Atlanta, Georgia 30303

ER 13/0082
9043.1

Jeff Long
Planning Team Leader
National Forests in Mississippi
200 South Lamar St., Suite 500-N
Jackson, MS 39201

Re: Comments on the Draft Environmental Impact Statement (DEIS) for US Forest Service (USFS), Revised Land and Resource Management Plan for the National Forests in Mississippi

Dear Mr. Long:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for US Forest Service (USFS), Revised Land and Resource Management Plan for the National Forests in Mississippi.

We have no comments at this time. [Comment 10-1:]

If you have questions or need further information, I can be reached on (404) 331-4524 or via email at joyce_stanley@ios.doi.gov.

Sincerely,

Joyce Stanley, MPA
Regional Environmental Protection Specialist
cc:
Jerry Ziewitz – FWS
Gary Lecain - USGS
Anita Barnett – NPS
OEPC – WASH

Letter Number 11

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Mississippi Field Office
6578 Dogwood View Parkway, Suite A Jackson, Mississippi 39213

May 8, 2013

2013-CPA-87

Ms. Margrett Boley
USDA
National Forests of Mississippi
200 South Lamar, Suite 500-N Jackson, Mississippi 39201

Dear Ms. Boley:

The Fish and Wildlife Service (Service) has reviewed the Proposed Forest Plan and associated Draft Environmental Impact Statement for the National Forests of Mississippi. We offer the following comments in accordance with provisions of the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 *et seq.),* and the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.).*

We commend your efforts to update the Forest Plan (Plan) which will guide management activities on the 1.2 million acres of national forest lands in Mississippi for the next 15 years. We appreciate the extensive collaboration that has gone into developing the Plan to date. We also strongly support the Plan's emphasis on native ecological systems and improving threatened and endangered species habitat, and its apparent reliance on adaptive management. However, while we are fully supportive of the vision of the National Forests of Mississippi as outlined in the Plan, in our review, we found it difficult to tie management of the Forests, over the next 15 years, directly to the status or conservation of endangered, threatened, or sensitive species. We also had trouble discerning a clear or defined adaptive management approach or model to relate their status to Forest Service activities. While more information on the status of endangered and threatened species is provided in the Draft Environmental Impact Statement (DEIS), as well some specific proposed actions in the alternatives (e.g., cooperative management units), overall, specifics on an adaptive management approach are absent.

We believe that this planning process provides a unique opportunity to: 1) ensure that many proposed or potential activities on Forest Service lands in Mississippi will not be likely to adversely affect federally listed species; 2) identify measures to mitigate for past and future actions that have, or will, adversely affect them; 3) improve the baseline status, and more importantly; 4) lead to the conservation (i.e., recovery) of the species on Forest Service lands. We believe that this can be done through developing a new Appendix for the Plan, and with only slight modification of the DEIS. Staff at the Mississippi Field Office is available to discuss and assist in this process, if you are interested in pursuing this.

Additional comments for your consideration:

General Comments

1. We support the restoration of the ecological function in the longleaf pine ecosystem and agree with restoring this system initially by transitioning to "high-function loblolly and slash pine phases". In many cases, thinning can be used, existing longleaf can be left in place, fire introduced, and ecological function can be achieved without the ground- and soil-disturbing effects of clear-cutting and re-planting. [Comment: 11-1]

2. We support the initiative to focus on inventory and restoration of ephemeral ponds and protection of stumps and stump holes. [Comment 11-2:]

3. Throughout the revised plan and associated documents, the common name of the Mississippi gopher frog needs to be changed to: dusky gopher frog and scientific name to: *Rana sevosa.* [Comment 11-3:]

4. Feral hogs have the potential to degrade habitat and destroy plant populations, such as those of the federally endangered Louisiana quillwort, and should be addressed in this Plan. [Comment 11-4:]

5. Forest Sensitive Species-We recommend that the Plan discuss non-federally listed rare species found in the National Forests of Mississippi such as the Camp Shelby Burrowing Crayfish or the Black Pine Snake. Again, staff in the Mississippi Field Office can assist in identifying these species of concern. [Comment 11-5:]

6. In April of2013, there was a confirmed sighting of the endangered Indiana Bat *(Myotis soda/is)* on the Holly Springs National Forest. We recommend the Plan be updated to include this new species. [Comment 11-6:]

Specific Comments

Comments on the Draft Revised Land and Resource Management Plan:

Section 2.3.1 Upland longleaf pine forest and woodland

1. p. 14: The "Desired Conditions for Upland Longleaf Pine Forests and Woodlands" includes the statement, "fire occurs at an interval of 1 to 3 years with approximately 40% of fires occurring in the growing season." However, on p. 45 under "Objectives for Upland Longleaf Pine Forests and Woodlands," there is the statement that "The estimated 251,000 acres of this fire-dependent ecosystem have received a prescribed bum return interval of 1 to 4 years, with approximately 40% of the burns conducted in the growing season for the first decade." We would like to see the Objectives match the Desired Conditions of burning every 1 to 3 years. [Comment 11-7:]

2. p. 14: In the box describing desired conditions for this forest type, fire frequency was described with 40% of fires occurring "in the growing season." For clarity, please define "growing season." [Comment 11-8:]

Section 2.4.1 Threatened and endangered species

3. p. 30, first paragraph: Dusky gopher frog populations may be stagnant to declining; however, you may want to mention the use of the newly restored pond (Pony Ranch Pond) as a new breeding site. In addition, I would say that the Mississippi sandhill crane population is slowly decreasing rather than increasing. [Comment 11-9:]

4. p. 30: The statement that "Louisiana quillwort populations are increasing and new populations are found regularly" needs to have some sort of documentation or citation to substantiate this claim. Also,

how is a determination made that a site is actually a new population and not a natural expansion of an existing population? [Comment 11-10:]

5. p. 30: The statement that "Pondberry appears to have stable populations, but they are not increasing" has no data or authorities cited to substantiate this claim. Our information indicates a decline in the USPS populations. [Comment 11-11:]

Section 3.3 Species Diversity

6. p. 58, first paragraph: Critical habitat was designated for the dusky gopher frog on June 12, 2012. This might be a good place in the revised plan to mention that critical habitat areas have been designated on the DeSoto National Forest (DNF). Shapefiles, clipped to just include the DNF areas, are attached. There are four areas within DNF that are designated critical habitat. These areas include habitat around the Glen's Pond and other associated ponds, habitat around Carr Bridge Road Pond, habitat around the Ashe Nursery ponds, and habitat around three ponds in the Mars Hill area of Perry County. One cooperative management unit has been created for the dusky gopher frog using a 2 km intersect with stands in the area of Glen's Pond. We do not have the shapefiles for this CMU, but based on our approximation, it appears it does not include the complete critical habitat unit around Glen's Pond. We would like to see CMUs for all of the areas designated as critical habitat; however, we understand that this may not be possible prior to finalizing the revised plan. [Comment 11-12:]

3.3.2 Mississippi Gopher Frog Cooperative Management Unit

7. p. 61, first paragraph under this section, second sentence: A memorandum of understanding (MOU) between the Forest Service, the Fish and Wildlife Service, and the Mississippi Department of Wildlife Fish (sic) (should be Fisheries) and Parks is mentioned as a guiding document in the management strategy for the frog on the DNF. However, we cannot find a signed MOU between these parties and do not believe such a document currently exists. [Comment 11-13:]

8. p. 61, first paragraph under this section, fourth sentence: In 2013, dusky gopher frogs bred at Pony Ranch Pond. These frogs are part of the Glen's Pond population, but this new site indicates the beginnings of the establishment of a metapopulation which was the intent of the management that has been on-going by the Forest Service on DNF. [Comment 11-14:]

9. p. 62, burn matrix, Table 5: At a gopher frog recovery meeting held in July of 2009, the burn matrix from 2008, as presented on this page, was updated. A pdf of this updated matrix is attached. [Comment 11-15:]

10. p. 85: There are specific recommendations for maintaining buffers around RCW colonies and black bear den sites. However, we could not find any conservation measures for activities near gopher tortoise burrows. The only mention was a blanket statement to "follow the habitat management strategies found in the most current USDI Fish and Wildlife Service Recovery Plan for each threatened and endangered species." We would like to see mention of the recommendation that a 25-foot buffer will be maintained around all known gopher tortoise burrows when utilizing heavy machinery. [Comment 11-16:]

Comments on the Draft Environmental Impact Statement:

3.5.3 Threatened and Endangered Species/Mississippi Gopher Frog

11. p. 71, Initial discussion under frog: This would be an appropriate place to have a more in depth description of the critical habitat designated on the DNF. [Comment 11-17:]

12. p. 72, Mississippi gopher frog responses to threats. Third paragraph, last sentence: Add "growing season" to sentence describing burning regime. Fourth paragraph: MOU is mentioned again. We are not aware of a signed MOU regarding dusky gopher frog management on the DNF. Fifth, sixth, and seventh paragraph: These paragraphs are duplicates of the first three paragraphs under the dusky gopher frog section. [Comment 11-18:]

13. p. 73, first paragraph: After second sentence, suggest adding something similar to this: "In 2013, a pond recently restored by the Forest Service and less than a mile from Glen's Pond was used as a breeding site." Also, a discussion of a management focus in the other 3 areas of critical habitat would fit here. [Comment 11-19:]

14. p. 73, Figure 10, CMU: The legend in this figure is not readable. The map in the figure would benefit from the addition of the CH units on the DNF. [Comment: 11-20]

15. p. 74, Mississippi Sandhill Crane Current Threats: Amend the third sentence and add an additional sentence to this paragraph as follows: "The wild flock has been slow to increase due to abnormally high mortality of nestlings and first-year birds. Population stability has been achieved only through the release of captive-bred chicks." [Comment 11-21:]

16. pp. 83-84, Pallid Sturgeon. Pallid sturgeon is no longer considered"...one of the rarest fish in North America." During the past decade, over 1,000 pallid sturgeon have been collected in the River, and telemetry studies find the species is utilizing numerous habitats along the river, above and below the mouth of the Yazoo. We can provide more information. [Comment 11-22:]

17. p. 233, under "Threatened and Endangered Species": The gopher tortoise is not listed as being associated with the species group "species dependent on fire to maintain habitat". A primary threat to the tortoise is habitat fragmentation/habitat modification, which often is the result of fire suppression. Fire is probably the most crucial element of maintaining quality tortoise habitat. [Comment 11-23:]

18. p. 234, Figure 77: Move this figure down the page so that it falls within the dusky gopher frog discussion. [Comment 11-24:]

19. p. 234, Section 4.5.1 Mississippi gopher frog effect and alternatives: The dusky gopher frog should be part of the "species dependent on fire to maintain habitat" group. Add group here, and add dusky gopher frog to appropriate table in Appendix G. [Comment 11-25:]

20. p. 235, Table 61: Update bum matrix to 2009 version, attached. [Comment 11-26:]

21. p. 235, second paragraph under this section, Last sentence, second word: Replace "banding" with "tagging". [Comment 11-27:]

22. p. 235, third paragraph under this section, second sentence: Replace "Mississippi Gopher Frog Group" with "Dusky Gopher Frog Recovery Team". [Comment 11-28:]

23. p. 236, Figure 78: Move figure down under discussion of Mississippi sandhill crane. [Comment 11-29:]

24. p. 236, section Mississippi gopher frog CMU alternatives and effects: This section is correct as Plan is currently written. However, if CMUs are added or modified, this paragraph will need to be amended. [Comment 11-30:]

25. p. 247, Section 4.5.9: Per Appendix G (Ecosystems and Species Diversity Report), Table G 71, (p. G-88), include "Species sensitive to hydrologic modification of wetlands" in the list of species group associations. [Comment 11-31:]

26. p. 276, Section Downed wood associates. first paragraph, last sentence: Last sentence seems incomplete. Stumps were removed in past, but need to present the current management practices. [Comment 11-32:]

27. pp. 276 and 277, Section Downed wood associates environmental effects: This section is duplicative of what appears under "Fire injury environmental effects." Also need to discuss downed wood effects. [Comment 11-33:]

28. p. 279, Section Species sensitive to fire injury environmental effects: This section is duplicative of that under downed wood discussion and appears to be a general discussion of forestry management. Suggest more focus on fire environmental effects. [Comment 11-34:]

APPENDIX G

29. p. G-9, Section Upland longleaf pine forest and woodland management strategy: It would be appropriate to discuss the specifics of what is meant by "growing season'' burning in this section. [Comment 11-35:]

30. p. G-61, Table G 42: Louisiana quillwort should not be listed as a pine flatwoods associate. The species occurs along low-order intermittent and perennial streams and their associated floodplain forests within Mississippi. [Comment 11-36:]

31. p. G-68, Table G 50: Louisiana quillwort should not be listed as a seeps, springs, and

seepage swamps associate. The species occurs along low-order intermittent and perennial streams and their associated floodplain forests within Mississippi. [Comment 11-36:]

32. pp. G-84-85, Table G69, Species dependent on fire to maintain habitat: Both the gopher tortoise and the dusky gopher frog are missing from this table and should be included. [Comment 11-37:]

33. p. G-84, Table G 69: Louisiana quillwort should not be listed as a species dependent on fire to maintain habitat. The species is dependent on periodic scouring floods to maintain its habitat. The species should be removed from this group. [Comment 11-38:]

34. pp. G102-103: The federally endangered *Isoetes louisianensis* (Louisiana quillwort) and *Lindera melissifolia* (pondberry) are species sensitive to canopy cover modifications and should be included here. Canopy modifications were cited as threats to these species in their listing documents and recovery plans. [Comment 11-39:]

35. p. G-151: Appendix G's Table G.7, "Threatened and endangered species removed from the National Forests in Mississippi list due to no known occurrence". Include an explanation why the species were removed from the list. For example, was the original locality information in error or was the species extirpated from the areas? [Comment 11-40:]

If you have questions, please contact David Felder at 601-321-1131, or for questions on certain species, contact one of the biologists below as appropriate:

Plants: Scott Wiggers, 601-364-6910
Invertebrates and Sturgeon: Paul Hartfield, 601-321-1125

Amphibians: Linda LaClaire, 601-321-1126
Reptiles: Matthew Hinderliter, 601-321-1132

We appreciate the opportunity to review and offer comments on the Proposed Forest Plan for the National Forests of Mississippi. We look forward to our continued collaboration with your office on the development of the Forest Plan.

Sincerely,

Stephen M. Ricks
Field Supervisor

JULY 2009 – RECOVERY MEETING Discussed changes to burn matrix

Goal is to reach target conditions without harming the MS Gopher Frog and move towards conducting growing season burning.

SUGGESTED BURN MATRIX Forest Service burn conditions** Use existing standards

TIMEFRAME	**CONDITION**	**BURN outside of drift fence**	**BURN inside fence and above area typically flooded during breeding season**	BURN inside of drift fence in area typically flooded during breeding season
BLOCKS A AND C				
ANYTIME	Adult Frogs in pond	NO	NO	**NO**
JANUARY - MARCH	Adult Frogs not in pond OR most (> 75%) frogs have left pond (>7 days since last movement at drift fence)	YES	YES	**NO**
APRIL - SEPTEMBER	Adult Frogs not in pond OR most (> 75%) frogs have left pond (>7 days since last movement at drift fence; could be either adults or metamorphs)	YES	YES	**YES**
MAY - JULY	Tadpoles are present in pond	NO	NO	**NO**
OCTOBER - DECEMBER	Adult Frogs not in pond	YES	YES	**NO**
BLOCKS B, D, & E				
ANYTIME	**No restrictions on burning**	**YES**	**----**	**----**

** Burn parameters to be defined by Forest Service

Letter Number 12

The Mississippi Chapter of The Nature Conservancy has reviewed the Proposed Forest Plan for the National Forests in Mississippi and has the following comments:

1. There is no mention of groundcover restoration/monitoring. Groundcover indicators provide a wealth of information regarding the measurement of conservation goals as they reveal management history and can be used at multiple scales. There are a suite of plant species that are less responsive to disturbance and a number of publications out there addressing this. We do understand these indicator species can vary between districts and even within districts. [Comment 12-1:]

2. Removing the gopher tortoise as a management indicator species: In Appendix F (Management Indicator Species), the justification for the removal of gopher tortoises as a management indicator species is that response to management takes a long time because they are a K-species. That is not necessarily true as gopher tortoises will start occupying younger stands of Longleaf pine forests as the ground cover conditions become favorable. Red cockaded woodpeckers require old growth longleaf pine stands and are not directly tied to groundcover as they rely on the insect species attracted to groundcover. Gopher tortoises feed directly on the groundcover and, in our opinion, are indeed indicators of management in terms of groundcover restoration goals at various restoration phases of Longleaf pine. [Comment 12-2:]

....a few supportive literature examples:

Kirkman, L.K. and R.J. Mitchell. 2006. Conservation management of Pinus palustris ecosystems from a landscape perspective. Applied Vegetation Science 9: 67-74.

Kirkman, L.K., K.L. Coffey, R.J. Mitchell and E.B. Moser. 2004. Ground Cover Recovery Patterns and Life-History Traits: Implications for Restoration Obstacles and Opportunities in a Species-Rich Savanna. Journal of Ecology 92: 409-421.

USFWS Gopher Tortoise Recovery Plan. (page 10, 2nd paragraph discusses gopher tortoise densities being highest in seedling/sapling stands. This is based on a unpublished data collected on the Conecuh Nat'l Forest)

Thank you for the opportunity to comment.

Becky Stowe

Terrestrial Program Manager

Letter Number 13

Dear Sirs:

Thank you for the opportunity to review and comment on the Proposed Forest Plan and associated Draft Environmental Impact Statement (DEIS) for the National Forests in Mississippi. As a forester, I am primarily interested in 1) how the National Forests will be managed long-term for the many benefits that we derive from these areas, and 2) how the National Forests can support the predominately rural counties in which they are located, as many counties struggle with high unemployment rates and economic challenges.

General comments:

- I support the Desired Alternative ("C") outlined in the DEIS. This seeks to restore natural forest ecosystems while increasing management above current levels. [Comment 13-1:]
- At the same time, I question whether significantly increased management can be accomplished in the face of budget and personnel restrictions alluded to in the Plan. [Comment 13-1:]
- I note that "81% of NF System in Mississippi is suitable for timber production." This is a reasonable balance that protects the many resources of our National Forests while allowing for a timber program that maintains forest health, aids local rural communities, and generates needed revenue for the US. [Comment 13-2:]
- Though beyond the scope of your request, and requiring Congressional changes, I would support a policy where a portion of the revenue generated from a District is returned to the District to support the many management activities required. [Comment 13-2:]

Specific comments:

- The product mix mentioned on page 140 of the Plan does not include pine poles. The DeSoto and Chickasawhay Districts in particular produce significant numbers of poles due to the large percentage of longleaf pine on these districts and access to pole markets. Pine poles have historically commanded a much better price than pine sawtimber, and this should be reflected in the analysis. [Comment 13-3:]
- Table 40 of the Plan (p. 162) presents an inventory of possible old-growth acreage, by district and community type, dated July 8, 2005. Less than 2 months later, Hurricane Katrina devastated forests in Mississippi, and the Plan acknowledged that the "DeSoto and Chickasawhay Ranger Districts took the brunt of Hurricane Katrina" (p. 170). As such, the acres presented for these Districts are suspect, particularly for the "River Floodplain Hardwood" type, as this type sustained greater damage than other forest types. I suggest a revision of the acres in the above 2 districts, as these numbers do not currently reflect the reality post-Katrina. [Comment 13-4:]
- According to the DEIS, the proposed alternative ("C") calls for harvesting 16% of net forest growth (or 25% based on the Oswalt et al., 1997 data). By the end of the 5th decade, according to the DEIS (p. 315), 82% of the forests will be in the 60+ age category. Such a high percentage in older age categories predisposes the trees to damage from a variety of factors including windstorms, ice storms, insects, diseases, and other mortality factors. A more balanced age class distribution would result in better forest health, without compromising amenity values we obtain from the forest. [Comment 13-5:]
- The cost/benefit analysis contained in the DEIS is suspect. Some data are "direct" impacts, and others likely contain "direct and indirect" impacts. Mixing these two data sources results in an incomplete and incomprehensible analysis. Further, no Discount Rate is given, and this is used in Net Present Value (NPV) calculations. Though I am not a forest economist, an independent review would help this section. [Comment 13-6:]

- Necessary activities such as invasive species control and prescribed fire are crucial to maintaining ecosystem health. In the future we will see greater challenges with invasive species, as well as challenges to our ability to use prescribed burning. [Comment 13-7:]
- The DEIS (p. 117) documents what can only be considered as wild fluctuations in the amount of timber harvested in Mississippi's National Forests over the past 20 years. This is not good for forest health or local communities. The Forest Service must have the ability to plan and conduct a timber harvest program that benefits forest health without compromising other important benefits from the forest. A stable program also benefits rural communities by providing jobs and income through forest health and restoration activities. [Comment 13-8:]
- I encourage the National Forests to identify specific opportunities where they can showcase forest management practices to both landowners and the interested public. Some of this already occurs, as the Chickasawhay Ranger District has the "Gavin Auto Tour" and "Managed and Unmanaged 40" demonstration areas. A specific recommendation is to implement demonstrations on how to convert from even-age to uneven-age management over time. I note on Table 14 of the Plan that there are no appreciable acres of uneven-age management proposed, and feel this is an opportunity to test such a system across Mississippi's National Forests. [Comment 13-9:]

I appreciate the significant time and effort required to develop the Plan. I encourage the Forest Service to revise as needed and implement this Plan as soon as is practical.

Sincerely,

Glenn Hughes

Letter Number 14

Here are my comments:

1. Need to consider adding Whiskey Creek Hills and Steve Hills as a special areas. Whiskey Creek Hills was originally considered for Wilderness Designation during RARE 1 Study. Need to reexamine Milky Creek area for special area designation also. Need to accelerate designations of existing proposed RNA's to designated through NEPA process. [Comment 14-1:]

2. Are heritage resources now being called cultural resources? [Comment: 14-2]

3. Revisit use of hydraulic fracturing for natural gas development in view of current controversy and new information regarding potential adverse effects on ground water. [Comment 14-3:]

4. Address silvicultural and economic soundness of restoring longleaf pine on Homochitto National Forest. Highly productive loblolly sites produce prolific natural seeding of loblolly defeating any attempts to restore longleaf regardless of herbicide use and prescribe burring. Focus on intensive thinning regimes to promote forest health here. [Comment 14-4:]

5. What happened to the featured species concept that was in the 1985 Plan? Typo in Table 63 (Southern). [Comment 14-5:]

6. Need to add Canadian thistle to list of non native invasive/noxious plants. [Comment: 14-6]

7. Are the standards and guides from 1985 Plan rolled over into this Plan? Are all 18 amendments to current planned rolled over into this proposed plan? [Comment 14-7:]

8. Since adequate funding and manpower is not available to do the necessary improvements for forest health, what direction will be given to the Districts to prioritize where and when compartments would be entered? I would like to see how the order of entry has changed from every compartment being entered every 10 years to what it will be in this proposed plan? [Comment 14-8:]

9. Need to accelerate resolution of claims and encroachments. Need to ensure all property lines are refurbished on regular maintenance schedule, including RNA and Wilderness boundaries. [Comment 14-9:]

10. Are all shortleaf stands to be regenerated to shortleaf on the DeSoto NF? Does longleaf restoration on these sites take priority? [Comment 14-10:]

11. Seems like the Forest Service could make an attempt to buy those mineral rights from the third party so those proposed wilderness areas inclusions can be designated wilderness on the Black Creek Wilderness. [Comment 14-11:]

12. Are there approved habitat management plans yet for gopher tortoise, gopher frog, rcw, and sandhill crane by the USFWS? [Comment: 14-12]

Robert Smistik

Letter Number 15

Re: Proposed Plan, Mississippi National Forests
Randy Miller

FEB 28 2013

Gentlemen,

I have had the opportunity to review the LRMP for the National Forests in Mississippi as outlined in your draft. After reviewing the draft and data, my choice for the proposed plan would be Alternative D, "an increased emphasis on restoration of historical forests".

Regardless of the final plan, below listed are my major concerns:

Old Growth strategy

Species Viability [help enhance red cockaded and Louisiana black bear habitats]

Recreational Management

Material Management [authorizes oil and gas leasing]

As I am a primary user of the Homochitto and DeSoto National Forests, I would agree that Alternative D is best for all Mississippi National Forests. [Comment 15-1:]

Respectfully,

Randy miller

Letter Number 16

FRANKLAN COUNTY BOARD OF SUPERVISORS
P. 0. Box 297 / 36 Main Street - Courthouse Square
Meadville, MS 39653
601-384-2330

May 3, 2013

National forests in Mississippi
Proposed Forest Plan
P. 0. Box 1919
Sacramento, CA 95812

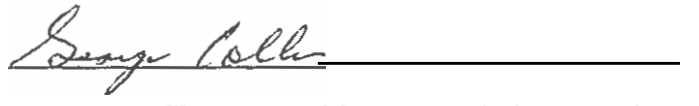
To Whom It May Concern:

Our local U. S. Forest Service personnel hosted a meeting on April 16, 2013, in which several county elected officials attended. We were notified of the comment period for the newly released Proposed Forest Plan for the Mississippi National Forests. By this letter, we are our voicing existing and ongoing comments and concerns related to the damages to county public roadways and infrastructure due to logging practices within the Homochitto National Forest. [Comment: 16-1]

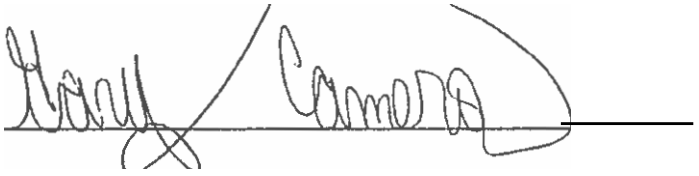
The draft EIS states that the USFS will be cutting 30% of the target in the Homochitto forest when it only encompasses 19% of the entire National Forest lands in Mississippi. We believe that the largest target area should be in the DeSoto/ Chickasawhay Districts where the Fish and Wildlife Service has declared these two districts as red-cockaded woodpecker recovery sites. [Comment 16-2:] The EIS has failed to identify the effects of the 30% target within the Homochitto National Forest. With the target area being approximately 39,000 acres, we do not need the aggressive timber cutting scheme that is planned for this area. [Comment 16-3:] The former plan shows the cutting in compartmental areas of approximately 1000 acres each which was to vary throughout the forest each year. The new directive has the units in 8,000 to10,000 acre areas which puts undue stress on our county's infrastructure including bridges, culverts, drainage areas and especially our roads since the cutting is in such consolidated areas. This, in turn, leads to burdens on the local tax payers in our small, rural county. We feel that the "old style" of timber management has worked well in the past and we are against the new EIS. [Comment 16-4:]

Please feel free to call us at the above number and we would welcome you to set up a time to meet with us at your earliest convenience to discuss these issues.

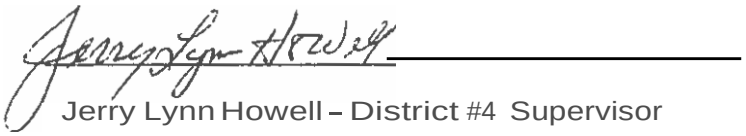
Sincerely,



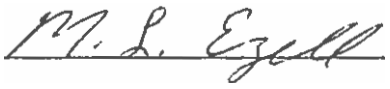
George Collins – President Board of Supervisors



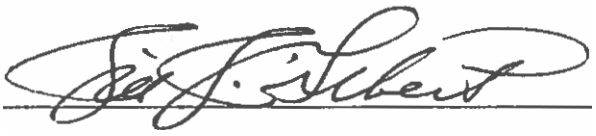
Gary Cameron – District #1 Supervisor



Jerry Lynn Howell – District #4 Supervisor



M. L. Ezell – District #5 Supervisor



Jill J. Gilbert, Chancery Clerk

Letter Number 17

May 3, 2013

National Forests in Mississippi
Proposed Forest Plan
P. 0. Box 1919
Sacramento, CA 95812

To Whom It May Concern:

Our local U. S. Forest Service personnel hosted a meeting on April 16, 2013, in which several county elected officials, as well as concerned citizens attended. We were notified of the comment period for the newly released Proposed Forest Plan for the Mississippi National Forests. By this letter, I am voicing my opinion concerning existing and ongoing comments and concerns related to the damages to county public roadways and infrastructure due to logging practices within the Homochitto National Forest. [Comment 17-1:]

The draft EIS states that the USFS will be cutting 30% of the target in the Homochitto Forest when it only encompasses 19% of the entire National Forest lands in Mississippi. I believe that the largest target area should be in the DeSoto/Chickasawhay Districts where the Fish and Wildlife Service has declared these two districts as red-cockaded woodpecker recovery sites. [Comment 17-1:] The EIS has failed to identify the effects of the 30% target within the Homochitto National Forest. [Comment: 17-2] With the target area being approximately 39,000 acres, I believe Franklin County does not need the aggressive timber cutting scheme that is planned for this area. [Comment 17-1:] The former plan shows the cutting in compartmental areas of approximately 1000 acres each which was to vary throughout the forest each year. The new directive has the units in 8,000 to 10,000 acre areas which puts undue stress on our county's infrastructure including bridges, culverts, drainage areas and especially our roads since the cutting is in such consolidated areas. This, in turn, leads to burdens on the local taxpayers in our small, rural county. I feel that the "old style" of timber management has worked well in the past and I am against the new EIS. [Comment 17-3:]

Sincerely,

Charles Chapman

Letter Number 18

Dear Ken (and others):

I've skimmed through most of the draft forest plan. I commend the writers on the hard work that went into this. I have no serious objections to most of it. However, I spent most of my time reviewing the recommendations for the upland communities in north Mississippi, and I feel obligated to raise some concerns. I've spent the past 15 years studying historical communities and have initiated ecological restoration projects in what is described here as Northern Dry Upland Hardwood Forest and Shortleaf Pine-Oak Forest and Woodland. I devote most of my comments to these ecosystems because I believe these are the most misunderstood and mismanaged ecosystems in Mississippi.

Part of the difficulty I have with the desired conditions of these ecosystems and the recommended management is the apparent insistence on using NatureServe to provide the reference descriptions for the ecosystems. I voiced this concern at the experts meetings in Jackson. I have no problem with NatureServe, per se, and the work it does, but in the drafting of this plan, there is a contradiction. The National Forests in Mississippi (NFM) claims to be interested in restoring approximate historical community structure and composition, but NatureServe describes and categorizes communities AS THEY OCCUR TODAY. As a result, the description of, say, the Northern Dry Upland Hardwood Forest, is a description of an ecosystem that has developed in response to fire exclusion in the 20th century. I don't think it is workable to try to have it both ways: i.e., to restore historic composition and fire regimes, but to use an artifact of modern fire suppression as your reference.

I have no objection to management aimed at achieving the desired conditions of the Northern Dry Upland Forest, as long as there is a stated recognition that the NFM is choosing to make this ecosystem an exception to the general rule that the restoration of historic fire regimes and associated community structure and composition is the desired objective of management. In other words, the NFM should state that it sees value in restoring the historic fire regimes and associated community structure and composition to longleaf pine ecosystems, shortleaf pine-oak woodlands, prairies, and wet savannas and perhaps other fire-dependent ecosystems, but not to Northern Dry Upland Forest. It should then state what the values of fire restoration are and then clearly explain why an exception is being made for Northern Dry Upland Forest. I anticipate that some will respond to my criticisms by saying that the NFM is interested in restoring fire to these ecosystems. My response is that, unless an appropriate and historically relevant fire regime is included in a comprehensive plan to restore Upland Open Oak Woodlands (notice I said Open Woodlands, not Forests), implementing frequent fire will not be an effective ecosystem restoration tool and could do more harm than good. For example, in the description of desired conditions of Northern Dry Upland Forest, no thought seems to have been given to the possibility that some of those species that apparently *require* closed-canopy conditions (conditions that developed under prolonged fire suppression) may not be able to tolerate the proposed prescribed burning frequency. I suspect that these species either can tolerate frequent fire and don't *require* closed canopies or they require closed canopies and cannot tolerate frequent fire. If the latter is true, then the NFM needs to consider the possibility that these species have benefited from fire exclusion and were not common components of upland ecosystems in north Mississippi historically, prior to fire exclusion in the 20th century. It also needs to consider which species might be losing out because of the NFM's refusal to restore open woodlands in these areas (e.g., Northern Bobwhite, Red-headed Woodpecker). I don't mean to say that the desired conditions of Northern Dry Upland Forests should not be one management goal. I'm just arguing that restoration of open oak woodlands in areas currently dominated by dry and midslope upland hardwood forest should be an additional and alternative management goal. The desired conditions should include more open canopies and a more productive and diverse groundcover vegetation of greater value to declining or near-threatened wildlife species of concern such as Northern Bobwhite and Red-headed Woodpecker.

My comments on specific passages follow:

Northern Dry Upland Hardwood Forest Desired Ecological Condition

Overstories are typically dominated by upland oaks (post, southern red, blackjack, and white)

Why not black oak? It was far more common historically in dry uplands than was white oak. Scarlet oak was also common. [Comment: 18-15]

In the NE portion of the Holly Springs District, there is also a unique upland assemblage dominated by rock chestnut oak with midstory dominated by sourwood.

and hickories (mockernut and sand). Often loblolly

In north Mississippi, there is little or no convincing evidence that loblolly pine was common in dry upland "hardwood" forests historically. I would like to see a citation for this. Hilgard (1860) makes no mention of loblolly being in dry upland areas in north Mississippi.

and shortleaf pines are intermingled with hardwoods. Midstories are sparse and typically dominated by dogwood, persimmon, and other hardwoods. Understories are also sparse and dominated by seedling hardwoods, shrubs and forbs.

Historically, this was not true of the dry upland woodlands. They contained a relatively productive and diverse groundcover of late-season grasses (Schizachyrium scoparium, Chasmanthium sessiliflorum), panic grasses, perennial sunflowers, and legumes (primarily Lespedeza and Desmodium). See before and after restoration photo at Strawberry Plains.

This system supports populations of associated rare species, including the worm-eating warbler and the yellow lady's slipper. Where suitable site conditions exist, several rare habitats are typically imbedded within this larger system including rock outcrops, seeps, springs, and depression pondshores.

Ages of diagnostic tree species are diverse, providing a sustained availability of forests across age classes, from regeneration to old-growth. Regenerating, young, and mid-aged forests may occur in small scattered patches (less than 2 acres), but typically occur in even-aged patches of 3-5 acres. Regenerating forests (0-10 years old) comprise no more than 7 percent of system acreage. Individual and small patches of snags and live overstory trees provide diversity to the vegetation structure within the regenerating forest and woodlands, and in some areas snags and live overstory trees form a two-aged forest. Mature forest (60 years old or older) comprises approximately 70 percent of system acreage, which includes 10 percent of system acreage in old-growth. Forests are closed, with canopy closure in mature examples of this system being greater than 80 percent.

Is this the desired canopy closure? If so, why? Contrary to what is being suggested here, fire-maintained open oak woodlands (with canopy coverage of 50 to 80%) were MUCH more common historically in this landscape than were the dry upland hardwood forests described here. In fact, most of the dry upland forests described here are artifacts of fire suppression. That should be made clear, in my opinion, namely that NFM desires to prolong the legacy of fire exclusion in this system (presumably to benefit species such as Worm-eating Warbler). If it is in fact true that Worm-eating Warblers require closed canopy upland forests, then I would like to remind folks that Northern Bobwhite and Red-headed Woodpecker require more open canopies and are associated with oak woodlands and savannas. They have IUCN listings as "Near Threatened." WEW's IUCN listing is "Least Concern."

Low intensity fire creeps into this system from the surrounding upland community and occurs on an average return interval of 1-6 years.

Which "surrounding uplands" are being referred to here? Many dry upland forests will be located on ridges.

Oak Woodland Restoration at Strawberry Plains Audubon Center

Photo: S. Brewer

Pre-treatment - July 2003 July 2010

Northern Dry Upland Hardwood Forest Management Strategy

Forest strategies for restoring, maintaining, and enhancing the northern dry upland hardwood forests should emphasize restoring the appropriate fire regime

In my opinion, priority (or at least consideration) should be given to restoring open oak woodlands in those areas currently designated as Northern Dry Upland Forests. The appropriate fire regime in my opinion is the same as for the Shortleaf Pine-Oak Woodlands, not low-intensity fires as mentioned above.

and using thinnings, gap creation, and irregular even-aged regeneration activities. Return of relative abundance to approach historical levels is a longterm goal for upland hardwood forests on the National Forests in Mississippi, [Comment 18-16:]

What does this mean? Are you talking about converting pine plantations to upland forests or are you talking about restoring upland forests that have experienced prolonged fire suppression to fire-maintained open woodlands? If the latter, then I think it is an opportunity missed. The decision not to restore open oak woodlands in north Mississippi is at odds with what I've seen happening at the state level in Arkansas, Tennessee, southern Missouri, Kentucky, and southern Illinois (and even in Mississippi, in regard to what John Gruchy with MS DWFP is doing).

but not one that will be immediately implemented given current program levels and competing needs.

What are the competing needs? Why not explicitly state these?

Tools such as stewardship programs and collaboration with partners offer opportunities to foster upland hardwood forest and woodland restoration.

Desired Conditions for Northern Mesic Hardwood Forest

Can someone tell me where these communities exist in northern Mississippi in Holly Springs National Forest? I have seen them on steep loess bluffs near Grenada and Enid Lake and in the Fall Line Hills in Tishomingo County (both fire protected), but I have not seen them in Holly Springs National Forest. Historically, in the loess plains (not to be confused with loess bluffs) and in the Eocene sandy-loam coastal plain areas that comprise most of HSNF, fire-tolerant oaks and shortleaf pines and to some extent hickories dominated the landscape all the way down to stream bottoms. Yellow poplar and beech were more or less non-existent. The Eocene sandy slopes and lower slopes are also where American Chestnut most commonly occurred in this region. I assume that its restoration is not under consideration.

Overstories are typically dominated by hardwoods, such as beech, white oak, cherry-bark oak, and southern magnolia.

If by southern magnolia you mean Magnolia grandiflora, I should point out that this species is not native to northern Mississippi. In fact, it is invasive in Bailey Woods in Oxford.

Mixed loblolly pine-hardwood conditions may exist within this system in the southern portion of the range. Subcanopies are more or less open and typically contain magnolia, hornbeam, yellow poplar, red maple, and flowering dogwood. Shrubs include red buckeye, switch cane, witch hazel, and deciduous holly. The forest floor typically has a rich organic layer with abundant leaf litter. This system supports populations of associated uncommon species, including Webster's salamander, American ginseng, and Turk's-cap lily. Several rare communities are typically embedded within this larger system including rock outcrops, seeps, and springs. Where site conditions are appropriate, these communities are present and functioning within this larger system. This system is dominated by mature forest and woodland (60 years old or older). A network of well-distributed old growth

Old growth? Where?

is present. Early-seral components exist in sufficient quantities to sustain this system over time. Forests are typically closed, with canopy closure in mature examples of this system being greater than 80 percent. Low-intensity fire creeps into this system from the surrounding upland community and occurs at an interval of 1 to 6 years.

Desired Conditions for Shortleaf Pine-Oak Forest and Woodland

Overstories are typically dominated by shortleaf pine with a mixture of upland hardwoods

Historically, prior to fire exclusion, these "hardwoods" would have mostly been oaks, with perhaps some sand hickory. They were the same species of oaks as dominated the upland hardwoods communities in north Mississippi, the most common being black jack, but also including lots of black oak, post oak, southern red oak, and scarlet oak. Unlike today, white oak was a relatively minor component and was more common in hollows and near seeps, springs, and intermittent streams.

and other yellow pines. Midstories of oaks, hickories, sweetgum, yellow poplar, maples, and blackgum are sparse. Understories are dominated by dense growth of grasses and forbs. This system supports populations of associated species, including Bachman's sparrow and the northern bob-white. Several rare communities are typically embedded within this larger system including rock outcrops; seeps, springs, and seepage swamps, and ephemeral ponds and emergent wetlands. Where site conditions are appropriate,

these communities are present and functioning within the larger system. This system is dominated by mature forest and woodland (60 years old or older). A network of well-distributed old growth is present. Early seral components exist in sufficient quantities to sustain this system over time. Forests and woodlands are open to very open, with canopy closure in mature examples of this system being less than 80 percent. Fire occurs at an interval of 1 to 3 years with approximately 40 percent of fires occurring in the growing season.

Perhaps need to define growing season.

From: Board_of_Directors_MSEPPC <klgordon@fs.fed.us>

Date: Tue, 5 Feb 2013 17:11:03 +0000

To: Pyro Maniac < @olemiss.edu>

Subject: RE: Link to Draft MS revised LRMP and EIS

Steve,

Thank you for your comments. I appreciate the time it took for you to do this. One comment that I would make is that HSNF and TNF are both in North MS and HSNF is less known (to many) and some of the generalizations you cite may be influenced by the better known? TNF. Your points are well made and, I think, can be incorporated a revised document. As we get further into the process, I may be back in touch to compare our fixes to your thoughts.

From: Steve Brewer [mailto: @olemiss.edu]

Sent: Tuesday, February 05, 2013 12:05 PM

To: Gordon, Kenneth L -FS

Subject: Re: Link to Draft MS revised LRMP and EIS

Ken,

Thanks for your reply and comments. I admit that I was mainly thinking of HSNF. I am aware that some of the upland hardwood forests in Tombigbee occur on more calcareous substrates and thus could have a more mesophytic character. However, my reading of Hilgard indicates that most upland communities that were not prairies in and around present-day TNF were either open oak woodlands or open pine oak woodlands (where pines were mostly shortleaf and maybe some loblolly). If historical conditions are being used a benchmark for management and restoration, then I think that it is reasonable to assume that closed-canopy conditions in upland areas (with the exception of steep ravines and bluffs) were the exception rather than the rule, even in TNF. Again, I'm not saying that Northern Dry Upland Forests should not be a management goal, just that we should be aware of the historical conditions and take those into account when defining desired conditions.

Best,

Steve

J. Stephen Brewer
Professor
Department of Biology

PO Box 1848
University of Mississippi
University, Mississippi 38677-1848
Brewer web page -
FAX - 662-915-5144 Phone - 662-915-1077

From: Board_of_Directors_MSEPPC <klgordon@fs.fed.us>

Date: Tue, 5 Feb 2013 21:04:17 +0000

To: Pyro Maniac <@olemiss.edu>

Subject: RE: Link to Draft MS revised LRMP and EIS

I went back and downloaded the current version of NatureServe's description of the Northern Dry Upland Hardwood Forest. I am struck by how often the lack of knowledge is mentioned. Maybe there should be a general statement for ALL natural communities that species descriptions, etc are the best available and they often describe present conditions more than historic. But what historic condition? Ice-age? Before European settlement? How far back can your tree data push back time? What time frame is your description accurate? Our problem was that we needed a classification system that would cover ALL of Mississippi. NatureServe's classification while not perfect came the closest to meeting that need. Your work on HNF is not replicated elsewhere in the state (to my knowledge). Confusing and challenging!

Again, thanks for your input.

From: Steve Brewer [mailto:@olemiss.edu]

Sent: Wednesday, February 06, 2013 8:13 AM

To: Gordon, Kenneth L -FS

Subject: Re: Link to Draft MS revised LRMP and EIS

Ken,

I don't want to take up much more of your time, but I would like to respond. The very same questions you ask could be asked of longleaf pine ecosystems. Why are open, fire-maintained savannas or woodlands better than thickets choked with yaupon and hardwoods? Is restoring an approximation of what Harper saw in the early 1900s adequate? Why not an earlier benchmark? No one is asking these questions of longleaf systems because we in Mississippi have experienced some success in using fire and thinning off-site species to achieve positive results with regard to preserving biodiversity, including T&E and rare species, in longleaf systems. We've not concerned ourselves with the precise date of the benchmark for restoration, have we?

I am asking that the same consideration be given to upland hardwood communities in northern Mississippi. People in the Midwest are ahead of us on this issue because they don't have a lot of upland pine or bottomland hardwoods and therefore are not caught up in this false dichotomy of pines need fire, but hardwoods don't (need much). They speak of their oak woodlands and savannas more or less the same way we talk about longleaf pine. In fact, NatureServe does have descriptions for oak woodlands and savannas. It's just that it has not recognized them as being appropriate references for northern Mississippi. Nobody does. That is because fire exclusion has been so complete that there are essentially no open oak

woodlands left in Mississippi. As far as I know, I am about the only person who has bothered to investigate this.

Ultimately, I hope we all can agree that desired conditions should be based at least in part on what will best preserve biodiversity. My experience with the restoration projects at Strawberry Plains Audubon Center and at the Tallahatchie Experimental Forest is that there is a significant net benefit in terms of plant diversity to reducing off-site tree species and implementing fire regimes comparable to those used in longleaf pine ecosystems and oak savannas. Studies in similar habitats in adjoining states have shown similar responses, not just for plants but also for small mammals, birds, most arthropods, and reptiles. I honestly don't care whether this is considered natural or "correct" historically. The results in terms of biodiversity responses speak for themselves. These upland hardwood communities are not filled with trilliums and NEVER will be. Rather, they have a lot of suppressed and non-flowering helianthuses and coreopses and seed banks of lespedezas and other open woodland indicators, presumably waiting for the canopy to be opened up and to be burned. The few shade-tolerant mesophytic herbs that are present (e.g., green dragon, christmas fern, false solomon's seal) have responded POSITIVELY (or at least not negatively) to opening the canopy and burning. Once the canopy was opened up and we started burning at Tallahatchie Experimental Forest (2010), we started seeing and hearing the calls of bobwhites (for the first time since I'd been working there (1998)).

For these reasons, I suggest that open woodlands be ONE of the desired conditions in areas currently designated as being appropriate for Northern Dry Upland Hardwood Forests. [Comment 18-16:]

Thanks for humoring me.

Steve

Letter Number 19

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

June 20, 2013

Mr. Jeff Long
Forest Plan Revision Team Leader
National Forests in Mississippi
200 S. Lamar St., Suite 5OO-N
Jackson, MS 39201

RE: EPA Comments on the Draft Environmental Impact Statement (DEIS) for the Revised Land and Resource Management Plan National Forests in Mississippi. CEQ#: 20130021.

Dear Mr. Long:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) reviewed the Draft Revised Land and Resource Management Plan (LRMP) for National Forests in Mississippi and the associated Draft Environmental Impact Statement (DEIS). The land and resource management plan is a revision to the Forest Service's 1985 Forest Plan.

The National Forests in Mississippi encompass 1.2 million acres ranging from pine forests in the Gulf Coastal Plain to Upland Hardwoods in Northern Mississippi. The DEIS analyzes the Forest Service's proposal to manage six National Forests in Mississippi for the next 10 to 15 years. The current plan "incorporates new information, evolving issues and trends, accounts for changes in national policies and directions and updated views from the public and other stakeholder groups. The intent of the plan is to reflect changing needs and values of the public while focusing on sustainable management of the National Forest System Lands for the Future. The forests in the revised plan include: Bienville National Forest; Chickasawhay Ranger District of the DeSoto National Forest; DeSoto Ranger District of the DeSoto National Forest; Delta National Forest; Holly Springs National Forest; Homochitto National Forest; and Tombigbee National Forest.

EPA appreciates the Forest Service's consideration and evaluation of significant amounts of information and input during the preparation of the revised LMRP. The LMRP proposes Goals and Desired Conditions, Objectives, Standards and Guidelines, and Monitoring and Evaluation for the various revision topics, and allocates land to designated Management Areas on 1.2 million acres of national forest land in Mississippi to guide Forest management. We recognize that there are challenges involved in national forest management including; the complexities associated with the LRMP revision topics; statutory and regulatory requirements; and mixed-land ownership patterns. In addition, we acknowledge the Forest Service's effort to involve the public in land management decisions. The proposed action not only updates the goals and desired conditions, objectives, standards and guidelines, and monitoring requirements. It also includes designations for 18 new Special Areas. The new management direction is focused on restoring natural resources and natural processes and creating and maintaining diverse wildlife habitats.

The DEIS addresses the following issues: (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; (I0) Special Area Designations; (11) Land Use and Ownership; (12) Climate Change; (13) Minerals Management; and (14) Economic Benefits. EPA's comments include a review of the alternatives, environmental issues and ratings of both the environmental impact of the proposed action and the adequacy of the DEIS.

Five alternatives (A, B, C, D and E) are evaluated in the revision of the Land and Resource Management Plan (LRMP or Forest Plan) DEIS for the National Forests in Mississippi. Alternative A is the custodial management alternative which promotes minimal intervention by active management. Alternative B represents no change from the current LRMP. Alternative C is the preferred alternative and is the foundation for the Proposed Plan. Alternative D accelerates the restoration of historical forest conditions and Alternative E emphasizes improved forest health. EPA supports the identification of a preferred alternative in the DEIS.

EPA appreciates the comparison of alternatives description summary. According to the DEIS, the desired conditions of the ecosystem-based management areas do not vary under any of the alternatives considered. However, the rate that these conditions will be achieved and the actions required were the key differences. Alternative A will restore the fewest acres of native ecosystems during the life of the plan. This plan would favor hardwood components. Alternatives Band C assume current funding levels, but Alternative C places more emphasis on the integration of restoration efforts (pg 24). Alternative D results in an increase in the rate and acreage restored over the life of the plan. Alternative E further increases acreage restored as a result of thinning out more acres of forest resulting in improved forest health and resiliency. While Alternatives D and E appear to maximize the acreage restoration efforts, the DEIS indicates that additional funding would be needed to achieve these results.

EPA recommends management of National Forests place emphasis on sustaining the ecological values of healthy forests. This should include: Protection of water quality and yield, sensitive groundwater recharge areas, and undisturbed headwaters of streams and public drinking water supplies. Greater attention to the adverse impacts of logging roads and the value of undisturbed buffer zones along streams and rivers and the designation of wild and scenic rivers. Soil quality maintenance and nutrient stocks that hold the key to current and future forest productivity should also remain a priority. Conservation of forest biodiversity by reducing forest fragmentation (as a result of clearcuts and roads), avoiding harvest in vulnerable areas such as hardwood or old growth stands and riparian zones, and restoring natural structural complexity to cutover sites. [Comment 19-15:]

EPA commends the Forest Service on its attempt to identify and address issues such as climate change and invasive species such as cogan grass and kudzu which are threats to native species, development and population growth, changes in recreational patterns, including the use of off road/highway vehicles and land ownership patterns (interspersion of the National Forests with private homes) making consistent best management practices challenging, adaptive management plan to address changing conditions.

EPA understands the need for multiple-use activities and supports management of National Forests that place less emphasis on traditional harvesting and other consumptive uses (e.g., mining) and a greater emphasis on recreation and ecosystem enhancement. EPA rates this document EC-I Environmental Concerns and no additional information requested See EPA Ratings Enclosure). We have concerns about the potential biological impacts from these actions including stream sedimentation, loss of habitat, reduction of biodiversity, and species impacts.

We appreciate the opportunity to review the proposed action and appreciate the revised agency review schedule based on the regional receipt date of the document. Please contact Ntale Kajumba at 404 562-9620 or Ken Clark at (404) 562-8282, if you have any questions on our comments. When the FEIS is available for review, please send a minimum of one hard copy and one CD to EPA Region 4 for review to the address above.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Environmental Accountability
Enclosure: Summary of EPA Rating System
Detailed Comments and Articles

Detailed EPA Comments on Revised Land and Resource Management Plan National Forests in Mississippi DEIS.

ECOSYSTEM RESTORATION METHODS

EPA recommended that future forest land and resource management plan DEIS include more quantitative evaluation. One method for quantitative evaluating ecosystem restoration includes that of environmental accounting (see Odum, H.T. (1996) Environmental Accounting: Emergy and Environmental Decision Making, Wiley, U.S.A). Environmental accounting utilizes emergy principles to evaluate all of the processes in an ecological system by back calculating the solar energy that it took to get to an equilibrium state for the processes. The value is in solar emjoules and because all of the processes are calculated using the same metric, it is feasible to value all of the processes and relationships.

We have attached and/or referenced three other documents for your future consideration, Assessing environmental costs and impacts o[jorest1y activities: A multi-method approach to environmental accounting by Elvira Buonocorea, Tiina Hayhaa, Alessandro Palettob, Pier Paolo Franzesea, Valuing Forest Ecosystem Services In Maryland And Suggesting Fair Payment Using The Principles OJ Systems Ecology and Environmental Accounting OJ Natural Capital and Environmental Services OJ The Us National Forest System by Elliott Campbell, 2008. For more information on energy analysis contact Dan Campbell at campbell.dan@epa.gov. [Comment 19-5:]

FOREST HEALTH AND PROTECTION

According to the DEIS, the three most important forest health issues for the National Forests in Mississippi are non-native invasive species, southern pine beetles and the need to improve old- growth. Overall forest health will be positively influenced by Alternatives C, D and E while Alternative A will result in the deterioration of the overall forest-wide forest health. The overall strategy for achieving healthy forests involves using a combination of vegetation management practices and prescribed burning to restore and maintain native ecosystems. The vegetative management emphasis is on thinning; converting loblolly and slash pine stands that are not on appropriate sites to longleaf and shortleaf pine forests; and restoring rare communities and old growth; which should improve native species diversity and resilience of ecological communities to non-native invasive species, disease and insect outbreaks, extreme weather disturbances associated with climate change, and other stressors. EPA notes that alternatives C-E, with implementation of best management practices, would appear to be the best approach for ecosystem restoration. [Comment 19-6:]

FIRE MANAGEMENT AND AIR QUALITY.

The activity most likely to affect air quality is prescribed burning. The DEIS indicates that while Alternatives C, D, and E will provide the highest level of hazardous fuels reduction and ecological restoration and maintenance; it will also result in 220,000; 240,000 and 251,000 acres of prescribed fires, respectively. Alternative B, at an average annual prescribed fire program of 190,000 acres, will contribute to fuels management and ecological restoration, but will probably relegate some restoration of rare ecological communities and control of non-native invasive plant species to occurrences embedded in large and landscape bums as has been done in the past with less emphasis on growing season burning. Alternative A will restrict the prescribed fires to four districts involving 121,000 acres.

Recommendation: EPA recommends that the Forest Service continue to comply with the federal and state guidelines associated with prescribed bums. EPA notes that Alternatives A and B will result in the less air quality impacts in the short-term. While Alternatives C, D, and E will result in the greatest hazardous fuels reduction and ecological restoration and maintenance, they will also contribute to the greater air quality impact. Increased prescribed burning during the growing season will result in more particulate

matter and ozone formation. However, according to the DEIS the increase is not expected to affect the attainment of federal and state air quality standards. [Comment 19-7:]

WATER QUALITY

According to the DEIS, forest management activities are not anticipated to substantially or permanently impair water quality nor result in measurable changes to overall watershed condition ranking. The implement of mitigation measures, such as use of best management practices (BMP's) and adherence to forest standards and guidelines are proposed. Nevertheless, timber harvesting in forests will result in some soil and water impacts associated erosion, increased sedimentation, and reduction of water quality.

Recommendations: EPA supports the effective use of BMPs and adherence to forest standards and guideline for water quality. We recommend reducing the nonpoint source pollution of surface and ground waters that can result from forestry activities. These activities include but are not limited to:

• Tracking the implementation of best management practices (BMPs) used to control nonpoint source pollution generated by forestry practices.

• Developing water-quality monitoring plans to evaluate the effectiveness of forestry

BMPs in meeting water-quality goals or standards.

• Design of monitoring projects and the selection of variables and methods to correlate BMP implementation with changes in stream water quality. Providing information on methods for sample site selection, sample size estimation, sampling, and result evaluation and presentation. The focus is to develop statistical approaches needed to collect and analyze data that are accurate and defensible.

• EPA supports efforts to implement the nonpoint source (NPS) total maximum daily load (TMDL) program. Nonpoint source TMDLs and watershed-based plans designed to implement the NPS TMDLs, provide the necessary link between actions on the ground and the water quality results to be achieved.

• EPA continues to support planning at the landscape level to address broader ecological concerns such as biodiversity, watershed maintenance and restoration, and forest fragmentation.

• EPA recommends that ecological and other environmental values should be the primary, driving factors in the identification, protection, and management of roadless areas in the National Forests. [Comment 19-8:]

SOILS

According to the DEIS, implementation of the best management practices, proper mitigation measures, and monitoring will result in minimal soil effects for all alternatives. The cumulative effects of management actions over time are not expected to reduce soil productivity. Mitigation measures for management activities such as timber harvesting, site preparation and prescribed burning should help maintain the litter layer in place, or replace the litter layer on exposed soils by seeding and fertilization and impacts associated with any one treatment should be recovered within three years.

Recommendations: EPA recommends commitments to best management plan, mitigation and monitoring should be documented in a summary tracking form of project commitments. [Comment 19-9:]

CLIMATE CHANGE

The previous forest plan did not address the increasing weather variability and climate change projected for the future. These issues are expected to continue to grow over the life of the revised forest plan.

According to the DEIS, the key factors expected to affect Mississippi's Forests in the near term (10-15 years) include an increase in extreme weather events such as hurricanes, heat waves, droughts, tornadoes, floods, and lightning storms. Previous storms such as Hurricane Katrina resulted in damage to all of the National forests in MS including 300,000 acres of timber damage, and high winds and downed trees, blocked roads, closed trails, facilities and recreation site damage, and red-cockaded woodpecker tree damage and cluster loss.

The DEIS includes strategies that address the effects of increasing weather disturbances and responding to anticipated climate changes. These strategies are incorporated into the alternatives and 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.

National forests can play an important role in both mitigating and adapting to climate change. Mitigation measures focus on strategies such as carbon sequestration by natural systems, ways to increase carbon stored in wood products, ways to provide renewable energy from woody biomass to reduce fossil fuel consumption, and ways to reduce environmental footprints. Adaptation measures address ways to maintain forest health, diversity, productivity, and resilience under uncertain future conditions.

Recommendation: The DEIS indicates that the Forest Service's research activities are expected to help both public and private land managers better understand changing conditions and determine appropriate management approaches for both adaptation and mitigation. EPA notes that by restoring native longleaf pine where loblolly and shortleaf pine currently exist, Alternatives C, D and E would result in a national forest less vulnerable to the effects of climate change than Alternative A. [Comment: 19-10]

MINERALS MANAGEMENT

An oil and gas leasing decision authorized lands on the National Forests in Mississippi to be available for Federal oil and gas leasing. The alternatives in the DEIS include the 20 I 0 oil and gas leasing decision as part of an ongoing management direction. The only exceptions to the decision are congressionally designated wilderness areas and the deferred Sandy Creek RARE II Further Study Area. This EIS addresses the decision to make oil and gas leasing available on the Sandy Creek. AREA 11 study area. The DEIS indicates that Alternatives A and B would not allow oil and gas leasing in the Sandy Creek RARE II study area. Alternatives C, D, and E would permit oil and gas leasing in the Sandy Creek RARE II study area. However, certain restrictions associated with the 2001 Roadless Area Conservation Rule apply including no new road construction permits in the Sandy Creek RARE II study area;

Recommendation: EPA supports restrictions on new roadway construction in the Sandy Creek RARE II study area and protecting sensitive natural resources. [Comment 19-11:]

INFRASTRUCTURE/ROADS

The effect of vegetation management which varies by alternative on infrastructure is that alternatives C, D and E which have higher levels of timber harvests will provide higher levels of funding to upgrade and maintain existing roads. Alternative A, having a minimal level of timber harvest, would provide less funding for road maintenance. Because there is very little need for new road construction under any alternative, road infrastructure is expected to have little impact on other resources based on alternative. However, road maintenance and reconstruction would vary by alternative with greater need for these activities as vegetation management activities increase from alternative A through E. [Comment 19-12:]

ENVIRONMENTAL JUSTICE

EPA notes that the Environmental Justice Assessment included demographic information regarding low-income and minority populations. The DEIS indicates that benefits would accrue to all segments of the population and no disproportionate negative environmental or health impacts are anticipated. We also note that the DEIS indicates that no segments of the population identified that depend on subsistence consumption of fish, wildlife, or vegetation within the planning area.

Recommendation: The EJ analysis should indicate the efforts made to identify subsistence consumption within the planning area that targeted low-income and minority populations and summarize any EJ concerns raised during the public engagement process, particularly in those areas that experience higher minority and low-income populations. [Comment 19-13:]

FRAGMENTATION

Extensive clear cutting has resulted in the fragmentation of many forested ecosystems into smaller patches that have more forest edge exposed to open, cutover habitats (Harris 1984). The effects of such fragmentation on forest remnants include changes in the microclimate (Chen et al. 1995), in species composition, and in species behavior. Changes in species composition may include loss of some species as a result of unsuitable forest microenvironment competitive interactions with species at the forest edge, or insufficient total foraging habitat. The change in microclimate at the forest edge may also affect seed dispersal, movement of flying insects, decomposition rates, and size of plant and animal populations.

Recommendation: EPA recommends forest managers examine the effects of fragmentation on a species-by species basis with emphasis placed on threatened and endangered species and also "keystones" species that play an important role in an ecosystem relative to their abundance and whose removal has large ripple effects on other plants and animals as well as on ecological processes. To reduce the impact of timber harvesting on biodiversity, EPA recommends forest management consider the mosaic of forest patches on the landscape and the connectedness of habitat for forest species in planning future cuts. [Comment 19-14:]

Environmental Impact Statement (EIS) Rating System Criteria

EPA has developed a set of criteria for rating draft EISs. The rating system provides a basis upon which EPA makes recommendations to the lead agency for improving the draft EIS.

• Rating the Environmental Impact of the Action

• Rating the Adequacy of the Draft Environmental Impact Statement (EIS)

RATING THE ENVIRONMENTAL IMPACT OF THE ACTION

LO (Lack of Objections) The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposed action.

EC (Environmental Concerns) The review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact.

EO (Environmental Objections) The review has identified significant environmental impacts that should be avoided in order to adequately protect the environment. Corrective measures may require substantial

changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). The basis for environmental Objections can include situations:

EU (Environmentally Unsatisfactory) The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the proposed action must not proceed as proposed. The basis for an environmentally unsatisfactory determination consists of identification of environmentally objectionable impacts as defined above and one or more of the following conditions:

RATING THE ADEQUACY OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)

1. (Adequate) The draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or Information.

2. (Insufficient Information) The draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided In order to fully protect the environment, or the reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the final EIS.

3. (Inadequate) The draft EIS does not adequately assess the potentially significant environmental impacts of the proposal, or the reviewer has identified new, reasonably available, alternatives, that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating indicates EPA's belief that the draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS.

Letter Number 20

Revised Land and Resource Management Plan

Comments from Migratory Bird Research Group, University of Southern Mississippi

The revised plan calls for 4 bird species to be used as Management Indicator Species. Those species will be monitored to assess the effectiveness of management plans for different habitat types:

Red-cockaded Woodpecker: Mature pine forest. Actively manage for this endangered species.

Pileated Woodpecker: Mature forests with snags/cavities

Wood Thrush: Tracts of unbroken forest

Hooded Warbler: Mature forest

We feel that Hooded Warbler should be removed from the list, as we found them in pretty much every type of habitat (from mature forest to scrub/shrub) during our breeding season point counts. Possibly a better indicator species for mature forest would be Acadian Flycatcher; this species was most often only found in draws in forest stands. [Comment 20-1:]

If we understand correctly, Wood Thrush was selected in order to monitor the effectiveness of reducing edge habitats. You might consider as an alternative (or in combination) Indigo Buntings, as they are closely tied to edges. We feel that it would be appropriate to monitor the population levels of Indigo Buntings to determine the amount of edge habitat in the landscape. [Comment 20-2:]

Frank Moore, TJ Zenzal, Will Lewis, Kristen Covino, Jill Gautreaux, Emily Lain

Migratory Bird Research Group, University of Southern Mississippi

A.3 Response to Comments

Comment letters begin at number 3 because during setup of the Comment Analysis and Response Application (CARA) database the first two letters received in the data base were generated internally to ensure proper setup of the public comment database prior to the public comment period beginning.

In this section the identified comment is presented in *italics* immediately followed by a crosslink reference to the original letter number. The first number for a comment number refers to the associated letter number for that comment. The second number is the sequential number assigned to the comment by the CARA database application. A table follows each comment showing the categories that were assigned to that particular comment. Clicking on each category in the table will provide a listing of all other comments assigned to that category.

Comment 3-1:

Cooperation with the Natchez Trace Parkway would be really wonderful. In Virginia the Blue Ridge Parkway, sister of the Natchez Trace, goes through 5 or more National Forests. This gives the visitor a chance to enjoy the beauty of the forest with full measure. One can stop and walk away from the roadway at any point you choose and be away from the sounds of passing vehicles. Such an experience would greatly enhance the Parkway across the state of Mississippi and make it a true National Treasure like the Blue Ridge. Perhaps a land swap could help facilitate acquiring land along the Trace.

Letter Number 3:

Trails Management (152)	Recreation Management (160)	Land Acquisition and Exchanges (170.03)

Response 3-1:

The Natchez Trace Parkway runs through the Trace Unit of the Tombigbee National Forest in Chickasaw and Pontotoc Counties. The Forest Service manages the Chickasaw ATV Trail which lies west of the Natchez Trace Parkway in north Chickasaw County. Section 2.6.4 of the revised plan describes the desired conditions for lands and special uses and provides plan direction that would support acquisition of additional lands along the Natchez Trace Parkway if they were available. However, the revised plan does not make site specific land acquisition decisions. If such and opportunity becomes available a project level decision would be appropriate.

Comment 3-2:

Old Growth Areas enhance the hiking experience with their scenic nature and support threatened ecosystems by preserving the diversity of plants and animals. They also help in water retention.

Letter Number 3:

Hiking, Backpacking (165.01)	Inherent Worth of Nature (230.02)	Water Resources (232)

Response 3-2:

We concur with your statement. The plan's desired condition for old growth can be found in Section 2.6.2 and old growth management objectives are in section 3.5.2.

Comment 3-3:

Increased hardwoods makes an area more scenic and helps support a greater population and diversity of birds, etc.

Letter Number 3:

Biological Resources Management (140)	Diversity, Extinctions (240.02)

Response 3-3:

The revised plan provides management direction for hardwood ecosystems.

Comment 3-4:

Nature Trails and Lakes are very valuable to the public for recreation, enjoyment, and better knowledge of the outdoors.

Letter Number 3:

User Education (160.02)	Visual Resource Management (160.04)	Trailheads, Signs, Parking (163.03)	Water Activities (163.04)

Response 3-4:

Thank you for your comment. Section 2.8.1 of the revised Forest Plan gives a description of desired conditions for recreation on the National Forests in Mississippi which concurs with your comment.

Comment 4-1:

I think you need to ban new roads and take out of use all roads that can be eliminated, too many roads.

Letter Number 4

Transportation Analysis (150.03)	Road Closure, Decommissioning (151.02)

Response 4-1:

Section 2.7.1 of the revised Plan addresses the concerns you raised regarding road system management.

Comment 4-2:

I ask for wilderness and wild and scenic river designations wherever possible.

Letter Number 4

Designated Wilderness Areas (171.02)	Wild and Scenic Rivers (171.07)

Response 4-2:

Analyses of potential wilderness recommendations are documented in Appendix C of the final environmental impact statement.

Comment 4-3:

Stop all burning because such burning of vegetation creates dirty polluted air. it isn't the smoke you have to worry about, its the fine particulate matter which is microscopic. that gets picked up by the atmosphere

and carried all the way to the east in America. Many are sent to hospitals or die from the fine particulate matter which enters the body and causes pneumonia, allergies, asthma, strokes, heart attacks and LUNG CANCER.

Letter Number 4

Prescribed Burns (136.03)	Safety, Risk Management (136.05)	Smoke Management (136.07)	Public Health, Safety (182.02)

Response 4-3:

Prescribed fire is an important and essential management tool for attaining the desired conditions for the fire dependent ecosystems which dominate the landscape across the National Forests in Mississippi. The revised Plan and associated final environmental impact statement evaluates the role of fire and the associated impacts resulting from application of prescribed burning across the landscape. See Section 4.2 in the final environmental impact statement for a description of the air quality program and prescribed fire procedures.

Comment 4-4:

WE OPPOSE LOGGING

Letter Number 4

Timber Management (142)

Response 4-4:

Vegetation management practices are utilized as a management tool to achieved desired ecological conditions, improve and maintain habitat for a diverse array of species, including several threatened and endangered species.

Comment 4-5:

WE OPPOSE TRAPPING AND HUNTER, THESE SITES WERE SAVED EXPRESSLY FOR WILDLIFE.[...]THEY NEED TO HAVE PEACEFUL TIME TO USE THESE SITS, ALONG WITH HIKERS, BIKERS, PHOTOGRAPHERRS AND HORSE BACK RIDERS.

Letter Number 4

Hunting, Shooting (165.03)

Response 4-5:

Section 2.8.1 of the revised plan describes the vast array of recreation opportunities available to National Forest visitors.

[Note: Comment 4-6 was eliminated during review and response to comments.]

Comment 4-7:

NO TOXIC CHEMICALS SHOULD BE USED IN ANY OF THESE SITES. IT RUNS INTO THE WATER AND POLLUTES THE WATER. WE WANT CLEAN UP PLEASE.

Letter Number 4

Water, Watershed Management (132)	Chemical Vegetation Treatment (141.04)	Water Quality (232.05)
Health, Safety (282.02)		

Response 4-7:

Section 4.2.6 of the revised plan provides guidelines that address both human and wildlife health and safety concerns for projects that may require the application of pesticides to achieve desired conditions.

Comment 5-1:

There has been a long time proposal to Re-River the Little Tallahatchie River in the Holly Springs National Forest. The proposal is to breech the low-head dam at the Cypress Creek- Puscus Creek and the Tallahatchie Canal. The low-head dam turns the normal flow from the Cypress Creek and Puscus Creek into the Little Tallahatchie Canal to flow into Sardis Lake. The breeching of the low-head would turn the normal flow of the two creeks into the old river run of the Little Tallahatchie River. The old river run meanders 22 miles down the bottom land hardwoods before empting into Graham Lake which is a part of Sardis Lake. The Channelized Tallahatchie Canal runs the same bottom but is only 13 miles in length. The old river run is primarily intact with only three known obstructions that could easily be dislodged with "ditching" Dynamite. The old river run and the proximity bottom-land hardwood are in pristine condition and would make an ideal scenic river for canoeing and hiking. There would be little initial expense and almost no maintenance cost. The Friends of the Upper Sardis Wildlife Management Area has proposed a detailed concept of the re-river of the Little Tallahatchie River.[...] The changing of the water flow in the old river run and the canal will have no impact on the flooding or the Sardis Lake Level. The low head dam allows water into the old run when the water is high in the canal. The same water flows in one or the other. All the water flows to the same destination of Sardis Lake.

Letter Number 5

Water, Watershed Management (132)	Water Resources (232)

Response 5-1:

Your comment regarding the Little Tallahatchie River "re-river" proposal in the Holly Springs National Forest is beyond the scope for consideration in the revised Land and Resource Management Plan. The proposal would involve multiple jurisdictions requiring a more detailed site specific environmental evaluation that is beyond the scope of analysis for plan revision.

Comment 5-2:

I continue to be concerned with the cutting of old growth timber on the Holly Springs and Tombigbee National Forest. The soil is predominately sandy and the cutting of roads for hauling logs and the damage of logging skidders used to pull logs to bunching sites promote erosion and permanent washes and future gullies on the land.

Letter Number 5

Timber Management (142)	Road Construction, Maintenance (151.01)	Watershed Condition (232.06)
Disturbance, Erosion, etc. (234.01)	Transportation System (250)	

Response 5-2:

The revised plan provides old growth management direction in sections 2.6.2 and 3.5.2. Standards and guidelines provide guidance for achieving resource protections applied to projects or activities aimed at achieving desired conditions (see Section 4.2 of the revised plan for a listing).

Comment 5-3:

Davis Lake in the Tombigbee National Forest has the potential to be a prominent campsite and bass fishing draw in all of Mississippi. The Davis Lake website on the National Forest Website is pathetic. It neither promotes the great fishing nor the quiet, serene setting of the campsite.[...] Puscus Lake in the Holly Springs National Forest has outstanding campsites, picnic areas, walking trails and good fishing. The problem is the lake has so silted it is only 3-5 feet deep in almost all the lake. The area is worth investment to improve the facilities.

Letter Number 5

Developed Recreation and Facilities (163)

Response 5-3:

Comment noted, thank you for your suggestions.

Comment: 6-1:

In the past Columbus AFB has received a call when projects such as these are in the vicinity of our Military Training Routes (MTRs). Columbus AFB will generally close our MTRs for that period of time, especially if there are helicopters flying in the vicinity. We ask that you continue this process.

Letter Number 6

Military Activities (149.03)

Response 6-1:

Thank you for your response. The revised plan does not proposed changes to established protocols where project implementation may affect Military Training Routes (MTRs).

Comment 7-1:

Interested in receiving any information on trail systems.

Letter Number 7

No Further Response Required (102)	Trails Management (152)

Response 7-1:

Thank you for your expressed interest in National Forest System trails.

Comment 8-1:

Any of these updates should be forwarded to the NFCAD updates team headed up by Marilena Lea and Fatou Jack. I have cced them on this message so I'm sure whoever on the team has that State will make the update in the directory.

Letter Number 8

No Further Response Required (102)	Beyond Scope (102.01)

Response 8-1:

Letter appears to have been sent in error. The letter does not address National Forest in Mississippi management issues or concerns within the scope of plan revision.

[Note: During review and response to comments, on letter number 9, the original comments were recoded which resulted in the first comment for letter number 9 to begin at 9-21.]

Comment 9-21:

Overall, this management plan is very good. Our primary concern is that this plan is far too ambitious to be realistic when one considers the state that the forests are currently in. The 10- year goals laid out in the Strategies are probably attainable, but even if accomplished, these practices would only be a small step towards accomplishing the Desired Conditions laid out in Chapter 2. In short, most of the Desired Conditions appear to be written to appease the reader rather than to actually guide the management of the forest.

Letter Number 9

Proposed Action, Decision (120)

Response 9-21:

The revised plan modeled outcomes for 5 decades. It was apparent from this modeling that attaining the desired conditions for the major systems was likely to take over a century, even for the proposed action alternative. The outcomes for each alternative are mostly driven by program level and slight changes in emphasis for restoration in Alternative D and forest health in Alternative E. However, the desired conditions are the same for the proposed action and all alternatives in the Final Environmental Impact Statement. These desired conditions set direction and priority so that annual programs make incremental steps in the right direction. With any added resources, the analysis is complete and the direction is set to focus additional accomplishment in the right direction as well.

Comment 9-22:

General Comments in regard to Prescribed Burns on all habitat types requiring burns (Specifically 2.3.1, 2.3.6, 2.3.13, 2.3.14, 2.3.17, 2.3.18, 2.6.3, 3.2.1, and possibly others). The majority of USFS prescribed burns occur during the cool season (early months) rather than later, warmer months. Ecologically, these ecosystems would be better served with a significant portion of the burns occurring in the warm/hot season, which would more effectively control shrubs, invasive species, and non-adapted hardwoods. Several of these habitat types will likely be too wet to carry cool season burns (i.e. wet pine savannah, seepage bogs and flats, etc.). In addition, early season burns may cause problems with rare breeding and migrating amphibians, such as gopher frogs and Webster's salamanders (the latter of which is provided as an example of an uncommon species in multiple habitats within this document). Additionally, there

needs to be some consideration for smaller-scale (<=100 acres) burns at least within the boundaries of Wildlife Management Areas. That could be something to take the cooperative MDWFP/USFS agreement a step further. These smaller burn units can reduce potential productivity limitation on some wildlife when large very blocks are burned at once.

Letter Number 9

Prescribed Burns (136.03)	Unit Fire Plans (136.04)

Response 9-22:

The proposed action projected outcomes include 40% growing season prescribe burning attainment. This is an attainable goal based on our experience and expected capabilities. It is agreed that some small scale prescribed burns will be beneficial to attain wildlife goals. There are other vegetation management goals facilitated by small scale burns such as site preparation for regeneration, release and thinning of regeneration, and brown spot disease control in longleaf regeneration. Planning these burns is a project level consideration below the broad scale direction set in the Forest Plan. A restriction in the standards and guides on burn size, or requiring some level of small scale burns would limit our ability to attain the overall goals and objectives of the plan and would increase the return interval between burns.

Comment 9-23:

1.1.2 Management Challenges, Page 3.We suggest including fragmentation of forest lands by new road construction and increased difficulty in conducting management activities, particularly fire, due to this fragmentation. These construction projects also often result in a loss of habitat for listed and SGCN species.

Letter Number 9

Diversity, Extinctions (240.02)

Response 9-23:

Section 2.7.1 of the revised plan describes the management strategy and desired conditions for National Forest System roads. Very little new road construction has occurred in recent years, the revised plan does anticipate need for new road construction over the next 10 to 15 years.

Comment 9-24:

1.3 Plan Purpose, Page 5. We suggest adding, as an important factor in guiding management actions, the following purpose decision statement: To incorporate state-of-the- art management practices designed to optimize habitat productivity for native wildlife in all silvicultural activities. Given the laudable goal expressed on Page 7, Paragraph 5, Line 2 which states"..a focus on restoring and sustaining the native ecological communities...,"the development and incorporation of the above statement as an additional management guide would be a significant addition assisting in realizing the concept of restoring and sustaining native ecological communities.

Letter Number 9

Purpose and Need (120.01)

Response 9-24:

The revised plan supports an adaptive management approach open to implementation of best available science based management practices to achieve desired conditions.

Comment 9-25:

Chapter 2. Vision. The premise of this chapter is somewhat confusing. It is difficult to tell whether it is describing the "desired condition" or the current condition of the forest. For the purposes of this review, we assume the author is describing the "desired future condition." Perhaps if the verb tenses were not present tense it would be easier to discern.

Letter Number 9

Technical, Editorial (123)

Response 9-25:

The desired conditions described in Chapter 2 of the revised plan reflect the ecological, economic, and social attributes that we expect to exist on these national forests in the future.

Comment 9-26:

The plan states "These desired conditions reflect the ecological, economic, and social attributes that we expect to exist on the National Forests in Mississippi in the future." This needs more explanation. Based on the Desired Conditions as they are written, it appears that the USFS plans to manage for an unnaturally high level of mature timber, which will likely spoil. In this case it appears the goals of ownership are dominated less by ecological and economic objectives and more by social and aesthetic objectives. There should be some discussion of this decision making process and exactly how the USFS arrived at the Desired Conditions so that the reader understands that the Forest Service: 1) is not simply making up numbers to appease the public and 2) does not believe that managing 60-80% of forests in mature timber is a sustainable condition over the long-term or ecologically and economically efficient.

Letter Number 9

Effects Analysis (122)	Technical, Editorial (123)	Environmental Quality and Ecosystem Integrity (230.01)

Response 9-26:

A Forest with 60 % over 60 years old can be maintained with 40 % less than 60 or 6.7% regeneration per decade. This would be about a 150 year rotation. For a desired condition combination of Shortleaf, Longleaf and Hardwood Forest types this is not unreasonable. (3.3%/decade for 80% over 60 or a 300 year rotation is a less reasonable expectation.) There is no statement in Chapter 2 Vision of the Revised Land and Resource Management Plan which sets 60-80% of the forest in mature timber as a desired condition. Desired conditions for systems are stated that they be dominated by mature forest (60 years old or older). Modeling was done with 120 year rotations for Shortleaf and Longleaf, 130 for upland hardwoods and 200 for floodplain hardwood. However, the effective rotations set by program budget levels are not sustainable without excessive mortality and either natural regeneration filling in canopy gaps or crisis responses when mortality events occur.

Comment 9-27:

2.2 Forest-wide Desired Conditions, Page 8. The document states that gopher tortoises are growing and thriving in restored habitats. Tortoises are doing exceptionally well in only a few areas within FS lands. Surveys indicate that most priority soils parcels do not harbor thriving gopher tortoise populations, but rather a decline in recruitment (as noted later in the management document.

Letter Number 9

Animal Species: TES, etc. (243.01)

Response 9-27:

The statement in Section 2.2 is a desired condition description and was not intended to describe or reflect existing conditions or status.

Comment 9-28:

2.3 Ecosystem Diversity, Page 12, Table 2. We suggest that this table be modified to reflect current ecological systems within each unit of the forest followed by desired conditions. Line 1 of Paragraph 2 on Page 12 indicates that "Table 2 displays the approximate current and desired percentage of each ecological system...," but it appears that the table only reflects draft plan "desired conditions." It is difficult to perform constructive review without existing conditions classified ecologically by unit of the system using the same classification criteria used for the presented desired conditions. We concur with utilizing a range of values but withhold specific comment on the appropriateness of specific management unit percentages until existing conditions, expressed as percentages, can be reviewed. The language provided addressing current conditions in sections 2.3.1 - 2.3.24 is rather general in nature and does not provide the needed specific information to complete constructive review of this extremely important table.

Letter Number 9

Technical, Editorial (123)	Species: TES, etc. (240.03)

Response 9-28:

Your suggestion was incorporated in Appendix B of the revised plan. Current and desired percent of ecological system by unit is depicted in Table 14.

Comment 9-29:

2.3.2 Shortleaf Pine-Oak Forest, Page 15. In paragraph 2, first sentence, Northern Bobwhite is misspelled northern bob-white.

Letter Number 9

Technical, Editorial (123)

Response 9-29:

Thank you. Correction has been made.

Comment 9-30:

The Desired Condition for these forest types consist of mature forest with less than 80% canopy closure, a sparse mid-story, and dense grasses and forbs in the understory. This condition is conducive to many

species of wildlife, indeed. The burn rotation described may be adequate to maintain such a forest, but creating these conditions from the current forest conditions will be difficult to impossible. Current conditions of many of these forests have greater than 90% canopy closure with a dense mid-story of shade tolerant hickories and other saplings. If timber harvests are conducted to open the canopy, the shade-tolerant mid-story will be released. Foresters should give some consideration to herbicide treatments where dense mid- stories exist prior to overstory manipulations. We recommend adding these intermediate steps.

Letter Number 9

Effects Analysis (122)	Vegetation Management (141)

Response 9-30:

We concur with your assessment. Herbicide treatments are included in the set of management tools available to achieve desired conditions.

Comment 9-31:

2.3.6 Northern Dry Upland Hardwood Forest, Page 17. The stated desired condition for this forest is a closed canopy stand with a sparse mid-story and regenerating hardwoods. Certainly any regeneration in this condition would be shade tolerant and not indicative of the current overstory condition. We recommend giving better attention to future regeneration practices to promote a mixed oak-hardwood forest.

Letter Number 9

Effects Analysis (122)	Vegetation Management (141)

Response 9-31:

The desired condition for dry upland hardwoods was written into the draft plan to reflect what we expected to be able to accomplish with likely resources. Your comment is valid and scientifically based. The desired condition of dry upland hardwood has been edited in the revised Land and Resource Management Plan to state that it will contain some open canopy conditions. In addition, oak species composition for northern dry upland hardwoods has been edited to substitute black and scarlet oak for white oak. Chapter 3 of the revised Land and Resource Management Plan has a stated objective for the first decade to reduce the density of 1700 acres of dry upland hardwood and restore dry upland hardwood on 1600 acres from the loblolly forest type. These activities result in a relatively small percentage increase in acreage of dry upland hardwoods and open canopy conditions.

The interdisciplinary team developing the plan was concerned that areas opened with overstory reductions to woodland conditions in dry upland hardwoods would be difficult to maintain with fire return intervals likely to be achieved. The revised Land and Resource Management Plan gives higher priority to threatened and endangered species habitat, and restoration of longleaf which supports many of the threatened and endangered species occurring on the Forest. A section has been added to Appendix C of the revised Plan to provide details on the vegetation management priorities for each district.

Comment 9-32:

Additionally, sites within this forest type are suitable for restoration of upland oak savannahs consisting of more fire-tolerant hardwoods with an open and grassy understory. This type of forest type was once

prevalent in North Mississippi. Upland oak savannahs should be considered as a restoration goal on appropriate sites.

Letter Number 9

Effects Analysis (122)	Vegetation Management (141)

Response 9-32:

Agree, but this was not emphasized due to shortage of resources to attain and maintain this as a desired future condition. The desired condition statement has been modified to permit some open canopy conditions to occur in this system. This is most likely to be attainable where dry upland hardwoods occur adjacent to shortleaf pine restoration areas since both systems require similar prescribe fire treatments for establishment and maintenance. See the description of priorities for management activities in Appendix C.

Comment 9-33:

2.3.9 Southern Mesic Slope Forest, Page 19, Paragraph 1, Last Sentence. We concur with the general observation that fire intensity and frequency has played a role in increasing pine composition within this ecosystem beyond probable historic composition. In its purest form, this ecosystem is highly valuable to native wildlife. Degradation to this system, caused in part by fire, could possibly affect local wildlife habitat productivity. The specific strategies presented for this community on Page 50 addressing use of fire may need to be further restricted using parameters such as high fuel moisture levels before fires are introduced.

Letter Number 9

Prescribed Burns (136.03)	Ecosystem, Habitat Health (240.01)

Response 9-33:

Thank you for your comment. Guidelines for prescribed fire were developed specifically to address this concern. See section 4.2.4 of the revised plan (guideline number 5).

Comment 9-34:

2.3.10 Northern Mesic Hardwood Forest, Page 19, Last Sentence. This sentence states 'Abundance of this system generally falls within the mid- to upper-end of the desired range as depicted in Table 2.' The absence of specific current conditions within the draft document makes it impossible to constructively address this statement. Based upon intimate staff knowledge of the existing condition of these systems within some units of the National Forest, revising this statement to a low-to-mid range may be more appropriate. Furthermore, it may be that fire intensity and frequency has also played a role in increasing pine composition within this community - certainly that has been the case in some localized areas and a similar statement to that suggested for the Southern Mesic Slope Forest may be appropriate. Once again, the specific management strategies for this ecosystem detailed on Page 51 may not go far enough to reverse this observed trend toward a greater pine component.

Letter Number 9

Technical, Editorial (123)	Prescribed Burns (136.03)	Ecosystem, Habitat Health (240.01)

Response 9-34:

Appendix B of the revised plan includes a table showing the current and desired percent of ecological systems by unit (Table 14). A section has been added to Appendix C of the revised plan to provide details on vegetation management priorities for each district and ecosystem.

Comment 9-35:

2.3.11 Desired Conditions for Floodplain Forest, Page 20, and 2.3.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 21. Both systems are classified in their respective sections as having"..canopy closure in mature examples of this system being greater than 80 percent."If the intent of these sections entitled "Desired Conditions"in the draft plan is to describe the plan's long term objective for these ecosystems (not describing current conditions), we strongly advise revising the >80% to a range of values such as 70-75% as a desired condition. We refer you to the Lower Mississippi Valley Joint Venture (LMVJV) publication entitled Restoration, Management and Monitoring of Forest Resources in the Mississippi Alluvial Valley: Recommendations for Enhancing Wildlife Habitat which provides ample scientific evidence of the increasingly negative impact to native wildlife as forest canopy closure exceeds 80%. Such higher rates of canopy closure frequently result in reduced ground and midstory cover within the forest severely impacting stand diversity and, hence, wildlife habitat productivity (see comments provided later in our review on the same topic). Furthermore, high canopy closure rates (consistently >80%) across large forested tracts for long periods of time frequently result in stand midstories becoming dominated by shade tolerant shrubs and trees. This condition usually is undesirable from a silvicultural and wildlife habitat standpoint. When this condition occurs (and it usually does in these systems given long periods of time in a closed canopy condition), regeneration efforts are generally restricted to extensive use of clear cutting as the only tool available that has a possibility of success. Land managers are essentially relegated to use of this type of silvicultural technique because shade-tolerant species likely would capture any small hole within the canopy. We suggest that modifying stand closure to the recommended levels and implementing treatments/thinning as needed to maintain these levels across stand life will slowly begin to provide other less intensive regeneration opportunities and approaches such as group selection (<2 acre clear cuts) or shelterwoods(two stage regeneration removals). Either approach has distinct, long-term advantages to achieving ecological objectives and retaining stand-wide habitat values.

Letter Number 9

Vegetation Management (141)	Clearings, Canopy (240.0103)

Response 9-35:

We agree that opening canopies and disturbance with thinning are key to establishing and maintaining appropriate advanced regeneration that is important prior to planned regeneration harvests as well as providing for the ability of stands to recover from natural events which destroy canopy cover. The plan states all regeneration in hardwoods will use two aged harvest methods or small clear cut areas. The plan does not emphasize uneven aged regulation and harvest methods, but allows for group selection where it achieves desired conditions for a project area. These were envisioned to be primarily areas with high visual quality expectations where maintaining over story is important. Uneven aged harvest methods were not expected to provide ecological conditions that could not be achieved using even aged thinning and regeneration harvest methods.

Comment 9-36:

2.3.14 Xeric Sandhills, Page 22. This habitat type oft does not contain the fuels to carry a cool season burn we recommend growing season burns to control shrubbery and invasive hardwoods.

Letter Number 9

Prescribed Burns (136.03)

Response 9-36:

The revised plan desired condition for this ecosystem envisions a 1 to 3 year fire return interval with approximately 40 percent occurring during the growing season.

Comment 9-37:

2.3.22 Ephemeral Ponds and Emergent Wetland, Page 27. We recommend seasonally appropriate burns for gopher frog basins, which are typically in the summer when the ponds are dry, and the gopher frogs have dispersed from the site. Additionally, cool season burns could pose negative impacts on this species. There are anecdotal incidences of gopher frog mortality due to inappropriately timed burning that coincided with gopher frog migrations. In addition, tiger salamanders are mentioned as a species found in this habitat, but we have no occurrences.

Letter Number 9

Prescribed Burns (136.03)	Species: TES, etc. (240.03)

Response 9-37:

Section 3.3.2 (Table 5) includes a burn matrix within gopher frog habitat that was developed to minimize effects of prescribed fire.

Comment 9-38:

2.3.23 Cypress-dominated Wetlands, Page 27. These can also be found on the Desoto Ranger District.

Letter Number 9

Technical, Editorial (123)

Response 9-38:

Any Cypress-dominated wetlands found to occur on the De Soto National Forest will be managed in a similar manner consistent with other units on the National Forests in Mississippi.

Comment 9-39:

2.4.1 Threatened and Endangered Species, Page 29. Should also include Graptemys flavimaculata (Yellow-blotched map turtle) Threatened.

Letter Number 9

Species: TES, etc. (240.03)

Response 9-39:

While the yellow-blotched map turtle is known to occur within the Pascagoula River basin, the threatened species is not known to occur on National Forest System lands in Mississippi.

Comment 9-40:

The majority of gopher tortoise nest predation appears to be due to fire ants. Fire ants are much more abundant in under burned or cool season burned habitats where logs and limbs remain abundant on the ground. Metabolic bone disorder is often referred to as the disease issue with gopher tortoises on DNF lands. In Florida, it has been documented that calcium may be tied up in woody shrubs that would be better controlled with warm/hot season burns, such as gallberry, and unavailable to the plants eaten by gopher tortoises or invertebrates eaten by RCWs.

Letter Number 9

Prescribed Burns (136.03)	Insects and Disease Treatment (141.02)	Species: TES, etc. (240.03)

Response 9-40:

The revised plan places an emphasis on the seasonal timing of prescribed fire to accomplish desired conditions.

[Note: Comments 9-41 through 9-45 were combined into a single comment and response and listed as comment 9-42 during review and response to comments.]

Comment 9-42:

2.4.3 Management Indicator Species, Page 31.[...]Second, the exclusive use of red-cockaded woodpecker (RCW) as an indicator species to measure ecological function and plant and animal diversity in pine forests leaves a lot to be desired. Even though it is clearly understood that RCWs must and should be a priority in pine communities, there is a large array of plant and animal species not dependent upon the target habitat conditions for optimum RCW habitat. We suggest consideration be given to utilizing at least one additional species as an indicator in these upland communities.[...]Finally, we strongly suggest adding additional species specific to the hardwood communities and recommend wood duck (Aix sponsa), fox squirrel (Sciurus niger), Swainson's warbler (Limnothlypis swainsonni) and red eyed vireo (Vireo olivaceus). The rationale and thought behind why these species are recommended can be provided if desired. The existing list of indicator species does nothing to track ecological health of the extremely important hardwood forest communities.[...]Largemouth bass (Micropterus salmoides) may indeed be a useful indicator for lentic systems on Forest Service property managed for recreational sport fishing. We cannot recommend largemouth bass as an adequate indicator for aquatic systems managed with biodiversity or natural ecosystem function in mind, especially for lotic systems. Largemouth bass are primarily lentic species that can adapt well to lotic environments and exhibits a broad and very adaptive diet. For these reasons, largemouth bass population trends could fail to indicate large shifts in the ecology of aquatic systems resulting from various practices. MDWFP's State Wildlife Action Plan (SWAP), formerly known as Comprehensive Wildlife Conservation Strategy (CWCS), provides a list of species (not all of which are considered rare) sensitive to many factors known to negatively impact biodiversity and natural ecosystem function (e.g., siltation, increased turbidity, increased nutrient loads, and altered hydrology). It is our recommendation that the Forest Service consult the MDWFP and/or the SWAP (CWCS) document to identify fishes that better serve as indicators of healthy biodiversity and natural ecosystem function relative to largemouth bass. The document in its current published form is available at:

www.mdwfp.com/media/63792/cwcs.pdf.[...]3.3.4 Management Indicator Species, Page 62. See previous comment concerning indicator species.

Letter Number 9

Monitoring (130.01)	Ecosystem, Habitat Health (240.01)	Indicator Species (243.02)

Response 9-42:

Thank you for your comment on selection of Management Indicator Species. Appendix F of the final environmental impact statement documents the process and rational used in selection of the management indicator species for the revised plan.

Comment 9-46:

2.7.1 Roads, Page 37. We recommend treating invasive species along USFS road corridors as soon as they are detected.[...]2.7.2 Trails, Page 38. See previous comment under Roads.

Letter Number 9

Invasive Animal Species (243.03)

Response 9-46:

We concur with your recommendation but often find that limited resource contributes to delay in treatments.

Comment 9-47:

3.2.3 Loblolly Pine Forest, Page 46, Last Sentence. The last sentence states "Other communities such as upland hardwoods and mesic slope forests will also be converted from loblolly sites as well."We endorse this change or conversion but are troubled that the following page lists no target objective for this change by ecological system type and ranger district. Please provide such a planning target in the objectives. In addition, the objectives for the loblolly pine forest state that all acreage (351,000) "..of this fire-dependent ecosystem have received a fire return interval of 1 to 4 years..."Successful conversion to upland hardwood/mesic slope mixed species hardwoods will likely, in some cases, require at least some modification in the normal burn regime proposed in both frequency and intensity. Reduced short-term burn frequency for 10- 20 years during and following conversion actions and long term modification to reduce burn intensity will be important to maintaining this hardwood community and selecting against greater pine component. Please see Page 19 of the draft plan and our comments on this subject above. It is doubtful that the upland mesic hardwood forest, in its purest form, can be classed as fire dependent, the classification given on Page 47 for the entire loblolly pine ecosystem.

Letter Number 9

Prescribed Burns (136.03)	Ecosystem, Habitat Health (240.01)

Response 9-47:

The priority placed on restoration of longleaf and shortleaf and improvement of endangered species habitat does not allow for this to be emphasized in the first decade of plan implementation. However, some may occur. See the description of priorities for management activities added to Appendix C of the plan.

Comment: 9-48

2.9 Minerals Management, Page 42. We recommend including contingency measures for emergency spill situations.

Letter Number 9

Oil & Gas (135.02)

Response 9-48:

Development of emergency contingency plans is a standard operating procedure for our minerals management program execution. The revised plan generally does not restate agency policy, manual or handbook direction.

Comment 9-49:

3.2 Upland Longleaf Pine Forest and Woodland, Page 44-45. Key characteristics of upland longleaf were referenced including "abundance, fire regime, canopy structure, and tree age diversity," however, the document did not emphasize the management regime to sustain canopy structure and tree age diversity, especially regarding role of regeneration strategy and management.

Letter Number 9

Timber Management (142)	Clearings, Canopy (240.0103)

Response 9-49:

Appendix C of the plan now includes a section addressing silvicultural systems and cultural practices by ecosystems.

Comment 9-50:

It is stated that of the acreage suitable for the longleaf pine ecosystem (251,000 ac), it is burned on a 1 - 4 year rotation with 40% of the burns conducted in the growing season. A combination of dormant season and growing season burns may be beneficial to manage longleaf pine and wildlife habitat. A patchwork of growing season burns can eliminate encroaching woody vegetation, and promote openings, grasses, and forbs, which support some wildlife associates. The current plan may want to consider including prescribed fire as one of the highest priorities of managing upland pine forests along with "restoration of longleaf pine" to achieve its restoration to a functioning "ecological system." Fire may be just as critical to restoration as establishment, since the two are usually not mutually exclusive of one another in natural history.

Letter Number 9

Prescribed Burns (136.03)

Response 9-50:

Agree, fire is the most important management technique (tool) in the establishment and maintenance of the longleaf pine ecosystem. See also, Appendix C of the plan.

Comment 9-51:

An understory restoration strategy may also be appropriate in developing the longleaf ecological system. We recommend specifying an understory vegetation monitoring and understory restoration strategy. Furthermore, we recommend including the identification and control of invasive species in this section of the plan.

Letter Number 9

Vegetation Management (141)

Response 9-51:

Control of invasive species is addressed in section 4.2.5 of the revised plan. Chapter 5 of the revised plan contains the monitoring and evaluation program strategies which includes understory vegetation conditions and trends.

Comment 9-52:

It is stated that "maintaining a sustainable mix of tree ages is vital to long-term stability of the ecological system..."a statement that reflects either all aged management in even aged units, or an uneven aged management regime, which mimics the natural growth pattern of longleaf pine and can meet objective of providing wildlife habitat. Meeting objectives for timber and wildlife in longleaf pine stands may include thinning stands every 6 - 10 years with basal areas between 40 and 70 sq. ft. per acre, depending on targeted wildlife species.

Letter Number 9

Technical, Editorial (123)	Vegetation Management (141)

Response 9-52:

More frequent entry for timber sales may be ideal, but is not logistically possible with the Forest Service's likely program levels. Also 40 to 70 square feet of basal area is low enough overstory density that if practiced on more than a limited basis on xeric sites would lead to understory proliferation which would not be controlled with the fire return interval capability of likely program levels. In addition, such low density management is not capable of supporting the frequent thinning entries suggested except to remove loblolly in-growth.

[Note: Comments 9-53 through 9-56 were dropped during review and response to comments.]

Comment 9-57:

3.2.5 Slash Pine Forest, Page 48, Last Sentence. The last sentence of this section states .."we have identified slash pine as a candidate for regeneration to shortleaf pine-oak or hardwood ecological systems...."As in the comment above, we suggest that target objectives for the conversion be provided in acres by ecological-system type and by ranger district.

Letter Number 9

Technical, Editorial (123)

Response 9-57:

For the Yalobusha Unit, the occurrence is a few hundred acres. So, the intent is 100% conversion to shortleaf pine-oak or hardwood ecological systems. The few acres of slash occurring on this unit were lumped with loblolly for modeling purposes.

Comment 9-58:

3.2.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 52, Line5. Repeated references are made throughout Section 3.2 to 'closed canopy' hardwood forests as a positive stand attribute for wildlife habitat production. If the intent of this statement is to describe a forest stand where the canopy exists at a level that provides closure due to density (for example, canopy cover of the overstory consistently greater than 80 percent or basal areas consistently greater than 80 square feet), we strongly disagree that this condition is conducive to desired conditions for most species of native wildlife (game and nongame) that inhabit these systems. Briefly, a closed canopy severely limits sunlight penetration greatly restricting both quantity and quality of ground, understory and midstory vegetation. Frequently, such stands exhibit open, park-like understory with little internal, horizontal or vertical diversity which severely limits wildlife habitat productivity for most all species. The science is very clear. Open, park-like conditions resulting from a uniformly closed overstory canopy severely restricts wildlife habitat productivity, including recruitment from nesting/foraging forest birds that utilize these canopy layers for their life cycle to utilization by game species such as deer and turkeys. Secondly, closed canopy hardwood forests tend to develop significant stocking of shade tolerant shrubs and trees which dominate the midstory. The shade tolerants can develop to the point that they immediately capture any gap which occurs, thereby significantly impacting future management options along with lowering species diversity. If the intent of this statement in these sections is a reference instead to a fully stocked stand (in comparison to low stocking rates associated with an RCW cluster site, for example), then please provide stocking rates intended and other canopy closure measures. Otherwise, it is suggested that such statements be deleted from the document as a desired condition of the hardwood forests in Mississippi. The draft plan stipulates that the Forest Service strategies for sustaining species diversity include providing ecological conditions that 'support a diversity of native plant and animal species over the long term (Page 57, Paragraph 4). A uniformly closed- canopy forest is counterproductive to this objective and could negate achieving many of the long-term objectives. Also, see previous comment concerning this subject provided in item 5.

Letter Number 9

Technical, Editorial (123)	Clearings, Canopy (240.0103)

Response 9-58:

The desired condition for dry upland hardwoods was written into the draft plan to reflect what we expected to be able to accomplish with likely resources. The desired condition of dry upland hardwood has been edited to state that it will contain some open canopy conditions. In addition, oak species composition for northern dry upland hardwoods has been edited to substitute black and scarlet oak for white oak. Chapter 3 of the revised plan has a stated objective for the first decade to reduce the density of 1700 acres of dry upland hardwood and restore dry upland hardwood on 1600 acres from the loblolly forest type. These activities result in a relatively small percentage increase in acreage of dry upland hardwoods and open canopy conditions.

The interdisciplinary team developing the plan was concerned that areas opened with overstory reductions to woodland conditions in dry upland hardwoods would be difficult to maintain with fire return intervals likely to be achieved. The revised plan gives higher priority to threatened and endangered species habitat,

and restoration of longleaf which supports many of the threatened and endangered species occurring on the Forest. A section has been added to Appendix C to provide details on the vegetation management priorities for each district.

Comment 9-59:

3.2.9 Southern Mesic Slope Forest, Page 50. A 1 to 6 year burn plan for Southern Mesic Slope Forest may be too frequent. A 6 to 20 year interval based on fuel conditions is more favorable. In addition, fire should not be pushed into the slope.

Letter Number 9

Prescribed Burns (136.03)

Response 9-59:

Prescribed fire strategy is low-intensity fire that may creep into this system from surrounding upland communities.

Comment 9-60:

3.2.11 Floodplain Forest, Page 52, Line 8. Line 8 states "Natural processes will contribute significantly to attaining the desired conditions within this system...." Please explain what is meant by this statement. In the absence of unusually high stem mortality, un-thinned, mature hardwood forests tend to develop closed-canopy, park-like conditions that typically provide relatively limited internal stand diversity. Consequently, these stands exhibit low-to-poor wildlife habitat values for most all species. Also, see previous comment on this subject.

Letter Number 9

Wildlife/Animals Management (143)

Response 9-60:

This statement reflects the fact that planned management in Floodplain hardwood will be fairly limited due to funding and staff constraints. Restoration of shortleaf, longleaf, rare community types, and threatened and endangered species habitat needs will have a higher priority. A consideration in this also was that this system, in the southern part of the state, has recently been significantly disturbed by hurricane Katrina. The Holly Springs and Tombigbee have floodplain hardwood harvest outcomes projected in the plan however, natural process and events will likely have greater influence on these floodplain forests than planned harvests.

Comment 9-61:

3.2.11 Floodplain Forest, Page 52, Objective Bullet 3. The third objective bullet states "approximately 600 acres of floodplain forest have reduced overstory density and a species composition shifted toward desired characteristic species for this ecological system ...." Please describe what constitutes these desired characteristic species for this ecosystem.

Letter Number 9

Technical, Editorial (123)

Response 9-61:

These are silvicultural thinning applications to promote advanced regeneration of desirable species which provide early serial components necessary to sustain the ecosystem over time.

Comment 9-62:

The fourth bullet objective states "Approximately 1,300 acres of the 97,000 total acres of floodplain forest are in the 0- to 10-year age class ... and approximately 88,000 acres are in mature forest condition (60 years or older)."These statistics indicate little, if any, planned thinning or stand silvicultural treatments other than 2-stage regeneration cuts (if we understand the intent correctly). If this is the planned management approach, we respectively submit that optimum wildlife habitat productivity will not be achieved on these forests other than minimum amounts of primary habitat on 1-2% of the ecosystem ownership. The math is simple- 90% of the ecosystem in Forest Service ownership will exist as closed-canopy stands providing significantly lowered habitat productivity across the planning period. It is imperative that Forest Service staff consider intermediate thinning (contingent upon crown closure variables and multiple other stand attributes and agency objectives at that time, of course) across the life of the stand in order to create and maintain internal stand structure provided by multi-tier canopies and abundant ground cover.

Letter Number 9

Clearings, Canopy (240.0103)

Response 9-62:

Vegetation treatment priority information has been added to Appendix C of the plan. We concur that more disturbances in floodplain hardwood with thinning activities would be beneficial. The floodplain forest system is projected to have 600 acres of thinning in the first decade on the Holly Springs and Tombigbee National Forests. Plan projections are based upon anticipated funding and staffing levels, other higher priority treatments, as described in Appendix C of the plan, preclude scheduling of additional treatments in this system.

Comment 9-63:

The draft plan repeatedly states objectives to support a diversity of native plant and animal species focusing on "restoring composition, structure and relative abundance"(Page 57). Without periodic disturbance (10-20 year intervals) associated with low-intensity thinning throughout the life of the stands, most areas will offer little intrinsic habitat value for many native species. As stated previously, the science is clear. The Forest Service is referred, once again, to the LMVJV document which summarizes and provides adequate peer-reviewed reference material. The Forest Service in Mississippi has a unique opportunity in development of this new plan to incorporate current, state-of-the-art forest management approaches that will significantly enhance wildlife habitat productivity throughout the hardwood ecosystem in its ownership. We are suggesting consideration of approaches that will achieve these objectives. What is being suggested is not maximizing or skewing the draft plan to a wildlife habitat management plan[...]We fully understand that the Forest Service does not singularly manage for wildlife. The MDWFP, however, as the state's principle wildlife agency, has the responsibility to request that other public land managing agencies consider the best science and sound habitat management practices that optimize wildlife outputs from lands within state boundaries contingent upon agencies' mandates and policies. The above and similar comments are offered in that light.[...]3.2.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 52, Line 5. This line states "Mature closed-canopy hardwood forests....See previous comment.

Letter Number 9

Coordination, Consultation (110.02)	Vegetation Management (141)	Disturbance Regimes (240.0101)

Response 9-63:

The desired condition and management strategies for floodplain forest were written in the draft plan to reflect what we expected to be able to accomplish with likely resources. The revised plan gives higher priority to threatened and endangered species habitat, and restoration of longleaf which supports many of the threatened and endangered species occurring on the Forest. A section has been added to Appendix C to provide details on the vegetation management priorities for each district. A guideline was also added to Section 4.2.1 of the revised plan that promotes enhanced wildlife habitat productivity in hardwood dominated ecosystems.

Comment 9-64:

Line 10. This line states, in part "...condition, and low intensity fires may be utilized to accomplish ecosystem objectives....'Please explain this statement. Other than use of fire as a site prep in a clearcut, controlling invasive species, or maintenance of a unique community, it is unclear what positive role fire would play in MAV hardwood ecosystem management. In contrast, it is very clear what negative impacts could occur if applied at stand-level scale.

Letter Number 9

Technical, Editorial (123)	Prescribed Burns (136.03)

Response 9-64:

The intent was to allow for fire use in lower Mississippi River bottomland and floodplain forest regeneration or in vine dominated areas after mechanical or herbicide treatment. This would depend upon project specific conditions; the plan would permit, but does not prescribe or project this level of detail at the forest plan level.

Comment 9-65:

3.2.12 Lower Mississippi River Bottomland and Floodplain Forest, Page 53, Objective Bullet 3. This bullet states "Approximately 6,500 acres...have improved species composition..."We assume this 6,500 acres across the plan's 15-year life (roughly 400 acres per year) reflects periodic management treatments/thinning for stand and habitat improvements. If the 6,500 acres reflect periodic treatments, we suggest this acreage be increased to about 15,000 acres across the plan's life expectancy (contingent upon individual stand conditions and other plan requirements, of course). We, once again, refer the Forest Service to the LMVJV document referenced above which enumerates ecologically-based, habitat-driven, sustainable management strategies for floodplain hardwoods reflecting many decades of highly-successful efforts across hundreds of thousands of acres of state- and federally-owned bottomland hardwood forestland.

Letter Number 9

Coordination, Consultation (110.02)

Response 9-65:

The 6,500 acres is the first decade total or 650 acres per year. Thinning of 15,000 acres in lower Mississippi River bottom and floodplain forest would be better, however this is not a priority for use of our

limited timber sale capability (see the vegetation treatment priority information added to Appendix C of the plan).

[Note: Comment 9-66 was eliminated during review and response to comments.]

Comment 9-67:

3.7.1 Recreation, Page 75, First Line.[...]The first line states that "Where appropriate, additional access for hunters by seasonally opening some routes on the National Forests in Mississippi will also be considered[...]The off-road use of OHVs to retrieve harvested animals, such as deer and hogs, is necessary to encourage the harvest of these animals. The regulated harvest of deer provides the only effective means of controlling populations, ideally, at or below the carrying capacity of the forest habitat. The MDWFP's experience with managing public lands has demonstrated that hunters are significantly more likely to harvest deer if they can more easily transport the animal after harvest. Likewise, hunters are more apt to harvest hogs when motorized transportation is available for retrieval of these[...]For obvious reasons, the control or eradication of nuisance hogs should be a key objective to any management plan for Forest Service lands. Based upon our experience, off -road use of OHVs for retrieval of deer and hogs has not caused any adverse impacts to wildlife or other natural resources on wildlife management areas managed by the MDWFP because such retrieval is (1) low in frequency- only occasional to rare, (2) usually not concentrated to the same sites, (3) not occurring during the time of year when most wildlife species are raising their young, and (4) used in a utilitarian manner that minimizes impacts to the resources. This type of use is minimally invasive compared to traditional, recreational uses of OHVs.

Letter Number 9

Seasonal Closures/Access (162.02)	OHV use (164.01)

Response 9-67:

The National Forests in Mississippi follows the National Roads Policy guidance for management of National Forest System roads and trails. The policy allows for an exception for large game retrieval which the forest utilizes, the revised plan does not affect or change National Roads Policy direction.

Comment 9-68:

While we endorse the limited and infrequent off-road or off-trail use of OHVs for deer and hog retrieval by hunters, we recommend that all other OHV use be limited to designated gated roads or trails specified and developed for use by OHVs. The use of OHVs for outdoor recreation in this state has increased in popularity in the past decade. We recognize that the Forest Service tries to accommodate the request for recreational use of OHVs and balance that use with the obligation to protect and conserve wildlife resources[...]Some of the problems inherent in allowing unrestricted, off-road use of OHVs include the following: (1) resource damage to sensitive soil types such as those susceptible to rutting in wetter, bottomland sites, (2) soil disturbance which could increase the levels of siltation into adjacent waterways and contribute to higher levels of turbidity, negatively affecting the biological health of aquatic systems, (3) damage to rare, threatened or endangered plant communities, (4) direct disturbance to wildlife and the accompanying noise pollution which can displace wildlife in certain circumstances, (5) use of OHVs to facilitate the illegal taking of wildlife, (6) difficulty of enforcing regulatory compliance and adherence to wildlife regulations because of motorized access, and (7) increased litter and dumping of potentially harmful debris.[...]However, the general[...]Forest Service lands is not compatible with the best interests of the wildlife resources on those lands.[...]unrestricted[...]resource damage to sensitive soil types such as those susceptible to rutting in wetter, bottomland sites, (2) soil disturbance which could increase the levels

of siltation into adjacent waterways and contribute to higher levels of turbidity, negatively affecting the biological health of aquatic systems, (3) damage to rare, threatened or endangered plant communities, (4) direct disturbance to wildlife and the accompanying noise pollution which can displace wildlife in certain circumstances, (5) use of OHVs to facilitate the illegal taking of wildlife, (6) difficulty of enforcing regulatory compliance and adherence to wildlife regulations because of motorized access, and (7) increased litter and dumping of potentially harmful debris.[comment end]

Letter Number 9

Seasonal Closures/Access (162.02)	OHV use (164.01)

Response 9-68:

The National Forests in Mississippi follows the National Roads Policy guidance for management of National Forest System roads and trails. The policy allows for an exception for large game retrieval which the forest utilizes, the revised plan does not affect or change National Roads Policy direction. The roads policy limits off-highway vehicle use to designated trails and areas only.

Comment 9-69:

The off-road use of OHVs to retrieve harvested animals, such as deer and hogs, is necessary to encourage the harvest of these animals. The regulated harvest of deer provides the only effective means of controlling populations, ideally, at or below the carrying capacity of the forest habitat. The MDWFP's experience with managing public lands has demonstrated that hunters are significantly more likely to harvest deer if they can more easily transport the animal after harvest. Likewise, hunters are more apt to harvest hogs when motorized transportation is available for retrieval of these animals. For obvious reasons, the control or eradication of nuisance hogs should be a key objective to any management plan for Forest Service lands. Based upon our experience, off -road use of OHVs for retrieval of deer and hogs has not caused any adverse impacts to wildlife or other natural resources on wildlife management areas managed by the MDWFP because such retrieval is (1) low in frequency- only occasional to rare, (2) usually not concentrated to the same sites, (3) not occurring during the time of year when most wildlife species are raising their young, and (4) used in a utilitarian manner that minimizes impacts to the resources. This type of use is minimally invasive compared to traditional, recreational uses of OHVs.

Letter Number 9

Seasonal Closures/Access (162.02)	OHV use (164.01)

Response 9-69:

Duplicate comment - See response to Comment 9-68:

Comment 9-70:

Line 5 states that 'Generally, hardwood regeneration harvests will not be made prior to age 90.'We encourage the Forest Service staff to consider routinely incorporating group selection holes (tree removals < 2 acres) in all treatments/thinning where stand conditions permit the application of this less obstructive technique. Implementation of such an approach has proven highly successful in obtaining desired regeneration, including shade-intolerant red oaks, on many thousands of acres of public land across the MAV. Such approach also avoids the long- term, negative impacts associated with a larger clear cut area losing habitat productivity for long periods of time following canopy closure.[...]4.2.1 Vegetation, Wildlife, and Fisheries, Page 82, Guideline 3. See previous comments above. 4.2.1 Vegetation, Wildlife, and Fisheries, Page 83, Guideline 8.DSee previous comments above.

Letter Number 9

Harvest Methods (142.04)

Response 9-70:

The plan does not emphasize uneven aged regulation and harvest methods, but allows for group selection where it achieves desired conditions for a project area. These were envisioned to be primarily areas with high visual quality expectations where maintaining over story is important. Uneven aged harvest methods were not expected to provide ecological conditions that could not be achieved using even aged thinning and harvest methods. However, the silvicultural treatment descriptions added to plan Appendix C describe thinning in floodplain and bottomland hardwood to include gap creation. Gaps are described to be the openings created by removal of one to several dominant trees in the canopy. Please note Vegetation, Wildlife and Fisheries standard number 3 states the legal limitation on regeneration area size.

Comment 9-71:

4.2.1 Vegetation, Wildlife, and Fisheries, Page 83, Guideline 19. When referencing planting wildlife food plots, we recommend emphasizing native vegetation management as opposed to, or in conjunction with planting food plots. Especially in the typical low quality soil of the longleaf forest, food plot plantings could be a big expense. Prescribed fire and disking has proven to promote native vegetation in the understory that is just as beneficial, or more so, than a food plot planting. Furthermore, large food plots may concentrate predators, which could be negative on some wildlife populations, such as northern bobwhite quail. Periodic thinning's, a carefully planned fire regime, and disking in the appropriate season to promote native grasses and forbs for cover and forage, have proven to be beneficial for wildlife.

Letter Number 9

Wildlife Structures (143.06)

Response 9-71:

Plan guidelines in Chapter 4 specify use of native or noninvasive nonnative species when seeding openings.

Comment 9-72:

4.2.1 Vegetation, Wildlife, and Fisheries, Page 83, Guideline 32. To insure that only certified triploid grass carp are stocked, all grass carp vendors should be asked if they participate in the USFWS Grass Carp Certification Program or if they obtain their grass carp from suppliers that participate in this program. Without the receiving receipt of a USFWS triploid grass carp certification statement for each grass carp shipment that the USFS receives, it cannot stated that only certified grass carp were stocked. Many fish producers in Mississippi are selling triploid grass carp, but only one actually has USFWS triploid certification statements for the fish they sell. Fish eggs may be subjected to methods (pressure and temperature shock) that are known to induce triploidy but usually a percentage of such offspring (5-30%) are determined to be diploid through ploidy testing.

Letter Number 9

Fishing (165.04)

Response 9-72:

Thank you for your comment your concern is noted and addressed in Guidelines for Vegetation, Wildlife, and Fisheries (number 36).

Comment 9-73:

4.2.4 Fire, Page 88, Guideline 5. We suggest that alluvial sites of significant size (perhaps> 40 acres) be excluded, where possible, modifying burn unit configurations except as noted in the last line of this item; or only included burn units when fuel conditions will not permit intense fires.

Letter Number 9

Prescribed Burns (136.03)

Response 9-73:

Prescribed fire guidelines limit fire intensity for these areas and also encourage use of existing barriers to reduce the need for fire line construction and minimize resource impacts.

Comment 9-74:

4.2.5 Invasive Species, Page 89. Guidelines for Invasive Species practices should include cleaning tools and vehicles before and after use in natural areas. We recommend including a section to address the impacts of wild hog damage to native wildlife habitats within National Forests. The impacts from wild hog damage on Mississippi's National Forests and consequently, some MDWFP WMAs, are of concern. There is opportunity for a cooperative plan between the USFS and the MDWFP to work collectively to reduce wild hog damage on National Forests that contain MDWFP WMAs. Regardless, the MDWFP suggests that wild hog impacts on wildlife habitats should be addressed within National Forests in Mississippi. Wild hog populations continue to increase at alarming rates statewide. Wild hog populations are threatening native wildlife habitats, timber, agriculture, water quality, roads, and levees not only in Mississippi, but all across the United States. Wild hogs are not native to North America and are classified as a 'nuisance animal' in Mississippi by state statute. Wild hog populations can naturally expand rapidly due to their prolific reproductive potential, adaptability to survive in virtually any type of habitat, and lack of natural predators. Populations have un-naturally expanded throughout the United States by illegal transportation and release into the wild by people who regard them for sport hunting more so than their potential to damage natural resources. Due to the severity of problems created by wild hog population the MDWFP initiated wild hog trapping and removal efforts on all state-owned WMAs to reduce damage caused to wildlife habitats in 2012.

Letter Number 9

Invasive Animal Management (143.03)

Response 9-74:

Impacts from wild hogs are addressed in the final environmental impact statement in sections 3.5.6 and 4.10.1. The final plan has guidelines that address invasive species, which include wild hogs, are found in plan section 4.2.5, specifically guidelines 7, 8, and 9.

Comment 9-75:

5.3.1 Monitoring Questions and Performance Measures, Page 112, Table 12, B.3. The performance measures for the question 'Are species diversity and game abundance supporting nature viewing and

quality hunting opportunities?"are listed as Wildlife Census, Statewide game population estimates, and Visitor use monitoring. We recommend changing the three performance measurement. Completing a wildlife census on free-ranging wildlife populations is all but impossible. We recommend using Wildlife Surveys. Additionally, statewide game population estimates may not be indicative of game populations on National Forest lands, especially when there are no harvest estimates for these areas. We recommend site-specific estimates and monitoring implemented within each National Forest unit. Additionally, more detail is needed on the visitor use monitoring to determine "quality hunting opportunities."

Letter Number 9

Monitoring (130.01)

Response 9-75:

We concur that site-specific estimates and monitoring specific to each unit would provide a higher resolution and a more accurate assessment of population trends, however anticipated staffing and budget levels limit our ability to monitor wildlife populations at the suggested resolution. This monitoring element relies on utilizing the best information available without collection of additional field level data.

Comment 10-1:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for US Forest Service (USFS), Revised Land and Resource Management Plan for the National Forests in Mississippi. We have no comments at this time.

Letter Number 10

No Further Response Required (102)

Response 10-1:

No response required.

Comment: 11-1

1. We support the restoration of the ecological function in the longleaf pine ecosystem and agree with restoring this system initially by transitioning to "high-function loblolly and slash pine phases." In many cases, thinning can be used, existing longleaf can be left in place, fire introduced, and ecological function can be achieved without the ground- and soil-disturbing effects of clear-cutting and re-planting.

Letter Number 11

Environmental Quality and Ecosystem Integrity (230.01)	Ecosystem, Habitat Health (240.01)

Response 11-1:

The plan objectives stated in Sections 3.2.3 and 3.2.5 recognize ecosystem restoration is a long-term commitment that may take decades to achieve and existing "off-site" species should be managed towards achievement of desired conditions in incremental phases where appropriate.

Comment 11-2:

2. We support the initiative to focus on inventory and restoration of ephemeral ponds and protection of stumps and stump holes.

Letter Number 11

Ecosystem, Habitat Health (240.01)

Response 11-2:

Thank you for your comment.

Comment 11-3:

3. Through-out the revised plan and associated documents, the common name of the Mississippi gopher frog needs to be changed to: dusky gopher frog and scientific name to: Rana sevosa.

Letter Number 11

Technical, Editorial (123)

Response 11-3:

Suggestion incorporated into all planning documents.

Comment 11-4:

4. Feral hogs have the potential to degrade habitat and destroy plant populations, such as those of the federally endangered Louisiana quillwort, and should be addressed in this Plan.

Letter Number 11

Invasive Animal Management (143.03)	Species: TES, etc. (240.03)

Response 11-4:

Feral hogs were addressed in the Final Environmental Impact Statement (Section 3.5.6). Non- native invasive species management guidelines (Section 4.2.5 Land and Resource Management Plan) were developed with this species in mind.

Comment 11-5:

5. Forest Sensitive Species- We recommend that the Plan discuss non-federally listed rare species found in the National Forests of Mississippi such as the Camp Shelby Burrowing Crayfish or the Black Pine Snake. Again, staff in the Mississippi Field Office can assist in identifying these species of concern.

Letter Number 11

Species: TES, etc. (240.03)

Response 11-5:

Sensitive species were addressed in Section 3.3 of the Forest Plan and several guidelines in Chapter 4 of the plan were developed to address sensitive species. These species were also addressed in Sections 4.6, 4.7, and 4.8 of the Final Environmental Impact Statement (see also Appendix G and H of the Final Environmental Impact Statement).

Comment 11-6:

6. In April of 2013, there was a confirmed sighting of the endangered Indiana Bat (Myotis soda/is) on the Holly Springs National Forest. We recommend the Plan be updated to include this new species.

Letter Number 11

Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-6:

The endangered Indiana Bat has been included in the final analysis and planning documents.

Comment 11-7:

1. p. 14: The "Desired Conditions for Upland Longleaf Pine Forests and Woodlands" includes the statement, "fire occurs at an interval of 1 to 3 years with approximately 40% of fires occurring in the growing season." However, on p. 45 under "Objectives for Upland Longleaf Pine Forests and Woodlands," there is the statement that "The estimated 251,000 acres of this fire-dependent ecosystem have received a prescribed burn return interval of 1 to 4 years, with approximately 40% of the burns conducted in the growing season for the first decade." We would like to see the Objectives match the Desired Conditions of burning every 1 to 3 years.

Letter Number 11

Prescribed Burns (136.03)

Response 11-7:

Plan objectives are stepping stones of achievement that move the National Forests in Mississippi toward the desired conditions. Objectives are strongly influenced by recent trends, past experiences, current staffing levels, and anticipated near-term budgets. The plan objectives reflect (what we believe are) realistic expectations that are planned to occur during the current planning cycle (next 10-15 years). The desired condition statement reflects our aspirations for the long-term.

Comment 11-8:

2. p. 14: In the box describing desired conditions for this forest type, fire frequency was described with 40% of fires occurring "in the growing season." For clarity, please define "growing season."

Letter Number 11

Technical, Editorial (123)

Response: 11-8

Growing season is defined as generally during the time period of leaf expansion to leaf off of deciduous tree species. Growing seasons vary depending upon local climate and geography. See growing-season burn in the glossary of the Forest Plan.

Comment 11-9:

3. p. 30, first paragraph: Dusky gopher frog populations may be stagnant to declining; however, you may want to mention the use of the newly restored pond (Pony Ranch Pond) as a new breeding site. In

addition, I would say that the Mississippi sandhill crane population is slowly decreasing rather than increasing.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-9:

Thank you for your comment. This comment has been incorporated into the paragraph.

Comment 11-10:

4. p. 30: The statement that "Louisiana quillwort populations are increasing and new populations are found regularly"needs to have some sort of documentation or citation to substantiate this claim. Also, how is a determination made that a site is actually a new population and not a natural expansion of an existing population?

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-10:

Statement was changed to: "National Forests in Mississippi are now known to be home to more Louisiana quillwort populations than anywhere else in the species' range."

Comment 11-11:

5. p. 30: The statement that "Pondberry appears to have stable populations, but they are not increasing" has no data or authorities cited to substantiate this claim. Our information indicates a decline in the USPS populations.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-11:

National Forests in Mississippi utilized data from a 2001 study. We appreciate the additional data provided by your office which has been incorporated into the final documents.

Comment 11-12:

6. p. 58, first paragraph: Critical habitat was designated for the dusky gopher frog on June 12,2012. This might be a good place in the revised plan to mention that critical habitat areas have been designated on the De Soto National Forest (DNF). Shape files, clipped to just include the DNF areas, are attached. There are four areas within DNF that are designated critical habitat. These areas include habitat around the Glen's Pond and other associated ponds, habitat around Carr Bridge Road Pond, habitat around the Ashe Nursery ponds, and habitat around three ponds in the Mars Hill area of Perry County. One cooperative management unit has been created for the dusky gopher frog using a 2 km intersect with stands in the area of Glen's Pond. We do not have the shape files for this CMU, but based on our

approximation, it appears it does not include the complete critical habitat unit around Glen's Pond. We would like to see CMUs for all of the areas designated as critical habitat; however, we understand that this may not be possible prior to finalizing the revised plan.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-12:

Critical habitat has been included in this section. There are 7 areas on the De Soto Ranger District. One conservation management unit (CMU) was created surrounding Glen's Pond to emphasize the importance of the original and primary breeding pond and provides a focus point. National Forests in Mississippi habitat management for this species and others emphasizes continuity of habitat across the landscape to preclude isolation and allow for dispersal of the species across the landscape as have been seen with the established breeding meta-population at Pony Ranch Pond. Management of critical habitat remains a priority to the Forest. National Forests in Mississippi would support the establishment of habitat management areas or conservation management units for the dusky frog within the recovery plan.

Comment 11-13:

7. p. 61, first paragraph under this section, second sentence: A memorandum of understanding (MOU) between the Forest Service, the Fish and Wildlife Service, and the Mississippi Department of Wildlife Fish (sic) (should be Fisheries) and Parks is mentioned as a guiding document in the management strategy for the frog on the DNF. However, we cannot find a signed MOU between these parties and do not believe such

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-13:

The original memorandum of understanding (MOU) was signed in 2007. A copy has been forwarded to your office for your records. The memorandum of understanding is being revised and renewed by all parties as the five year term for the original document has recently expired.

Comment 11-14:

8. p. 61, first paragraph under this section, fourth sentence: In 2013, dusky gopher frogs bred at Pony Ranch Pond. These frogs are part of the Glen's Pond population, but this new site indicates the beginnings of the establishment of a meta-population which was the intent of the management that has been on-going by the Forest Service on DNF.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-14:

Clarification statement has been incorporated into the final document.

Comment 11-15:

9. p. 62, burn matrix, Table 5: At a gopher frog recovery meeting held in July of 2009, the burn matrix from 2008, as presented on this page, was updated. A pdf of this updated matrix is attached.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-15:

This burn matrix has been modified to adhere to the 2009 burn matrix and also modified to be implemented in areas rather than solely at Glen's Pond.

Comment 11-16:

10. p. 85: There are specific recommendations for maintaining buffers around RCW colonies and black bear den sites. However, we could not find any conservation measures for activities near gopher tortoise burrows. The only mention was a blanket statement to 'follow the habitat management strategies found in the most current USDI Fish and Wildlife Service Recovery Plan for each threatened and endangered species.' We would like to see mention of the recommendation that a 25-foot buffer will be maintained around all known gopher tortoise burrows when utilizing heavy machinery.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-16:

Your recommendation has been incorporated into the final document, section 3.2.1 standard number 10.

Comment 11-17:

11. p. 71, Initial discussion under frog: This would be an appropriate place to have a more in depth description of the critical habitat designated on the DNF.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-17:

A description of the critical habitat designated on the De Soto National Forest has been added to the final documents.

Comment 11-18:

12. p. 72, Mississippi gopher frog responses to threats. Third paragraph, last sentence: Add 'growing season' to sentence describing burning regime. Fourth paragraph: MOU is mentioned again. We are not aware of a signed MOU regarding dusky gopher frog management on the DNF. Fifth, sixth, and seventh paragraph: These paragraphs are duplicates of the first three paragraphs under the dusky gopher frog section.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-18:

Your suggested edits have been incorporated into the final document. See also response to comment 11-13 regarding memorandum of understanding.

Comment 11-19:

13. p. 73, first paragraph: After second sentence, suggest adding something similar to this: "In 2013, a pond recently restored by the Forest Service and less than a mile from Glen's Pond was used as a breeding site."Also, a discussion of a management focus in the other 3 areas of critical habitat would fit here.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-19:

This information has been incorporated into the final documents.

Comment: 11-20

14. p. 73, Figure 10, CMU: The legend in this figure is not readable. The map in the figure would benefit from the addition of the CH units on the DNF.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-20:

The map has been updated in the final documents.

Comment 11-21:

15. p. 74, Mississippi Sandhill Crane Current Threats: Amend the third sentence and add an additional sentence to this paragraph as follows: "The wild flock has been slow to increase due to abnormally high mortality of nestlings and first-year birds. Population stability has been achieved only through the release of captive-bred chicks."

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-21:

Suggested edits have been incorporated into the final documents.

Comment 11-22:

16. pp. 83-84, Pallid Sturgeon. Pallid sturgeon is no longer considered"...one of the rarest fish in North America."During the past decade, over 1,000 pallid sturgeon have been collected in the River, and telemetry studies find the species is utilizing numerous habitats along the river, above and below the mouth of the Yazoo. We can provide more information.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-22:

Information has been incorporated into the final documents.

Comment 11-23:

17. p. 233, under "Threatened and Endangered Species:" The gopher tortoise is not listed as being associated with the species group "species dependent on fire to maintain habitat."[...] A primary threat to the tortoise is habitat fragmentation/habitat modification, which often is the result of fire suppression. Fire is probably the most crucial element of maintaining quality tortoise habitat.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-23:

Although not shown in the draft document, the gopher tortoise was included in this species group in the Ecological Sustainability Evaluation (ESE) tool (database). Thank you for alerting us of this oversight. Editorial corrections have been made in the final documents.

Comment 11-24:

18. p. 234, Figure 77: Move this figure down the page so that it falls within the dusky gopher frog discussion.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-24:

Thank you for your comment. Edit has been made in final document.

Comment 11-25:

19. p. 234, Section 4.5.1 Mississippi gopher frog effect and alternatives: The dusky gopher frog should be part of the "species dependent on fire to maintain habitat" group. Add group here, and add dusky gopher frog to appropriate table in Appendix G.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-25:

Although not shown in the draft document, the gopher tortoise was included in this species group in the Ecological Sustainability Evaluation (ESE) tool (database). Thank you for alerting us of this oversight.

Comment 11-26:

20. p. 235, Table 61: Update burn matrix to 2009 version, attached.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-26:

Burn matrix has been updated. See also response to comment 11-15.

Comment 11-27:

21. p. 235, second paragraph under this section, Last sentence, second word: Replace "banding" with "tagging."

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-27:

Suggested edit has been incorporated into final document.

Comment 11-28:

22. p. 235, third paragraph under this section, second sentence: Replace "Mississippi Gopher Frog Group" with "Dusky Gopher Frog Recovery Team."

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-28:

Suggested edit has been incorporated into final document.

Comment 11-29:

23. p. 236, Figure 78: Move figure down under discussion of Mississippi sandhill crane.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-29:

Suggested edit has been incorporated into the final document.

Comment 11-30:

24. p. 236, section Mississippi gopher frog CMU alternatives and effects: This section is correct as Plan is currently written. However, if CMUs are added or modified, this paragraph will need to be amended.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-30:

Thank you for your comment.

Comment 11-31:

25. p. 247, Section 4.5.9: Per Appendix G (Ecosystems and Species Diversity Report), Table G 71, (p. G-88), include 'Species sensitive to hydrologic modification of wetlands' in the list of species group associations.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-31:

Suggested edit was incorporated into final document.

Comment 11-32:

26. p. 276, Section Downed wood associates. first paragraph, last sentence: Last sentence seems incomplete. Stumps were removed in past, but need to present the current management practices.

Letter Number 11

Technical, Editorial (123)

Response 11-32:

Suggested edit has been incorporated into the final document.

Comment 11-33:

27. pp. 276 and 277, Section Downed wood associates environmental effects: This section is duplicative of what appears under 'Fire injury environmental effects.' Also need to discuss downed wood effects.

Letter Number 11

Technical, Editorial (123)

Response 11-33:

Effects discussion was intended to reflect how National Forests in Mississippi management actions would affect species in this group and not effects of downed wood on species group.

Comment 11-34:

28. p. 279, Section Species sensitive to fire injury environmental effects: This section is duplicative of that under downed wood discussion and appears to be a general discussion of forestry management. Suggest more focus on fire environmental effects.

Letter Number 11

Technical, Editorial (123)

Response 11-34:

Effects discussion focuses on how National Forests in Mississippi management actions would affect species in this group not just the effects of fire on species in the group. As a result since management actions are generally similar the language was repeated where appropriate.

Comment 11-35:

29. p. G-9, Section Upland longleaf pine forest and woodland management strategy: It would be appropriate to discuss the specifics of what is meant by 'growing season'burning in this section.

Letter Number 11

Technical, Editorial (123)	Disturbance Regimes (240.0101)

Response 11-35:

See response to previous comment Response: 11-8

Comment 11-36:

30. p. G-61, Table G 42: Louisiana quillwort should not be listed as a pine flatwoods associate. The species occurs along low-order intermittent and perennial streams and their associated floodplain forests within Mississippi.[...]31 . p. G-68, Table G 50: Louisiana quillwort should not be listed as a seeps, springs, and seepage swamps associate. The species occurs along low- order intermittent and perennial streams and their associated floodplain forests within Mississippi.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-36:

Although Louisiana quillwort occurs within low-order intermittent and perennial streams and floodplain forests, many experts felt that this species was also associated with seeps, springs and seepage swamps (or

the affiliated streams) and management included in this ecosystem could affect the species so it was included as an associate.

Comment 11-37:

32. pp. G-84-85, Table G69, Species dependent on fire to maintain habitat: Both the gopher tortoise and the dusky gopher frog are missing from this table and should be included.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-37:

Thank you for noting over-sight in draft table. Species have been included in table of final documents.

Comment 11-38:

33. p. G-84, Table G 69: Louisiana quillwort should not be listed as a species dependent on fire to maintain habitat. The species is dependent on periodic scouring floods to maintain its habitat. The species should be removed from this group.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-38:

While the streams mentioned are not directly affected by fire, the associated habitat is, which is why it was incorporated into this group.

Comment 11-39:

34. pp. G102-103: The federally endangered Isoetes louisianensis (Louisiana quillwort) and Lindera melissifolia (pondberry) are species sensitive to canopy cover modifications and should be included here. Canopy modifications were cited as threats to these species in their listing documents and recovery plans.

Letter Number 11

Technical, Editorial (123)	Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-39:

Though not reflected in the draft, these species were included in the Ecological Sustainability Evaluation (ESE) tool (database). The final document reflects that these species are sensitive to canopy cover modifications.

Comment 11-40:

35. p. G-151: Appendix G's Table G.7, Threatened and endangered species removed from the National Forests in Mississippi list due to no known occurrence."Include an explanation why the species were removed from the list. For example, was the original locality information in error or was the species extirpated from the areas?

Letter Number 11

Endangered Species Act (220.0303)	Species: TES, etc. (240.03)

Response 11-40:

Species on this list do not occur nor have they been found within National Forests in Mississippi boundaries. This is based on many variables such as expert group meetings during the planning process, surveys done on the Forest, species ranges, etc.

Comment 12-1:

There is no mention of groundcover restoration/monitoring. Groundcover indicators provide a wealth of information regarding the measurement of conservation goals as they reveal management history and can be used at multiple scales. There are a suite of plant species that are less responsive to disturbance and a number of publications out there addressing this. We do understand these indicator species can vary between districts and even within districts.

Letter Number 12

Plant Species: TES, etc. (241.01)

Response 12-1:

Ground-cover restoration is included within ecosystem restoration as a whole. Ground-cover restoration is a result of managing ecosystem characteristics such as fire regimes, basal area, and invasive species management. The National Forests in Mississippi has invested in an intensified Forest Inventory and Analysis protocol designed to provide landscape level inventory plot data (including ground-cover classification) as a component of our long-term monitoring strategy.

Comment 12-2:

Removing the gopher tortoise as a management indicator species: In Appendix F (Management Indicator Species), the justification for the removal of gopher tortoises as a management indicator species is that response to management takes a long time because they are a K- species. That is not necessarily true as gopher tortoises will start occupying younger stands of Longleaf pine forests as the ground cover conditions become favorable. Red cockaded woodpeckers require old growth longleaf pine stands and are not directly tied to groundcover as they rely on the insect species attracted to groundcover. Gopher tortoises feed directly on the groundcover and, in our opinion, are indeed indicators of management in terms of groundcover restoration goals at various restoration phases of Longleaf pine.

Letter Number 12

Indicator Species (243.02)

Response 12-2:

Gopher tortoise was removed as a management indicator species because of the amount of time it takes to show population responses to management. Although gopher tortoises will move from less favorable areas to better suited areas, true population growth via natality, which is what is measured in population surveys, remains to be slow with K-species making them a poor management indicator species. Although this species is no longer a management indicator species, management and monitoring for this species is still a high priority for the National Forests in Mississippi and will continue.

Comment 13-1:

I support the Desired Alternative ("C") outlined in the DEIS. This seeks to restore natural forest ecosystems while increasing management above current levels.[...]At the same time, I question whether significantly increased management can be accomplished in the face of budget and personnel restrictions alluded to in the Plan.

Letter Number 13

Proposed Action, Decision (120)

Response 13-1:

Thank you for your comment. The range of alternatives evaluated in the environmental impact statement addresses a shift in management priorities if funding and staffing levels were to decline.

Comment 13-2:

I note that "81% of NF System in Mississippi is suitable for timber production." This is a reasonable balance that protects the many resources of our National Forests while allowing for a timber program that maintains forest health, aids local rural communities, and generates needed revenue for the US.[...]Though beyond the scope of your request, and requiring Congressional changes, I would support a policy where a portion of the revenue generated from a District is returned to the District to support the many management activities required.

Letter Number 13

Economic and Social Conditions (280)

Response 13-2:

Thank you for your comment and support for National Forest management.

Comment 13-3:

The product mix mentioned on page 140 of the Plan does not include pine poles. The DeSoto and Chickasawhay Districts in particular produce significant numbers of poles due to the large percentage of longleaf pine on these districts and access to pole markets. Pine poles have historically commanded a much better price than pine sawtimber, and this should be reflected in the analysis.

Letter Number 13

Timber Management (142)	Resource Value (281.01)

Response 13-3:

Table 17 of the revised plan displays the estimated product mix for the Timber Sale Program Quantity in four broad categories. The values from the pole timber product class, while not displayed separately in the table, were included in the pine sawtimber product estimate for modeling purposes only. Historical sale volumes and values were included in the analysis which captured the higher value for pole timber product class in our analysis.

Comment 13-4:

Table 40 of the Plan (p. 162) presents an inventory of possible old-growth acreage, by district and community type, dated July 8, 2005. Less than 2 months later, Hurricane Katrina devastated forests in Mississippi, and the Plan acknowledged that the "DeSoto and Chickasawhay Ranger Districts took the brunt of Hurricane Katrina" (p. 170). As such, the acres presented for these Districts are suspect, particularly for the "River Floodplain Hardwood" type, as this type sustained greater damage than other forest types. I suggest a revision of the acres in the above 2 districts, as these numbers do not currently reflect the reality post-Katrina.

Letter Number 13

Effects Analysis (122)	Ecosystem, Habitat Health (240.01)

Response 13-4:

We recognize that impacts from Hurricane Katrina changed the pre-Katrina preliminary old- growth inventory stand conditions, however the preliminary inventory of old-growth still the best location information available for potential old-growth conditions for those units. While the existing conditions of the potential old-growth stands were affected by Hurricane Katrina the revised plan desired conditions and objectives remain unchanged. The primary objective for old- growth is that approximately 10 percent of all forested lands across all districts and across all ecological community types are identified for old growth or future old growth. Stand condition information will be updated during identification and establishment of the 10 percent old-growth objective.

Comment 13-5:

According to the DEIS, the proposed alternative ("C") calls for harvesting 16% of net forest growth (or 25% based on the Oswalt et al., 1997 data). By the end of the 5th decade, according to the DEIS (p. 315), 82% of the forests will be in the 60+ age category. Such a high percentage in older age categories predisposes the trees to damage from a variety of factors including windstorms, ice storms, insects, diseases, and other mortality factors. A more balanced age class distribution would result in better forest health, without compromising amenity values we obtain from the forest.

Letter Number 13

Effects Analysis (122)	Forest Health (230.03)

Response 13-5:

The revised plan modeled outcomes for 5 decades. It was apparent from this modeling that attaining the desired conditions for the major systems was likely to take over a century, even for the proposed action alternative. We concur with your observation, however the revised plan objectives reflect an assumption that federal budgets and staffing levels will either remain flat or decline during the first plan period. Alternatives D and E would result in a more balanced age class distribution providing improved forest health conditions. Those alternatives were developed and evaluated to demonstrate that with additional funding the Forest could accomplish restoration objectives and enhance forest health conditions in an ecologically and environmentally sustainable manner.

Comment 13-6:

The cost/benefit analysis contained in the DEIS is suspect. Some data are "direct" impacts, and others likely contain "direct and indirect" impacts. Mixing these two data sources results in an incomplete and

incomprehensible analysis. Further, no Discount Rate is given, and this is used in Net Present Value (NPV) calculations. Though I am not a forest economist, an independent review would help this section.

Letter Number 13

Cost/Benefit Outcome (281.02)

Response 13-6:

Table 78 in Chapter 4 of the environmental impact statement displays the present values of costs and benefits for the five alternatives evaluated. The revenues were derived from various Forest Service data sources. Mineral program revenues from USDI Minerals Management Agency receipt reports. Revenue values derived from vegetation management, minerals and recreation fee collection represent actual real dollar collections that were used in the present net value calculation. The dispersed recreation and wildlife values were derived from Forest Service National Visitor Use Monitoring estimates for the National Forests in Mississippi recreation uses and regionally derived values for recreation activities occurring on the National Forests in Mississippi. The calculation of cumulative present values of cost and benefits utilized a 4% discount rate.

The entire economic section in the final environmental impact statement was reviewed and updated to incorporate 2010 economic and census data that became available between of the draft and final versions.

Comment 13-7:

Necessary activities such as invasive species control and prescribed fire are crucial to maintaining ecosystem health. In the future we will see greater challenges with invasive species, as well as challenges to our ability to use prescribed burning.

Letter Number 13

Forest Health (230.03)	Fire, Fire Risk (236)

Response 13-7:

We concur that invasive species control and prescribed fire are critical to maintaining ecosystem health.

Comment 13-8:

The DEIS (p. 117) documents what can only be considered as wild fluctuations in the amount of timber harvested in Mississippi's National Forests over the past 20 years. This is not good for forest health or local communities. The Forest Service must have the ability to plan and conduct a timber harvest program that benefits forest health without compromising other important benefits from the forest. A stable program also benefits rural communities by providing jobs and income through forest health and restoration activities.

Letter Number 13

Timber Management (142)	Timber Resource (242)	Community Economic Effects (281.03)

Response: 13-8

We concur, attainment of ecosystem desired conditions are dependent upon implementation of a stable, consistent, integrated vegetation management and prescribed fire program that promotes enhanced forest health and provides a steady flow of economic benefits to our local communities.

Comment 13-9:

I encourage the National Forests to identify specific opportunities where they can showcase forest management practices to both landowners and the interested public. Some of this already occurs, as the Chickasawhay Ranger District has the "Gavin Auto Tour" and "Managed and Unmanaged 40" demonstration areas. A specific recommendation is to implement demonstrations on how to convert from even-age to uneven-age management over time. I note on Table 14 of the Plan that there are no appreciable acres of uneven-age management proposed, and feel this is an opportunity to test such a system across Mississippi's National Forests.

Letter Number 13

Timber Management (142)

Response 13-9:

Uneven aged management utilizing group selection method is permitted but not emphasized or mandated by the revised plan. Use of group selection is envisioned to be desirable primarily in areas with high visual quality expectations where maintaining over story is important. Uneven aged harvest methods were not expected to provide ecological conditions that could not be achieved using even aged thinning and regeneration harvest methods.

Comment 14-1:

Need to consider adding Whiskey Creek Hills and Steve Hills as special areas. Whiskey Creek Hills was originally considered for Wilderness Designation during RARE 1 Study. Need to reexamine Milky Creek area for special area designation also. Need to accelerate designations of existing proposed RNA's to designate through NEPA process.

Letter Number 14

Potential for Special Designation (270.01)

Response 14-1:

Twenty proposed new special areas were evaluated during the plan revision process. Table 17 in Chapter 3 of the Final Environmental Impact Statement lists the areas evaluated. Eighteen of the twenty areas evaluated are being designated as special management areas in the revised plan. See section 3.5.5 of the Final Environmental Impact Statement for additional information.

Appendix C of the Final Environmental Impact Statement documents our review of potential wilderness areas that may be suitable for recommendation for congressional designation as wilderness study areas. For additional information, see Appendix D of the Final Environmental Impact Statement which addresses Special Areas: Status, Trends and Strategies.

You specifically name three areas for consideration. However, there was not enough site specific information provided on their location and special or unique characteristics for detailed consideration at this late stage in the plan revision process. Since plan implementation allows for consideration of special

area designations between plan revision cycles the National Forests in Mississippi has elected to move forward with completion of the plan revision process.

Comment: 14-2

Are heritage resources now being called cultural resources?

Letter Number 14

Technical, Editorial (123)

Response 14-2:

Cultural resources fall under the umbrella of heritage resource management.

Comment 14-3:

Revisit use of hydraulic fracturing for natural gas development in view of current controversy and new information regarding potential adverse effects on ground water.

Letter Number 14

Oil & Gas (135.02)

Response 14-3:

In August 2010, the National Forests in Mississippi renewed its decision for Lands Available for Oil and Gas Leasing. All plan revision alternatives incorporate the 2010 oil and gas leasing decision as continuation of management direction.

The USDA Forest Service and USDI Bureau of Land Management share responsibility for implementation of the federal minerals program on National Forest System administered lands. Both agencies follow a Memorandum of Understanding which defines each Agency's roles and responsibilities regarding minerals program management on federal lands. The Bureau of Land Management was a cooperating agency in the development of the National Environmental Policy Act disclosure documents for the 2010 Lands Available for Oil and Gas Leasing decision and the Forest Plan revision decisions as they relate to federal minerals management on the National Forests in Mississippi.

A two-staged decision process is followed regarding minerals management on the National Forests in Mississippi. The first stage is the identification of lands available for leasing which was addressed in the 2010 leasing decision and subsequently incorporated as management direction in the revised plan. The second-stage decision occurs when a federal lease holder proposes to exercise their rights to extract minerals under the lease. At such time, the lease holder submits an Application for Proposal to Drill (APD). The Forest Service and Bureau of Land Management then conduct a site specific (National Environmental Policy Act compliant) analysis addressing potential surface and sub-surface impacts. This analysis provides the basis to support agency decisions regarding final site location and the lease holder's operation plan terms and conditions.

Hydraulic fracturing for natural gas development is currently not an extraction technique employed on production well sites on the National Forests in Mississippi. If an application for proposal to drill were to include hydraulic fracturing extraction techniques, then a determination as to whether or not to permit such activities would be addressed in the site-specific analysis for the application to drill.

Comment 14-4:

Address silvicultural and economic soundness of restoring longleaf pine on Homochitto National Forest. Highly productive loblolly sites produce prolific natural seeding of loblolly defeating any attempts to restore longleaf regardless of herbicide use and prescribe burring. Focus on intensive thinning regimes to promote forest health here.

Letter Number 14

Forest Health (230.03)	Cost/Benefit Outcome (281.02)

Response 14-4:

Appendix C of the final plan provides a listing of possible actions by administrative unit. Table 35 displays the expected outcomes on the Homochitto National Forest during the first decade of forest plan implementation. Treatments on the upland loblolly pine forest ecological system include 36,000 acres of species composition and structural improvements (thinning) which promote forest health. The first decade projection is 5,000 acres converted to appropriate ecological systems.

Comment 14-5:

5. What happened to the featured species concept that was in the 1985 Plan? Typo in Table 63 (Southern).

Letter Number 14

Technical, Editorial (123)

Response 14-5:

The featured species concept was replaced by the ecological sustainability framework described in detail in Appendix G of the Final Environmental Impact Statement. See also Section 2.4 Species Diversity in the final revised plan.

Comment: 14-6

Need to add Canadian thistle to list of non-native invasive/noxious plants.

Letter Number 14

Invasive, Noxious Plant Species (241.02)

Response: 14-6

Table 64 in Section 4.10.1 of the Final Environmental Impact Statement lists the high priority invasive plant species across the Forest. Canadian thistle did not make the high priority list because no samples have been collected in the State of Mississippi.

Comment 14-7:

Are the standards and guides from 1985 Plan rolled over into this Plan? Are all 18 amendments to current planned rolled over into this proposed plan?

Letter Number 14

Technical, Editorial (123)

Response 14-7:

The 1985 Forest Plan including all its amendments was the starting point for development of the revised plan. The management guidelines and standards found in Chapter 4 of the revised plan originate from the standards and guidelines in the 1985 plan. The majority of the original plan direction is reflected in the revised plan management direction. The revision of the forest plan incorporates new information, addresses evolving issues and trends, accounts for changes in national policies and direction, and includes updated views from public users and stakeholders. The revised plan differs from the previous plan in focusing more on an integrated vision of how we want the national forests to look and function in the future rather than how individual projects would be implemented. The revised plan uses a new format and emphasis an adaptive management approach that will continue to include public and technical adjustments as changes are needed.

Comment 14-8:

Since adequate funding and manpower is not available to do the necessary improvements for forest health, what direction will be given to the Districts to prioritize where and when compartments would be entered? I would like to see how the order of entry has changed from every compartment being entered every 10 years to what it will be in this proposed plan?

Letter Number 14

Technical, Editorial (123)

Response 14-8:

Appendix C of the revised plan describes possible actions that may subsequently take place on the districts at the project or activity level to help maintain existing conditions or move toward desired conditions.

Comment 14-9:

Need to accelerate resolution of claims and encroachments. Need to ensure all property lines are refurbished on regular maintenance schedule, including RNA and Wilderness boundaries.

Letter Number 14

Land Ownership Uses (170)

Response 14-9:

Sections 2.6.4 and 3.5.4 of the revised plan describe lands and special uses desired conditions and management strategies. Program implementation is dependent upon staffing and funding levels being allocated to the forest for these activities.

Comment 14-10:

Are all shortleaf stands to be regenerated to shortleaf on the DeSoto NF? Does longleaf restoration on these sites take priority?

Letter Number 14

Vegetation Management (141)	Ecosystem, Habitat Health (240.01)

Response 14-10:

Table 31 in the revised plan displays proposed outcomes for ecological systems on the De Soto District. A review of the table indicates no planned conversions of shortleaf pine to longleaf. Loblolly pine and slash pine stands located on sites deemed more appropriate for longleaf would be the target areas of conversion in the first decade of plan implementation.

Comment 14-11:

Seems like the Forest Service could make an attempt to buy those mineral rights from the third party so those proposed wilderness areas inclusions can be designated wilderness on the Black Creek Wilderness.

Letter Number 14

Wilderness, Roadless Character (270.02)

Response 14-11:

Purchase of mineral rights from private land holders would require special congressional authorization.

Comment: 14-12:

Are there approved habitat management plans yet for gopher tortoise, gopher frog, rcw, and sandhill crane by the USFWS?

Letter Number 14

Animal Species: TES, etc. (243.01)

Response 14-12:

The United States Fish and Wildlife Service is currently developing a recovery plan for the gopher frog and we are a partner in its development. The other species you listed currently have approved recovery plans.

Comment 15-1:

I have had the opportunity to review the LRMP for the National Forests in Mississippi as outlined in your draft. After reviewing the draft and data, my choice for the proposed plan would be Alternative D, "an increased emphasis on restoration of historical forests." Regardless of the final plan, below listed are my major concerns: Old Growth strategy, Species Viability [help enhance red cockaded and Louisiana black bear habitats], Recreational Management, Material Management [authorizes oil and gas leasing]. As I am a primary user of the Homochitto and De Soto National Forests, I would agree that Alternative D is best for all Mississippi National Forests.

Letter Number 15

Alternatives (comparing, range) (121.02)	Minerals & Geol. Resources (235)	Species: TES, etc. (240.03)
Recreation (260)		

Response 15-1:

Thank you for your interest in National Forest in Mississippi resource management.

Comment: 16-1

By this letter, we are our voicing existing and ongoing comments and concerns related to the damages to county public roadways and infrastructure due to logging practices within the Homochitto National Forest.

Letter Number 16

Harvest Levels (Actual) (142.03)	Transportation System Management (150)

Response 16-1:

Please see response to comments 16-3 and 16-4.

Comment 16-2:

The draft EIS states that the USFS will be cutting 30% of the target in the Homochitto Forest when it only encompasses 19% of the entire National Forest lands in Mississippi. We believe that the largest target area should be in the DeSoto/ Chickasawhay Districts where the Fish and Wildlife Service has declared these two districts as red-cockaded woodpecker recovery sites.

Letter Number 16

Harvest Levels (Actual) (142.03)	Species: TES, etc. (240.03)

Response 16-2:

Appendix C of the revised plan describes possible actions that may subsequently take place on the districts at the project or activity level to help maintain existing conditions or move toward desired conditions. The lists of possible actions are not intended to be all inclusive nor are they decisions.

It appears you may be comparing the Timber Sale Program Quantity (TSPQ) by district displayed in Table B-22 of the environmental impact statement for likely volume outputs for the first decade. The values in Table B-22 are not "cutting" targets. The 60 MMCF timber sale program quantity for the Homochitto National Forests for the first decade was derived from vegetation management model results for treatment of 6,898 acres of regeneration cutting and 36,284 acres of commercial thinning on the Homochitto National Forest in the first decade (see Table 17 in the revised plan or Table B-12 in the final environmental impact statement).

These anticipated treatments would help maintain existing desired conditions and/or more toward desired conditions consistent with ecosystem management priorities reflected in the plan. These estimates are model estimates based on current resource capability and biological potential. For the selected alternative, the estimate in the Timber Resource Program Suitability and Sustainability Analysis for the Homochitto District is 33% of that alternative's outcome in terms of volume. For acres of harvest, the Homochitto District's share is 26%. The estimates were based on current resource capability which includes budget and staffing.

The analysis did not look at changes based on staffing decisions; rather alternatives considered overall program level changes with a district's share remaining proportionally the same. These proportions were based on traditional target accomplishment capability of each district unit. The allocation of targets to districts may change over time but these allocations are administrative in nature and are not made by the Land and Resource Management Plan for the National Forests in Mississippi.

Appendix C of the revised plan also includes a description of ecosystem vegetation management priorities by district. The priorities for the Homochitto are (first) threatened and endangered species habitat improvement, (second) restoration of vegetation communities outside red-cockaded woodpecker habitat management, then followed by management practices that promote forest health. Table 36 in the revised plan displays the expected outcomes for ecological systems on the Homochitto Ranger District during the first decade of plan implementation. One result of these treatments would be the removal of approximately 60 MMCF for timber in the first decade of plan implementation to achieve desired habitat conditions.

The red-cockaded woodpecker occurs on the Bienville, Chickasawhay, De Soto and Homochitto Ranger Districts. Throughout the revised plan, threatened and endangered species protection and habitat enhancement are a priority. Red- cockaded woodpecker populations are generally increasing as habitat is being maintained, enhanced, or restored and nesting and foraging conditions are being improved (see Table 17, in Section 3.5.4 of the final environmental impact statement). The program levels in the revised plan, for all districts with red-cockaded woodpecker populations, are intended to maintain and improve habitat conditions such that population growth at rates prescribed in the recovery plan are achieved forest-wide.

Comment 16-3:

The EIS has failed to identify the effects of the 30% target within the Homochitto National Forest.[...] With the target area being approximately 39,000 acres, we do not need the aggressive timber cutting scheme that is planned for this area.

Letter Number 16

Cumulative Effects Analysis (122.01)	Harvest Levels (Actual) (142.03)

Response 16-3:

The revised plan proposed management activities on the Homochitto Ranger District are displayed in Table 17 in Appendix B of the final revised plan. The estimated total vegetation management practices on the Homochitto Ranger District are 43,182 acres (6,898 acres regeneration cutting and 36,284 acres from thinning) resulting in an estimated 60 MMCF of timber volume removal in the first decade of plan implementation. The impacts from all activities were evaluated in the final environmental impact statement.

Regarding concern for concentrating impacts in Franklin County please note that during the analysis for the development of the Land and Resource Management Plan for the National Forests in Mississippi, it was determined that the Homochitto District could better meet the USDI Fish and Wildlife Services recovery standards for the red-cockaded woodpecker by expanding the boundaries of the tentative habitat management area. So, all alternatives analyzed except Alternative B (No Action Alternative) increases the red-cockaded woodpecker habitat management area from 76,755 acres to 93,502 acres. This expands the red-cockaded woodpecker habitat management area into Amite and Wilkinson Counties instead of the original designation that was predominantly in Franklin County. The selected alternative for the revised plan includes expansion of the red- cockaded woodpecker habitat management area to approximately 93,502 acres. This should allow some of the priority red-cockaded woodpecker habitat improvement harvests to be in Amite and Wilkinson Counties.

Comment 16-4:

The former plan shows the cutting in compartmental areas of approximately 1000 acres each which was to vary throughout the forest each year. The new directive has the units in 8,000 to10,000 acre areas which puts undue stress on our county's infrastructure including bridges, culverts, drainage areas and especially our roads since the cutting is in such consolidated areas. This, in turn, leads to burdens on the local taxpayers in our small, rural county. We feel that the öld style'of timber management has worked well in the past and we are against the new EIS.

Letter Number 16

Cumulative Effects Analysis (122.01)	Harvest Levels (Actual) (142.03)	Transportation System Management (150)

Response 16-4:

The National Forests in Mississippi develops projects that implement our agency's mission and priorities which results in the selection of areas for the preparation of timber sales to accomplish resource management objectives. The revised Land and Resource Management Plan for the National Forests in Mississippi does not prescribe management activities on a typical 1,000 acre compartment bases the way the original 1985 plan did. The revised plan establishes ecosystem-based prescriptions for management of broad areas of the National Forests in Mississippi resulting in analysis units larger than the typical 1,000 acre compartment size. This allows for more effective and efficient project planning and implementation. However, your concern is understood, and where practical, efforts to distribute impacts can be made.

To put this issue in context, it is worth considering that the total sale volume on the Homochitto National Forest for fiscal year 2012 was 17 % of the harvest level reported by the State of Mississippi to have occurred in Franklin County. Therefore, National Forest harvest is a small portion of the total harvest from Franklin County. The National Forests in Mississippi Federal Payment to the State of Mississippi for Franklin County in 2012 was $671,275.88. This is $6.99 per acre. These payments are ultimately controlled by Forest Service revenue generated from resource sales. Increased timber sales would ultimately result in increased funding for schools and roads in the counties in which the National Forests occur, likewise a reduction in receipts would reduce payments.

Your concerns related to damages to county public roadways and infrastructures due to logging activities are noted. A portion of federal receipts from revenues received from harvest activities are returned to the counties for the support of local county roads and schools. Payments are made to the counties comprising the National Forests from which payments were generated in accordance with provisions set forth in 16 U.S.C. Sections 500 and 501. These federal payments to States from National Forests receipts are typically the extent to which reimbursements are authorized under federal law.

Normally the Forest Service may only spend funds on roads under its jurisdiction (23 USC 205 /23 USC 201). The one exception is forest roads identified on Schedule A of a Forest Road Agreement wherein the Forest Service may spend funds on improvements to roads under the cooperator's jurisdiction (FSH 1509.11 Section 31.21). The National Forest Roads and Trails Act of October 13, 1964 (16 USC 532-538, Pub. L. 88-657) authorizes Forest Service financing and/or cooperation with other public agencies, private agencies, or individuals for acquisition, construction, and maintenance of forest development roads within or near national forests. A Cooperative Forest Road Agreement administered in accordance with FSH 1509.11 must be established for applicable forest roads. A "forest road" is a road wholly or partly within or adjacent to and serving the National Forests System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

The forest road system for the National Forests in Mississippi is well established. The primary focus of the revised plan for the existing forest road system is on maintenance and rehabilitation; infrastructure additions are anticipated to be limited and dependent on funding availability. Cooperative Forest Road Agreements have been utilized in the past, on a limited basis, and may be appropriate were project specific circumstances warranting consideration is identified.

Comment 17-1:

I am voicing my opinion concerning existing and ongoing comments and concerns related to the damages to county public roadways and infrastructure due to logging practices within the Homochitto National Forest.[...] The draft EIS states that the USFS will be cutting 30% of the target in the Homochitto Forest when it only encompasses 19% of the entire National Forest lands in Mississippi. I believe that the largest target area should be in the DeSoto/Chickasawhay Districts where the Fish and Wildlife Service has declared these two districts as red-cockaded woodpecker recovery sites.[...] With the target area being approximately 39,000 acres, I believe Franklin County does not need the aggressive timber cutting scheme that is planned for this area.

Letter Number 17

Harvest Levels (Actual) (142.03)	Transportation System Management (150)

Response 17-1:

Appendix C of the revised plan describes possible actions that may subsequently take place on the districts at the project or activity level to help maintain existing conditions or move toward desired conditions. The lists of possible actions are not intended to be all inclusive nor are they decisions.

It appears you may be comparing the Timber Sale Program Quantity (TSPQ) by district displayed in Table B-22 of the environmental impact statement for likely volume outputs for the first decade. The values in Table B-22 are not "cutting" targets. The 60 MMCF timber sale program quantity for the Homochitto National Forests for the first decade was derived from vegetation management model results for treatment of 6,898 acres of regeneration cutting and 36,284 acres of commercial thinning on the Homochitto National Forest in the first decade (see Table 17 in the revised plan or Table B-12 in the final environmental impact statement).

These anticipated treatments would help maintain existing desired conditions and/or more toward desired conditions consistent with ecosystem management priorities reflected in the plan. These estimates are model estimates based on current resource capability and biological potential. For the selected alternative, the estimate in the Timber Resource Program Suitability and Sustainability Analysis for the Homochitto District is 33% of that alternative's outcome in terms of volume. For acres of harvest, the Homochitto District's share is 26%. The estimates were based on current resource capability which includes budget and staffing.

The analysis did not look at changes based on staffing decisions; rather alternatives considered overall program level changes with a district's share remaining proportionally the same. These proportions were based on traditional target accomplishment capability of each district unit. The allocation of targets to districts may change over time but these allocations are administrative in nature and are not made by the Land and Resource Management Plan for the National Forests in Mississippi.

Appendix C of the revised plan also includes a description of ecosystem vegetation management priorities by district. The priorities for the Homochitto are (first) threatened and endangered species habitat improvement, (second) restoration of vegetation communities outside red-cockaded woodpecker habitat

management, then followed by management practices that promote forest health. Table 36 in the revised plan displays the expected outcomes for ecological systems on the Homochitto Ranger District during the first decade of plan implementation. One result of these treatments would be the removal of approximately 60 MMCF for timber in the first decade of plan implementation to achieve desired habitat conditions.

The red-cockaded woodpecker occurs on the Bienville, Chickasawhay, De Soto and Homochitto Ranger Districts. Throughout the revised plan, threatened and endangered species protection and habitat enhancement are a priority. Red-cockaded woodpecker populations are generally increasing as habitat is being maintained, enhanced, or restored, and nesting and foraging conditions are being improved (see Table 17, in Section 3.5.4 of the final environmental impact statement). The program levels in the revised plan, for all districts with red-cockaded woodpecker populations, are intended to maintain and improve habitat conditions such that population growth at rates prescribed in the recovery plan are achieved forest-wide.

Regarding concern for concentrating impacts in Franklin County please note that during the analysis for the development of the Land and Resource Management Plan for the National Forests in Mississippi, it was determined that the Homochitto District could better meet the USDI Fish and Wildlife Services recovery standards for the red-cockaded woodpecker by expanding the boundaries of the tentative habitat management area. So, all alternatives analyzed except Alternative B (No Action Alternative) increases the red-cockaded woodpecker habitat management area from 76,755 acres to 93,502 acres. This expansion moves the red-cockaded woodpecker habitat management area into Amite and Wilkinson Counties instead of the original designation that was predominantly in Franklin County. The selected alternative for the revised plan includes expansion of the red- cockaded woodpecker habitat management area to approximately 93,502 acres. This should allow some of the priority red-cockaded woodpecker habitat improvement harvests to be in Amite and Wilkinson Counties.

Comment: 17-2

The EIS has failed to identify the effects of the 30% target within the Homochitto National Forest.

Letter Number 17

Cumulative Effects Analysis (122.01)	Harvest Levels (Actual) (142.03)	Transportation System Management (150)

Response 17-2:

The revised plan proposed management activities on the Homochitto Ranger District are displayed in Table 17 in Appendix B of the final revised plan. The estimated total vegetation management practices on the Homochitto Ranger District are 43,182 acres (6,898 acres regeneration cutting and 36,284 acres from thinning) resulting in an estimated 60 MMCF of timber volume removal in the first decade of plan implementation. The impacts from all activities were evaluated in the final environmental impact statement.

Comment 17-3:

The former plan shows the cutting in compartmental areas of approximately 1000 acres each which was to vary throughout the forest each year. The new directive has the units in 8,000 to 10,000 acre areas which puts undue stress on our county's infrastructure including bridges, culverts, drainage areas and especially our roads since the cutting is in such consolidated areas. This, in turn, leads to burdens on the local taxpayers in our small, rural county. I feel that the öld style'bf timber management has worked well in the past and I am against the new EIS.

Letter Number 17

Transportation System Management (150)

Response 17-3:

The National Forests in Mississippi develops projects that implement our agency's mission and priorities which results in the selection of areas for the preparation of timber sales to accomplish resource management objectives. The revised Land and Resource Management Plan for the National Forests in Mississippi does not prescribe management activities on a typical 1,000 acre compartment bases the way the original 1985 plan did. The revised plan establishes ecosystem-based prescriptions for management of broad areas of the National Forests in Mississippi resulting in analysis units larger than the typical 1,000 acre compartment size. This allows for more effective and efficient project planning and implementation. However, your concern is understood, and where practical, efforts to distribute impacts can be made.

To put this issue in context, it is worth considering that the total sale volume on the Homochitto National Forest for fiscal year 2012 was 17 % of the harvest level reported by the State of Mississippi to have occurred in Franklin County. Therefore, National Forest harvest is a small portion of the total harvest from Franklin County. The National Forests in Mississippi Federal Payment to the State of Mississippi for Franklin County in 2012 was $671,275.88. This is $6.99 per acre. These payments are ultimately controlled by Forest Service revenue generated from resource sales. Increased timber sales would ultimately result in increased funding for schools and roads in the counties in which the National Forests occur, likewise a reduction in receipts would reduce payments.

Your concerns related to damages to county public roadways and infrastructures due to logging activities are noted. A portion of federal receipts from revenues received from harvest activities are returned to the counties for the support of local county roads and schools. Payments are made to the counties comprising the National Forests from which payments were generated in accordance with provisions set forth in 16 U.S.C. Sections 500 and 501. These federal payments to States from National Forests receipts are typically the extent to which reimbursements are authorized under federal law.

Normally the Forest Service may only spend funds on roads under its jurisdiction (23 USC 205 /23 USC 201). The one exception is forest roads identified on Schedule A of a Forest Road Agreement wherein the Forest Service may spend funds on improvements to roads under the cooperator's jurisdiction (FSH 1509.11 Section 31.21). The National Forest Roads and Trails Act of October 13, 1964 (16 USC 532-538, Pub. L. 88-657) authorizes Forest Service financing and/or cooperation with other public agencies, private agencies, or individuals for acquisition, construction, and maintenance of forest development roads within or near national forests. A Cooperative Forest Road Agreement administered in accordance with FSH 1509.11 must be established for applicable forest roads. A "forest road" is a road wholly or partly within or adjacent to and serving the National Forests System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

The forest road system for the National Forests in Mississippi is well established. The primary focus of the revised plan for the existing forest road system is on maintenance and rehabilitation; infrastructure additions are anticipated to be limited and dependent on funding availability. Cooperative Forest Road Agreements have been utilized in the past, on a limited basis, and may be appropriate were project specific circumstances warranting consideration is identified.

[Note: Letter Number 18 resulted in two comments beginning with comment 18-15. The comment letter includes a copy of the e-mail dialogue that was generated while clarifying and resolving the issues raised in the original comment submission.]

Comment: 18-15

Northern Dry Upland Hardwood Forest Desired Ecological Condition Overstories are typically dominated by upland oaks (post, southern red, blackjack, and white) Why not black oak? It was far more common historically in dry uplands than was white oak. Scarlet oak was also common.

Letter Number 18

Technical, Editorial (123)

Response 18-15:

Species listed in Northern Dry Upland Hardwood Forest ecosystem were edited to include suggested species.

Comment 18-16:

Northern Dry Upland Hardwood Forest Management Strategy Forest strategies for restoring, maintaining, and enhancing the northern dry upland hardwood forests should emphasize restoring the appropriate fire regime. In my opinion, priority (or at least consideration) should be given to restoring open oak woodlands in those areas currently designated Northern Dry Upland Forests. The appropriate fire regime in my opinion is the same as for the Shortleaf Pine-Oak Woodlands, not low-intensity fires as mentioned above. Return of relative abundance to approach historical levels is a long-term goal for upland hardwood forests on the National Forests in Mississippi,[…]am asking that the same consideration be given to upland hardwood communities in northern Mississippi. People in the Midwest are ahead of us on this issue because they don't have a lot of upland pine or bottomland hardwoods and therefore are not caught up in this false dichotomy of pines need fire, but hardwoods don't (need much). They speak of their oak woodlands and savannas more or less the same way we talk about longleaf pine. In fact, Nature Serve does have descriptions for oak woodlands and savannas. It's just that it has not recognized them as being appropriate references for northern Mississippi. Nobody does. That is because fire exclusion has been so complete that there are essentially no open oak woodlands left in Mississippi. As far as I know, I am about the only person who has bothered to investigate this. Ultimately, I hope we all can agree that desired conditions should be based at least in part on what will best preserve biodiversity. My experience with the restoration projects at Strawberry Plains Audubon Center and at the Tallahatchie Experimental Forest is that there is a significant net benefit in terms of plant diversity to reducing off-site tree species and implementing fire regimes comparable to those used in longleaf pine ecosystems and oak savannas. Studies in similar habitats in adjoining states have shown similar responses, not just for plants but also for small mammals, birds, most arthropods, and reptiles. I honestly don't care whether this is considered natural or "correct" historically. The results in terms of biodiversity responses speak for themselves. These upland hardwood communities are not filled with trilliums and NEVER will be. Rather, they have a lot of suppressed and non-flowering helianthuses and coreopses and seed banks of lespedezas and other open woodland indicators, presumably waiting for the canopy to be opened up and to be burned. The few shade-tolerant mesophytic herbs that are present (e.g., green dragon, christmas fern, false Solomon's seal) have responded POSITIVELY (or at least not negatively) to opening the canopy and burning. Once the canopy was opened up and we started burning at Tallahatchie Experimental Forest (2010), we started seeing and hearing the calls of bobwhites (for the first time since I'd been working there (1998)). For these reasons, I suggest that open woodlands be ONE of the desired

conditions in areas currently designated as being appropriate for Northern Dry Upland Hardwood Forests.

Letter Number 18

Technical, Editorial (123)

Response 18-16:

The desired condition for dry upland hardwoods was written into the draft plan to reflect what we expected to be able to accomplish with likely resources. Your comment is valid and scientifically based.

The desired condition of dry upland hardwood has been edited in the revised Land and Resource Management Plan to state that it will contain some open canopy conditions. In addition, oak species composition for northern dry upland hardwoods has been edited to substitute black and scarlet oak for white oak. Chapter 3 of the revised Land and Resource Management Plan has a stated objective for the first decade to reduce the density of 1700 acres of dry upland hardwood and restore dry upland hardwood on 1600 acres from the loblolly forest type.

These activities result in a relatively small percentage increase in acreage of dry upland hardwoods and open canopy conditions. The interdisciplinary team developing the plan was concerned that areas opened with overstory reductions to woodland conditions in dry upland hardwoods would be difficult to maintain with fire return intervals likely to be achieved.

The revised Land and Resource Management Plan places a higher priority on threatened and endangered species habitat, and restoration of longleaf which supports many of the threatened and endangered species occurring on the Forest. A section has been added to Appendix C of the revised Plan to provide details on the vegetation management priorities for each district.

[Note: During review and response to comments the first four comments originally identified were eliminated resulting in the comments for letter number 19 beginning at 19-5.]

Comment 19-5:

EPA recommended that future forest land and resource management plan DEIS include more quantitative evaluation. One method for quantitative evaluating ecosystem restoration includes that of environmental accounting (see Odum, H.T. (1996) Environmental Accounting: Emergy and Environmental Decision Making, Wiley, U.S.A). Environmental accounting utilizes emergy principles to evaluate all of the processes in an ecological system by back calculating the solar energy that it took to get to an equilibrium state for the processes. The value is in solar emjoules and because all of the processes are calculated using the same metric, it is feasible to value all of the processes and relationships. We have attached and/or referenced three other documents for your future consideration, Assessing environmental costs and impacts forestry activities: A multi-method approach to environmental accounting by Elvira Buonocorea, Tiina Hayhaa, Alessandro Palettob, Pier Paolo Franzesea, Valuing Forest Ecosystem Services In Maryland And Suggesting Fair Payment Using The Principles OJ Systems Ecology and Environmental Accounting OJ Natural Capital and Environmental Services of the US National Forest System by Elliott Campbell, 2008. For more information on energy analysis contact Dan Campbell at campbell.dan@epa.gov.

Letter Number 19

Effects Analysis (122)	Ecosystem, Habitat Health (240.01)

Response 19-5:

Thank you for your comment. Our agency is currently evaluating environmental accounting and assessment tools, your reference citations are appreciated.

Comment 19-6:

EPA notes that alternatives C-E, with implementation of best management practices, would appear to be the best approach for ecosystem restoration

Letter Number 19

Preferred Alternative (121.0201)	Ecosystem, Habitat Health (240.01)

Response 19-6:

We concur that alternatives C-E appear to be best approach for ecosystem restoration.

Comment 19-7:

Recommendation: EPA recommends that the Forest Service continue to comply with the federal and state guidelines associated with prescribed burns. EPA notes that Alternatives A and B will result in the less air quality impacts in the short-term. While Alternatives C, D, and E will result in the greatest hazardous fuels reduction and ecological restoration and maintenance, they will also contribute to the greater air quality impact. Increased prescribed burning during the growing season will result in more particulate matter and ozone formation. However, according to the DEIS the increase is not expected to affect the attainment of federal and state air quality standards.

Letter Number 19

Laws, Policies (110.04)	Air Quality Management (133.01)	Fire, Fire Risk (236)

Response 19-7:

We concur with your findings and recommendations.

Comment 19-8:

Recommendations: EPA supports the effective use of BMPs and adherence to forest standards and guideline for water quality. We recommend reducing the nonpoint source pollution of surface and ground waters that can result from forestry activities. These activities include but are not limited to: Tracking the implementation of best management practices (BMPs) used to control nonpoint source pollution generated by forestry practices. Developing water-quality monitoring plans to evaluate the effectiveness of forestry BMPs in meeting water-quality goals or standards. Design of monitoring projects and the selection of variables and methods to correlate BMP implementation with changes in stream water quality. Providing information on methods for sample site selection, sample size estimation, sampling, and result evaluation and presentation. The focus is to develop statistical approaches needed to collect and analyze data that are accurate and defensible. EPA supports efforts to implement the nonpoint source (NPS) total maximum daily load (TMDL) program. Nonpoint source TMDLs and watershed-based plans designed to implement the NPS TMDLs, provide the necessary link between actions on the ground and the water quality results to be achieved. EPA continues to support planning at the landscape level to address broader ecological concerns such as biodiversity, watershed maintenance and restoration, and forest fragmentation. DEPA recommends that ecological and other environmental values should be the primary,

driving factors in the identification, protection, and management of roadless areas in the National Forests.

Letter Number 19

Water Quantity (232.04)

Response 19-8:

The Forest Service is committed to implementation of best management practices to ensure water quality goals and standards are maintained.

Comment 19-9:

EPA recommends commitments to best management plan, mitigation and monitoring should be documented in a summary tracking form of project commitments.

Letter Number 19

Soils (234)

Response 19-9:

The agency has a Planning, Appeals and Litigation System (PALS) national database that documents and tracks agency project-level decisions from proposed action to project level decision and implementation. Our monitoring and evaluation procedures support an adaptive management approach that fosters a continuous improvement in management philosophy.

Comment: 19-10

The DEIS indicates that the Forest Service's research activities are expected to help both public and private land managers better understand changing conditions and determine appropriate management approaches for both adaptation and mitigation. EPA notes that by restoring native longleaf pine where loblolly and shortleaf pine currently exist, Alternatives C, D and E would result in a national forest less vulnerable to the effects of climate change than Alternative A.

Letter Number 19

Climate Change (233.02)

Response 19-10:

We concur with your findings.

Comment 19-11:

EPA supports restrictions on new roadway construction in the Sandy Creek RARE II study area and protecting sensitive natural resources.

Letter Number 19

Oil & Gas (235.02)

Response 19-11:

Thank you for your comment. The final plan direction for the Sandy Creek RARE II further study area prohibits new road construction to ensure compliance with Federal Court rulings on the 2001 National Roadless Rule.

Comment 19-12:

Road maintenance and reconstruction would vary by alternative with greater need for these activities as vegetation management activities increase from alternative A through E.

Letter Number 19

Transportation System (250)

Response 19-12:

We concur with your findings.

Comment 19-13:

The EJ analysis should indicate the efforts made to identify subsistence consumption within the planning area that targeted low-income and minority populations and summarize any EJ concerns raised during the public engagement process, particularly in those areas that experience higher minority and low-income populations.

Letter Number 19

Environmental Justice (282.05)

Response 19-13:

Dependence on subsistence consumption of fish or wildlife is not recognized by the regulations of the Mississippi Department of Wildlife Fisheries and Parks for any segment of the State of Mississippi population. Wild game and fish harvested provides supplemental nutrition for all segments of the population who harvest game and fish regardless of their income status.

However, the statement in the Environmental Justice analysis was based more on the fact that it is not recognized by the State agency which regulates harvests of game and fish. There were no concerns raised during the public engagement process related to dependent consumption of game, fish, berry or other vegetative food gathering. The effects of the alternatives are based on differences in habitat quality and growing conditions. There would be no disproportionate negative impacts to minority or low-income populations on the availability of the supplemental nutrition obtained from these natural resources.

Comment 19-14:

EPA recommends forest managers examine the effects of fragmentation on a species-by species basis with emphasis placed on threatened and endangered species and also 'keystones' species that play an important role in an ecosystem relative to their abundance and whose removal has large ripple effects on other plants and animals as well as on ecological processes. To reduce the impact of timber harvesting on biodiversity, EPA recommends forest management consider the mosaic of forest patches on the landscape and the connectedness of habitat for forest species in planning future cuts.

Letter Number 19

Fragmentation, Connectivity (240.0102)

Response 19-14:

The final environmental impact statement considered the effects of fragmentation on individual species and species groups as part of our ecosystems and species diversity report and viability evaluation process. Final plan direction and management guidelines promote a strategy for reducing fragmentation with priority given to maximizing the amount of contiguous forest area when planning stand regeneration. Priority is to be placed on locating new stands adjacent to existing young or regenerating stands to maximize the amount of contiguous mature forest.

Comment 19-15:

EPA recommends management of National Forests place emphasis on sustaining the ecological values of healthy forests. This should include: Protection of water quality and yield, sensitive groundwater recharge areas, and undisturbed headwaters of streams and public drinking water supplies. Greater attention to the adverse impacts of logging roads and the value of undisturbed buffer zones along streams and rivers and the designation of wild and scenic rivers. Soil quality maintenance and nutrient stocks that hold the key to current and future forest productivity should also remain a priority. Conservation of forest biodiversity by reducing forest fragmentation (as a result of clearcuts and roads), avoiding harvest in vulnerable areas such as hardwood or old growth stands and riparian zones, and restoring natural structural complexity to cutover sites.

Letter Number 19

Environmental Quality and Ecosystem Integrity (230.01)	Forest Health (230.03)	Water Resources (232)
Soils (234)		

Response 19-15:

The ecological values expressed in these concerns were the drivers for development of the revised plan desired conditions, and objectives. Where there was the potential for undesirable impacts, standards and guides were developed to prevent or reduce impacts. The revised plan protective guidelines and standards for these concerns are located in the following sections: Soil and water quality, stream sedimentation and vulnerable area protection - sections 4.2.2, 4.2.3, 4.2.4, 4.2.6, and 4.2.8; Forest fragmentation, loss of habitat, species impacts and structural complexity section 4.2.1.

Comment 20-1:

The revised plan calls for 4 bird species to be used as Management Indicator Species. Those species will be monitored to assess the effectiveness of management plans for different habitat types: Red-cockaded Woodpecker: Mature pine forest. Actively manage for this endangered species. Pileated Woodpecker: Mature forests with snags/cavities Wood Thrush: Tracts of unbroken forest Hooded Warbler: Mature forest we feel that Hooded Warbler should be removed from the list, as we found them in pretty much every type of habitat (from mature forest to scrub/shrub) during our breeding season point counts. Possibly a better indicator species for mature forest would be Acadian Flycatcher; this species was most often only found in draws in forest stands.

Letter Number 20

Indicator Species (243.02)

Response 20-1:

While the Hooded Warbler was initially considered as a Management Indicator Species (MIS) to represent mature forest, it was eliminated from further consideration through the Management Indicator Species screening process. The Pileated Woodpecker was selected as a Management Indicator Species to represent mature forest as well as snag/cavities. See Appendix F - Management Indicator Species of Final Environmental Impact Statement for additional details.

Comment 20-2:

If we understand correctly, Wood Thrush was selected in order to monitor the effectiveness of reducing edge habitats. You might consider as an alternative (or in combination) Indigo Buntings, as they are closely tied to edges. We feel that it would be appropriate to monitor the population levels of Indigo Buntings to determine the amount of edge habitat in the landscape.

Letter Number 20

Indicator Species (243.02)

Response 20-2:

Upon further discussion with Dr. Frank Moore, it was agreed that the Wood Thrush is a good indicator of large unbroken tracks of forest. However, while the Indigo Bunting is closely tied to edges, the Wood Thrust would be a better overall single indicator of large unbroken tracts of forest. Indigo Bunting population numbers would continue to be monitored through annual breeding bird surveys.

A.4 Comments by Category

No Further Response Required (102)

Comment 7-1: Comment 8-1: Comment 10-1:

Beyond Scope (102.01)

Comment 8-1:

Coordination, Consultation (110.02)

Comment 9-63: Comment 9-65:

Laws, Policies (110.04)

Comment 19-7:

Proposed Action, Decision (120)

Comment Comment

9-21: 13-1:

Purpose and Need (120.01)

Comment
9-24:

Alternatives (comparing, range) (121.02)

Comment
15-1:

Preferred Alternative (121.0201)

Comment
19-6:

Effects Analysis (122)

Comment 9-26:	Comment 9-30:	Comment 9-31:	Comment 9-32:	Comment 13-4:	Comment 13-5:	Comment 19-5:

Cumulative Effects Analysis (122.01)

Comment 16-3:	Comment: 17-2

Technical, Editorial (123)

Comment 9-25:	Comment 9-26:	Comment 9-28:	Comment 9-29:	Comment 9-34:	Comment 9-38:	Comment 9-52:	Comment 9-57:
Comment 9-58:	Comment 9-61:	Comment 9-64:	Comment 11-3:	Comment 11-8:	Comment 11-9:	Comment 11-10:	Comment 11-11:
Comment 11-12:	Comment 11-13:	Comment 11-14:	Comment 11-15:	Comment 11-16:	Comment 11-17:	Comment 11-18:	Comment 11-19:
Comment: 11-20	Comment 11-21:	Comment 11-22:	Comment 11-23:	Comment 11-24:	Comment 11-25:	Comment 11-26:	Comment 11-27:
Comment 11-28:	Comment 11-29:	Comment 11-30:	Comment 11-31:	Comment 11-32:	Comment 11-33:	Comment 11-34:	Comment 11-35:
Comment 11-36:	Comment 11-37:	Comment 11-38:	Comment 11-39:	Comment: 14-2	Comment 14-5:	Comment 14-7:	Comment 14-8:
Comment: 18-15	Comment 18-16:						

Monitoring (130.01)

Comment 9-42:	Comment 9-75:

Water, Watershed Management (132)

Comment 4-7:	Comment 5-1:

Air Quality Management (133.01)

Comment 19-7:

Oil & Gas (135.02)

Comment: 9-48 Comment 14-3:

Prescribed Burns (136.03)

Comment 4-3: Comment 9-22: Comment 9-33: Comment 9-34: Comment 9-36: Comment 9-37: Comment 9-40: Comment 9-47: Comment 9-50: Comment 9-59: Comment 9-64: Comment 9-73: Comment 11-7:

Unit Fire Plans (136.04)

Comment 9-22: Comment 9-33:

Safety, Risk Management (136.05)

Comment 4-3:

Smoke Management (136.07)

Comment 4-3:

Biological Resources Management (140)

Comment 3-3:

Vegetation Management (141)

Comment 9-30: Comment 9-31: Comment 9-32: Comment 9-35: Comment 9-51: Comment 9-52: Comment 9-63: Comment 14-10:

Insects and Disease Treatment (141.02)

Comment 9-40: Comment 9-63:

Chemical Vegetation Treatment (141.04)

Comment 4-7:

Timber Management (142)

Comment 4-4: Comment 5-2: Comment 9-49: Comment 13-3: Comment 13-8: Comment 13-9:

Harvest Levels (Actual) (142.03)

Comment:	Comment	Comment	Comment:
16-1	16-2:	17-1:	17-2

Harvest Methods (142.04)

Comment	Comment
9-70:	16-3:

Wildlife/Animals Management (143)

Comment
9-60:

Invasive Animal Management (143.03)

Comment	Comment
9-74:	11-4:

Wildlife Structures (143.06)

Comment
9-71:

Military Activities (149.03)

Comment:
6-1

Transportation System Management (150)

Comment:	Comment	Comment	Comment:	Comment
16-1	16-4:	17-1:	17-2	17-3:

Road Construction, Maintenance (151.01)

Comment
5-2:

Road Closure, Decommissioning (151.02)

Comment
4-1:

Transportation Analysis (150.03)

Comment
4-1:

Trails Management (152)

Comment	Comment
3-1:	7-1:

Recreation Management (160)

Comment
3-1:

User Education (160.02)

Comment
3-4:

Visual Resource Management (160.04)

Comment
3-4:

Seasonal Closures/Access (162.02)

Comment
9-67:

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