

Holly Springs and Tombigbee Ranger Districts National Forests in Mississippi Vision Statement

Lands in need of restoration became National Forest

Prior to the 1930s, deforestation and erosion had severely impacted land in Mississippi. The lands now contained in the Holly Springs and Tombigbee ranger districts (Figure 1) were acquired by the federal government in the 1930s due to their need for restoration. At first, these lands were managed by two different agencies and different programs. The Holly Springs ranger district was administered by the U.S. Forest Service (USFS), and what is now the Tombigbee ranger district was administered by the Soil Conservation Service.

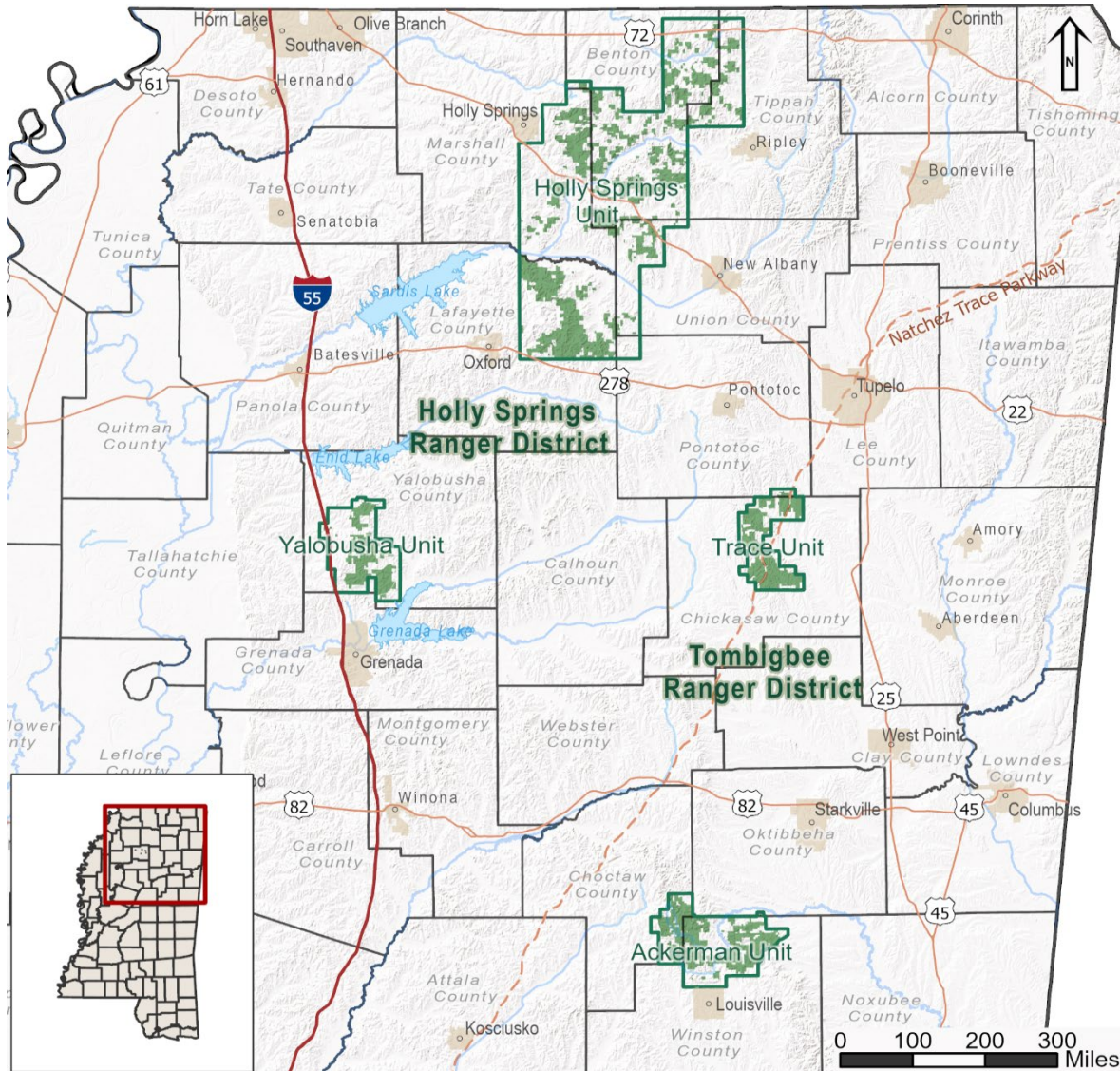


Figure 1: Vicinity map for the Holly Springs and Tombigbee ranger districts, as well as U.S. Forest Service ownership

While the Holly Springs and Tombigbee districts remain separate units, in 2013 they were zoned and placed under the management of a single District Ranger. It was determined that the most efficient way to manage these two units was to share staff and resources. They are similar in many ways: mixed pine/hardwood forests dominate both landscapes, and the focus on restoration of the shortleaf and shortleaf/oak forest types. Combined, these units total 224,000 acres dispersed across 11 counties.

Understanding the historical conditions of the pine species and land conditions gives context to the management of these lands. Shortleaf pine and the shortleaf/oak forest types are the native pine ecosystems found in the Holly Springs and Tombigbee; prior to federal ownership, these forests were cutover for farming and grazing. When these lands were acquired by the federal government, many areas on both units, were eroded farmlands in poor condition. For example, land records for the Holly Springs show that an astonishing 85% of the unit did not have forest cover (Figure 2). Across both units, hardwood species grew back on appropriate sites with little active management over the years. Pine was planted on appropriate sites and continues to be managed. Loblolly pine was chosen to help re-establish forest cover because of its ability to grow quickly in poor soil conditions, and because its frequent, heavy dropping of needles help reduce erosion. Unfortunately, loblolly is an off-site species and has shown some problems, particularly its susceptibility to ice damage. Additionally, there is a significant backlog of pine stands in need of treatment to maintain a healthy forest, due in part to a reduction in funding for timber management and markets.



Figure 2: Erosion problems in North Mississippi in the 1930s.

Overview of Units: Size, Soils, Challenges, Amenities

The Holly Springs ranger district is in north-central Mississippi. It is approximately 157,000 acres and is composed of the Holly Springs and Yalobusha units. A major management challenge is the dispersed nature of the USFS lands, with few consolidated blocks of federally managed land. The Holly Springs ranger district is the most fragmented ownership district in the National Forests in Mississippi. The soils are moderately to highly erosive, with areas of large gullies that developed prior to the establishment of the ranger district. The Holly Springs has 12 ecological community types, including shortleaf pine/oak

forest and woodland vegetation communities. The emphasis has been on improvement of forest health, and the conversion of off-site species to shortleaf pine/oak forest and hardwood dominated forests. There are two developed recreation sites, a horseback riding trail, several hiking trails, and a wildlife management area. There are also 33 small lakes across the district which provide opportunities for fishing, an important recreational experience for many visitors.

The Tombigbee ranger district is in northeast Mississippi. It encompasses approximately 67,000 acres and includes the Ackerman and Trace units. The Natchez Trace Parkway, a National Parkway managed by the National Park Service, crosses the Trace unit, a portion of the Tombigbee. This ranger district consists of old farmland that was abandoned, and either replanted or naturally regenerated forests. Soils are fragile and erosive with many gullied areas. The Tombigbee geographic area has 12 ecological community types. Loblolly pine and northern dry upland hardwood forest are the prevalent forest types. The Tombigbee is primarily managed for forest health. There are approximately 5,000 acres of Black Belt Calcareous Prairie and Woodland ecological systems soil types, which need restoration. There is an extensive recreation program and public use, with two large campgrounds, two wildlife management areas and an ATV, horseback, mountain biking, and hiking trails. Quality fishing is a big emphasis in the two developed recreation areas. This unit hosts the most developed recreation use of all districts of the National Forests in Mississippi.

Forest wide Vegetative Types

When one envisions the forests of Mississippi, what comes to mind are the vast expanses of pine forest typical of the central and southern parts of the state, or the large river bottom hardwood stands snaking their way to the Mississippi River or the Gulf of Mexico. However, a look at the woods of the Holly Springs and Tombigbee show a very different view. Both units have intermingled hardwood and pine forest types (Figures 3 – 6). Because of differences in soils, topography, moisture, and past management, there are no large cohesive expanses of any one forest type. While some sites will call for conversion from pine to hardwood, none of these future changes will change the interspersed forest types.

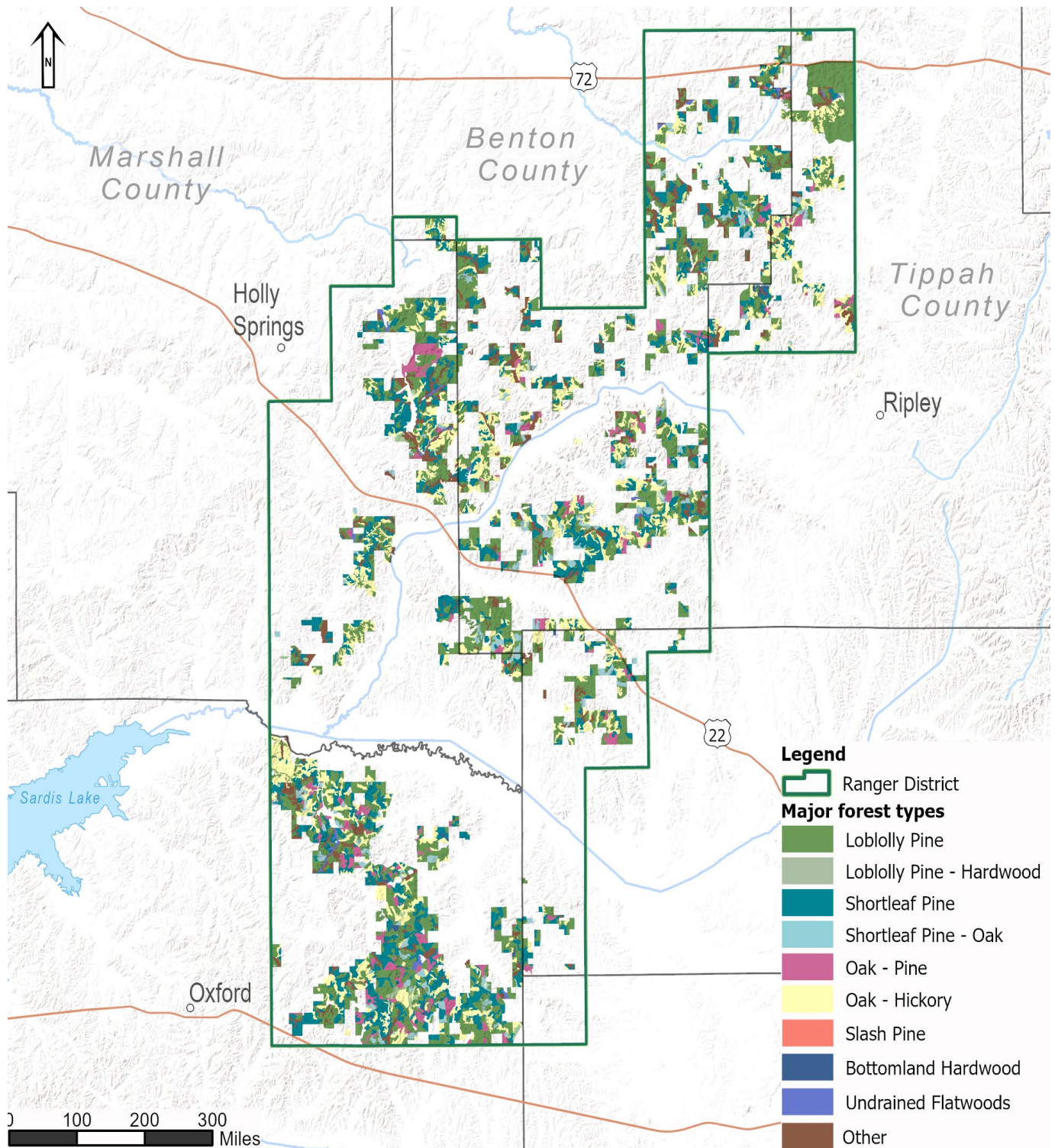


Figure 3: Major forest types, Holly Springs Unit

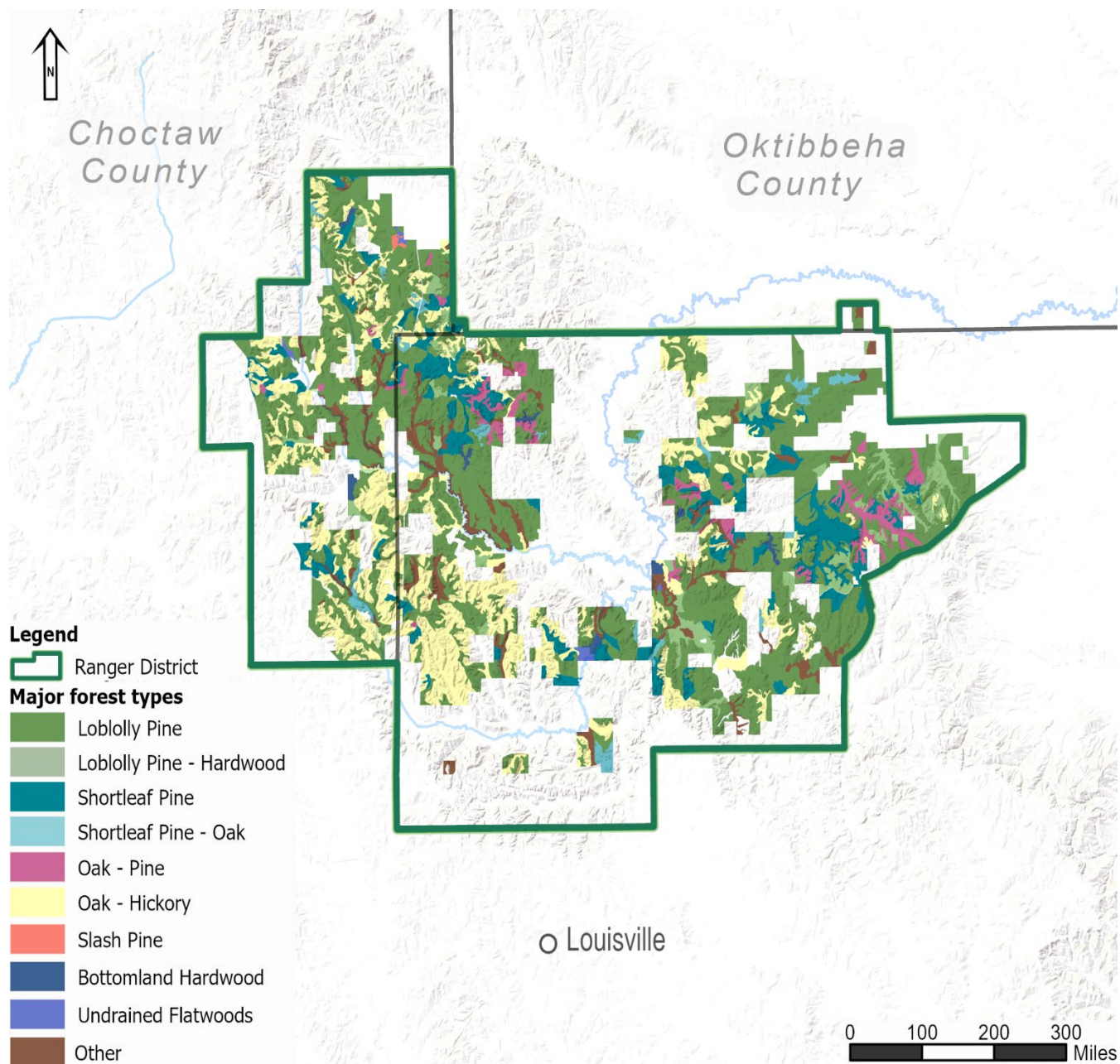
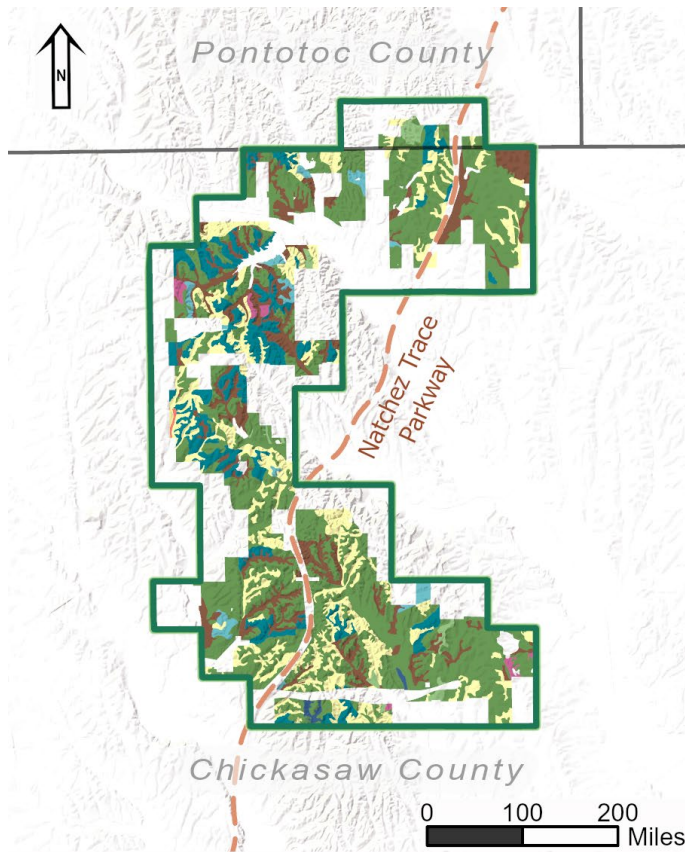


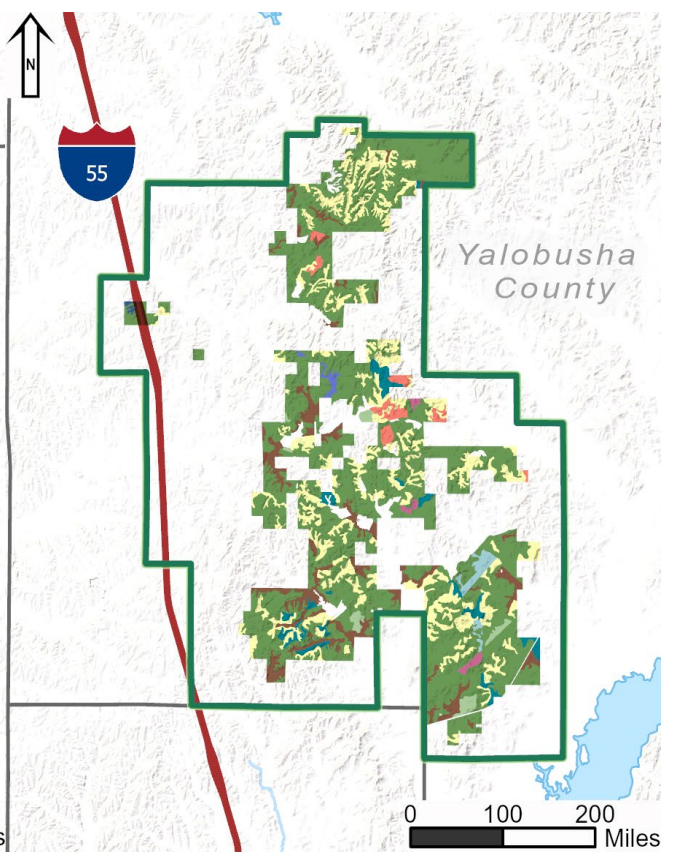
Figure 4: Major forest types, Ackerman Unit



Major forest types



Figure 5: Major forest types, Trace Unit



Major forest types



Figure 6: Major forest types, Yalobusha Unit

Benefits of Restoring Shortleaf and Shortleaf/Oak Forest Types

Shortleaf pine is the main native pine species and is a much more desirable forest type due to its resiliency and adaptability in our changing environment. Shortleaf pine has the widest distribution of all southern pines, which is reflective of its adaptability to a variety of soil types, temperatures, precipitation amounts, and elevations. It is a fire adapted species, and frequent prescribed burns are necessary to its conservation; this is also true of the understory native grasses and forbs that associate with shortleaf pine. The resiliency of the shortleaf pine to weather impacts make it better suited to this region than loblolly pine. It is resistant to ice storm damage due to its smaller needles and thinner crown, wind damage due to its deep taproot and extensive lateral roots, and to fusiform rust. In addition, shortleaf pine's slow growth rates and ability to resprout are very comparable to oaks, allowing for successful mixed stand management.

While both units have recognized the importance of this ecological system, the Holly Springs district has been working on maintaining and restoring it since the late 1990s. The district has managed older stands through consistent prescribed burning and timber activities. Storm events, particularly the reoccurring ice storms and the cyclic outbreaks of Southern Pine Beetle (SPB), both showed the need and gave the opportunity to begin moving away from the predominate loblolly pine forest type to the hardier and more resilient shortleaf.

While the benefits of regeneration to shortleaf and shortleaf/oak forest types are clear, the process to restore shortleaf and shortleaf/oak forest types has taken great effort. These forest types are difficult to establish due to the relentless vegetative competition found in Mississippi. The unit has worked through a variety of approaches to site preparation and to find the best way of re-establishment. Once the forest stand is well established there is a need for consistent prescribed burning. As with all forest management, there is never a "one-size-fits-all" approach to success. The commitment and skill of the local staff have been instrumental in continuing to help re-establishment of this important ecosystem. Work is being done with partners, particularly Mississippi State University, in research projects on regeneration methods and outcomes, including Mississippi State University and the Shortleaf Pine Initiative

Black Belt Prairie Restoration

The prairie remnants found on the Trace Unit of the Tombigbee are thought to be some of the best remnants of the Black Belt Calcareous Prairie and Woodlands in the range (Figure 7). Restoration of Black Prairie ecosystems, including grasslands and woodlands, will increase diversity of habitats for many species including grassland birds (such as grasshopper sparrow and prairie warbler), pollinators, fox squirrels, and cottontail rabbits. It will also compliment habitats for other species such as white-tailed deer, eastern wild turkey, woodcock, and northern bobwhite. Other remnant prairie units in north Mississippi have shown a plant diversity of hundreds of species, and present burning of existing prairie grasslands has demonstrated that there is a valuable seed bank already present. Prescribed burning in this

area reduces competing vegetation, opens areas to increased sunlight, and creates some disturbance which encourages the germination and sprouting of existing seeds.

The unit will establish a collaborative working group with several partners in prairie restoration work and research, such as Southeastern Grasslands Initiative, Mississippi State University, USDA Plants Material Center, Natchez Trace State Park, and Mississippi Museum of Natural Science. Prairie restoration will include prescribe burns during both dormant and growing season burns, as well as timber removal to improve and expand the prairie and natural and artificial ground layer restoration.



Figure 7: One of the open areas of prairie on the Trace unit (left), and a location map of the area pictured (right).

Forest Plan Direction: Ecological Restoration is the Priority

The Revised Land and Resource Management Plan (Forest Plan) plotted a new vision and direction for the National Forests in Mississippi. The Forest Plan primarily emphasizes ecological restoration, but each separate unit has their own management direction and priorities to achieve this restoration.

The top priorities for the Holly Springs and Tombigbee districts are:

1. *Rare Community Restoration*: The restoration of prairie (Black Belt Calcareous Prairie and Woodlands) soil types to desired conditions.
2. *Restoration of Vegetative Communities*: The most important vegetation management treatments are the use of harvests to restore native vegetation, in particular shortleaf pine and shortleaf/oak. Harvest would also include pine forest type areas that should be hardwood forest types.
3. *Forest Health*: The use of harvests to address forest health improvement needs. The immediate forest health concern is the susceptibility of overstocked pine stands to SPB infestations.

We have reviewed the existing ecological systems and compared them to desired future ecological systems. The locations and amounts of ecological systems in our desired future condition refers to acres in which the species or ecological systems are of historic occurrence, where topographic features (such as slope and aspect) and soil characteristics are conducive to sustain the system, or where the species is not considered to be “off-site”, invasive, or otherwise undesirable as discussed in the Forest Plan (Table 1).

Table 1: Current and Desired Future Percent of Ecological Systems by Unit*

| Ecological System | ** | Holly Springs | Holly Springs | Tombigbee | Tombigbee |
|--|----|---------------|---------------|-----------|-----------|
| | | Main | Yalobusha | Ackerman | Trace |
| Shortleaf Pine/Oak Forest and Woodland | C | 28 | 4 | 12 | 14 |
| | D | 34-52 | 34-52 | 30-47 | 28-43 |
| Loblolly Pine Forest | C | 38 | 65 | 53 | 51 |
| | D | 0-5 | 0-5 | 0-5 | 0-5 |
| Slash Pine Forest | C | | 2 | | |
| | D | | 0 | | |
| Northern Dry Upland Hardwood Forest | C | 21 | 18 | 20 | 16 |
| | D | 34-51 | 34-51 | 30-46 | 28-43 |
| Northern Mesic Hardwood Forest | C | 10 | 10 | 12 | 15 |
| | D | 6-13 | 1-8 | 6-12 | 18-24 |
| Floodplain Forest | C | 2 | 2 | 3 | 2 |
| | D | 6-13 | 11-18 | 16-22 | 7-13 |

* Forest Plan

** C – Current, D – Desired

Current Restoration – Considering Hardwoods or Pines

As shown in Table 1, the hardwood ecological systems are an important part of the landscape on both the Holly Springs and Tombigbee. An overall summary of the percentages of forest types is shown in (Table 2). As we move to the desired future condition, the hardwood forest types will become a larger percentage, especially on the Tombigbee.

Table 2: Percentage of Acres per Forest Types

| Unit | Current or Future | Pine Forest Types | Hardwood Forest Types |
|---------------|-----------------------------------|-------------------|-----------------------|
| Holly Springs | Current | 67% | 33% |
| | Averaged Desired Future Condition | 56% | 44% |
| Tombigbee | Current | 65% | 35% |
| | Averaged Desired Future Condition | 45% | 55% |

The Holly Springs and Tombigbee have not conducted timber management in hardwood forest types for decades due to the urgency of the pine management. The importance of continuing this focus is shown in recent SPB outbreaks, which generally occur in stressed pine stands. One factor contributing to this is the large backlog of initial treatment needs in these stands. First thinning is critical in planted pine stands because of extremely high stem densities. As the trees grow, they begin to compete for limited resources, particularly water. This competition causes the trees to become stressed. It is expected that we will need to continue this focused management of pine forest types for many years, and thus expect limited timber management in hardwood forest types. To reach restoration goals for the district, eventually 30,670 acres of pine will need to be converted back to hardwood. So, although we are not specifically managing hardwood stands, hardwood remains a part of our silvicultural considerations.

The remainder of this document will focus on restoration and resiliency work in pine forest types. The Ecological Condition model in this discussion will be focused on the shortleaf and shortleaf/oak forest types. In the future this will be expanded to examine the hardwood forest types as well.

Ecological Conditions and Modeling of Current Conditions

The Holly Springs ranger district has 38,000 acres and Tombigbee ranger district has 11,000 acres of overstocked young to mid-age loblolly pine forest that needs treatment to improve forest health and resilience to impacts such as SPB outbreaks and climate change. Additionally, there are about 16,000 acres on the Holly Springs and 17,000 acres on the Tombigbee of mature loblolly pine that needs regeneration to restore the landscape to more appropriate ecological systems of shortleaf pine, shortleaf pine/oak forests, woodlands, or hardwoods. The remainder of the loblolly forest on the Holly Springs (11,000 acres) and the Tombigbee (6,990 acres) are open pine forest because of recent timber harvests. These areas will continue to be thinned as needed until regeneration.

Approximately 1,800 acres of shortleaf and shortleaf/oak on the Holly Springs and approximately 340 acres on the Tombigbee are in the regeneration stage. Overstocked shortleaf and shortleaf/oak systems of young to mid-age represent roughly 10,980 acres on the Holly Springs and 220 acres on the Tombigbee. These stands require first or intermediate thinning to improve forest health and resilience to impacts such as SPB outbreaks and climate change. Mature shortleaf and shortleaf/oak represent 25,900 acres on the Holly Springs and 8,000 acres on the Tombigbee that will be maintained and carried to a longer rotation of 120 years before regeneration needs are evaluated. Thinning will continue to be used to improve forest health, species composition, structural, and spatial diversity. Where the shortleaf and shortleaf pine/oak systems occur on dryer sites, woodland conditions will be created through thinning, midstory, and ground layer treatments.

To focus restoration and management of the shortleaf and shortleaf/oak ecosystems, the units have analyzed and assigned a rough classification scheme related to condition. In the future the condition classification of other ecological systems will be done. Currently, we are only examining areas of shortleaf. This rough classification simply groups areas into a Tier 1 – Good, Tier 2 – Fair, and Tier 3 – Poor. While all lands that are classified as pine forest type can grow shortleaf pine and shortleaf/oak forests and woodlands systems, there are some areas that have more problems and challenges to overcome.

This initial classification used the following generalized framework.

1. **Tier 1 – Good** areas may have the following characteristics: a good proportion of shortleaf or shortleaf/oak forest types already established on pine forest type sites, are receiving regular prescribed burning or other treatments to maintain or improve their condition and have good access. These are shown on the map in **green**.
2. **Tier 2 – Fair** areas may have the following characteristics: limited shortleaf or shortleaf/oak forest types but have a good quantity of pine forest type, have an established prescribed burning regime in place and have good access. These are shown on the map in **orange**.
3. **Tier 3 – Poor** areas may have the following characteristics: are isolated tracts, limited access, are predominately hardwood forest types, have no or little prescribed burning activity. These are shown on the map in **red**.

We will not completely abandon management on any National Forest lands. We will continue to manage all National Forest System lands to be good stewards of the public lands and good neighbors. But we want to keep our focus on maintaining our high quality shortleaf and shortleaf/oak stands in good shape

and expand these areas. With limited resources we must be strategic in where we are putting emphasis on the ground and what results we are achieving.

This classification will be an ongoing process as we refine the mapping. The vision is that this mapping of the units will be examined as conditions change to update and more finely determine areas, helping to better focus on restoration of quality shortleaf ecological systems.

These ecological condition class tiers for shortleaf and shortleaf/oak forest types can be seen in Figure 8-11.

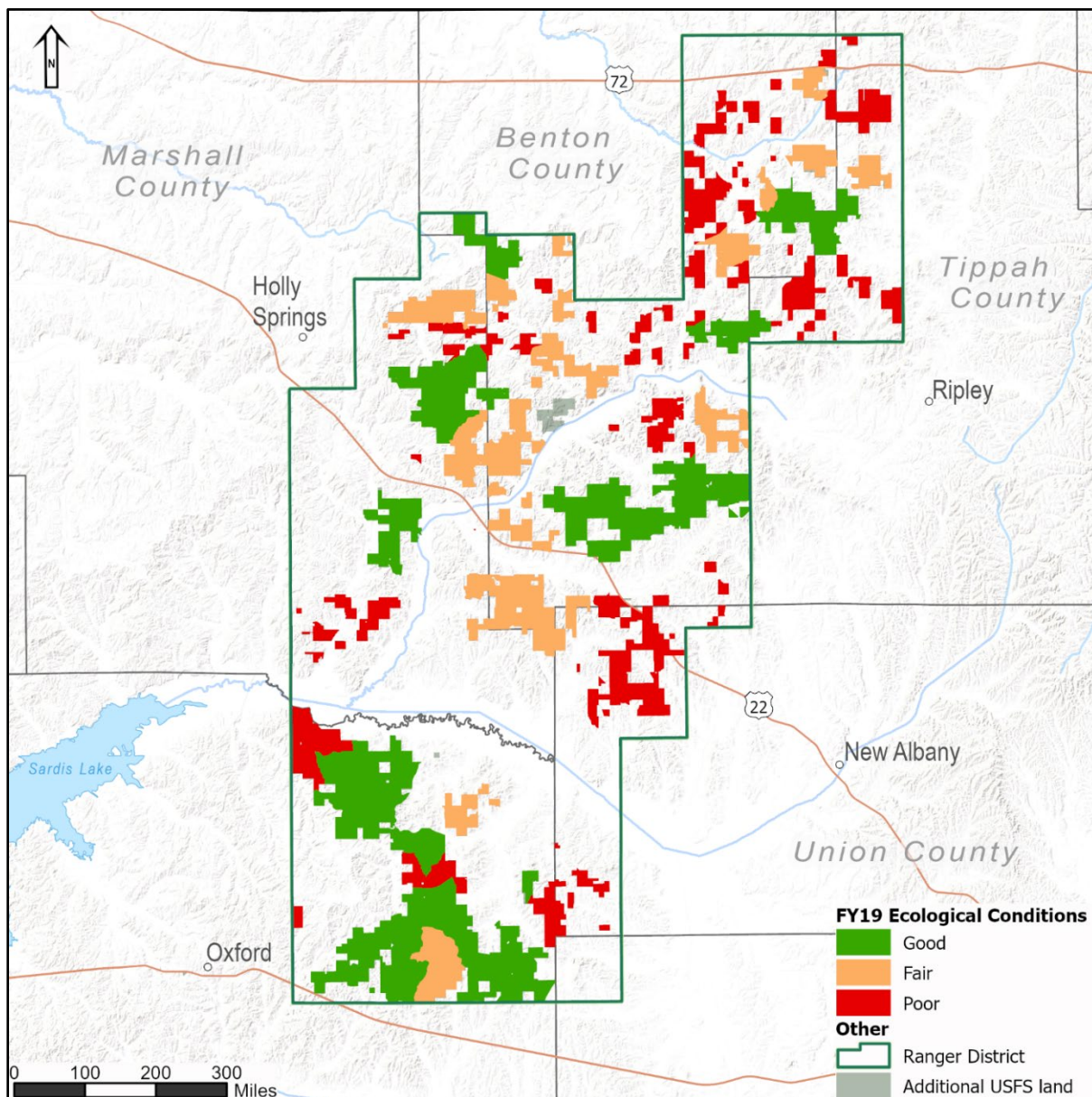


Figure 8: Ecological Conditions for Shortleaf/Shortleaf-Oak, Holly Springs Unit

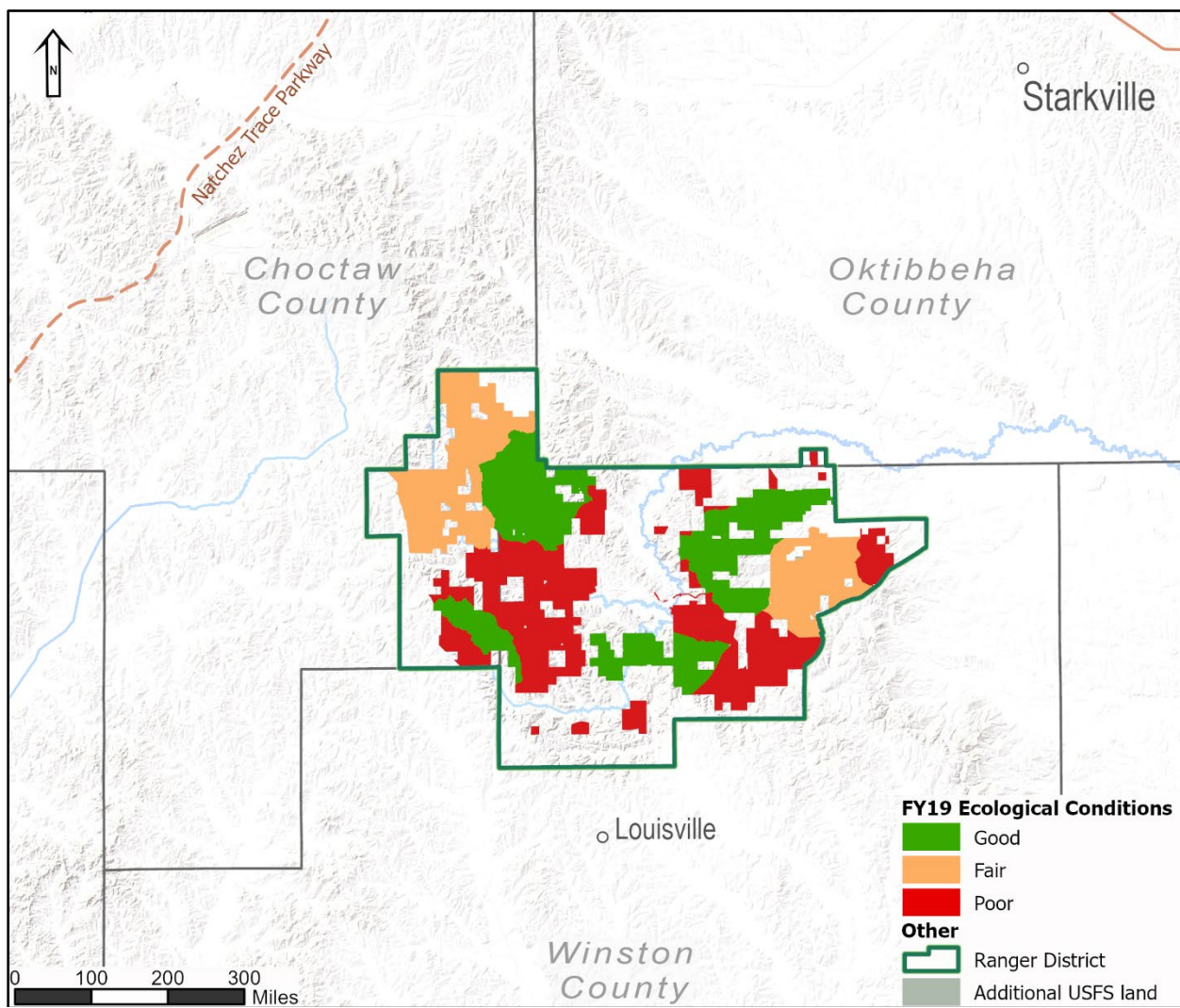


Figure 9: Ecological Conditions for Shortleaf/Shortleaf-Oak, Ackerman Unit

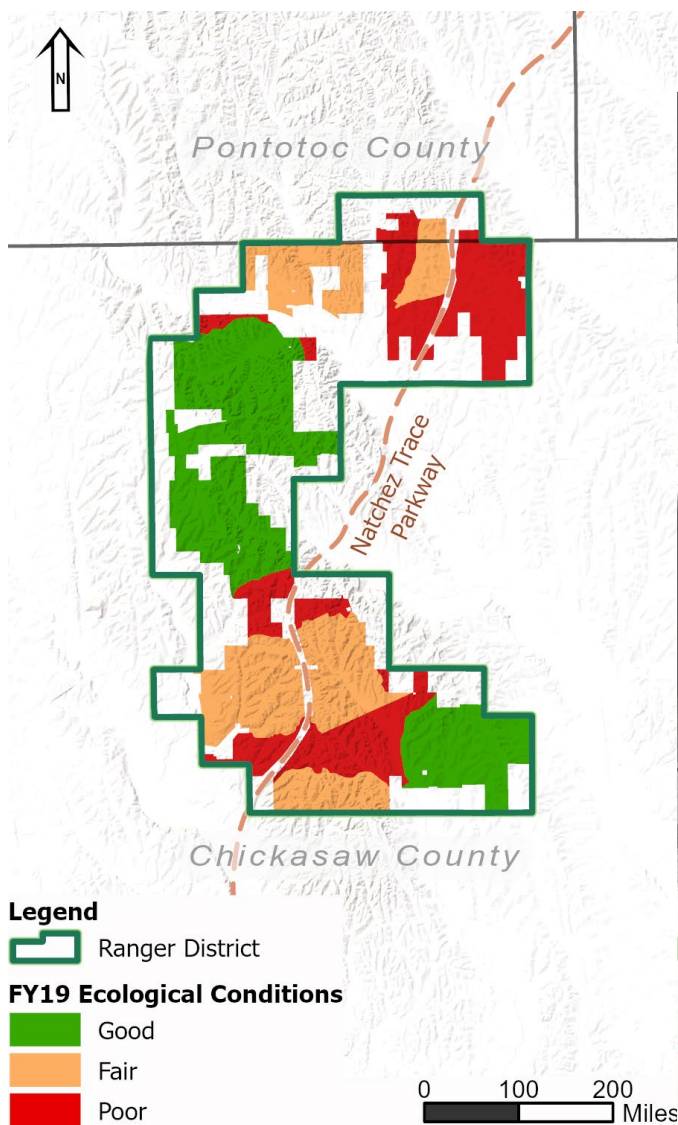


Figure 10: Ecological Conditions for Shortleaf/Shortleaf-Oak, Trace Unit

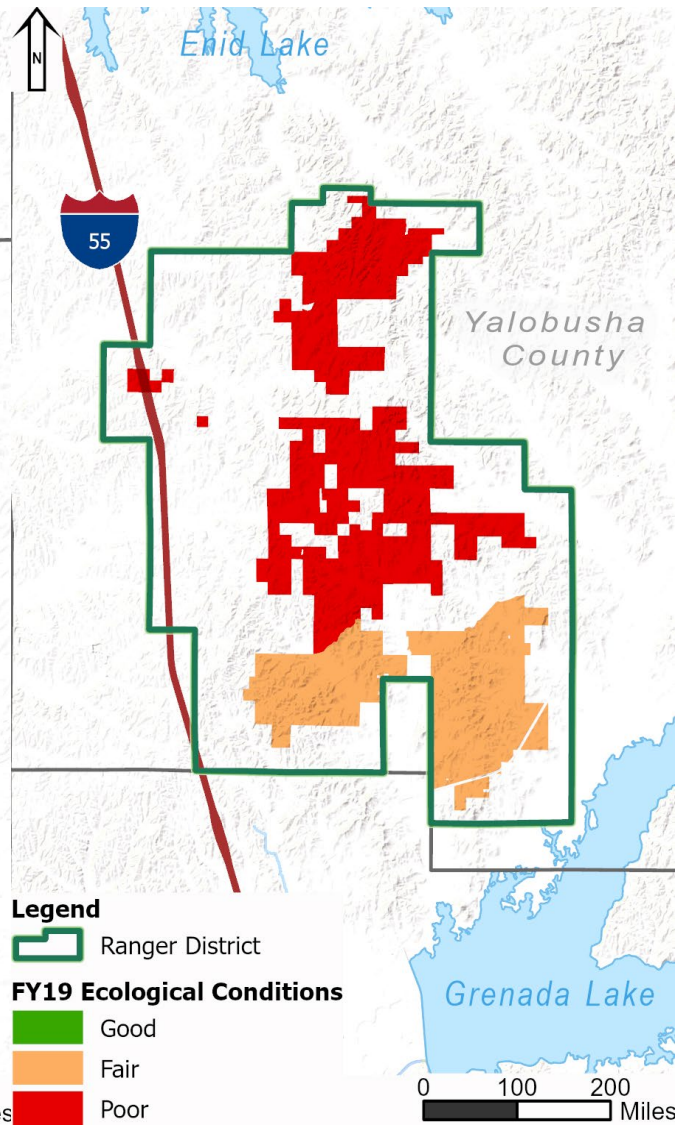


Figure 11: Ecological Conditions for Shortleaf/Shortleaf-Oak, Yalobusha unit

Priority Aspects of Management towards Desired Future Condition:

1. *Timber/Silviculture Management*

The need to improve forest health points to a critical need for first thinnings in pine stands to strengthen their natural defenses, as well as the conversion back to more native ecosystems. Species that are more adapted to the area will improve forest conditions. Timber sales and associated silvicultural treatments will coordinate closely with the prescribe burn program to complement restoration efforts.

2. Established Natural Prescribed Burn Cycles

A necessary tool to aid in the restoration of more native landscapes is the use of fire. While the prescribed burning work is being done to aid the return to native ecosystems, other important benefits include improved safety and wildlife habitat. We will continue to carefully place fire on the landscape to mimic natural occurrence, including an emphasis on growing season burns. We are expanding our season of burning to achieve the desired results.

3. Control of Non-Native Invasive Species

The ever-increasing presence of non-native invasive species (NNIS) negatively impacts native species and our restoration efforts. Kudzu is the most prevalent NNIS on both units and covers approximately 4,000 acres on the Holly Springs and 1,000 on the Tombigbee. Cogon grass has recently appeared on the Tombigbee and pose a great risk. Currently, only a few spots, covering less than 5 acres, have been discovered. These areas have been initially treated and monitoring continues to determine additional treatments. Other NNIS of concern on the district include: bicolor lespedeza, sericea lespedeza, Chinese privet, mimosa, Japanese honeysuckle, johnsongrass, and nepalese browntop.

We have included NNIS treatment in our stewardship agreements and look for other opportunities and partners. Treatments are prioritized in high priority areas on the Ecological Condition Maps, protecting recent and future investments in shortleaf restoration, areas identified prior to ground disturbance activities, and activities increasing light exposure and developed recreation/administrative sites.

Other Important Aspects of Management

1. Wildlife and Fisheries Program Priorities

Terrestrial wildlife management is integral with the timber and fire programs. Important early successional habitat is lacking on the units. Improvements to these habitats are being addressed mostly through activities related to timber management and NNIS treatments. Partnerships with groups such as National Wild Turkey Federation, The Nature Conservancy and Mississippi Department of Wildlife Fisheries and Parks (MDWFP) will be important to provide quality habitat. A large focus is on aquatic habitat management. All lakes are manmade impoundments, created as flood retention ponds, which have turned into recreation locations. The districts hold over 50 lakes and ponds that provide anything from walk-in remote fishing opportunities to intensively managed lakes in recreation areas. Fishing opportunities and lake habitat have been identified as unique niches for these units and as priority work in the Forest Plan. This management will be dependent on partners such as The Nature Conservancy, MDWFP fisheries division and United States Fish and Wildlife Service.

The Indiana bat is a recent discovery of the Holly Springs from two radio collared bats tracked into Mississippi. The use of acoustical monitoring and mist netting have not provided a species quantity or locations. Due to the lack of verification, it has proven difficult to know where the Indiana bat may be. The needs of forest bats fit well within a program of prescribed burning and pine thinning, and specific management could be directed to locations when they are found.

The goal is to sustain populations of all existing native plants and animals, and restore extirpated species where feasible, striving for a variety of habitats with varying successional levels for maximum species diversity. We will integrate prescribed fire, timber programs, and vegetation treatments to maximize opportunities to increase habitat diversity for all wildlife.

2. Heritage Resources

There are a variety of prehistoric and historic site types located within both units. This includes sites from prehistoric through early settlement, post-civil war, and sharecropper era, all requiring protection and interpretation. The two units differ in their heritage resource management challenges. On the Holly Springs, projects are more apt to require survey since large areas of the district have not been previously surveyed. On the Tombigbee, the site density is more than twice that of the Holly Springs, making project design and implementation more difficult due to the necessity of avoiding sites.

Completion of legal compliance and consultations, including Sections 106 and 110 of the National Historic Preservation Act, will be an enormous task in the coming years. Through these processes, information about the unit's respective histories will be gathered and shared with partners. There have been some Phase 1 surveys to locate Chickasaw Homesteads and there are currently discussions about more. These are surveys for informational purposes rather than clearance for management actions. Between the two districts there are two Priority Heritage Areas: Owl Creek Mounds near Davis Lake, and another less known mound near Chewalla Lake. The units will be working to improve and expand interpretive signage at these areas.

3. Recreation

Recreation is an important part of management on both units. Much recreation use is dispersed and related to hunting and fishing, but there are a variety of other opportunities. The Tombigbee has a great array of recreational opportunities with over 65 miles of trail (hiking, ATV, horseback, and a well-respected mountain bike trail system). The Tombigbee also has two popular recreation areas, historic structures, an archeological interpretative site, and famous fishing. The main issue is the lack of funding for maintenance of areas and trails. Both units continue to look for partnerships, volunteers, and efficiencies for the enjoyment of the National Forest by the public. Facilities are constantly being tailored to changing needs and to minimize maintenance costs. We are taking actions like reducing mowing by developing pollinator gardens, replacing old, failing crosstie construction with block construction, making more sites accessible, and eliminating structures that are no longer being used by the public. Another opportunity is that many of our key recreational trails, such as the Chickasaw ATV trail, Witchdance Horse trail, and Noxubee bike trail all have portions that will be within planned timber sale areas. Trail stabilization along with other improvements associated with these trails are possible improvement options through the use of timber sale receipts.

4. Soil and Water

The condition and treatment of soils on both units is an important consideration in our daily activities. These lands were in poor condition when transferred into federal ownership. While conditions have greatly improved there are still problem areas. The condition of the land frequently dictates the layout of projects, and we look for opportunities for restoration, where feasible. We also examine ways to maintain and improve water quality. Good quality water is critical to the health and function of watersheds both within and downstream of the National Forest. The impact of water quality on aquatic

species is important and the district continues to investigate ways to improve these conditions through responsible management practices.

5. *Roads/Access Management*

Access through the road network is important to successful resource management and public use. This access becomes complicated because of the scattered ownership patterns, particularly on the Holly Springs. Keeping Forest Service roads well maintained with minimal funds takes focus and planning. Providing safe driving conditions, managing seasonal road closures, and looking for creative solutions are important. The interspersed landownership causes the public and adjacent landowners to need access across National Forest System lands. The reverse is also true: the district needs to gain access across private lands. A Travel Analysis Plan (TAP) was prepared in 2014. These consider density of roads, needs for future management, needs for public transportation and available funding for maintenance.

6. *Stewardship/Partnerships*

We are just beginning to take advantage of opportunities outside of our usual project funding such as the use of Stewardship, Good Neighbor Authority, Grants, etc. We signed Stewardship Agreements in 2018 with The Nature Conservancy and in 2019 with the National Wild Turkey Federation and look forward to years of working together to the benefit of the natural resources and the public. The use of partnerships and stewardship agreements are another avenue to provide needed natural resource management and provide the public with greater benefits and efficiencies for their tax dollars.

Summary of Unit Accomplishments 2015-2020

Due to a series of natural disasters, including tornados and SPB, both units did not accomplish the desired level of harvest. Our focus is back on the timber treatments for restoration of shortleaf and shortleaf/oak stands, along with assuring hardwood is placed back on hardwood sites and thinning pine stands continues.

The district has been working to maintain an appropriate prescribed burn rotation. Depending on the desired impacts, the return interval rotations have varied. In the general forest areas, there is a 3 to 5-year re-entry interval for burning. The Forest Plan calls for an average of 34,000 acres per year combined between the two units. While good faith efforts have been made to accomplish this, there has been a shortfall. Work is ongoing to return to the burn rotation that best mimics natural processes. To burn on a four-year return interval in the Tier 1 and 2 lands, the Forest Plan prescribed acreage of 11,000 is correct for the Tombigbee; the Holly Springs prescribed acreage of 23,000 is around 3,500 acres short of what is needed.

Table 3: Annual Activities for Timber and Fire shows each unit's average activity between 2015 and 2020.

Table 3: Annual Activities for Timber and Fire

| Unit | Activity | 2015 - 2020 Average Actual Yearly Acres | Forest Plan Yearly Acres |
|---------------|----------------------------------|---|-----------------------------|
| Holly Springs | Timber Harvest - Regeneration | 158 | 587 |
| | Timber Harvest - Thinning | 257 | 1,070 |
| | Prescribed Burn | 15,200 | 23,000 |
| Tombigbee | Timber Harvest - Regeneration | 178 | 309 |
| | Timber Harvest - Thinning | 292 | 743 |
| | Prescribed Burn | 8,696 | 11,000 |

Challenges, Issues, Threats and Risks

There are some other challenges in the accomplishment of our program of work, including:

1. *Landownership*: The scattered landownership patterns, particularly on the Holly Springs, adds a high level of complexity. At times there is limited, and sometimes no, access to tracts. The landownership patterns also add daily pressures from adjacent landowners, encroachments, and requests for uses on or across National Forest System lands. These can be significant.
2. *Natural Disaster Responses*: This has been previously discussed but there has been a series of natural disasters that have impacted our management. There have historically been regular natural disasters, either weather or insect/disease related, that frequently impact what and where vegetative management is happening on both units. We must be prepared to respond.
3. *Non-Native Invasive Species*: Although already mentioned, the growing issue of early detection and rapid response for NNIS is important. Planning, new protocols and targeted education must be implemented to help reduce the threat of NNIS plants to native vegetation.

Vision: Future Planning FY23 – FY26

Planned Future Timber Objectives

For fiscal years 2023 through 2026, the district has an average forest treatment objective of 2,200 acres per year, with an average of 40,000 CCF per year. The primary objective in these treatments is to thin or restore native species across the district focusing on pine plantations.

Planned Future Prescribed Burn Objectives

For fiscal years 2023 through 2026, the district has an average prescribed fire treatment objective of 34,000 acres per year. The primary objective in these treatments is to reduce fuels across the district on 2-5 year return intervals.

Planned Future Silviculture Objectives

For fiscal years 2023 through 2026, the district has an average vegetation establishment objective of 300 acres per year, with vegetation improvement objective of 325 acres. Silviculture also plans to treat and monitor approximately 850 acres of NNIS each year and 1500 acres of stand inventory and spatial updates.

Planned Future Recreation Objectives

For fiscal years 2023 through 2026, the district will be improving our recreation areas to proactively manage our recreation facilities and provide a better visitor experience. This work will include maintenance on existing recreation areas, development of primitive campsites, establishing pollinator habitats, right sizing recreation areas to levels the district can maintain, stabilization of shorelines and adding new accessible fishing opportunities.

Planned Future Lands Objectives

For fiscal years 2023 through 2026, the districts will be improving our land line boundaries and forest service roads to provide a better visitor experience. This work will include maintenance on existing landlines of approximately 135 miles across the districts. This also includes reoccurring maintenance (daylighting, grading, vegetation removal, ditching, gravel application, etc.) of over 200 miles of forest service roads.

Planned Future Wildlife Objectives

For fiscal years 2023 through 2026, the districts will be improving district lakes by liming, fertilizing, fish stocking, levee maintenance and aquatic weed control. Maintain on average 105 acres of wildlife opening in early successional habitat. We also plan to have an average of two kids fishing derbies per year across the districts.