

# Stephens State Forest Management Plan

2009 - 2028



Iowa Department of Natural Resources  
Bureau of Forestry  
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## **Purpose**

The purpose for developing management plans for the State Forests is to ensure that these lands are managed sustainably for future generations and that the mission and core functions of the Iowa Department of Natural Resources (DNR) and Bureau of Forestry are reflected in the management of these lands. Furthermore, this plan serves as a record of public input and desired uses for these lands. This plan reflects the management intentions for the next twenty years based on current knowledge of land capability, inventory data, sound forestry practices, land stewardship and public demands. This plan will be a working document and will be revised as needed to address the challenges of managing a forest resource that is constantly changing.

The mission and core functions of the Iowa DNR are as follows:

### **Iowa DNR Mission:**

To conserve and enhance our natural resources in cooperation with individuals and organizations to improve the quality of life in Iowa and ensure a legacy for future generations.

### **Iowa DNR Vision:**

Leading Iowans in caring for our natural resources

### **Core Functions of the Iowa DNR:**

Conservation, Protection, & Stewardship – Protect, manage, and ensure the lands through the effective use of policies and procedures. Provide sustainable, responsible recreational opportunities where possible. Increase awareness and understanding of natural resources values and needs. Provide all vital infrastructure needs necessary to administer and support agency operations to achieve results for Iowans.

### **Bureau of Forestry Mission:**

To help Iowans value, protect, expand and enjoy our trees, forests and prairies and the amenities they provide.

This plan will achieve forest and non-forest management goals on the state forest to help accomplish our mission and vision. In the planning process we have developed goals and objectives that will move the forest resource to a desired future condition. This plan ensures a system of orderly management and development of the state forest which reflects current science regarding harvesting, forest stand improvement and reforestation. The following management goals and objectives lay a foundation for the implementation of sound forestry management practices.

## **Forest Management Goals**

**Sustainability** – Manage for healthy, sustainable forests and prairies. Maintain and improve the diversity of plant species and communities on the state forests.

- Improve forest age diversity through harvest and regeneration of over-mature and mature forest stands.
- Use forest stand improvement to enhance species diversity.
- Manage native prairies and savannas using prescribed fire management to promote plant diversity and control unwanted woody plants and invasive species.
- Increase the quality, quantity and connectivity of public forestlands in Iowa.

**Utilization** – Ensure a sustainable flow of wood products for public benefit while promoting forest vigor by applying proper forest management techniques.

- Intensify forest management practices to utilize and regenerate over-mature, mature and declining forest stands.
- Use forest stand improvement techniques to enhance tree growth rates and vigor.
- Reduce Non-Forest acreage through natural succession and tree planting where appropriate.

**Demonstration and Research** – Create and maintain forest management demonstration and research areas to increase the public awareness of the value and role of forests in Iowa and provide educational opportunities for students, organizations and others.

- Establish and maintain forest research plots.
- Establish forest demonstration areas, host field days and provide outdoor classrooms to increase awareness and understanding of forest and prairie management.
- Seek partnerships with supporting private organizations, non-profit groups and educational institutions to promote forestry education and awareness.

**Wildlife** – Maintain or improve natural wildlife habitat for game and non-game species. Protect known endangered and threatened species, as well as identified Species of Greatest Conservation Need (SGCN) and their habitats.

- Use forest stand improvement and other practices to improve mast production for wildlife species.
- Maintain prairie and grassland habitats, increase contiguous forest cover and create forest edge where appropriate to promote habitat diversity.
- Identify, study and preserve unique habitats and T & E species.
- Consult Iowa Wildlife Action Plan regarding identification and needs of Species of Greatest Conservation Need (SGCN).

**Recreation** – Create and enhance primitive, low-impact recreational opportunities.

- Maintain primitive trail systems and camping facilities where appropriate.
- Promote hunting, fishing and other game management activities.
- Promote other primitive activities such as backpacking and bird-watching.

**Water quality** – Enhance water quality by protecting watersheds and preventing soil loss.

- Prevent soil erosion by employing sound conservation practices.
- Protect and enhance streams and waterways adjacent to agricultural land by establishing riparian buffers.

Use “Best Management Practices (BMP’s)” in all forest management operations. Detailed information about BMP’s can be obtained from an Iowa DNR Bureau of Forestry publication entitled “Iowa Forestry Best Management Practices” (1998).

## **Forest Management Objectives**

The following objectives have been developed to address the unique needs of Stephens State Forest. These objectives directly correlate with long-range goals of the State Forest system and relate specific issues at Stephens State Forest to on-the-ground management of the resource.

**Objective 1** – Manage for a range of successional stages, age classes and habitat types. Develop a diverse forest with multiple age classes and successional stages to improve overall forest health. Benefits will also include increased habitat diversity, increased sawtimber potential and sustainability, increased regeneration of shade intolerant species (including oak) and increased diversity of flora and fauna.

**Objective 2** – Increase diversity by removal of invasive species, introduction of natural disturbance regimes and use of native species and local ecotypes in establishment of new prairies, savannas, wetlands and forests. Invasive species populations will be documented, contained and controlled.

**Objective 3** – Identify, increase and protect rare ecosystems: prairie, savanna, riparian areas and wetlands. These ecosystems will be inventoried and digitized as stands into the Stephens State Forest GIS layers. Rare ecosystems will be maintained or expanded when appropriate.

**Objective 4** – Increase forestland by land acquisition; decrease fragmentation of the forestland and encourage connectivity. Land will be purchased when a parcel is in a priority area, the seller is willing and the funding is available. Fragmentation will be addressed by strategic tree plantings, utilizing natural reforestation and increasing connectivity with acquisitions.

**Objective 5** – Address issues relating to species decline including oak and pine species. Maintain forest ecosystem health and vitality. Even age management will be used to increase oak regeneration and vigor. Stand conversion and thinning will be utilized to decrease decline in pine plantations and to decrease risks associated with that decline.

**Objective 6** – Increase knowledge of flora and fauna of the forest by increasing research, compiling existing research and creating databases. The Area Forester will coordinate with the proper contacts within the Wildlife Bureau to attain research and survey information that pertains to the forest resource.

**Objective 7** – Increase quality of recreational opportunities. Improvements will be completed for the backpack trail system in the Woodburn Unit in 2009. These improvements include trail signage, water crossings and completion of the camping areas. North Pond improvement project includes repair of the dam, increase in quality and quantity of aquatic life habitat, completion of access road and parking area and construction of fishing jetties and trail system.

**Objective 8** – Fulfill annual harvest goals, planting schedules, forest stand improvement projects and planned non-forest management activities. Follow Forest Work Plan and complete scheduled projects.

**Objective 9** – Foster and encourage partnerships with local and regional organizations, including non-profit, volunteer groups and other state agencies that relate to forestry / resource management in Iowa.

**Objective 10** – Research and apply for alternative funding sources, including non-governmental, non-profit and government funding. Utilize funding to increase acres of forest management completed per year. Funding may also be utilized to increase or improve forest management demonstration areas.

**Objective 11** – Perform risk tree assessment in high use areas and along gravel roadways each year. Remove risk trees and replace removed trees where feasible.

**Objective 12** – Create plan to inventory, digitize, improve and maintain trails and access lanes. Perform initial inventory and create a GIS layer of trails and access lanes. Survey and implement planned and needed maintenance on trail systems on an annual basis.

## **History and Overview**

### **Historical Account**

Stephens State Forest is currently the largest state forest in Iowa at just over 15,000 acres. The seven units of the forest are dispersed across five counties in south-central Iowa. The first lands to become part of Stephens State Forest were purchased in 1936. Originally, the forest was to serve as an example of forest management for the people of Iowa. During the 1950's, multiple-use management became a top priority as recreational demands increased. In 1972, the first forest inventory was conducted and the first sawtimber was sold from the forest. Today, Stephens State Forest continues to offer multiple resources such as timber and wildlife as well as recreational opportunities.

### **Landscape**

Stephens State Forest is primarily surrounded by agricultural land or timber used for agricultural purposes such as livestock grazing. The cattle industry is a large part of the agricultural community in south-central Iowa. Most of the land surrounding the forest is grazed at least part of the year. The landscape is characterized by forested drainages, pasture or row crop on the ridgetops and transition zones of pasture, native grass openings or grazed forested ground.

Stephens State Forest is spread throughout five counties: Lucas, Clarke, Monroe, Appanoose and Davis. All of the counties have populations under 15,000. Major communities in these counties include: Chariton, Albia, Centerville, Moravia and Bloomfield. Smaller communities include: Lucas, Woodburn, Columbia, Unionville and Blakesburg.



## **Cultural History**

The earliest use of Stephens State Forest was to provide a base of operations for the Civilian Conservation Corps (CCC). In 1935, one million dollars was appropriated for CCC work, which fueled the acquisition of large tracts of land in southern and northeast Iowa. Most of the land purchased was of marginal or poor quality and was not farmable or was heavily eroded from overuse. The role of the CCC was to restore forest cover and halt erosion.

During the mid – late 1930's, the CCC continued their work on newly acquired lands which eventually became part of Stephens State Forest (CCC Camp S 104). Their work included the construction of ponds for watershed protection and numerous demonstration plantings of various types of hardwoods and conifers, some of which can still be seen at the forest today. The purpose of the conifer plantings was to restore sites that were “worn out” or heavily eroded from agricultural use and grazing. Many of these conifer stands have since served their purpose and are being slowly converted to native hardwood species.

In the 1950's and 1960's, the demand for recreational opportunities began to increase. Picnic areas and campgrounds were developed, which eventually led to recreational trail development. A continued increase in the land base of the forest area provided increased recreational opportunities such as hunting, fishing, hiking and trail riding.

In the 1970's, a renewed emphasis was placed on forest management and demonstration. The first timber sales at Stephens State Forest were conducted in 1972. The goals of timber management and demonstration continue to be a top management priority today.

### *Origin of Forest Unit Names*

The forest is named for Dr. T.C. Stephens, a native of Sioux City and a prominent educator and conservationist. The forest area was named and dedicated to Dr. Stephens in 1951. Prior to that time, the area was referred to as the Lucas-Monroe Forest Area. During the CCC days, the units were loosely referred to as “state forest lands.” The area has also been called the Grand River State Forest Preserve, probably after the Grand River Forest Purchase of the Forest Service; part of the original land was purchased to create a National Forest and then the lands were sold to the state around 1964.

Some of the unit names can be assumed, as they are named after nearby towns (Lucas, Unionville and Woodburn units). The Whitebreast Unit takes its name from the Whitebreast Creek which flows on its north boundary. The Cedar Creek Unit is located near a stream with the same name, but as late as 1946 was called the Olmitz Unit after a coal mine and town that used to be near that area. The family and friends of the people of Olmitz dedicated a site to the mine and townspeople in 2008. There is a rock at the site with a plaque that shows a map of the old coal mining town. There is no indication as to how the Chariton Unit was named; it had been referred to as the Brown-Herrick Unit as recently as 1951. The Thousand Acres Unit has always been known by that name locally.

### **Geology**

All of Stephens State Forest is found in the Southern Iowa Drift Plain landform region. The geology of this area has been influenced by the Nebraskan and Kansas glaciers which left deposits of till on the land. Long after those glaciers deposited till across the land, the Wisconsin glacier was melting in northern Iowa. The part of the melt waters which found their way into the Missouri River drainage caused large mud flats to be formed on the bottoms. Whenever colder weather checked the melting of the glaciers, the prevailing southwesterly winds picked up the material and deposited it over southern Iowa in layers up to 100 inches thick.

This fine material called loess is found on ridge tops overlaying glacial till. On the sides of hills, erosion has exposed glacially deposited materials. The relatively narrow valleys of this area are covered with alluvial material carried from the hills by erosion. In some instances, erosion has proceeded far enough in to the valleys to expose glacial till or underlying sedimentary material. Thus, the terrain at Stephens State Forest is largely characterized by narrow, flat ridges separated by deeply cut drainages.

### **Soils**

The soil associations most commonly found at Stephens State Forest include: Lindley-Keswick-Weller, Gara-Pershing-Armstrong and Nodaway-Zook-Lawson associations. Lindley-Keswick-Weller soils were formed under deciduous trees and are well suited for woodland uses. Gara-Pershing-Armstrong soils formed under a mixture of deciduous trees and native grasses; this association is suited for woodland, but is often used as pasture or cropland. Nodaway-Zook-Lawson soils were formed under tree-prairie transition zones or prairie; these soils are common



in floodplains and are suited for woodland, pasture or cropland. There are many other soils found on the forest area, but these three associations represent the majority of soils.

### **Archeological Sites**

There are four known archeological sites located in Stephens State Forest. These sites contain prehistoric Native American artifacts and have been recorded by the state archeologist. To prevent vandalism of these sites, the locations are not identified or marked at the forest. Every effort has been made to prevent disturbance of these artifacts since they were recorded by the State Archeologist in 1988. The access roads leading to the sites were gated in 1989, and now only foot access or authorized vehicle access is allowed on those areas. In 2005, the riding of horses and mules on those areas was prohibited in order to reduce soil disturbance and further protect the archeological resources.

These sites are taken into account with all forest management and trail / road building activities.

### **Land Acquisition Plans**

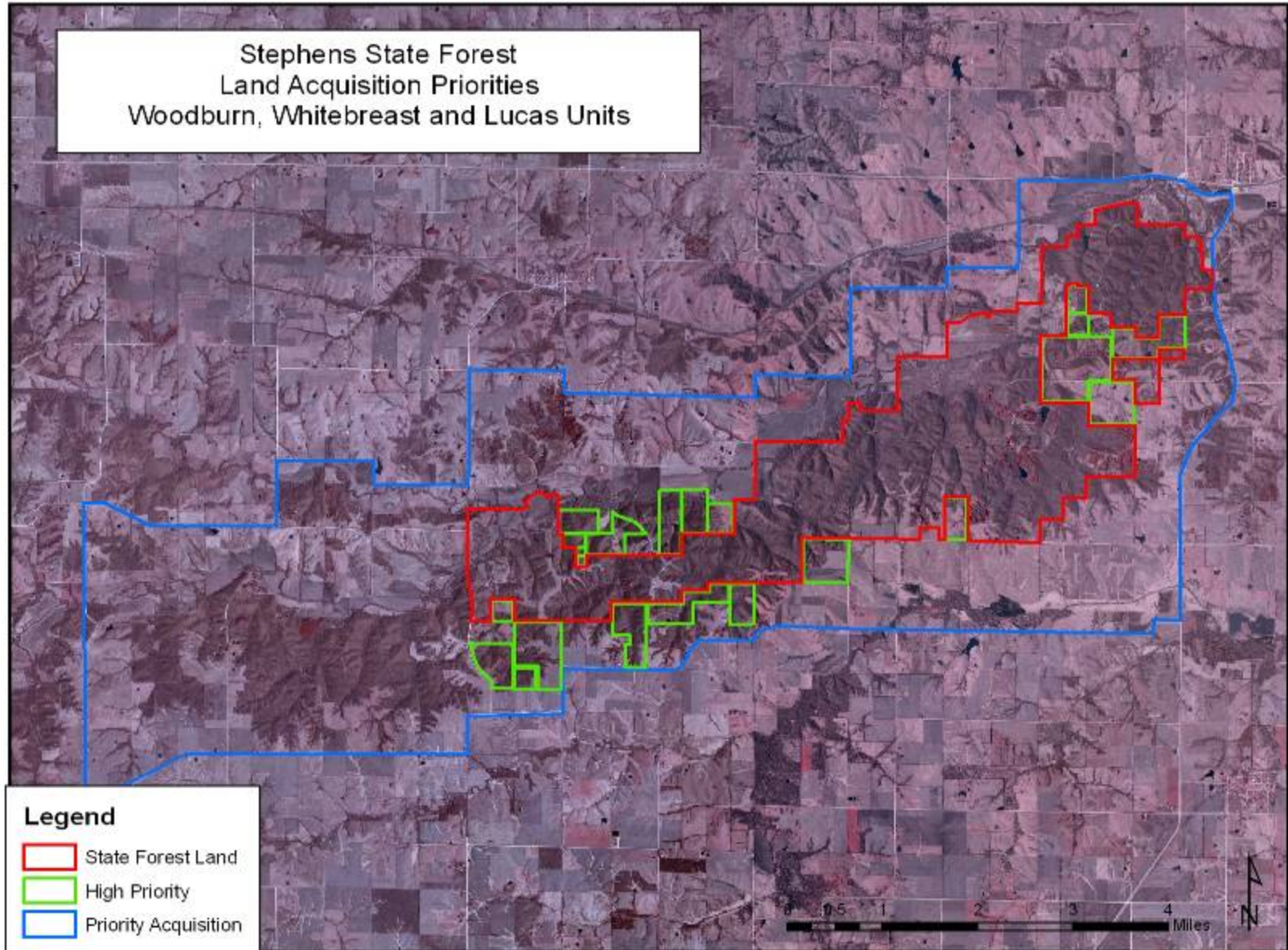
Over the years, the expansion of the state forest boundaries has been a top priority for the Bureau of Forestry. A focus on resource management and the demand for larger recreational areas continues to fuel the need to acquire more forest land.

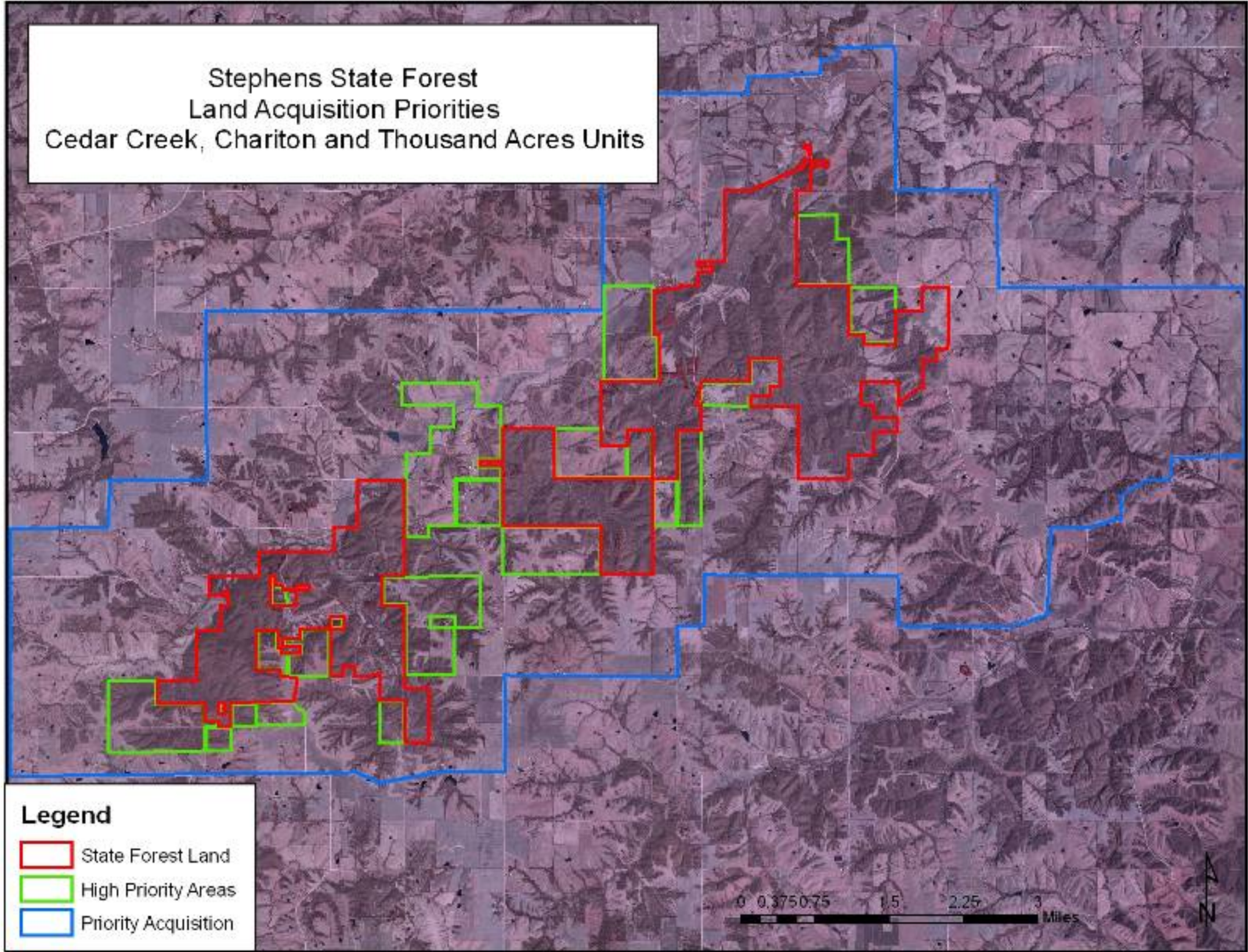
Most of the recreational development has occurred in the Lucas, Whitebreast and Woodburn units. This fact, combined with the continued threat of private development around these units, has made this area the top priority for land acquisitions. The Cedar Creek, Chariton and Thousand Acres units are second priority, mainly because the threat of private development surrounding that area is minimal. However, because of this lack of development, land is typically more available for acquisition. The Unionville Unit is the lowest priority for acquisition, due to its fragmented nature and lack of proximity to other large tracts of state forest land. The Bureau of Forestry is exploring the potential to combine this unit with wildlife lands in the future to create a new state forest.

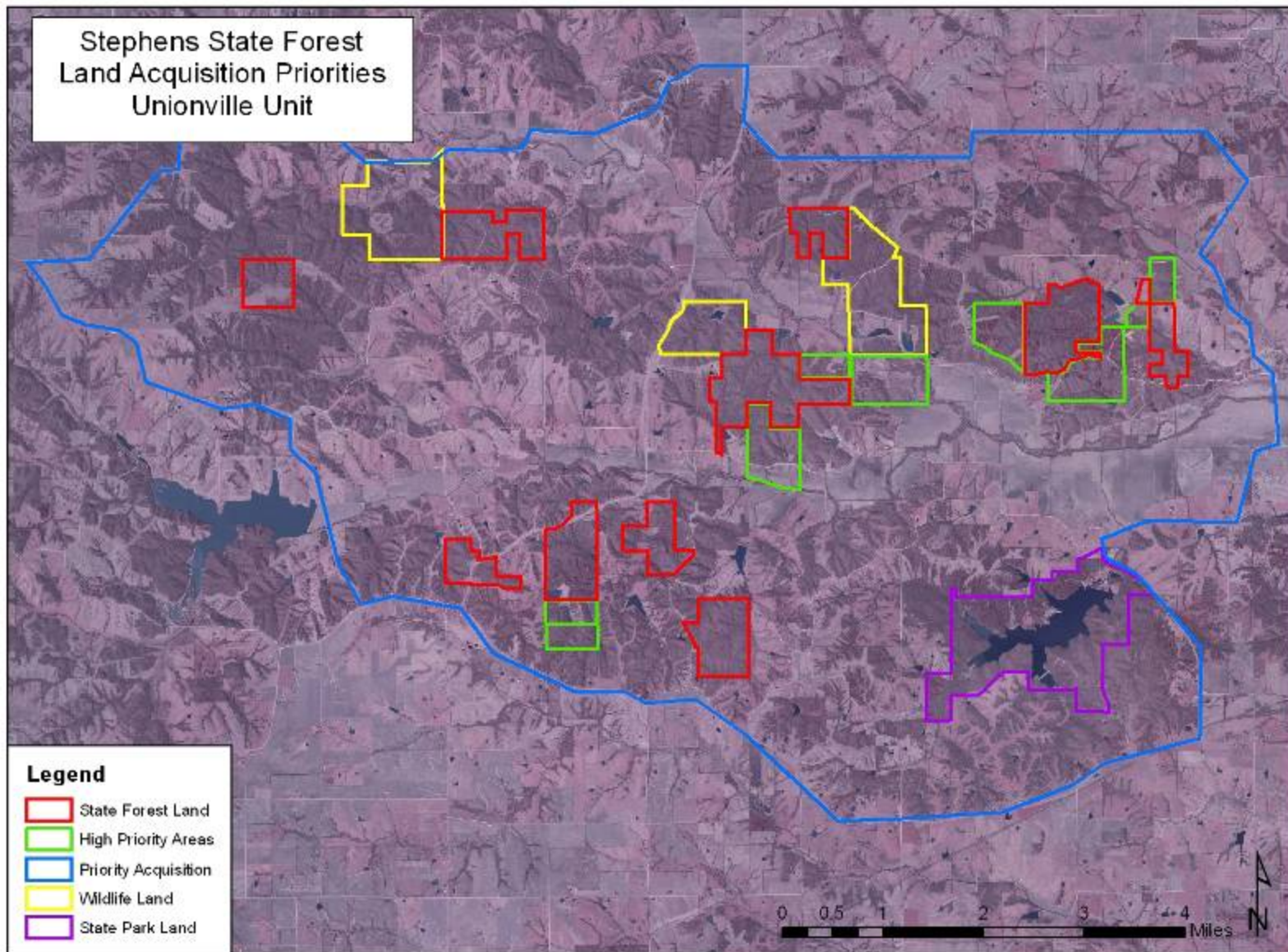
Potential land acquisitions are prioritized from highest to lowest based on (but not limited to) the following criteria:

- Proximity to state forest land or other state-owned properties
- Total acres offered
- Percent of cover (prairie, forest, savanna)
- Cost of site clean-up (i.e. building removals)
- Public accessibility
- Development pressure
- Alternative funding sources
- Income potential (crop leases, timber, etc.)

Land acquisition priorities are outlined in the maps shown below. Individual tracts that are considered high priority (due to proximity to state land or a high percentage of existing timber) are highlighted in green. Additional lands that fall within the priority area, outlined in blue, will be given strong consideration for purchase.







## **Recent Changes and Trends in Forest Composition**

There are a few major, recent changes in the forest composition at Stephens State Forest: lack of forest age diversity, loss of the oak resource and decline of pine stands. These issues can, and will, affect the forest resource in a negative way if they are not properly dealt with and managed for.

Much of the timber at Stephens State Forest is 75 years old or younger (in a similar age class and successional stage). The management focus will be to improve the quality and vigor of these stands and to create multiple age classes and successional stages throughout the forest. This will primarily be accomplished by harvesting of mature timber, regeneration of new forests through planting and natural regeneration, usage of forest stand improvement techniques and the application of even-aged management methods.

Oak is beginning to decline as a major component of the forest, with red oak species being affected at a greater level. A combination of general decline of the species from age and the damaging effects of oak wilt are taking a toll on the oak population. Changes in natural disturbance regimes and lack of management also contribute to oak loss in the state. Red oak at Stephens State Forest appears to be more vulnerable to oak wilt. The red oak stands die slowly and are replaced by other oak species or species with higher shade tolerance such as hackberry, elm, ash and basswood. Oak wilt will be discussed in more detail in the Forest Health section.

Management of the forest to retain red oak (and other desirable oak species) as a major component will involve using silvicultural techniques targeted at harvesting and regenerating oak prior to decline. Harvesting methods include clearcutting and shelterwood techniques. Clearcutting will be utilized on sites where oak regeneration is at an acceptable level prior to harvest. Shelterwood will be utilized where oak regeneration needs to be increased before the final cut.

The final, recent change at Stephens State Forest involves the decline of various pine species. Management of pine decline will involve conversion of these stands to native hardwoods or thinning methods to improve stand health and vigor. Healthy stands of pine will be closely monitored for any possible insect and disease problems. Pine stand health will be discussed in more detail in the Forest Health section.

## **Forest Health**

Forest health issues impact many of the goals and objectives of forest management. Issues related to forest health include an increase in invasive species populations, outbreaks of insect and disease and decreased vigor of native species. Fortunately, forest health can be improved through proper ecosystem management. This section will discuss specific forest health issues at Stephens State Forest and will address management of the resource in response to these issues. For more information on any forest health issue, please visit the Iowa DNR – Bureau of Forestry's Forest Health page at: <http://www.iowadnr.gov/forestry/health.html>.

## *Invasive Species*

One of the most problematic forest health issues that Stephens State Forest faces is invasive species. There are numerous exotic plants that threaten native ecosystems and flora. Most invasive species reproduce aggressively, compete with natural vegetation and are lacking in natural predators or control. All of these factors create issues when trying to manage for a natural, native and healthy forest. Species of major concern at Stephens State Forest include Chinese Lespedeza (*Lespedeza cuneata*, syn. *Lespedeza sericea*), garlic mustard (*Allaria petiolata*), black locust (*Robinia pseudoacacia*) and autumn olive (*Elaeagnus umbellata*). The Stephens State Forest Management Plan includes methods to control and / or eradicate these four species. Species of lesser concern include honeysuckle (*Lonicera* spp.), buckthorn (*Rhamnus* spp.), Japanese barberry (*Berberis thunbergii*) and burning bush (*Euonymus alatus*). The forest is being closely monitored for any significant populations of these potential problem species.

### Chinese Lespedeza

Chinese Lespedeza (*Lespedeza cuneata*, syn. *Lespedeza sericea*) is an aggressive, invasive perennial that is threatening numerous grasslands, reconstructed prairies and native prairies at Stephens State Forest.

A native of Asia, this plant was originally introduced in Missouri and Kansas to provide ground cover in land reclamation projects. The plant is now widespread throughout much of the Southeast and Midwestern U.S.

The plant is perennial, with erect stems up to five feet tall and leaves with three small, wedge shaped leaflets. The plant flowers in late July through early October, with tiny light yellow to purplish blossoms. Chinese Lespedeza spreads primarily by seed, but can also spread through root crowns one to three inches below ground.



[www.nps.gov](http://www.nps.gov)

Once Chinese Lespedeza spreads to a native prairie area, it is very difficult to control. It is not a major threat to Iowa's timber because it is not shade tolerant. Control methods that are used at Stephens State Forest include aggressive mowing regimes and chemical treatments. Mowing late in July, just before bloom, does the most harm to the plant and keeps the plant from going to seed. Chemical treatment, however, has proven to be the best way to completely eradicate the

species. Broadcast treatments of 2-4 D for two years early in the blooming stage are effective in stands of native grasses where forbs are not of specific concern. In native prairie stands, spot treatments have been very effective in eliminating small populations of Chinese Lespedeza. Care must be taken to minimize overspray on surrounding native vegetation in sensitive, remnant prairie areas.

The key to controlling Chinese Lespedeza is catching it early, while it is growing in small, isolated patches. Once the plant has spread through an area for one or two years and has become established, it has proven very difficult to eradicate completely.

### Garlic Mustard

Garlic mustard (*Allaria petiolata*) is an exotic herb that is threatening native woodland ecosystems.

Garlic mustard was originally brought to the United States by early settlers for cooking and medicinal uses. This herb competes with native wildflowers and tree seedlings. It can overtake an area in less than five years because it is a prolific seed producer; there can be hundreds of seeds per plant.

The plant is biennial with leaves and stems that emit a distinct odor of garlic when crushed. The first year plant is a rosette that can stay green all winter long. The second year plant is 10-30 inches in height that produces white flowers in late April – early June. Seed capsules begin to form immediately after flowering.



[www.ipm.iastate.edu](http://www.ipm.iastate.edu)

Control methods for garlic mustard that are utilized at Stephens State Forest include mechanical, biological and chemical controls. Mechanical and biological methods include hand pulling, cutting and burning. Pulling and cutting are efficient methods for small populations. For larger populations, chemical control or prescribed burning will be utilized. Fortunately, garlic mustard at Stephens State Forest is still in small, controllable patches. If chemical control is utilized, glyphosate will be applied in the early spring or late fall when garlic mustard is still actively photosynthesizing and native plants are in dormancy.

### Autumn Olive

Autumn olive (*Elaeagnus umbellata*) is a deciduous shrub that is threatening prairies, open areas and forest edges.

This shrub was introduced in the United States in the 1830's; it's native to China, Japan and Korea. Autumn olive has been used for erosion control, screening, landscaping, wildlife uses and mine reclamation. Autumn olive produces an abundant amount of seeds per shrub, and the fruits are attractive to many forms of wildlife, which is the primary form of seed dispersal.

Autumn olive has small, oval, grayish-green leaves that are silvery underneath. The stems sometimes have thorns that can be several inches long. The flowers are light yellow and autumn olive typically blooms in May or June. The fruit is small, round, pink and very abundant. Autumn olive can range in height from six to twenty feet tall.



[www.dnr.wi.gov](http://www.dnr.wi.gov)

Control methods that are utilized at Stephens State Forest include mechanical, biological and chemical controls. Mechanical methods include cutting or mowing. A biological method used is prescribed burning, usually in conjunction with a mechanical method. Chemical control includes stump treatment of cut plants with a glyphosate or triclopyr mixture. It seems that autumn olive is best controlled with a combination of mechanical, chemical and biological methods.

### Black Locust

Black locust (*Robinia pseudoacacia*) is a deciduous tree that invades native woodlands and open, grassland areas.

Black locust is native to the United States, but its native range was typically further south than Iowa. It was introduced to the Midwest for soil erosion control activities and windbreaks. The wood is also used for posts and firewood. Black locust reproduces primarily by shallow rhizomes and stump sprouting, but it also reproduces by seed.



Black locust can be identified by its pinnately compound leaves, one inch thorns, white flowers and shiny, dark brown seedpods. Black locust can grow up to 90 feet tall. Typical size of black locust at Stephens State Forest is about 30 feet tall, with a diameter of 8-10 inches.



[www.ipaw.org](http://www.ipaw.org)

Control methods that have the most success at Stephens State Forest include cutting and chemical treatment of stems or basal bark treatments. Basal bark treatments include a triclopyr mixed with penetrating oil. Cut stump treatments include glyphosate mixtures applied immediately after cutting. Cut stump treatments must be timed to maximize success; cutting can encourage stump sprouting when done at the wrong time of the growing season.

#### *Insect / Disease Outbreaks and Reduced Vigor of Native Species*

##### Emerald Ash Borer

Emerald ash borer (EAB) was introduced to the United States in the 1990's. Since then, EAB has spread throughout the eastern United States. EAB has the potential to kill every ash, regardless of size or species. Emerald ash borer has not yet been identified in Iowa, but many surrounding states have infestations; these states are then quarantined. Traps have been set throughout the state to look for EAB populations. Efforts have been focused on urban areas, campgrounds and travel corridors. One way that EAB is spread is by the transportation of firewood and logs across state lines. Use and transport of out-of-state firewood from a quarantined state is illegal and use and transport of firewood from a non-quarantined state is strongly discouraged. There is currently no known control or preventative measure for EAB.

##### Gypsy Moth

Gypsy moth is a European insect that defoliates native tree species. Repeated defoliation can eventually lead to decline or death. Although gypsy moth is not currently established in Iowa, it is established in Wisconsin and spreading towards northeastern Iowa. Efforts are being made to "slow the spread." Traps are set up in northeastern Iowa to alert foresters to potential establishment.

## Pine Decline

Stephens State Forest is home to hundreds of acres of pine plantations. The primary species are white pine, red pine, jack pine and Scotch pine. Most of these pine plantations were planted by the CCC in the late 1930's through the early 1940's or in the 1950's and 1960's by state forest staff. The pine was primarily planted for demonstration or to reclaim old agricultural land. The health and longevity of the pine plantations at Stephens State Forest is being threatened by many disease and insect problems. White pine is the only pine species on the forest that shows promise of a long, healthy lifespan.

Jack pine stands began to show signs of decline in 1970, with the first discovery of Annosus root rot in Stephens State Forest. This was believed to be the first known occurrence of a *Fomes annosus* infection in the state of Iowa. This type of root rot is caused by the spread of *Fomes annosus* through root grafts and butt and root wounds. While no recent infections have been observed, the fungus has taken its toll on the jack pine populations at Stephens State Forest over the years. Management includes converting these stands to native hardwoods as the pine dies. Forest stand improvement techniques are being utilized to release oak and walnut from the competing elm, ash and black locust that seem to flourish in these old pine stands. There have been very few opportunities to utilize the pine material as the trees die, due to heavy insect infestations. Prescribed burning can also be used to reduce the heavy amount of ground fuel from fallen trees.

Red pine stands around the forest began to show signs of decline as early as the 1990's. Most of these stands are approximately 50 years old and the reason for initial decline is unknown at this time. It is believed that lack of management (thinning) over time has led to heavily over-stocked stands, which in turn is causing tree stress at around 40 to 50 years of age. Insect damage is occurring at a rampant rate as bark beetles move in to feed on the stressed trees. Management to date includes removing dead pockets of trees and converting these pockets to hardwoods through planting or releasing of existing desirable trees. Because most of these stands are found along road and trail corridors, quick cleanup is necessary to preserve the aesthetics and safety of the area.

Scotch pine stands were planted from the 1950's through the 1970's at Stephens State Forest. These stands are now very susceptible to pine wilt caused by the sawyer beetle and the pinewood nematode. Light to moderate infestations have been noted in one stand, but the majority of the Scotch pine at Stephens has not yet been devastated by the pine wilt disease. Management includes removing dead or infected trees as practical and burning the material. Since it is predicted that these stands will most likely die within the next few years, management will be aimed at removal of the pine overstory and planting these stands to native hardwoods.

White pine stands at Stephens State Forest have shown little sign of decline over the years. While many of these stands have remained unmanaged, they are still healthy overall. Younger white pine stands are being thinned to improve tree vigor and help prevent disease. While we still do not have a market for pine in southern Iowa, the aesthetic and wildlife value of the white pine make it worth retaining for the future.

## Oak Wilt

As previously mentioned, oak wilt is affecting red oak populations at Stephens State Forest. The members of the white oak family are currently showing more resistance to the fungal pathogen. Small, isolated oak wilt pockets are fairly common in the forest. Management techniques that focus on removal, sanitation and regeneration are the best hope for sustaining red oak populations. Timing of forest management is also important in controlling the pathogen; care is given as to what time of year oaks are cut.

## Tubakia

Tubakia has been found recently on bur oaks in Iowa; it is a fungal blight that causes discoloration of the leaf tissue. Research is currently underway in the state. Although Tubakia does not appear to kill bur oaks outright, repeated infections can stress the tree and cause decline over time.

## Dutch Elm Disease

Dutch elm disease (DED) was introduced to the United States and has since taken a great toll on the elm population. The greatest losses associated with DED are in urban areas, where elms were a popular landscape tree. The introduction of DED has decreased the number of large, mature elms on the forest, but because elm reproduces very efficiently, there are still populations of younger, small elms that have not yet been infected.

## Recreation

The demand for recreational opportunities at Stephens State Forest is always increasing. Primitive recreational opportunities will be offered and enhanced where feasible. It is important to ensure that recreational activities are compatible with the other management goals and objectives. Recreational facilities must be sustainable and should not conflict with forest resource management. The following activities are considered acceptable forms of recreation at Stephens State Forest:

### *Camping*

There are numerous camping opportunities at Stephens State Forest. The Lucas Unit has three campgrounds with a total of 30 campsites. The Whitebreast Unit has four campgrounds with a total of 50 campsites. Three of the four campgrounds in the Whitebreast Unit are designated for equestrian use and have a total of 40 equestrian campsites. The fourth campground, known as the "Boy Scout Area," has 10 sites and is primarily used for a camping area for scouts or other groups. Most campsites offer a fire ring and picnic table. Some sites in the Lucas and Whitebreast units have access to pit latrines and running water. There are also four pack-in campsites in the Woodburn Unit that are part of the backpack trail system; these sites have no running water or easy access to latrines but do have fire rings and picnic tables. Stephens State Forest campgrounds are managed by the staff at Red Haw State Park (Parks Bureau).

### *Hunting*

The entire state forest, with the exception of the campgrounds, is open to public hunting. The state forest is home to numerous game species, but wild turkey and deer are the most favored and sought after species.

### *Fishing*

There are four large ponds at Stephens State Forest that are popular fishing spots: Mine Pond and Hidden Pond in the Lucas Unit and North Pond and South Pond in the Whitebreast Unit. The forest contains several other small ponds that are not stocked.



Several improvements are underway to improve fishing opportunities at the forest. New roads and parking lots are planned for the North and South Ponds to improve access. Construction of these roads may begin as early as 2009. Complete renovation of the Mine Pond is planned within the next 10 years. Over-population of bullhead catfish and heavy silting has ruined the once popular picnicking and fishing spot. Repairs will include a complete fish kill, draining, dredging silt from the pond and a restocking of desirable fish species.

### *Hiking and Backpacking*

The entire forest is open to hiking and backpacking. Outdoor enthusiasts can find opportunities ranging from strolling along well groomed roads and trails to backpacking into the primitive wilderness and enjoying the solitude of a backcountry experience.

The Lucas Unit and Woodburn Unit have designated hiking trails. The Lucas Unit has ten miles of well groomed trails for day-hiking. The Woodburn Unit has six miles of trails and four pack-in campsites for backpacking. The Lucas Unit trails are maintained by periodic mowing and brush cutting by forestry staff. The Woodburn Unit trails are currently maintained by periodic mowing and brush cutting by a local volunteer.

### *Horseback Riding and Mountain Biking*

There are approximately 30 miles of trails in the Whitebreast Unit designated for equestrian riding. Maintenance of these trails includes periodic mowing, earth grading and graveling. Rock and geo-textiles are used to help stabilize steep slopes and wet areas.

Equestrian trails are considered multi-use, and therefore non-motorized mountain bike use is allowed on equestrian trails at Stephens State Forest.



### *Snowmobiling and Cross-Country Skiing*

Snowmobiling is permitted in the Lucas Unit of Stephens State Forest during the winter months on roads and on ten miles of designated trails.

Cross-country skiing is allowed on the entire forest during the winter months.

### **Wildlife**

Stephens State Forest will be managed for a diversity of wildlife species by utilizing various forestry techniques. Wildlife species at the forest include, but are not limited to: deer, turkey, bobcat, squirrel, rabbit, red fox, quail, pheasant and many songbirds. The Iowa DNR Wildlife Bureau will provide guidance and assistance in understanding the needs of Iowa's wildlife on the forest. The Iowa Wildlife Action Plan will be utilized to examine how forest management can benefit Iowa's wildlife, particularly the identified Species of Greatest Conservation Need (SGCN) and listed threatened and endangered species. The Iowa Wildlife Action Plan can be accessed online at: <http://www.iowadnr.gov/wildlife/diversity/plan.html>. See Appendix for information on threatened and endangered species.

Development of a diverse forest will benefit the largest number of wildlife species. Tree planting will benefit most forest species by continuously increasing the amount of habitat for those species. Forest fragmentation will be addressed by continuing to plant trees in open areas to create large tracts of interior forest habitat. Edge habitat around the perimeter of these large tracts will be enhanced by the planting of various small tree and shrub species to provide habitat for edge dwelling species and to soften the forest edges. Forest stand improvement practices will benefit many wildlife species by improving forest health and increasing mast production of individual trees which are valuable food sources. Timber harvesting and regeneration will benefit species by providing new and healthy forest stands for sustainable habitat, encouraging oak ecosystems and creating early successional habitat. Grassland species will benefit from

continued prescribed fire and brush management in grassland areas. Agricultural crops left in the field as food plots will serve as a valuable alternative food source for many species during the winter months.

Several attempts have been made to introduce or re-introduce certain wildlife species at Stephens State Forest in the past. In 1972, 40 ruffed grouse were stocked in the Cedar Creek Unit. Later stockings were made in other units as well, with varied success. Today, Stephens State Forest has small, viable populations of ruffed grouse in the Whitebreast, Cedar Creek, Chariton and Thousand Acres units. Habitat management for the ruffed grouse will include sustaining areas of high density and small diameter woody stems. Even-aged timber management is the best way to create this type of habitat and ensure a stable grouse population. Many sightings of ruffed grouse on the forest are in areas that have been cut over for regeneration.

The eastern wild turkey was first released in the Whitebreast Unit in 1968. Subsequent stockings were made on the Thousand Acre Unit and the Unionville Unit. The turkey re-stocking was very successful and the first wild turkey hunting season in Iowa opened in the spring of 1974. Research and turkey restocking efforts at Stephens State Forest and surrounding areas continued into the early 1990's. Today, the forest boasts a huge turkey population and is one of the most popular turkey hunting areas in the state.

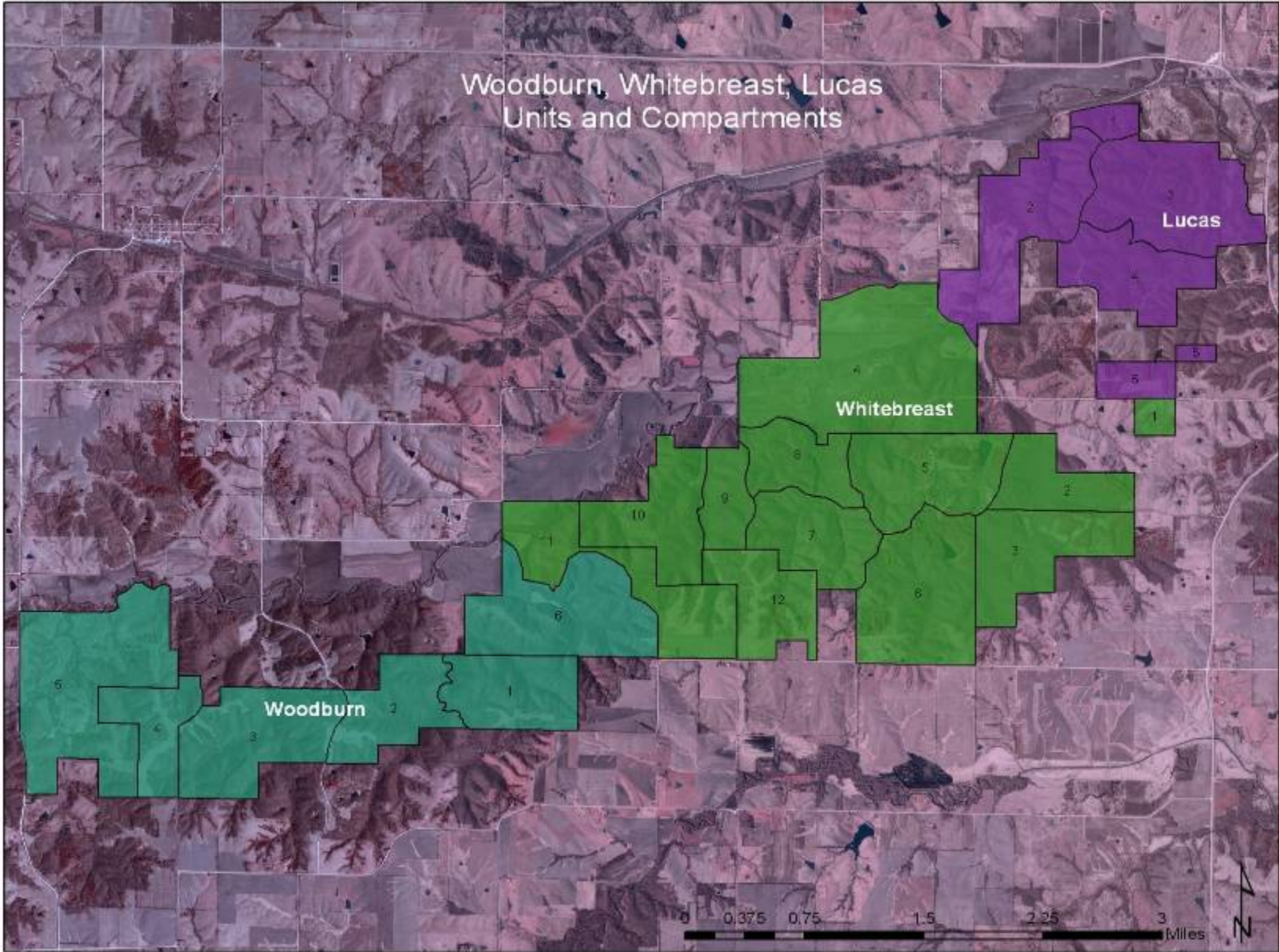
A portion of Stephens State Forest was dedicated as a Bird Conservation Area (BCA) in December of 2008. The Bird Conservation Area program was established in 2001 in response to recent declines in certain North American bird populations. Stephens Forest BCA is the thirteenth BCA dedicated and the third forest BCA dedicated. More information on the Bird Conservation Area program can be found on the Iowa DNR Wildlife Diversity Program's webpage at: [http://www.iowadnr.gov/wildlife/files/BCA\\_index.html](http://www.iowadnr.gov/wildlife/files/BCA_index.html). See Appendix for a field checklist of bird species at Stephens State Forest.

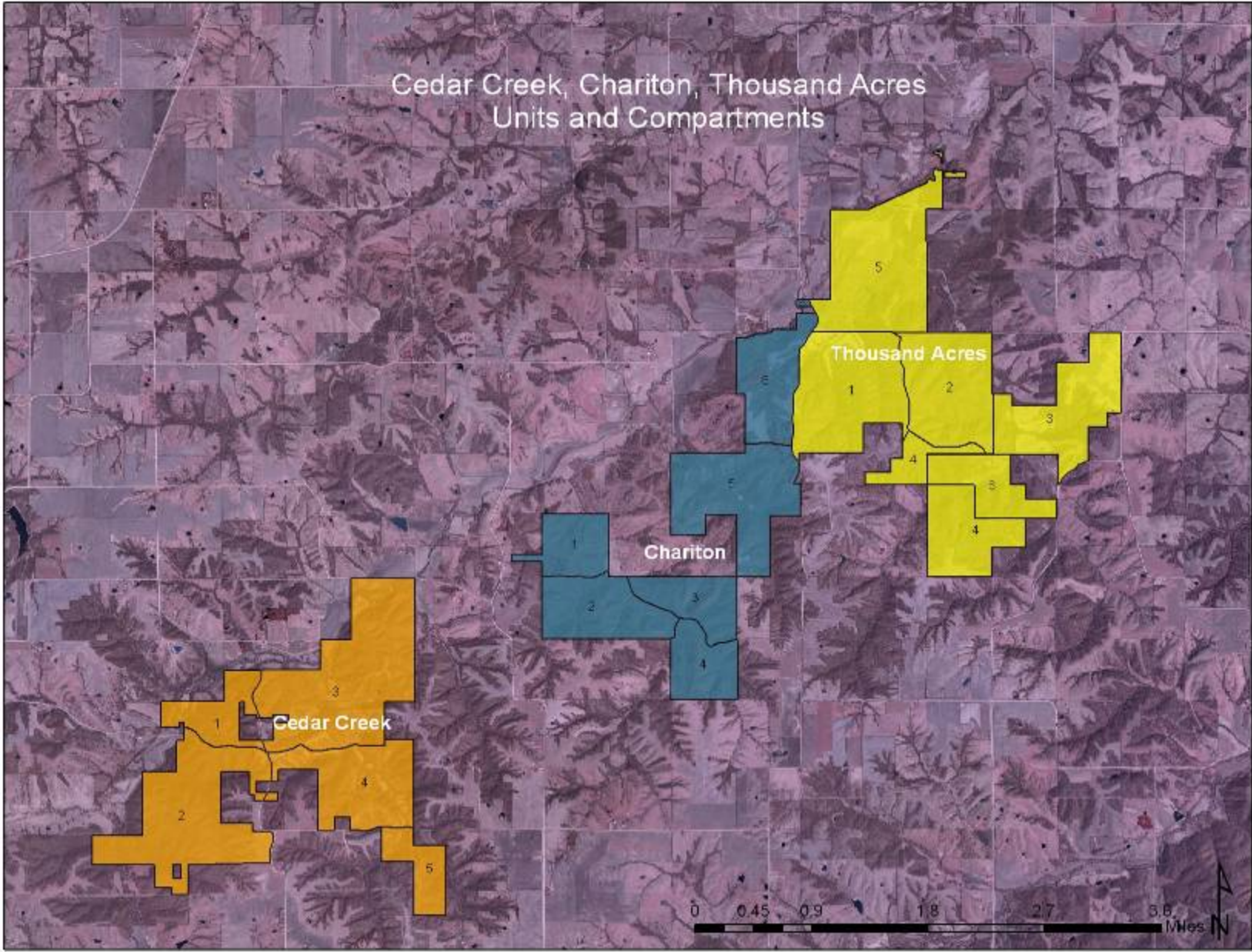
## **Forest Units**

Stephens State Forest is divided into seven geographical management units:

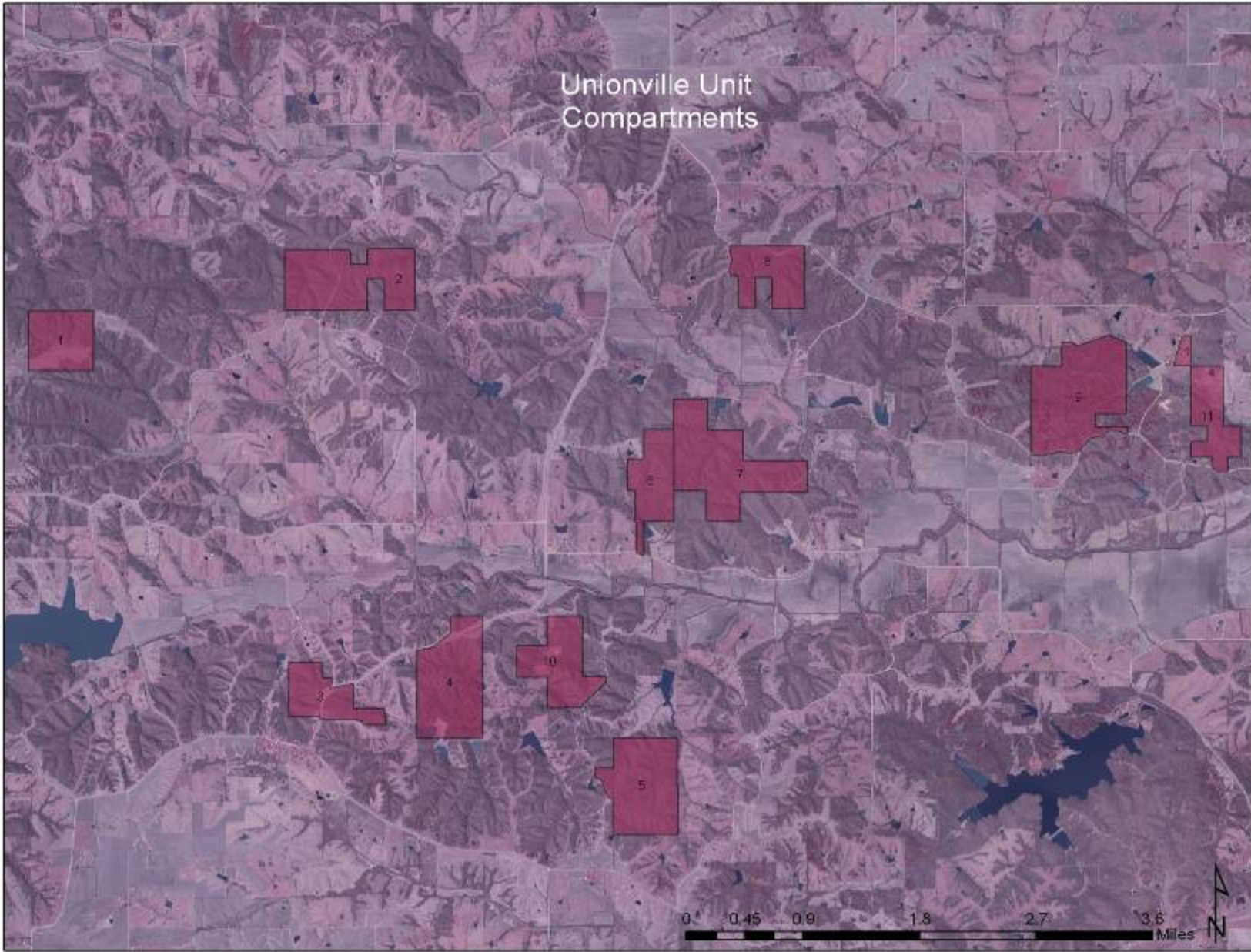
<b>UNIT</b>	<b>ACREAGE</b>
Lucas	1,267
Whitebreast	3,519
Woodburn	2,098
Cedar Creek	1,937
Chariton	1,503
Thousand Acres	2,376
Unionville	2,470
<b>Total Acreage</b>	<b>15,170</b>

Each *unit* is divided up into several management *compartments*, generally delineated by size and natural terrain features. These compartments are then further divided into individual forest *stands* based primarily upon timber type and management recommendations. Management prescriptions are made on an individual stand basis.









## **Forest Management Classes**

Stephens State Forest is divided into three main management classes, based upon the type of management that will be performed:

1. Active Forest Management Areas
2. Limited Forest Management Areas
3. Non-Forest Areas

### **Active Forest Management Areas (approx. 12,241 acres)**

#### *Upland Hardwoods*

Most of the upland hardwood type consists of variations of the oak-hickory timber type. This timber type hosts a variety of oak species including white oak, red oak, black oak and bur oak as well as shagbark hickory, cherry and ash. Most of the dry ridges and south facing upland areas are dominated by white oak, while the north slopes and drainages are dominated by red oak.

Management activities for this timber type will involve even-aged management techniques. Crop tree release and other forest stand improvement methods will be used to reduce competition in crowded stands and improve species composition, tree growth and wildlife values. Clearcut harvesting and shelterwood harvesting will be used as regeneration tools when a stand has reached physiological maturity or in stands with forest health concerns. Clearcut harvesting involves the removal of the entire merchantable stand in one cut. Pre- or post-harvest treatments improve the regeneration on the site either before or after the cut. Shelterwood harvesting involves the removal of part of the stand in the first cut, allowing natural regeneration to become well established before the remainder of the stand is harvested. Clearcuts will often be used when young oaks are already well established. Clearcuts will not be less than 2 acres in size. Shelterwood cuts will be used when a stand does not have the potential for adequate natural regeneration if all dominant trees are removed in one cut. Shelterwood harvesting is currently being used in many oak stands on the forest where natural regeneration is difficult to establish before harvest. Shelterwood harvesting is often used in conjunction with prescribed burning. The combination of these techniques has proved to increase the probability of natural regeneration on a site where it was once lacking.

#### *Bottomland Hardwoods*

The bottomland hardwood type consists of a variety of bottomland species including black walnut, silver maple, cottonwood, basswood, hackberry, green ash, bitternut hickory and several less common species. This timber type is typically located near or within stream or river corridors.

Management of these areas involves even-aged management; shelterwood harvesting method will be used in some stands, especially those with a high component of walnut. Fast-growing species such as cottonwood and silver maple are typically clearcut because they regenerate

naturally and easily by seed. Pre- and post-harvest treatments will be utilized where necessary to ensure proper regeneration.

### *Conifers*

Most of the pine stands at Stephens State Forest were planted on formerly cropped agricultural fields. No pine species are native to south central Iowa.

Management of pine stands will involve the conversion of these stands to native hardwoods. Some of these stands, especially white pine next to major road corridors, have aesthetic value and will be preserved as long as possible through thinning and sanitation methods.



### **Limited Forest Management Areas (approx. 441 acres)**

Areas of limited management include those areas in which intensive forest management may potentially have negative impacts. These areas will include specific riparian areas, aesthetic areas (viewsheds), archeological sites, unique areas, cultural and historical sites, and threatened and endangered species habitat.

Management of these areas may include salvage of valuable trees, clean-up of damaged trees and elimination of undesired species. Light harvesting and forest stand improvement may be done on these areas on a limited basis. Some of the conifer plantations will fall into this category because of their aesthetic value.

### **Non-Forest Areas (approx. 2,518 acres)**

Non-forest lands management areas include native prairie remnants, savannas, native grass plantings and agricultural fields. This class also includes developed areas such as campgrounds.

Native prairie remnants, savannas, and fields planted with native grasses and forbs will be managed with prescribed fire to control unwanted woody vegetation at one to five year intervals. The length of time between burns will be determined by how much woody vegetation is established or encroaching into the area.

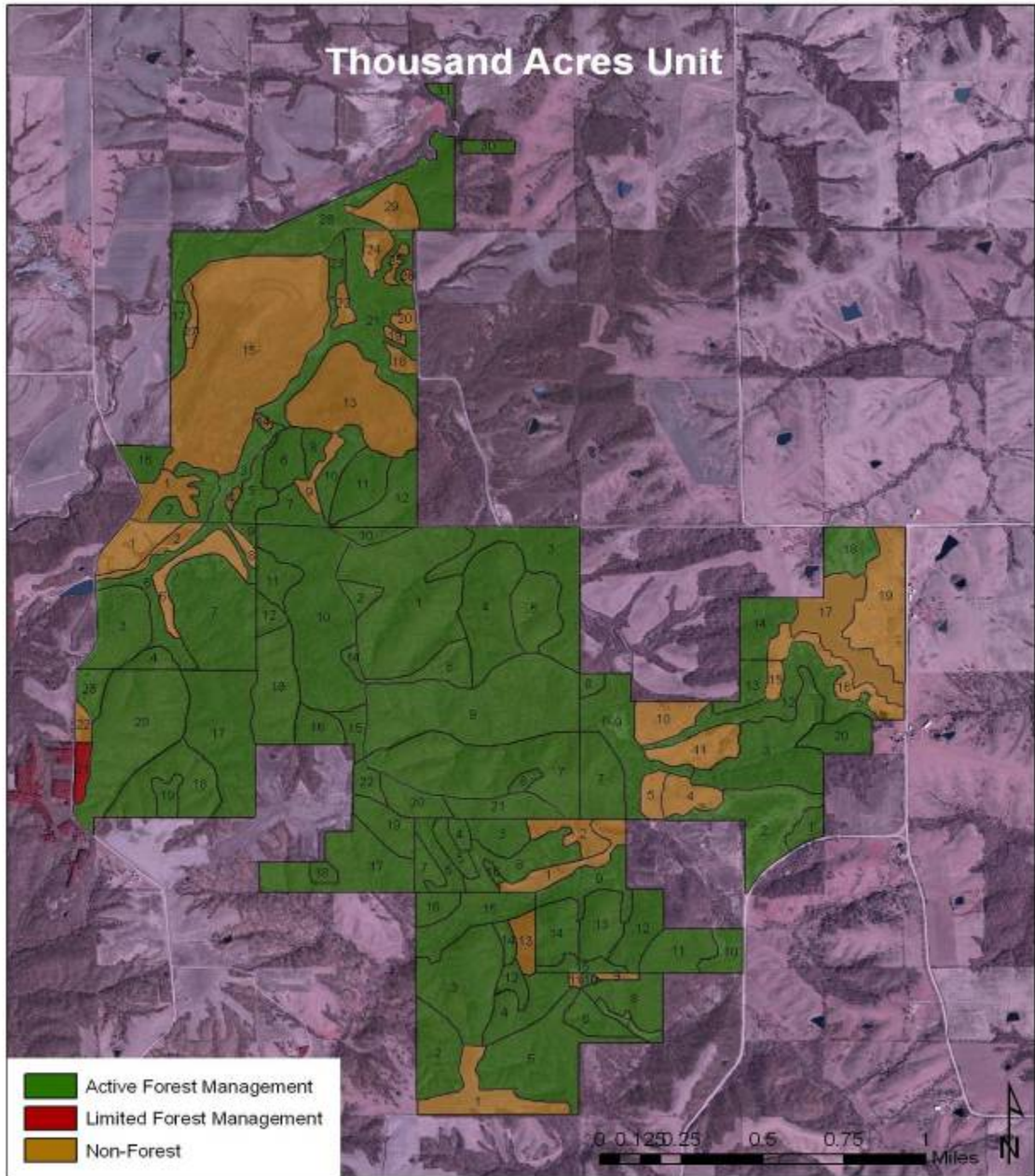


Native prairie remnants must have a good diversity of native grasses and forbs and be at least one acre in size to be considered for management at Stephens State Forest.

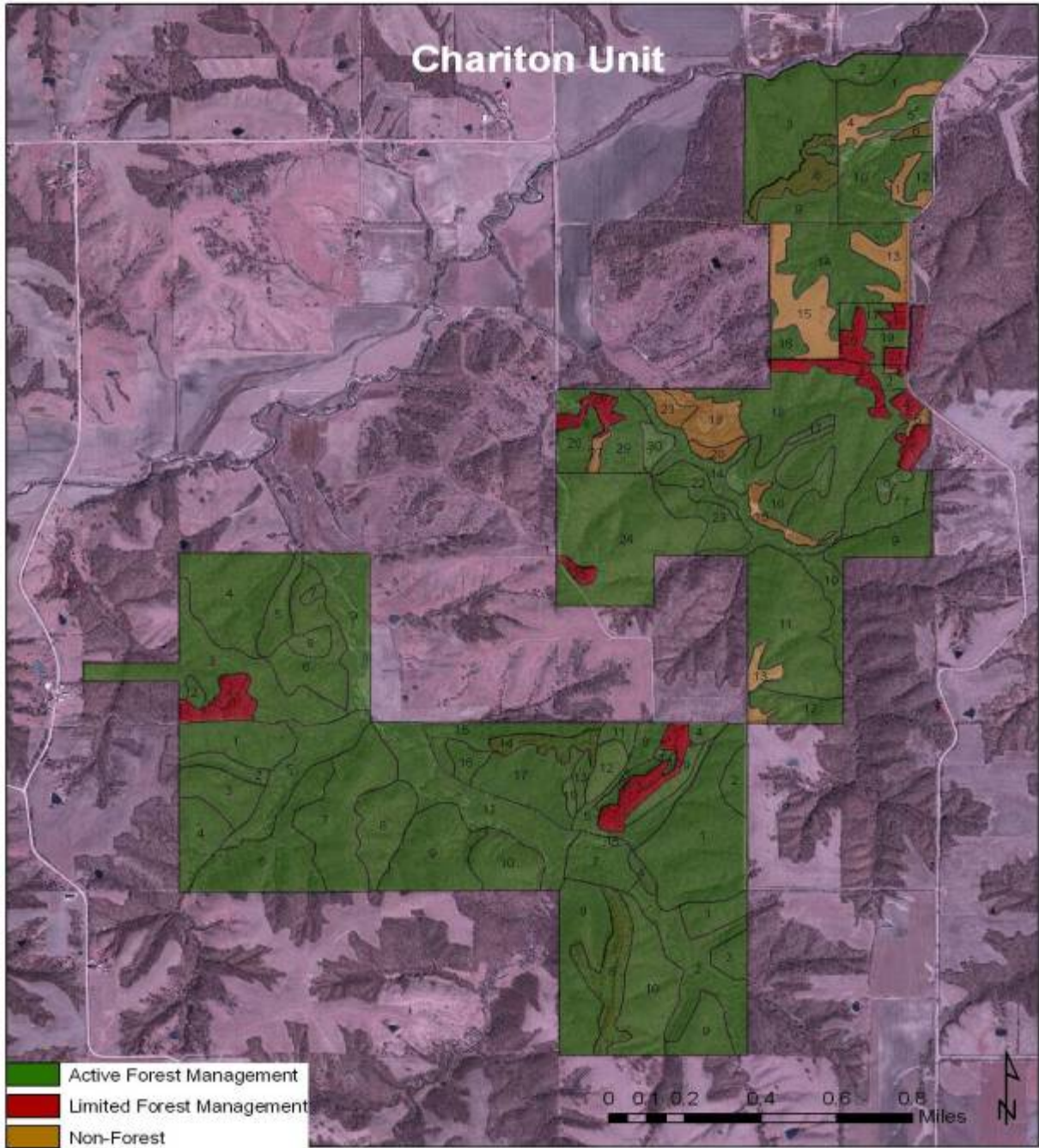
Newly acquired lands will be examined for potential native prairie and savanna remnants or sites suited to native prairie establishment.

Lands suitable for agriculture may be leased for farming. A minimum of 10% of each farmer's crop will be left in the field during the winter months for wildlife food plots. Agricultural land will gradually be converted to permanent forest cover by planting trees. No more than 10% of the total acreage of the state forest will be in agricultural use at any time. See Appendix for current agricultural lease holders.

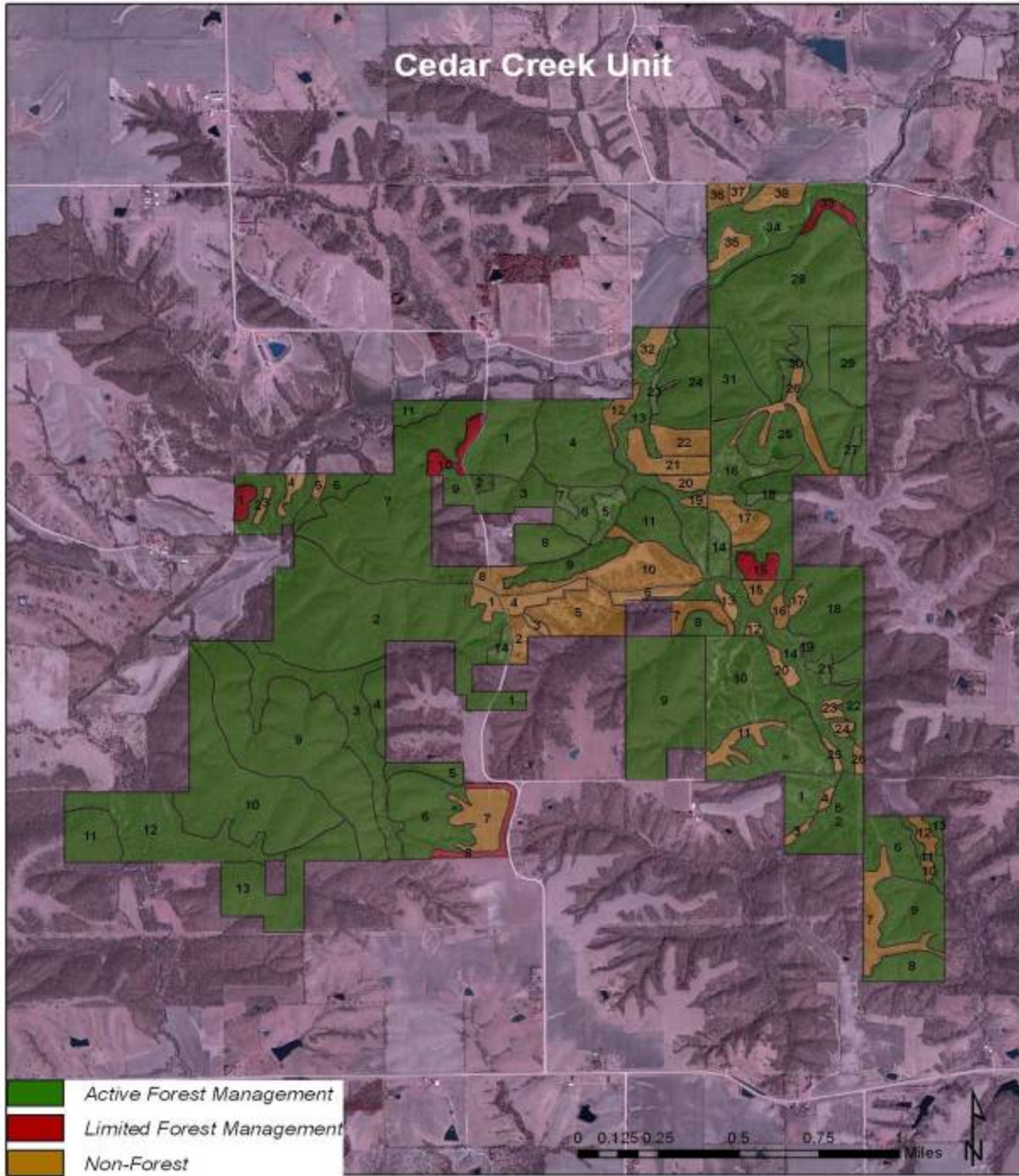
<b>MANAGEMENT CLASS</b>	<b>ACREAGE</b>	<b>% OF TOTAL</b>
Active Forest Management	12,241	81
Limited Forest Management	411	3
Non-Forest	2,518	16
<b>Total</b>	<b>15,170</b>	<b>100</b>



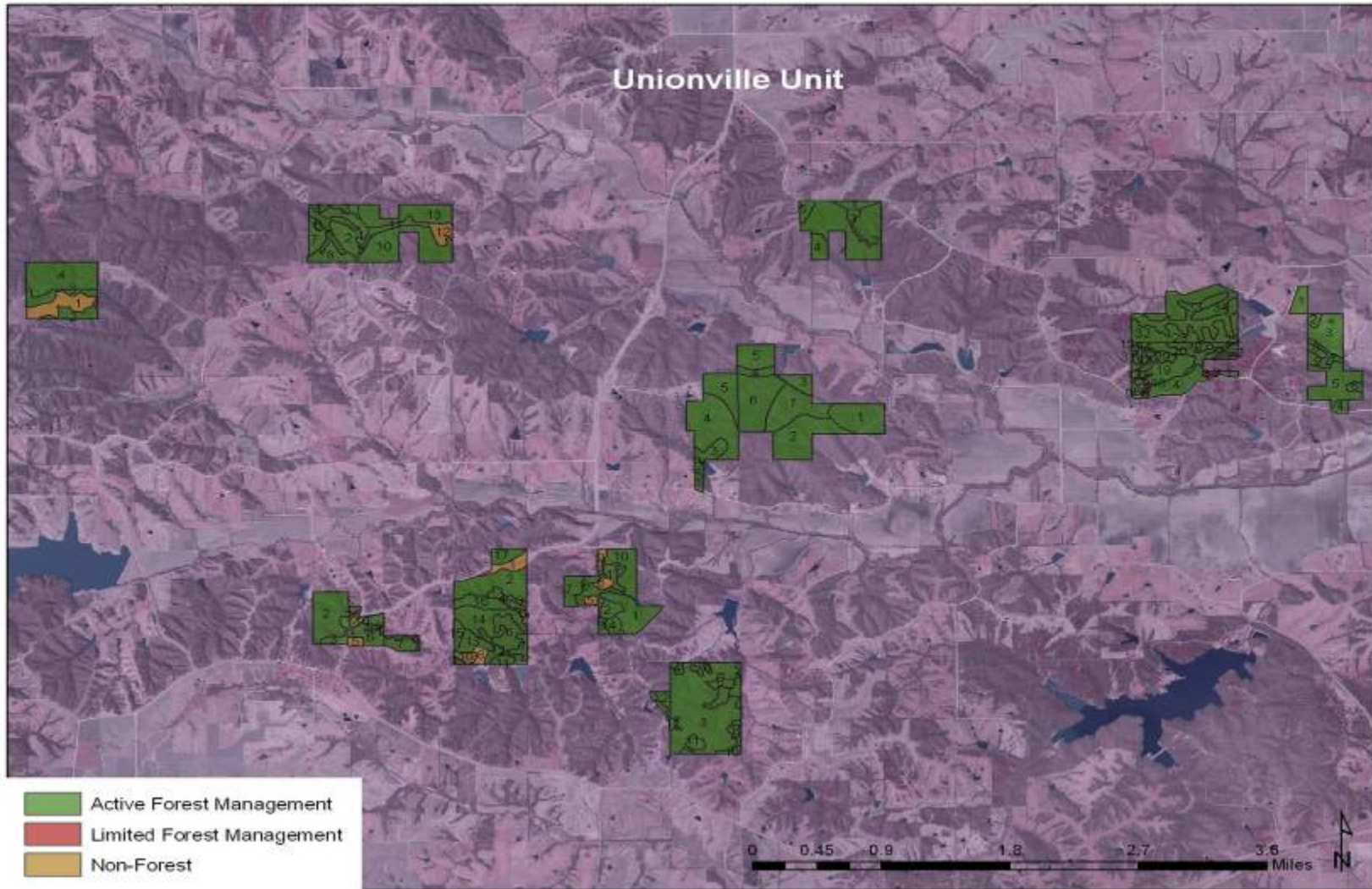
<b>THOUSAND ACRES</b>	<b>ACREAGE</b>	<b>% OF UNIT</b>
Active Forest Management	1,836	77
Limited Forest Management	6	1
Non-Forest Management	534	22
Total	2,376	100



<b>CHARITON</b>	<b>ACREAGE</b>	<b>% OF UNIT</b>
Active Forest Management	1,353	90
Limited Forest Management	62	4
Non-Forest Management	88	6
Total	1,503	100

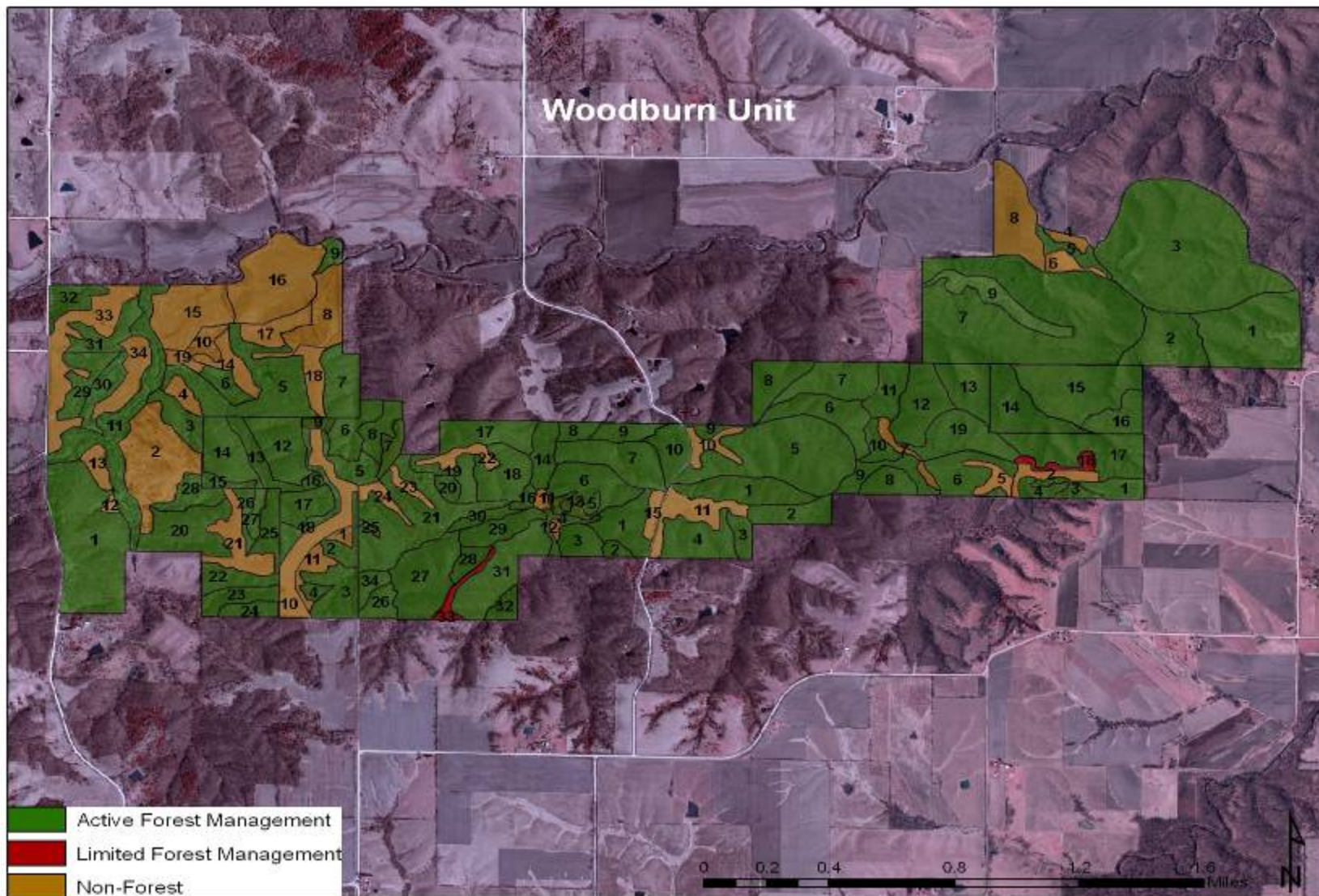


<b>CEDAR CREEK</b>	<b>ACREAGE</b>	<b>% OF UNIT</b>
Active Forest Management	1,635	84
Limited Forest Management	30	2
Non-Forest Management	272	14
Total	1,937	100

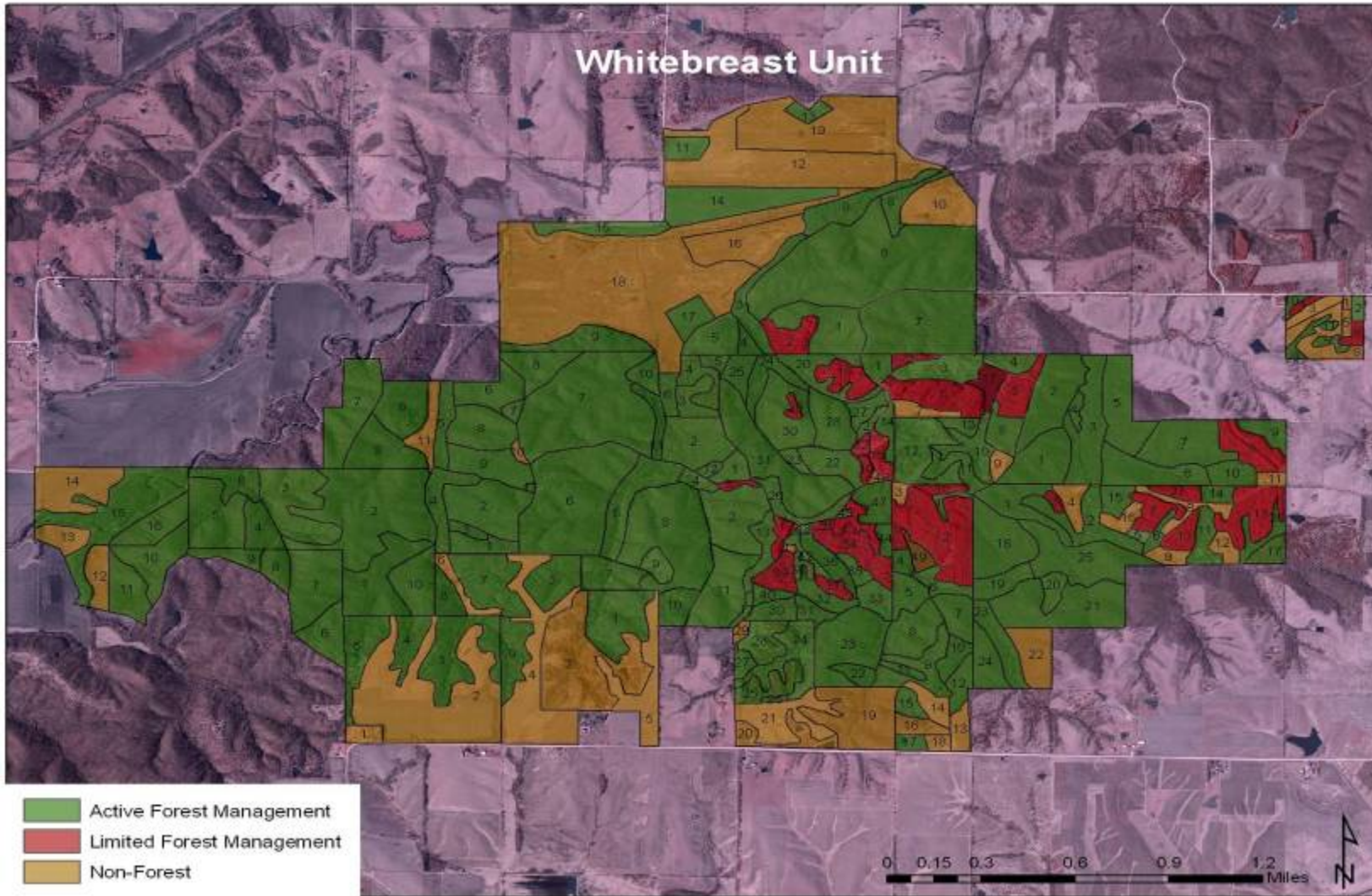


<b>UNIONVILLE</b>	<b>ACREAGE</b>	<b>% OF UNIT</b>
Active Forest Management	2350	95
Limited Forest Management	6	<1
Non-Forest Management	114	5
Total	2470	100

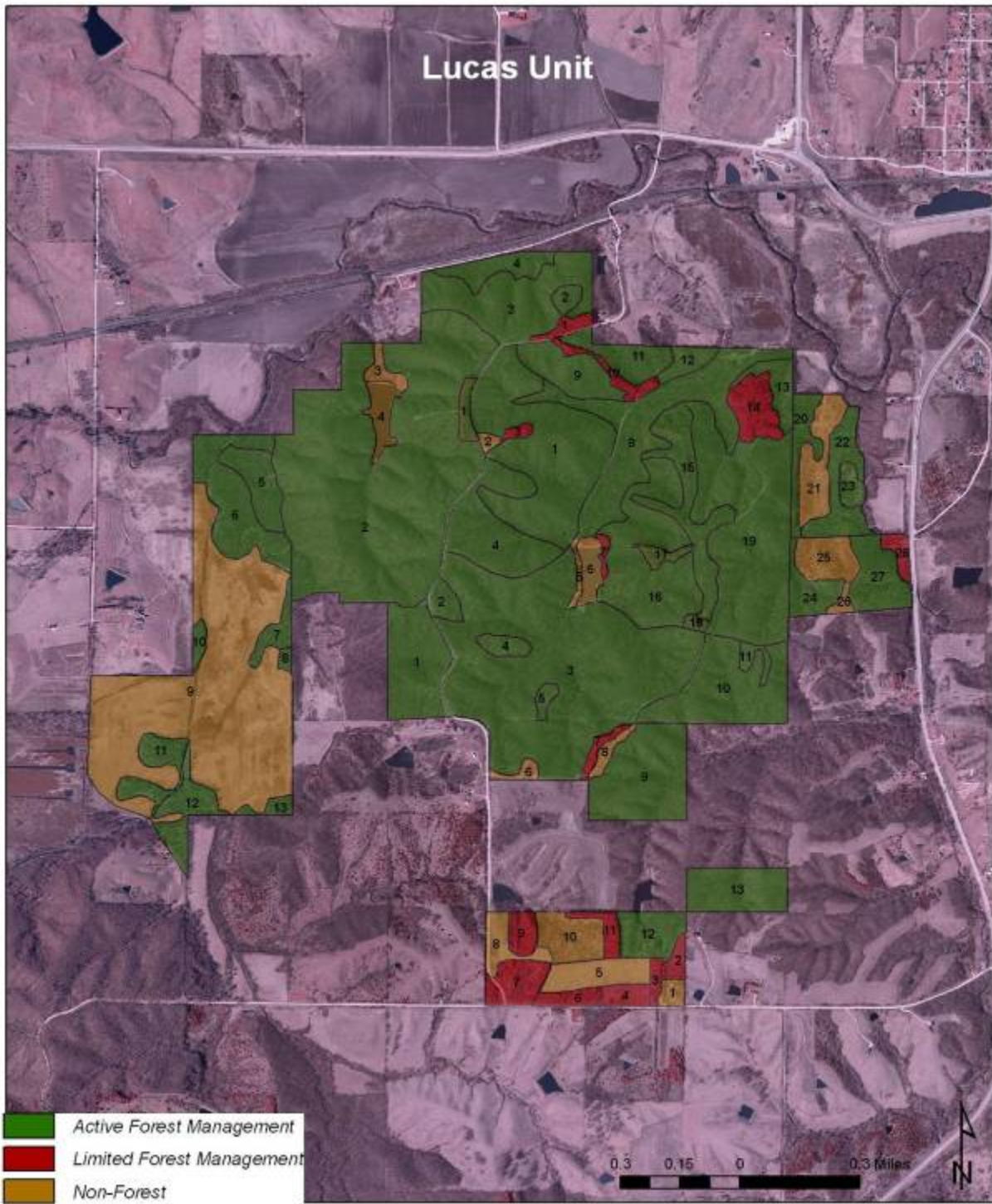




<b>WOODBURN</b>	<b>ACREAGE</b>	<b>% OF UNIT</b>
Active Forest Management	1,679	80
Limited Forest Management	10	1
Non-Forest Management	409	19
<b>Total</b>	<b>2,098</b>	<b>100</b>



<b>WHITEBREAST</b>	<b>ACREAGE</b>	<b>% OF UNIT</b>
Active Forest Management	2,409	68
Limited Forest Management	236	7
Non-Forest Management	874	25
Total	3,519	100



LUCAS	ACREAGE	% OF UNIT
Active Forest Management	979	77
Limited Forest Management	61	5
Non-Forest Management	227	18
Total	1,267	100

## **Allowable Sustainable Harvest**

Timber stands that are mature will be harvested and regenerated to ensure desirable species are present in the future, to achieve a diversity of timber age classes and to increase sustainability.

### **Rotation Age**

The rotation age for the upland hardwood type is 125 years. Most upland hardwood stands have a good oak component. Growth information collected in 2004 showed that oaks are growing at an average rate of two inches in diameter every 14 years. This means it will take an average of 125 years to grow an oak with a diameter of 18 inches. Stands with an average tree diameter of at least 18 inches will be considered physiologically mature and ready for harvest and regeneration. Disease problems or storm damage may warrant harvests before trees are physiologically mature (salvage cuts).

The rotation age for the bottomland hardwood timber type is 80 years. Most bottomland stands have little or no oak component, but have a decent walnut component. Growth information collected in 2004 showed that black walnut reaches merchantable size (18 – 20 inches in diameter) in 80 years on most bottomland sites. Other bottomland species grow even faster, so black walnut will be used as a baseline to determine when stands should be harvested.

The rotation age for the coniferous forest type is 50 years. Due to site suitability, insects and disease most of the coniferous stands (primarily red and jack pine) begin deteriorating 50 years after planting.

### **Annual Harvest Goals**

All of the timber harvesting at Stephens State Forest will involve even-aged management, due to an oak dominated forest and the lack of heavy competition of shade-tolerant hardwood species.

<b>Timber Type</b>	<b>Rotation Age</b>	<b>Total Acres</b>	<b>Annual Harvest</b>
Upland Hardwood	125 years	9,879	79
Bottomland Hardwood	80 years	1,671	21
Pine	50 years	518	10
Other	0 years	3,102	0
Total		15,170	110

The total annual harvest is 110 acres per year. One exception to the annual harvest plan is that more acres of pine may be harvested sooner due to decline and associated risk in those stands. Most of the pine stands have already reached or surpassed their rotation age and may be converted to native hardwoods once they are harvested or removed.

# Appendix

# **Forest Work Plan**

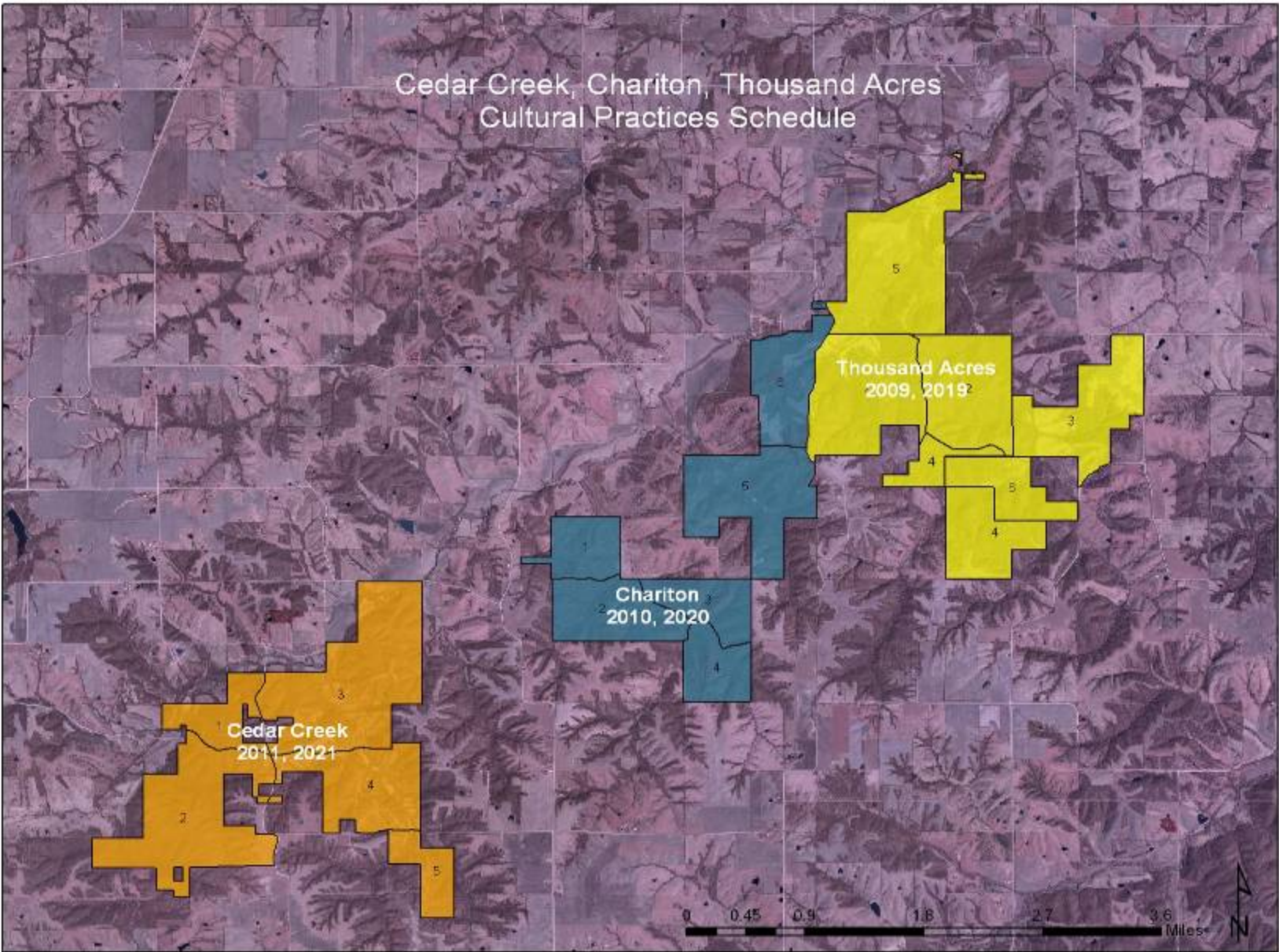
## **Stephens State Forest**

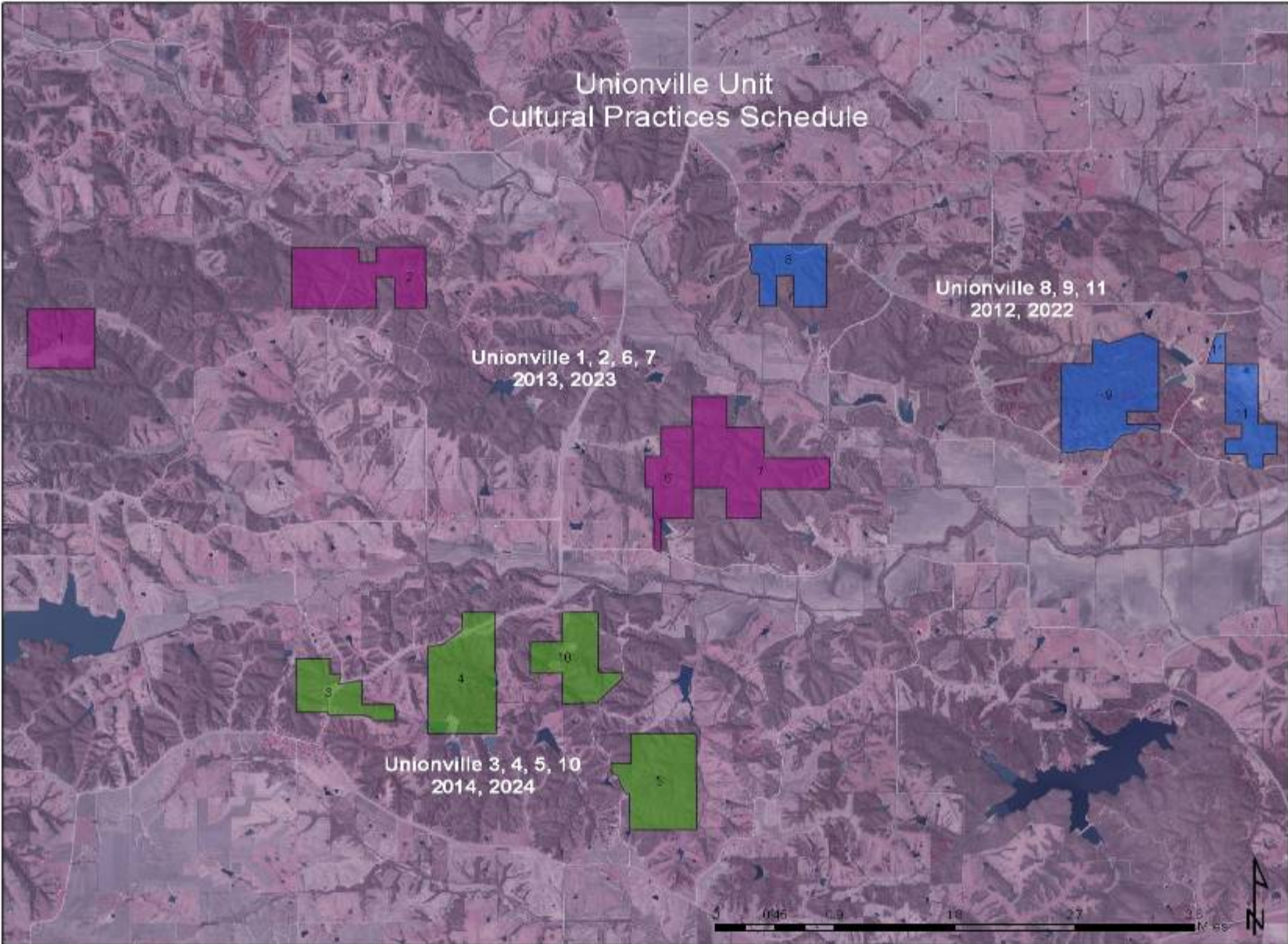
*Descriptions and Prescriptions for  
Individual Stands*

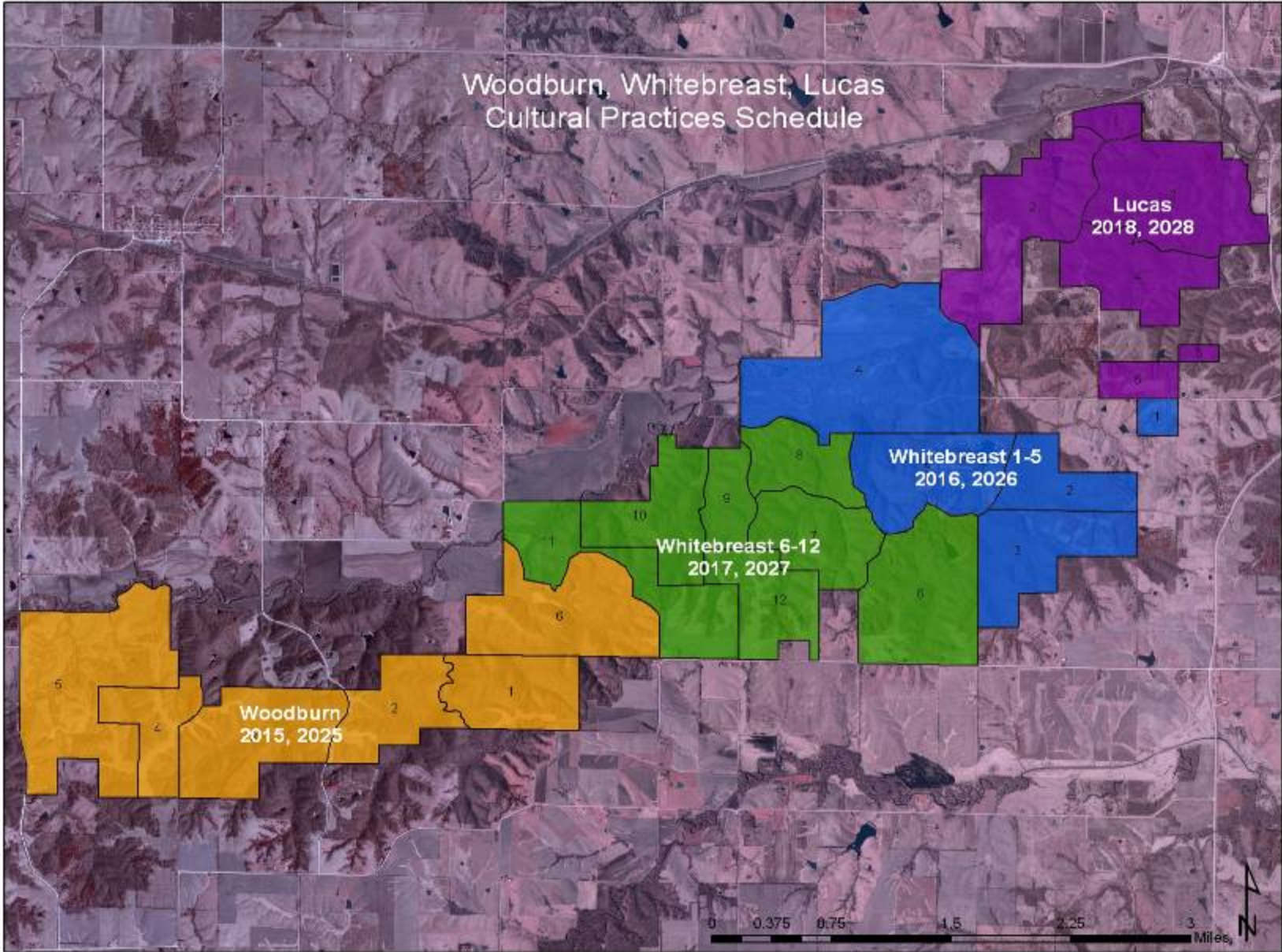
**Cultural Practices Schedule**

<b>Fiscal Year</b>	<b>Unit</b>	<b>Total Acres</b>	<b>Acres Mgmt</b>	<b>Cost Mgmt - \$</b>	<b>Acres Harvest</b>	<b>Estimated Revenue + \$</b>
2009	Thousand Acre	2,376	340	49,180.00	60	35,325.00
2010	Chariton	1,503	379	55,580.00	110	84,240.00
2011	Cedar Creek	1,937	417	63,720.00	80	63,540.00
2012	Unionville 8,9,11	664	284	49,230.00	103	93,240.00
2013	Unionville 1,2,6,7	937	250	43,830.00	32	23,040.00
2014	Unionville 3,4,5,10	869	166	25,100.00	49	44,100.00
2015	Woodburn	2,098	507	68,900.00	98	97,800.00
2016	Whitebreast 1-5	1,611	972	104,010.00	94	81,720.00
2017	Whitebreast 6-11	1,908	584	85,930.00	75	59,760.00
2018	Lucas	1,267	359	81,040.00	92	76,320.00
2019	Thousand Acre	2,376	465	64,410.00	108	97,990.00
2020	Chariton	1,503	376	49,150.00	112	169,140.00
2021	Cedar Creek	1,937	491	68,630.00	77	100,040.00
2022	Unionville 8,9,11	664	249	38,960.00	40	87,960.00
2023	Unionville 1,2,6,7	937	202	25,430.00	10	22,560.00
2024	Unionville 3,4,5,10	869	164	21,500.00	0	29,400.00
2025	Woodburn	2,098	383	42,830.00	100	135,000.00
2026	Whitebreast 1-5	1,611	795	71,940.00	72	115,620.00
2027	Whitebreast 6-11	1,908	496	77,430.00	97	54,960.00
2028	Lucas	1,267	212	30,670.00	31	71,780.00









**Forest Work Plan Summary 2009-2028**

<b>Fiscal Year</b>	<b>Unit / Compartment</b>	<b>Cultural Practice</b>	<b>Acres</b>	<b>Cost of Practice</b>	<b>Harvest Acres</b>	<b>Income</b>	<b>+/-</b>
<b>2009</b>	<b>Thousand Acres</b>						
	Thousand Acres C2	Harvest			43	\$35,325.00	
	Thousand Acres C2	Harvest			17	Pd. in FY2008	
	Thousand Acres C2	PostHarvest	60	\$9,600.00			
	Thousand Acres C2	PreHarvest	16	\$2,560.00			
	Unionville C4	PreHarvest	0	\$0.00			
	Thousand Acres C1, C2, C5	Forest Stand Improvement	118	\$14,720.00			
	Thousand Acres C5	Tree Planting	50	\$17,500.00			
	Thousand Acres	Stand Conversion	0	\$0.00	0		
	Thousand Acres C3, C6	Prairie / Savanna Activities	96	\$4,800.00			
	Total		340	\$49,180.00	60	\$35,325.00	<b>-\$13,855.00</b>
<b>2010</b>	<b>Chariton</b>						
	Chariton C1, C2	Harvest			102	\$84,240.00	
	Thousand Acres	PostHarvest	0	\$0.00			
	Woodburn C3	PreHarvest	16	\$2,560.00			
	Chariton (all)	Forest Stand Improvement	315	\$38,720.00			
	Thousand Acres C5	Tree Planting	25	\$8,750.00			
	Chariton C5	Stand Conversion	8	\$4,800.00	8		
	Chariton C5	Prairie / Savanna Activities	15	\$750.00			
	Total		379	\$55,580.00	110	\$84,240.00	\$28,660.00
<b>2011</b>	<b>Cedar Creek</b>						
	Cedar Creek C3	Harvest			69	\$57,600.00	
	Thousand Acres C4	Harvest			11	\$5,940.00	
	Chariton C1, C2	PostHarvest	102	\$16,320.00			
	Whitebreast C4	PreHarvest	18	\$2,880.00			
	Cedar Creek C1, C3, C4	Forest Stand Improvement	246	\$29,520.00			
	Cedar Creek C2, C3, C4	Tree Planting	36	\$12,600.00			
	Cedar Creek C3	Stand Conversion	3	\$1,800.00	3		
	Cedar Creek C3	Prairie / Savanna Activities	12	\$600.00			
	Total		417	\$63,720.00	83	\$63,540.00	<b>-\$180.00</b>
<b>2012</b>	<b>Unionville 8, 9, 1 1</b>						
	Unionville C9, C11	Harvest			13	\$12,240.00	
	Thousand Acres C2	Harvest			90	\$81,000.00	
	Cedar Creek C3	PostHarvest	69	\$11,040.00			
	Thousand Acres C4	PostHarvest	11	\$1,760.00			
	Whitebreast 6-12	PreHarvest	0	\$0.00			

	Unionville C9, C11	Forest Stand Improvement	154	\$18,480.00		
	Unionville C11	Tree Planting	41	\$14,350.00		
	Unionville C8	Stand Conversion	9	\$3,600.00	9	
	Unionville 8,9,11	Prairie / Savanna Activities	0	\$0.00		
	Total		284	\$49,230.00	112	\$93,240.00 \$44,010.00
<b>2013</b>	<b>Unionville 1 , 2, 6, 7</b>					
	Unionville C7	Harvest			17	\$12,240.00
	Chariton C5	Harvest			15	\$10,800.00
	Unionville C9, C11	PostHarvest	13	\$2,080.00		
	Thousand Acres C2	PostHarvest	90	\$14,400.00		
	Lucas C2, C3	PreHarvest	17	\$2,720.00		
	Unionville C1, C2, C7	Forest Stand Improvement	94	\$11,280.00		
	Unionville 1 , 2, 6, 7	Tree Planting	0	\$0.00		
	Unionville C1	Stand Conversion	21	\$12,600.00	21	
	Unionville C2	Prairie / Savanna Activities	15	\$750.00		
	Total		250	\$43,830.00	53	\$23,040.00 -\$20,790.00
<b>2014</b>	<b>Unionville 3, 4, 5, 10</b>					
	Unionville C4	Harvest			7	\$6,300.00
	Thousand Acres C4	Harvest			42	\$37,800.00
	Unionville C7	PostHarvest	17	\$2,720.00		
	Chariton C5	PostHarvest	15	\$2,400.00		
	Thousand Acres C1, C3, C4, C5	PreHarvest	14	\$2,240.00		
	Unionville C3, C4, C10	Forest Stand Improvement	97	\$11,640.00		
	Unionville 3, 4, 5, 10	Tree Planting	0	\$0.00		
	Unionville C4, C5	Stand Conversion	9	\$5,400.00	9	
	Unionville C3, C4	Prairie / Savanna Activities	14	\$700.00		
	Total		166	\$25,100.00	58	\$44,100.00 \$19,000.00
<b>2015</b>	<b>Woodburn</b>					
	Woodburn C1, C3	Harvest			98	\$97,800.00
	Unionville C4	PostHarvest	7	\$1,120.00		
	Thousand Acres C4	PostHarvest	42	\$6,720.00		
	Chariton C2	PreHarvest	71	\$11,360.00		
	Woodburn C2, C3, C5, C6	Forest Stand Improvement	285	\$34,200.00		
	Woodburn C1, C3, C5	Tree Planting	9	\$3,150.00		
	Woodburn C1, C4	Stand Conversion	14	\$8,400.00	14	
	Woodburn C5	Prairie / Savanna Activities	79	\$3,950.00		

	Total		507	\$68,900.00	112	\$97,800.00	\$28,900.00
<b>2016</b>	<b>Whitebreast 1 - 5</b>						
	Whitebreast C4, C5	Harvest			21	\$29,160.00	
	Chariton C5	Harvest			73	\$52,560.00	
	Woodburn C1, C3	PostHarvest	98	\$15,680.00			
	Cedar Creek C1	PreHarvest	28	\$4,480.00			
	Whitebreast C2, C3, C4, C5	Forest Stand Improvement	370	\$44,400.00			
	Whitebreast C5	Tree Planting	21	\$7,350.00			
	Whitebreast C1, C5	Stand Conversion	17	\$10,200.00	17		
	Whitebreast (all)	Prairie / Savanna Activities	438	\$21,900.00			
	Total		972	\$104,010.00	111	\$81,720.00	-\$22,290.00
<b>2017</b>	<b>Whitebreast 6 - 12</b>						
	Whitebreast C6, C7, C8	Harvest			45	\$35,280.00	
	Thousand Acres C4	Harvest			30	\$24,480.00	
	Whitebreast C4, C5	PostHarvest	21	\$3,360.00			
	Chariton C5	PostHarvest	73	\$11,680.00			
	Unionville 8,9,11	PreHarvest	0	\$0.00			
	Whitebreast (all)	Forest Stand Improvement	372	\$45,440.00			
	Whitebreast C12	Tree Planting	7	\$2,450.00			
	Whitebreast C6, C7	Stand Conversion	35	\$19,200.00	35		
	Whitebreast C6	Prairie / Savanna Activities	76	\$3,800.00			
	Total		584	\$85,930.00	110	\$59,760.00	-\$26,170.00
<b>2018</b>	<b>Lucas</b>						
	Lucas C2, C3	Harvest			46	\$43,200.00	
	Chariton C1	Harvest			46	\$33,120.00	
	Whitebreast C6, C7, C8	PostHarvest	45	\$7,200.00			
	Thousand Acres C4	PostHarvest	30	\$4,800.00			
	Unionville 1, 2, 6, 7	PreHarvest	0	\$0.00			
	Lucas C1, C2, C3, C4	Forest Stand Improvement	121	\$15,240.00			
	Lucas C2	Tree Planting	143	\$50,050.00			
	Lucas C3	Stand Conversion	5	\$3,000.00	5		
	Lucas C5	Prairie / Savanna Activities	15	\$750.00			
	Total		359	\$81,040.00	97	\$76,320.00	-\$4,720.00
<b>Grand Total</b>	<b>2009-2018</b>		<b>4258</b>	<b>\$626,520.00</b>	<b>906</b>	<b>\$659,085.00</b>	<b>\$32,565.00</b>

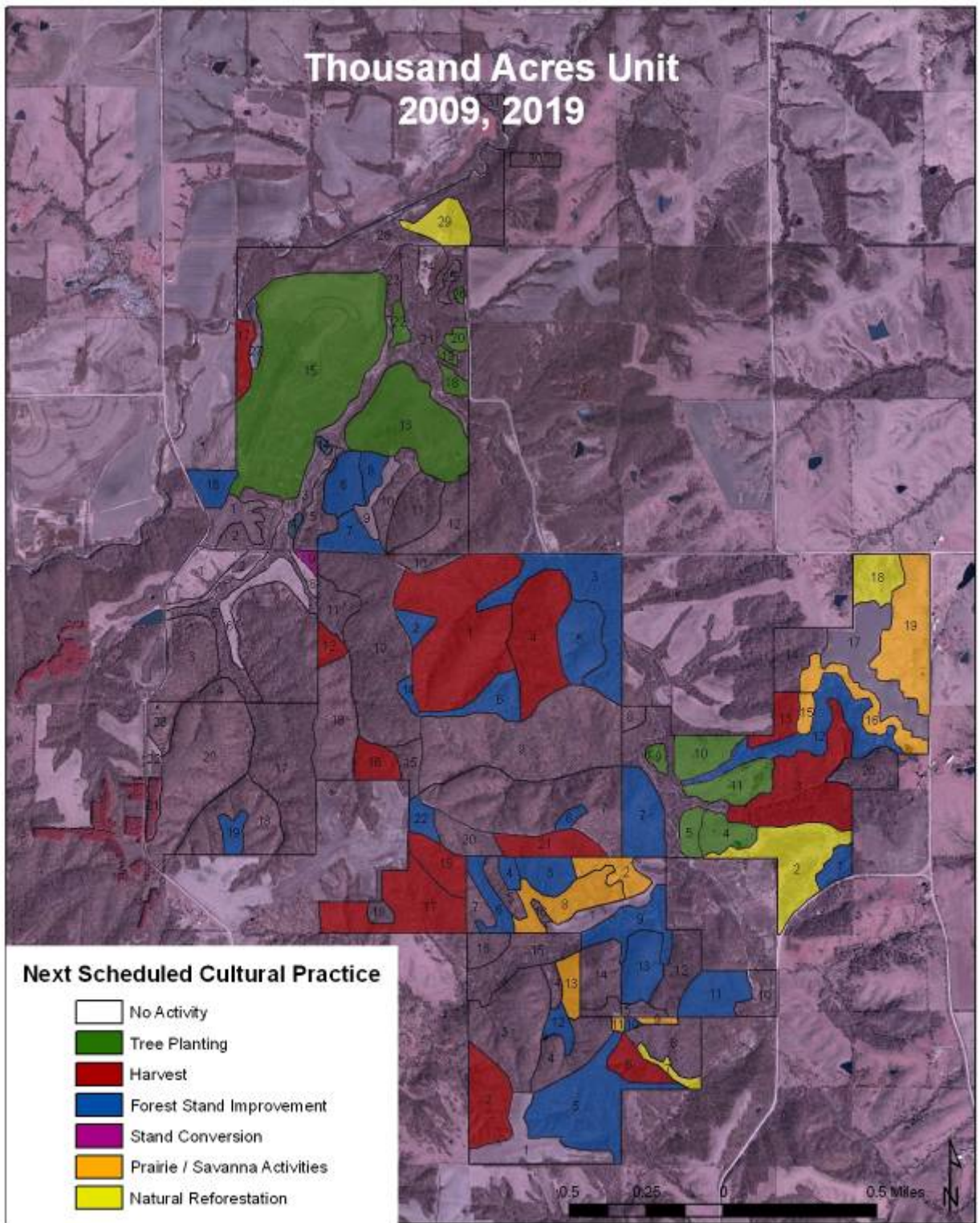
<b>Fiscal Year</b>	<b>Unit / Compartment</b>	<b>Cultural Practice</b>	<b>Acres</b>	<b>Cost of Practice</b>	<b>Harvest Acres</b>	<b>Income</b>	<b>+/-</b>
<b>2019</b>	<b>Thousand Acres</b>						
	Thousand Acres C1, C3, C4, C5	Harvest			108	\$74,440.00	
	Thousand Acres C2	Harvest - Second Cut				\$23,550.00	
	Lucas C2, C3	PostHarvest	46	\$7,360.00			
	Chariton C1	PostHarvest	46	\$7,360.00			
	Unionville 3, 4, 5, 10	PreHarvest	0	\$0.00			
	Thousand Acres C2, C3, C4, C6	Forest Stand Improvement	212	\$25,440.00			
	Thousand Acres C3	Tree Planting	54	\$18,900.00			
	Thousand Acres	Stand Conversion	0	\$0.00	0		
	Thousand Acres C3, C4, C6	Prairie / Savanna Activities	107	\$5,350.00			
	Total		465	\$64,410.00	108	\$97,990.00	\$33,580.00
<b>2020</b>	<b>Chariton</b>						
	Chariton C2	Harvest			112	\$112,980.00	
	Chariton C1, C2	Harvest - Second Cut				\$56,160.00	
	Thousand Acres C1, C3, C4, C5	PostHarvest	108	\$17,280.00			
	Woodburn C3, C4	PreHarvest	19	\$3,040.00			
	Chariton C4, C5	Forest Stand Improvement	234	\$28,080.00			
	Chariton	Tree Planting	0	\$0.00			
	Chariton	Stand Conversion	0	\$0.00	0		
	Chariton C5	Prairie / Savanna Activities	15	\$750.00			
	Total		376	\$49,150.00	112	\$169,140.00	\$119,990.00
<b>2021</b>	<b>Cedar Creek</b>						
	Cedar Creek C1, C2	Harvest			77	\$57,680.00	
	Cedar Creek C3	Harvest - Second Cut				\$38,400.00	
	Thousand Acres C4	Harvest - Second Cut				\$3,960.00	
	Chariton C2	PostHarvest	112	\$17,920.00			
	Whitebreast	PreHarvest	0	\$0.00			
	Cedar Creek C2, C3, C4, C5	Forest Stand Improvement	342	\$41,360.00			
	Cedar Creek C5	Tree Planting	25	\$8,750.00			
	Cedar Creek	Stand Conversion	0	\$0.00	0		
Cedar Creek C3	Prairie / Savanna Activities	12	\$600.00				

	Total		491	\$68,630.00	77	\$100,040.00	\$31,410.00
<b>2022</b>	<b>Unionville 8, 9, 1 1</b>						
	Unionville C9	Harvest			40	\$28,800.00	
	Unionville C9, C11	Harvest - Second Cut				\$5,160.00	
	Thousand Acres C2	Harvest - Second Cut				\$54,000.00	
	Cedar Creek C1, C2	PostHarvest	77	\$12,320.00			
	Whitebreast C11	PreHarvest	49	\$7,840.00			
	Unionville C8, C9, C11	Forest Stand Improvement	110	\$13,200.00			
	Unionville 8, 9, 11	Tree Planting	0	\$0.00			
	Unionville C9	Stand Conversion	13	\$5,600.00	13		
	Unionville 8, 9, 11	Prairie / Savanna Activities	0	\$0.00			
	Total		249	\$38,960.00	53	\$87,960.00	\$49,000.00
<b>2023</b>	<b>Unionville 1 , 2, 6, 7</b>						
	Unionville C2	Harvest			10	\$7,200.00	
	Unionville C7	Harvest - Second Cut				\$8,160.00	
	Chariton C5	Harvest - Second Cut				\$7,200.00	
	Unionville C9	PostHarvest	40	\$6,400.00			
	Lucas C2, C3	PreHarvest	16	\$2,560.00			
	Unionville C2, C6	Forest Stand Improvement	131	\$15,720.00			
	Unionville 1 , 2, 6, 7	Tree Planting	0	\$0.00			
	Unionville 1 , 2, 6, 7	Stand Conversion	0	\$0.00	0		
	Unionville C2	Prairie / Savanna Activities	15	\$750.00			
	Total		202	\$25,430.00	10	\$22,560.00	-\$2,870.00
<b>2024</b>	<b>Unionville 3, 4, 5, 10</b>						
	Unionville 3, 4, 5, 10	Harvest			0	\$0.00	
	Unionville C4	Harvest - Second Cut				\$4,200.00	
	Thousand Acres C4	Harvest - Second Cut				\$25,200.00	
	Unionville C2	PostHarvest	10	\$1,600.00			
<i>assumed cost</i>	Thousand Acres	PreHarvest	60	\$9,600.00			
	Unionville C3, C5	Forest Stand Improvement	80	\$9,600.00			
	Unionville 3, 4, 5, 10	Tree Planting	0	\$0.00			
	Unionville 3, 4, 5, 10	Stand Conversion	0	\$0.00	0		
	Unionville C3, C4	Prairie / Savanna Activities	14	\$700.00			
	Total		164	\$21,500.00	0	\$29,400.00	\$7,900.00
<b>2025</b>	<b>Woodburn</b>						
	Woodburn C1, C3, C4, C5, C6	Harvest			100	\$85,800.00	
	Woodburn C1, C3	Harvest - Second Cut				\$49,200.00	



<i>assumed cost</i>	Unionville 3, 4, 5, 10	PostHarvest	0	\$0.00		
	Chariton	PreHarvest	60	\$9,600.00		
	Woodburn C1, C4, C5	Forest Stand Improvement	244	\$29,280.00		
	Woodburn	Tree Planting	0	\$0.00		
	Woodburn	Stand Conversion	0	\$0.00	0	
	Woodburn C5	Prairie / Savanna Activities	79	\$3,950.00		
	Total		383	\$42,830.00	100	\$135,000.00 \$92,170.00
<b>2026</b>	<b>Whitebreast 1 - 5</b>					
<i>assumed cost</i>	Whitebreast C2, C3, C5	Harvest			72	\$57,060.00
	Whitebreast C5	Harvest - Second Cut				\$23,520.00
	Chariton C5	Harvest - Second Cut				\$35,040.00
	Woodburn C1, C3, C4, C5, C6	PostHarvest	100	\$16,000.00		
	Cedar Creek	PreHarvest	60	\$9,600.00		
	Whitebreast C1, C2, C3, C5	Forest Stand Improvement	177	\$21,240.00		
	Whitebreast 1 - 5	Tree Planting	0	\$0.00		
	Whitebreast C4	Stand Conversion	4	\$2,400.00	4	
	Whitebreast (all)	Prairie / Savanna Activities	454	\$22,700.00		
	Total		795	\$71,940.00	76	\$115,620.00 \$43,680.00
<b>2027</b>	<b>Whitebreast 6 - 12</b>					
<i>assumed cost</i>	Whitebreast C10, C11	Harvest			69	\$9,600.00
	Chariton C1	Harvest			28	\$15,120.00
	Whitebreast C6, C7, C8	Harvest - Second Cut				\$23,520.00
	Thousand Acres	Harvest - Second Cut				\$6,720.00
	Whitebreast C2, C3, C5	PostHarvest	72	\$11,520.00		
	Unionville 8, 9, 11	PreHarvest	60	\$9,600.00		
	Whitebreast C6, C7, C8, C9	Forest Stand Improvement	183	\$21,960.00		
	Whitebreast 6 - 12	Tree Planting	0	\$0.00		
	Whitebreast 6 - 12	Stand Conversion	46	\$27,600.00	46	
Whitebreast C6, C12	Prairie / Savanna Activities	135	\$6,750.00			
	Total		496	\$77,430.00	143	\$54,960.00 -\$22,470.00
<b>2028</b>	<b>Lucas</b>					
<i>assumed cost</i>	Lucas C2, C3	Harvest			31	\$32,300.00
	Lucas C3	Harvest - Second Cut				\$17,400.00
	Chariton C1	Harvest - Second Cut				\$22,080.00
	Whitebreast C10, C11	PostHarvest	69	\$11,040.00		
	Chariton C1	PostHarvest	28	\$4,480.00		
	Unionville 1 , 2, 6, 7	PreHarvest	60	\$9,600.00		

Lucas C2, C3, C4	Forest Stand Improvement	40	\$4,800.00			
Lucas	Tree Planting	0	\$0.00			
Lucas	Stand Conversion	0	\$0.00			
Lucas C5	Prairie / Savanna Activities	15	\$750.00	15		
Total		212	\$30,670.00	46	\$71,780.00	\$41,110.00
<b>Grand Total</b>	<b>2019-2028</b>	<b>3833</b>	<b>\$490,950.00</b>	<b>725</b>	<b>\$884,450.00</b>	<b>\$393,500.00</b>



# Thousand Acres Unit Compartment 1

## **Stand 1: 17 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This site will be periodically burned to promote native vegetation and reduce woody species.

## **Stand 2: 7 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

## **Stand 3: 6 acres**

*Description* – Black oak, hickory, bur oak; brushy, small diameter trees with larger scattered oaks

DBH (Avg): 6”      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. Re-evaluate for FSI.

## **Stand 4: 6 acres**

*Description* – Red oak, white oak, hickory overstory; open understory

DBH (Avg): 10”      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 5: 22 acres**

*Description* – Cottonwood, hackberry, black locust; bottomland hardwoods, young stand

DBH (Avg): 8”      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 6: 14 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. Periodic prescribed burning will prevent woody encroachment and promote native species.

**Stand 7: 56 acres**

*Description* – Bur oak, hickory

DBH (Avg): 10”      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 8: 3 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 9: 2 acres**

*Description* – Black locust

DBH (Avg): 6”      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

Recommended complete removal of black locust and planting of desirable species.

**Stand 10: 76 acres**

*Description* – Bur oak hickory (pole-size) overstory; elm, ironwood understory

DBH (Avg): 10”      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 11: 11 acres**

*Description* – Mixed bottomland hardwoods, poor quality stand; hackberry, elm understory

DBH (Avg): 10”      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 12: 6 acres**

*Description* – Red oak, white oak (sawtimber size and smaller) overstory; elm, ash understory

DBH (Avg): 18”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This site will need pre-harvest treatment of understory removal to allow for natural oak regeneration. Once regeneration is established, harvest stand within 10 years.

**Stand 13: 32 acres**

*Description* – White oak, hickory overstory; elm, cherry, ash understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 14: 3 acres**

*Description* – Successional woody; poor oak component, mostly ash and elm

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Residual trees from a previous clearcut need to be removed / killed to decrease light competition with regrowth.

**Stand 15: 7 acres**

*Description* – White oak, red oak, ash overstory; elm, hickory understory (poorly stocked understory)

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 16: 11 acres**

*Description* – White oak, red oak, hickory overstory; elm, ash understory

DBH (Avg): 18”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

Harvest largest trees for commercial sale to release large pole-sized trees underneath.

**Stand 17: 54 acres**

*Description* – Bur oak, hickory overstory; elm, hickory understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 18: 33 acres**

*Description* – White oak, red oak, hickory overstory; elm, ash, hickory understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 19: 6 acres**

*Description* – Mixed oak, ash, elm overstory (some walnut and hackberry); small pole-size, old clearcut area

DBH (Avg): 6”                      BA: 100



*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be used to manage for oak, walnut and cherry at a rate of 40-50 crop trees per acre.

**Stand 20: 66 acres**

*Description* – White oak, black oak, hickory overstory; ash, elm ironwood understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 21: 6 acres**

*Description* – Red pine

DBH (Avg): 10”                      BA: 210

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand should only have salvage and clean-up activities. Trees may also be removed next to road for power right-of-way.

**Stand 22: 4 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

### **Stand 23: 9 acres**

*Description* – Black oak, hickory, scattered white oak overstory; prickly ash, hickory understory

DBH (Avg): 8”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

## **Thousand Acres Unit Compartment 2**

### **Stand 1: 90 acres**

*Description* – White oak, hickory, red oak overstory; elm, ash, dogwood understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand has a lot of storm damage and oak wilt present. A pre-harvest treatment will be needed to improve regeneration before harvest. The harvest may be non-commercial or a low quantity sale.

### **Stand 2: 6 acres**

*Description* – Ash, cherry, hackberry, hickory, bur oak, basswood, walnut

DBH (Avg): 5”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be performed second cycle to release oak and walnut at a rate of 35-45 crop trees per acre.

### **Stand 3: 44 acres**

*Description* – Mixed bottomland hardwoods; bur oak, walnut, elm, hackberry, ash

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release walnut and oak at a rate of 35-40 crop trees per acre.

### **Stand 4: 42 acres**

*Description* – White oak, red oak, bur oak, hickory, walnut, hackberry, ash

DBH (Avg): 14”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

Shelterwood harvest performed FY 2009; second cut scheduled 2019. Site will be burned to assist in oak regeneration. Post-harvest will be completed by FY 2010.

### **Stand 5: 22 acres**

*Description* – White oak, elm, hackberry, hickory, red oak

DBH (Avg): 8”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Clearcut performed FY 2009. Post-harvest will be completed by FY 2010.

### **Stand 6: 14 acres**

*Description* – Bur oak, hickory, white oak, red oak, basswood

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 35-40 crop trees per acre. This site was cutover either for timber sale or firewood purposes.

**Stand 7: 74 acres**

***Description*** – White oak, red oak, hickory, bur oak, ash, hackberry overstory; oak, hickory, elm understory

DBH (Avg): 12”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 8: 3 acres**

***Description*** – Successional woody; oak, basswood, hackberry, hickory, elm, ash, cherry

DBH (Avg): 4”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

FSI will be performed in second cycle. This site was either cut over for timber sale or firewood purposes.

**Stand 9: 94 acres**

***Description*** – White oak, red oak, hickory, bur oak overstory; elm, oak, hickory understory

DBH (Avg): 12”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

### **Stand 10: 6 acres**

*Description* – White oak, red oak, hickory, bur oak, mixed pine

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

## **Thousand Acres Unit Compartment 3**

### **Stand 1: 7 acres**

*Description* – Shingle oak, elm, hickory, black oak overstory; brushy understory

DBH (Avg): 6”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand is a low priority for thinning and weed tree eradication. The FSI will release oak and eliminate undesirable species.

### **Stand 2: 37 acres**

*Description* – Successional woody with open areas

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This area will be allowed to reforest naturally; re-evaluate for FSI in 10 years.

### **Stand 3: 50 acres**

*Description* – Bur oak, black oak overstory (scattered large trees); basswood, red oak, hackberry, elm understory

DBH (Avg): 18”

BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is a low priority harvest site; larger trees will be harvested and residual stems will be managed to release oak. Harvest will be low quality, but the site has good potential.

**Stand 4: 12 acres**

*Description* – Open grassy area with scattered trees / brush; shingle oak and weed trees

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be cleared of brush and planted with native upland hardwoods.

**Stand 5: 7 acres**

*Description* – Open grassy area with scattered, small trees

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be cleared of brush and planted with walnut and mixed bottomland hardwoods.

**Stand 6: 34 acres**

*Description* – Mixed bottomland hardwoods, walnut; understory brushy, multiflora rose present

DBH (Avg): 14”

BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. Re-evaluate this site in 15-20 years for walnut; potential future harvest site.

**Stand 7: 23 acres**

*Description* – Bur oak, elm, hickory, hackberry, ash, white oak, black oak, red oak, walnut, bitternut overstory; cherry, elm, hickory understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release oak and walnut at a rate of 30-40 crop trees per acre.

**Stand 8: 3 acres**

*Description* – White oak, red oak, hickory overstory; oak, hickory, elm understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 9: 3 acres**

*Description* – Open field, previously farmed

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed bottomland hardwoods and walnut.

**Stand 10: 15 acres**

*Description* – Open field, previously hay / grazing

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be cleared of brush and planted with mixed upland hardwoods.

**Stand 11: 17 acres**

*Description* – Open field with scattered trees / brush

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be cleared of brush and planted with mixed upland hardwoods.

**Stand 12: 34 acres**

*Description* – Black oak, shingle oak, elm

DBH (Avg): 6”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release to release 35-45 trees per acre, focusing on oak.

This is a low priority site.

**Stand 13: 9 acres**

*Description* – Black oak, basswood overstory; basswood, oak understory

DBH (Avg): 16”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

The commercial trees on this site should be harvested. The residual stand will require weed tree eradication or complete removal with replanting.

**Stand 14: 17 acres**

*Description* – Bur oak, black oak, basswood

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity



No management activities are recommended.

**Stand 15: 4 acres**

*Description* – Open grassy area with scattered trees

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be managed as an open area for wildlife; clear site of brush and use periodic burning to control woody vegetation.

**Stand 16: 18 acres**

*Description* – Open grassy area with scattered trees / brush; edge along timber

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be burned periodically to create an open edge area for wildlife.

**Stand 17: 35 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 18: 15 acres**

*Description* – Successional woody / brush

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This site will be allowed to naturally convert to forest.

**Stand 19: 36 acres**

*Description* – Open field, previously hay

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This area will be periodically burned to maintain an open area for wildlife. This is a potential site for native prairie seeding.

**Stand 20: 15 acres**

*Description* – Bur oak, black oak, hickory overstory; little understory

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Thousand Acres Unit  
Compartment 4**

**Stand 1: 25 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 2: 24 acres**

*Description* – Black oak, white oak, red oak, hickory overstory; ironwood (heavy) understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This site is mature and ready for harvest. A pre-harvest treatment will be needed to remove heavy ironwood understory.

**Stand 3: 45 acres**

*Description* – White oak, red oak, hickory, bur oak, walnut overstory; elm, hickory, oak understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 4: 21 acres**

*Description* – Red oak, white oak, hickory overstory; elm, ash understory

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 5: 51 acres**

*Description* – Hickory, bur oak, black oak, red oak, white oak, ash, bitternut overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 crop trees per acre to improve growing conditions and improve species composition.

**Stand 6: 11 acres**

*Description* – White oak, red oak, hickory overstory; hickory, elm understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. A pre-harvest treatment will be needed to improve conditions for oak regeneration before harvest.

**Stand 7: 4 acres**

*Description* – Grassy, fallow field

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This field will be allowed to naturally convert to forest cover. The site will be re-evaluated for species composition and FSI in the future.

**Stand 8: 20 acres**

*Description* – Hickory, bur oak, black oak, ash, shingle oak overstory; hackberry, ash, elm understory

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 9: 2 acres**

*Description* – Grassy, fallow field

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site has native grasses and forbs present. The site will be burned to test response of native component then re-evaluated for management class.

**Stand 10: 1 acre**

*Description* – Walnut, ash, hackberry, hickory, bur oak overstory; elm, hackberry understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be performed on walnut at a rate of 30-40 crop trees per acre.

**Stand 11: 1 acre**

*Description* – Grassy, fallow field

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site has native grasses and forbs present. The site will be burned to test response of native component then re-evaluated for management class.

**Stand 12: 6 acres**

*Description* – Walnut, shingle oak, hackberry, boxelder, red oak, hickory, cherry, bitternut, bur oak

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be performed to release 30-45 crop trees per acre, with a focus on walnut.

**Stand 13: 8 acres**

*Description* – Savanna; white oak, bur oak overstory; oak, prickly ash understory

DBH (Avg): 20”                      BA: 50

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to improve and maintain the savanna structure.

**Stand 14: 4 acres**

*Description* – Successional woody; shingle oak, hawthorn, dogwood

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 15: 24 acres**

*Description* – Walnut, shingle oak, silver maple, bur oak, elm, cottonwood, hackberry overstory;

bitternut, elm, shingle oak understory

DBH (Avg): 12”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 16: 8 acres**

*Description* – White oak, bur oak, red oak, black oak, walnut, hickory, shingle oak, bitternut

overstory; elm, hickory understory

DBH (Avg): 14”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 17: 42 acres**

*Description* – White oak, red oak, hickory, ash overstory; ironwood, hickory, ash, elm understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. A pre-harvest treatment will be needed to improve site conditions for oak regeneration before harvest.

**Stand 18: 3 acres**

*Description* – Bur oak, hickory, red oak overstory; ironwood understory

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 19: 14 acres**

*Description* – White oak, red oak, bur oak, hickory, cherry, walnut, ash overstory; elm, hickory understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

Re-evaluate for harvest in 2019; check status of regeneration and oak wilt.

**Stand 20: 12 acres**

*Description* – White oak, hickory, red oak, black oak, ash, cherry

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 21: 16 acres**

*Description* – White oak, red oak, black oak, hickory, bur oak, ash, basswood overstory; oak, hickory, cherry understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. There is oak wilt and significant storm damage also.

Pre-harvest treatment will be necessary to improve oak regeneration on the site before harvest.

**Stand 22: 6 acres**

*Description* – Hickory, ash, black oak, shingle oak, elm, bur oak, basswood, bitternut, hackberry, cherry, walnut overstory; elm, hickory, hackberry understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to improve growing conditions and species composition; oak, cherry and walnut will be released at a rate of 30-35 crop trees per acre.



# Thousand Acres Unit Compartment 5

## **Stand 1: 13 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

## **Stand 2: 13 acres**

*Description* – Shingle oak, mixed hardwoods

DBH (Avg): 8”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

## **Stand 3: 13 acres**

*Description* – Bottomland hardwoods

DBH (Avg): 8”                      BA: 40”

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

## **Stand 4: 1 acre**

*Description* – Pond

*Management Class* – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 5: 11 acres**

***Description*** – Black locust

DBH (Avg): 4                      BA: 50

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended. This is a potential stand conversion site; complete removal of black locust, replant to desirable species.

**Stand 6: 14 acres**

***Description*** – Shingle oak, mixed hardwoods

DBH (Avg): 8”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be performed to release best oak and walnut stems at a rate of 40-50 crop trees per acre.

**Stand 7: 11 acres**

***Description*** – Black oak, bur oak, hickory, walnut

DBH (Avg): 8”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Walnut will benefit from crop tree release in this stand at a rate of 35-45 crop trees per acre.

**Stand 8: 6 acres**

*Description* – Black oak, hickory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be used to benefit the best quality stems at a rate of 35-40 crop trees per acre.

**Stand 9: 7 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 10: 12 acres**

*Description* – Black oak, hickory, mixed hardwoods

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 11: 19 acres**

*Description* – Hickory, black oak

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 12: 20 acres**

*Description* – Red oak, white oak, hickory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 13: 57 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This field will be planted to mixed hardwoods.

**Stand 14: 1 acre**

*Description* – Pond

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 15: 156 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree planting

This site will be planted to mixed hardwoods.

**Stand 16: 9 acres**

*Description* – Black oak, hickory

DBH (Avg): 6”

BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 17: 8 acres**

*Description* – Silver maple, cottonwood

DBH (Avg): 16”

BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand will be harvested and allowed to naturally regenerate from seed.

**Stand 18: 4 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed hardwoods.

**Stand 19: 2 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed hardwoods.

**Stand 20: 3 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed hardwoods.

**Stand 21: 64 acres**

*Description* – Bottomland hardwoods

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 22: 4 acres**

*Description* – Open grassy field

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed hardwoods.

**Stand 23: 6 acres**

*Description* – Mixed oak, shingle oak

DBH (Avg): 8”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 24: 7 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed hardwoods.

**Stand 25: 3 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed hardwoods.

**Stand 26: 1 acre**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed hardwoods.

**Stand 27: 4 acres**

*Description* – Two ponds; willows

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 28: 74 acres**

*Description* – Mixed bottomland hardwoods, walnut, cottonwood, willow, silver maple

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 29: 14 acres**

*Description* – Grassy fields

*Management Class* – Non-Forest

*Management Prescription* – Natural Reforestation

No management activities are recommended, re-evaluate species composition next cycle.

Perform FSI if necessary.

**Stand 30: 5 acres**

*Description* – Mixed bottomland hardwoods, walnut

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 31: 3 acres**

*Description* – Mixed bottomland hardwoods, walnut

DBH (Avg): 12”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Thousand Acres Unit  
Compartment 6**

**Stand 1: 15 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity



No management practices are recommended; continue crop lease.

**Stand 2: 11 acres**

*Description* – Grassy field, early successional; cedar, oak, dogwood

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to improve native component and discourage woody encroachment.

**Stand 3: 12 acres**

*Description* – Black oak, hickory, bur oak, ash, shingle oak, elm, willow

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release desirable oak at a rate of 35-45 crop trees per acre.

**Stand 4: 4 acres**

*Description* – Black locust, shingle oak, hickory, white oak

DBH (Avg): 8”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be performed to remove all black locust from the stand.

**Stand 5: 7 acres**

*Description* – Hickory, bur oak, white oak, ash, elm overstory; ironwood, elm, hickory, ash understory

DBH (Avg): 12”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 6: 10 acres**

*Description* – Ash, hackberry, bitternut, cottonwood, basswood, walnut

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-40 crop trees per acre.

**Stand 7: 7 acres**

*Description* – Hickory, ash, white oak overstory; elm, hickory, bitternut understory

DBH (Avg): 12”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 8: 23 acres**

*Description* – Successional woody; shingle oak, elm, hawthorn, hickory, prairie pockets

DBH (Avg): 6”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to improve species composition and to test response of native component.

**Stand 9: 19 acres**

*Description* – Walnut, ash, elm, boxelder, cottonwood

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release walnut at a rate of 30-40 crop trees per acre.

**Stand 10: 10 acres**

*Description* – Walnut, elm, silver maple, bur oak, hackberry, shingle oak overstory; elm understory

DBH (Avg): 14”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 11: 19 acres**

*Description* – Walnut, bur oak, shingle oak, black oak, ash, hackberry, red oak, cherry, hickory overstory; elm, hickory, prickly ash understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be performed to release 30-40 crop trees per acre, with a focus on oak and walnut.

**Stand 12: 17 acres**

*Description* – Bur oak, hickory, black oak, white oak, basswood, hackberry, shingle oak overstory; elm, hickory understory

DBH (Avg): 12”

BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 13: 17 acres**

*Description* – Hickory, bur oak, walnut, cherry, basswood, red oak, black oak, white oak

DBH (Avg): 6”

BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This site has a harvest / cutover history. A basal area thinning will decrease competition and act like a post-harvest treatment, increasing growth potential. This FSI can wait until second cycle.

**Stand 14: 17 acres**

*Description* – White oak, hickory, basswood, red oak, bur oak, ash overstory; cherry, elm, walnut, basswood understory

DBH (Avg): 14”

BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; re-evaluate for harvest.

**Stand 15: 7 acres**

*Description* – Hickory, ash, black oak, red oak, bur oak overstory

DBH (Avg): 12”

BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 16: 2 acres**

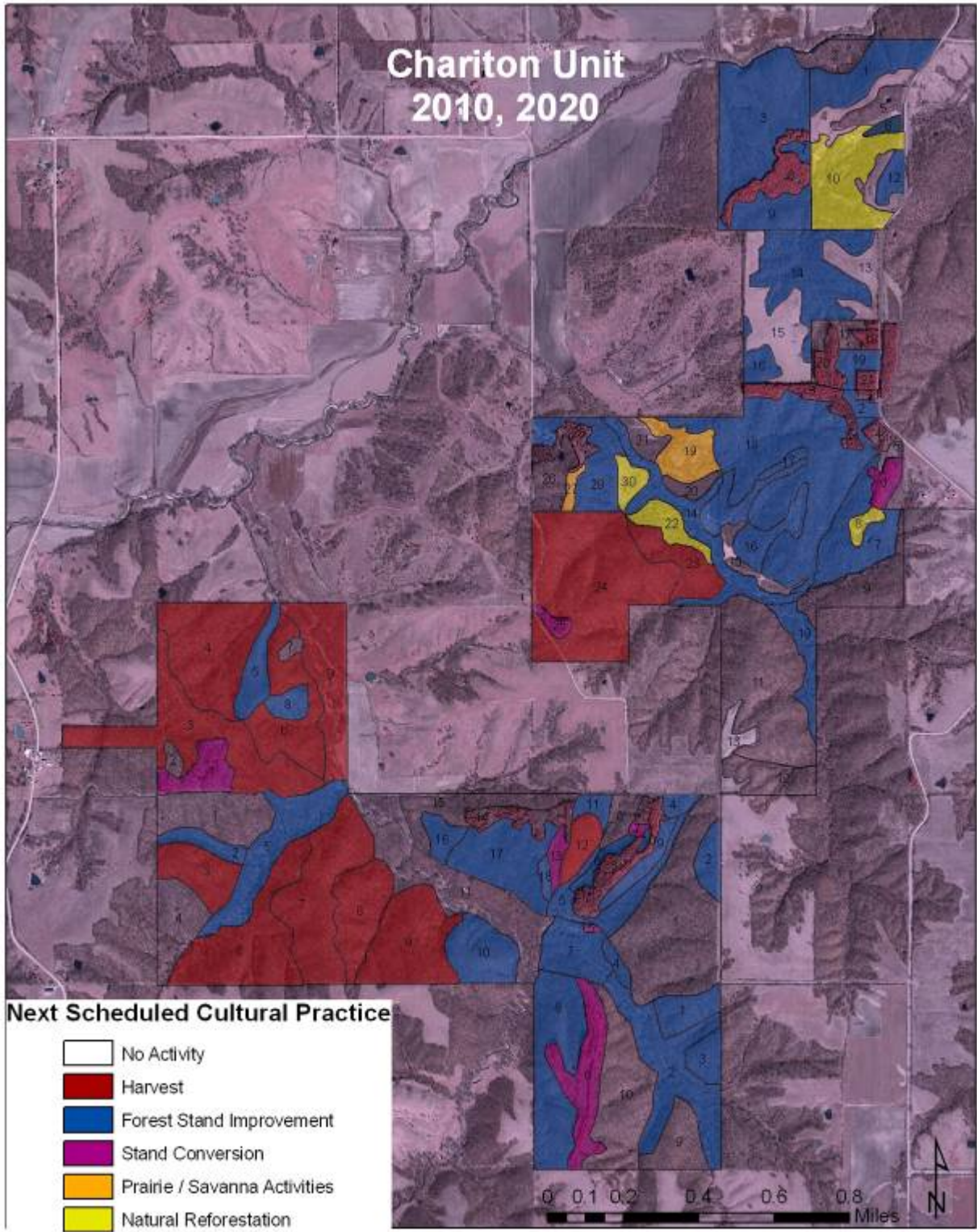
*Description* – Walnut, bitternut, ash, bur oak

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.



# Chariton Unit Compartment 1

## **Stand 1: 11 acres**

*Description* – Mixed pine; red pine, white pine, jack pine

DBH (Avg): 10”                      BA: 200

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

The pine overstory will be removed and the stand will be planted to native hardwoods.

## **Stand 2: 2 acres**

*Description* – Successional woody; harvested in 2004

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended. Re-evaluate for FSI in the future.

## **Stand 3: 46 acres**

*Description* – White oak, hickory, black oak, red oak, basswood, bur oak, cherry, elm overstory;  
basswood, elm, cherry, oak, hackberry understory

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. There is oak wilt present in the stand. This stand will either need to be harvested with shelterwood method or have a pre-harvest treatment as oak regeneration is currently lacking on the site.

## **Stand 4: 40 acres**

**Description** –White oak, hickory, black oak, red oak

DBH (Avg): 16”                      BA: 100

**Management Class** – Active Forest Management

**Management Prescription** – Harvest

This stand has mature individuals and is ready for an overstory removal. Shelterwood method will be utilized to improve conditions for oak regeneration before final cut.

### **Stand 5: 10 acres**

**Description** –White oak, elm, walnut, red oak, cherry

DBH (Avg): 6”                      BA: 70

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized in this stand to release 35-45 crop trees per acre.

### **Stand 6: 27 acres**

**Description** –White oak, red oak, black oak, hickory

DBH (Avg): 16”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Harvest

This stand is mature and ready for harvest. Shelterwood method will be utilized to improve conditions for oak regeneration before final cut.

### **Stand 7: 2 acres**

**Description** – Successional woody; harvested in 2004

**Management Class** – Active Forest Management

**Management Prescription** – No Activity



No management practices are recommended; re-evaluate for FSI in the future.

**Stand 8: 5 acres**

*Description* – Successional woody; harvested in 2004

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A post-harvest treatment will be performed on this site to encourage oak regeneration and decrease competition.

**Stand 9: 28 acres**

*Description* – Walnut, buckeye, hackberry, basswood, elm

DBH (Avg): 12”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and is ready for harvest. Re-evaluate regeneration status before cut.

**Chariton Unit  
Compartment 2**

**Stand 1: 22 acres**

*Description* – Bur oak, white oak, hickory, red oak, black oak, ash, cherry

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

There is oak wilt present on this stand; re-evaluate for possible early harvest / salvage cut.

**Stand 2: 6 acres**

*Description* – Hackberry, elm, walnut, cherry, black oak, basswood, hickory

DBH (Avg): 8”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release; oak and walnut will be released at a rate of 35-45 crop trees per acre.

**Stand 3: 16 acres**

*Description* – White oak, red oak, hickory, basswood, ash

DBH (Avg): 18”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready to be harvested. Shelterwood method will be utilized in conjunction with a post-harvest treatment to encourage oak regeneration before final cut.

**Stand 4: 16 acres**

*Description* – Bur oak, black oak, hickory, cherry

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 5: 27 acres**

*Description* – Walnut, bur oak, black oak, hackberry, red oak, basswood

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand to release 30-40 crop trees per acre, with a focus on oak and walnut. This site has good walnut potential.

**Stand 6: 39 acres**

*Description* – White oak, hickory, walnut, elm, red oak, bur oak

DBH (Avg): 16”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready to be harvested; red oak was logged out in 2002. Shelterwood method with a pre-harvest treatment will be utilized to improve oak regeneration on the site before final cut.

**Stand 7: 41 acres**

*Description* – White oak, red oak, hickory

DBH (Avg): 18”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready to be harvested. Shelterwood method with a pre-harvest treatment will be utilized to improve oak regeneration on the site before final cut.

**Stand 8: 21 acres**

*Description* – White oak, hickory, ash, elm, red oak

DBH (Avg): 14”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready to be harvested. Shelterwood method with post-harvest treatment will be utilized to improve site conditions for oak regeneration before final cut.

**Stand 9: 32 acres**

*Description* – Red oak, white oak, bur oak, hickory

DBH (Avg): 20”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready to be harvested. A pre-harvest treatment will be utilized to improve oak regeneration before stand is clearcut. This stand has low volume per acre.

**Stand 10: 18 acres**

*Description* – Successional woody; harvested in 2005

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand needs post-harvest treatment; all standing, residual trees will either be felled or girdled to improve site conditions for oak regeneration.

**Stand 11: 44 acres**

*Description* – Walnut, basswood, elm, ash, black oak, red oak, hackberry

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Chariton Unit  
Compartment 3**

### **Stand 1: 61 acres**

*Description* – Bur oak, hickory, walnut, hackberry, black oak overstory; hickory, elm understory

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand should be re-evaluated for potential future harvest.

### **Stand 2: 7 acres**

*Description* – Red oak, walnut, hackberry, bur oak, cherry overstory; ash, elm, hackberry understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-45 crop trees per acre; focus on releasing oak and walnut.

### **Stand 3: 14 acres**

*Description* – Mixed pine planting: red, white, and jack pine

DBH (Avg): 12”                      BA: 240

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This conifer planting will be monitored for possible pest and disease issues.

### **Stand 4: acres**

**Description** – Bur oak, white oak, hickory, walnut, black locust overstory; hickory, elm understory

DBH (Avg): 10”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – Timber Stand Improvement

This stand will benefit from crop tree release and weed tree eradication; there will be 30-35 crop trees released per acre and the black locust will be eradicated from the stand.

**Stand 5: 19 acres**

**Description** – Walnut, hackberry, bitternut, ash, red oak overstory; elm, hackberry understory

DBH (Avg): 10”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 select walnut and oak stems per acre.

**Stand 6: 4 acres**

**Description** – Ash plantation with scattered walnut, hackberry, shingle oak overstory; elm, ash understory

DBH (Avg): 10”                      BA: 140

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release should be utilized to control species composition and focus on select walnuts at a rate of 35-45 crop trees per acre.

**Stand 7: 1 acre**

**Description** – Black locust, elm, hackberry, hickory overstory; elm, hickory understory

DBH (Avg): 8” BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The majority of the overstory will be removed; the stand will then be planted to mixed native hardwoods.

**Stand 8: 19 acres**

*Description* – Ash, basswood, hickory, elm, red oak, bur oak, hackberry overstory; elm, hickory understory

DBH (Avg): 12” BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. Control / eradicate garlic mustard present.

**Stand 9: 7 acres**

*Description* – Ash, black locust, red oak (planting?) overstory; elm, ash understory

DBH (Avg): 10” BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release (40-45 crop trees per acre) and weed tree eradication will be used to release desirable species and remove undesirable species.

**Stand 10: 1 acre**

*Description* – Red oak plantation

DBH (Avg): 12” BA: 150

*Management Class* – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release (35-45 crop trees per acre) will be utilized to reduce stocking density and to improve vigor and growth rates of the plantation.

**Stand 11: 4 acres**

***Description*** – Small pole; oak, ash, cherry, hickory

DBH (Avg): 6”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release can be completed either first or second management cycle. Select, desirable species will be chosen at a rate of 35-45 crop trees per acre.

**Stand 12: 8 acres**

***Description*** – Red oak plantation; elm, dogwood understory

DBH (Avg): 12”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Harvest

This plantation can be removed; either by non-commercial clearcut or firewood cutting. There is oak wilt present on the north side of the stand. Regeneration is not currently sufficient on the site; post-harvest follow-up will be needed.

**Stand 13: 3 acres**

***Description*** – Ash, black locust planting; chinkapin and other mixed hardwoods

DBH (Avg): 8”                      BA: 110

***Management Class*** – Active Forest Management

***Management Prescription*** – Stand Conversion



Black locust and ash will be removed from the stand and oaks will be released. Under-planting may be needed to supplement oak regeneration.

**Stand 14: 10 acres**

*Description* – Jack pine, red pine, white pine stand; elm understory

DBH (Avg): 12”                      BA: 130

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. Stand will continue to be monitored for potential disease and insect issues.

**Stand 15: 16 acres**

*Description* – Bur oak, white oak, hickory, black oak, red oak, walnut, basswood, cherry overstory; elm, hackberry understory; honeysuckle present in significant numbers

DBH (Avg): 12”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This site has scattered mature trees; re-evaluate for harvest potential. Oak wilt is present in red and black oaks.

**Stand 16: 6 acres**

*Description* – Walnut, red oak, basswood, hackberry, black locust overstory; elm understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release and weed tree eradication will improve species composition and release potential crop trees (35-45 crop trees per acre). Low priority; manage with adjacent stands.

**Stand 17: 26 acres**

*Description* – Ash, elm, hackberry, walnut, mixed oak, black locust overstory; elm, locust understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release and weed tree eradication will improve species composition and release potential crop trees (30-40 crop trees per acre). Low priority; manage with adjacent stands.

**Stand 18: 2 acres**

*Description* – Red oak planting; elm, bitternut understory

DBH (Avg): 12”                      BA: 150

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A basal area thinning will decrease competition in this plantation. A sanitation cut will be utilized to attempt to control oak wilt on the stand.

**Chariton Unit  
Compartment 4**

**Stand 1: 10 acres**

*Description* – Bur oak, hickory, cherry, elm, shingle oak, black oak, basswood, chinkapin

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized on this stand to improve growing conditions; trees will be released at a rate of 35-40 crop trees per acre.

**Stand 2: 36 acres**

*Description* – Bur oak, black oak, red oak, walnut, hickory, bitternut, hackberry, cherry

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to focus on oak and walnut in the stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 3: 7 acres**

*Description* – Shingle oak, bur oak, hickory, black oak, cherry overstory; hackberry, elm, chinkapin understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release; select oaks released at a rate of 30-40 crop trees per acre.

**Stand 4: 3 acres**

*Description* – Walnut, red oak, bur oak, hackberry, bitternut overstory; elm, hickory, shingle oak understory

DBH (Avg): 12”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized to release select walnuts in this stand at a rate of 30-45 crop trees per acre.

**Stand 5: 0.5 acre**

**Description** – Hybrid poplar (bigtooth aspen x silver poplar) overstory; red oak, elm, walnut, hickory understory

DBH (Avg): 18”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – Stand Conversion

The overstory of hybrid poplar will be removed; this will release desirable native hardwoods from the understory. Future FSI will control species composition.

**Stand 6: 21 acres**

**Description** – Mixed pine; jack pine, red pine, white pine

DBH (Avg): 8”                      BA: 140

**Management Class** – Active Forest Management

**Management Prescription** – Stand Conversion

The jack pine and red pine in this stand are in decline. The overstory of pine will be removed and replaced with native hardwoods (supplement regeneration with planting if necessary).

**Stand 7: 15 acres**

**Description** – Mixed bottomland hardwoods, walnut overstory; ash, bitternut understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-40 select oak and walnut per acre.

**Stand 8: 35 acres**

*Description* – White oak, red oak, hickory, black oak, walnut, ash overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 9: 13 acres**

*Description* – White oak, red oak, hickory, black oak, bur oak, walnut overstory; oak, hickory, elm understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 10: 33 acres**

*Description* – White oak, red oak, hickory, black oak overstory; hickory, elm understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

## **Chariton Unit Compartment 5**

### **Stand 1: 0.5 acre**

*Description* – Parking area; grassy field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 2: 3 acres**

*Description* – Bur oak

DBH (Avg): 8”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 35-45 crop trees per acre.

### **Stand 3: 9 acres**

*Description* – Mixed pine

DBH (Avg): 12”                      BA: 140

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will continue to be monitored for insect and disease problems.

#### **Stand 4: 3 acres**

*Description* – Mixed pine; red pine, white pine

DBH (Avg): 14”                      BA: 140

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will continue to be monitored for insect and disease problems.

#### **Stand 5: 2 acres**

*Description* – Grassy field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

#### **Stand 6: 5 acres**

*Description* – Jack pine plantation

DBH (Avg): 8”                      BA: 210

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

The jack pine overstory of this stand is dead/dying; the overstory will be removed and native hardwoods will be planted.

#### **Stand 7: 22 acres**

*Description* – Black oak, hickory, elm, bur oak, ash

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 8: 3 acres**

***Description*** – Successional woody; old field site

***Management Class*** – Active Forest Management

***Management Prescription*** – Natural Reforestation

This stand will be allowed to naturally convert to forest. Future FSI will maintain species composition and spacing.

**Stand 9: 18 acres**

***Description*** – Red oak, hickory, elm, black oak, bur oak

DBH (Avg): 14”                      BA: 70

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 10: 10 acres**

***Description*** – Black oak, elm, bur oak, hickory, red oak

DBH (Avg): 10”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 11: 53 acres**



*Description* – White oak, hickory, red oak, bur oak

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 12: 12 acres**

*Description* – Red oak, walnut, black oak, white oak, hickory, basswood, cherry, ash

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 13: 6 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 14: 23 acres**

*Description* – Walnut, hackberry, cottonwood, cherry, elm, ash

DBH (Avg): 10”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

### **Stand 15: 6 acres**

*Description* – Grassy field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 16: 20 acres**

*Description* – Ash, hickory, cherry, elm, black oak, red oak, bur oak; walnut plantation

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 35-45 crop trees per acre.

### **Stand 17: 2 acres**

*Description* – Walnut plantation

DBH (Avg): 6”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This walnut plantation will be thinned approximately 20% to reduce the crown competition factor to an acceptable level. This thinning can wait until second cycle.

### **Stand 18: 78 acres**

*Description* – Red oak, cherry, hackberry, bur oak, hickory, ash, basswood, white oak, elm, black oak

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 19: 13 acres**

*Description* – Native prairie, brushy

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

Brush will be removed and this site will be periodically burned to improve the native grasses and forbs and to discourage woody species.

**Stand 20: 4 acres**

*Description* – Grassy field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 21: 5 acres**

*Description* – Grassy field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 22: 8 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

***Management Prescription*** – Natural Reforestation

This stand will be allowed to naturally convert to forest. Future FSI will control species composition and spacing.

**Stand 23: 15 acres**

***Description*** – Red oak, bur oak, hickory, black oak, shingle oak, white oak, ash

DBH (Avg): 14”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Harvest

This stand is mature and ready for harvest. There is oak wilt present in the red oak on this stand. A pre-harvest treatment will be utilized to improve site conditions for oak regeneration before final cut. There is adequate regeneration on the site for a clearcut.

**Stand 24: 73 acres**

***Description*** – White oak, hickory, bur oak, red oak, ash, walnut

DBH (Avg): 14”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Harvest

This stand is mature and ready for harvest. Shelterwood will be utilized to improve site conditions for oak regeneration before final cut. This stand was opened up for firewood cutting in fall of 2008 to serve as a pre-harvest treatment.

**Stand 25: 3 acres**

***Description*** – Red pine plantation

DBH (Avg): 10”                      BA: 180

***Management Class*** – Limited Forest Management

***Management Prescription*** – Stand Conversion

This stand is currently in decline; the overstory of red pine will be removed and the area will be planted to native hardwood species.

**Stand 26: 10 acres**

***Description*** – Black oak, hickory, white oak, bur oak

DBH (Avg): 12”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended. The south end of this stand was open for firewood cutting in fall 2008 to improve oak regeneration on the site.

**Stand 27: 2 acres**

***Description*** – Grassy field

***Management Class*** – Non-Forest

***Management Prescription*** – Prairie / Savanna Activities

This site will be periodically burned to improve native herbaceous component and to discourage woody encroachment.

**Stand 28: 6 acres**

***Description*** – Mixed pine; red pine, white pine

DBH (Avg): 10”                      BA: 140

***Management Class*** – Limited Forest Management

***Management Prescription*** – No Activity

No management activities are recommended. This stand will continue to be monitored for insect and disease problems.

**Stand 29: 18 acres**

*Description* – Black oak, elm, bur oak, red oak, cherry, shingle oak, ash, walnut, cedar

DBH (Avg): 6”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 35-50 crop trees per acre.

**Stand 30: 5 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally convert to forest. Future FSI will control species composition and spacing.

**Stand 31: 1 acre**

*Description* – Mixed pine; red pine, white pine

DBH (Avg): 10”                      BA: 140

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will continue to be monitored for insect and disease problems.

**Chariton Unit  
Compartment 6**

### **Stand 1: 20 acres**

*Description* – Red oak, white oak, hickory, elm, walnut, ash, bur oak

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

### **Stand 2: 8 acres**

*Description* – Silver maple, cottonwood, elm

DBH (Avg): 14”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 3: 44 acres**

*Description* – White oak, red oak, hickory, ash overstory; heavy ironwood understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

### **Stand 4: 8 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 5: 7 acres**

***Description*** – Black oak, hickory, bur oak, elm overstory; prickly ash, elm understory

DBH (Avg): 12”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 6: 2 acres**

***Description*** – Pond

***Management Class*** – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 7: 2 acres**

***Description*** – Bur oak, elm, hickory, ash, hackberry

DBH (Avg): 10”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 8: 12 acres**

***Description*** – White pine, red pine plantation

DBH (Avg): 10”                      BA: 240



***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 9: 13 acres**

***Description*** – White oak, red oak, elm, cherry, hickory, hackberry; old clearcut site

DBH (Avg): 6”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 40-50 crop trees per acre.

**Stand 10: 29 acres**

***Description*** – Elm, shingle oak, black oak, cherry, cedar, honeylocust overstory; brushy, old grass field sites

DBH (Avg): 8”                      BA: 70

***Management Class*** – Active Forest Management

***Management Prescription*** – Natural Reforestation

This site will be allowed to naturally convert to forest. Future FSI will be completed to control species composition and spacing.

**Stand 11: 5 acres**

***Description*** – Agricultural field

***Management Class*** – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 12: 5 acres**

*Description* – Elm, ash, black oak, hickory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 13: 12 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 14: 35 acres**

*Description* – Red oak, black oak, bur oak, elm, ash, hickory, shingle oak

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 15: 23 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 16: 6 acres**

*Description* – Hickory, bur oak, elm, hackberry, basswood, cherry, red oak

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will benefit this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 17: 5 acres**

*Description* – Red oak, white oak, hickory, bur oak, ash, elm overstory; ash, elm understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 18: 3 acres**

*Description* – Mixed pine; red pine, white pine

DBH (Avg): 10”                      BA: 180

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will continue to be monitored for insect and disease problems.

**Stand 19: 5 acres**

*Description* – Red oak plantation

DBH (Avg): 10”                      BA: 160

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This plantation will be thinned to improve the growing conditions for the residual trees. There is oak wilt present in the stand, so early overstory removal may be necessary.

**Stand 20: 6 acres**

*Description* – Mixed pine; red pine, white pine

DBH (Avg): 10”                      BA: 180

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will continue to be monitored for insect and disease problems.

**Stand 21: 2 acres**

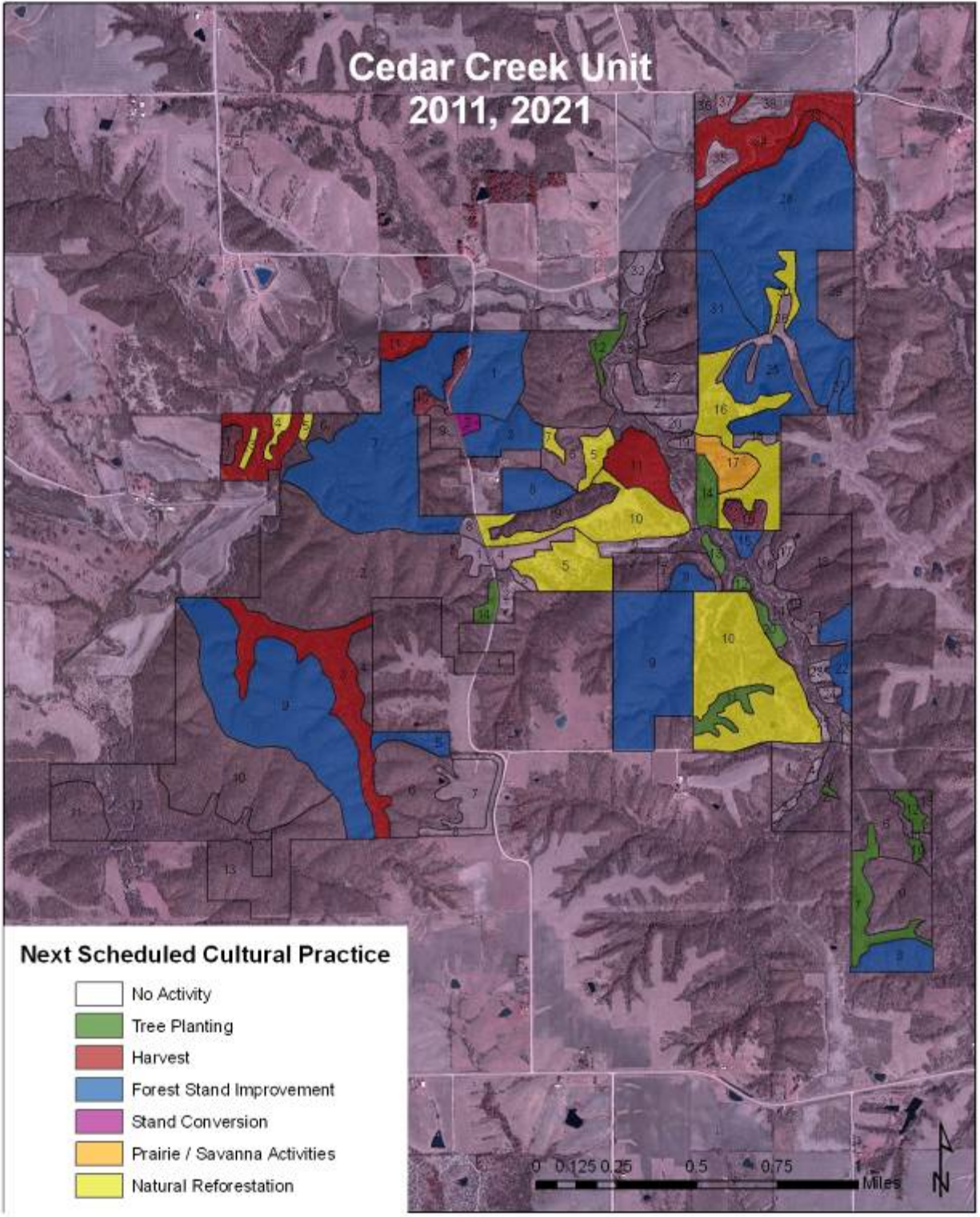
*Description* – Mixed pine; red pine, white pine

DBH (Avg): 10”                      BA: 180

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will continue to be monitored for insect and disease problems.



# Cedar Creek Unit Compartment 1

## **Stand 1: 3 acres**

*Description* - Scotch pine

DBH (Avg): 10"                      BA: 200

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

Cleanup and salvage of dead or diseased trees is recommended periodically to ensure the longevity of the stand. No other management activities are recommended.

## **Stand 2: 2 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Natural Reforestation

The area will be allowed to naturally convert to forest.

## **Stand 3: 31 acres**

*Description* – Bottomland mixed hardwoods, mostly silver maple and cottonwood

DBH (Avg): 20"                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* - Harvest

This area will be harvested and allowed to naturally regenerate from seed.

## **Stand 4: 3 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

***Management Prescription*** – Natural Reforestation

The area will be allowed to naturally convert to forest.

**Stand 5: 2 acres**

***Description*** – Open grassy area

***Management Class*** – Non-Forest

***Management Prescription*** – Natural Reforestation

The area will be allowed to naturally convert to forest.

**Stand 6: 27 acres**

***Description*** - Red oak, walnut, basswood

DBH (Avg): 14”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** - No Activity

No management activities are recommended.

**Stand 7: 105 acres**

***Description*** - Red oak, white oak, and hickory: heavily stocked overstory; ironwood, hickory, ash understory

DBH (Avg): 12”                      BA: 110

***Management Class*** - Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be performed to release 30-40 crop trees per acre.

**Stand 8: 3 acres**

***Description*** – Agricultural field

***Management Class*** – Non-Forest

***Management Prescription*** - No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 9: 7 acres**

***Description*** - Red oak, white oak, and hickory: heavily stocked overstory; ironwood, hickory, ash understory

DBH (Avg): 10"                      BA: 110

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

Crop tree release was completed in 2002 (30 trees per acre). The stand needs to be revisited in 15 -20 years to determine if additional FSI is necessary.

**Stand 10: 7 acres**

***Description*** – Red pine

DBH (Avg): 10"                      BA: 200

***Management Class*** - Limited Forest Management

***Management Prescription*** - No Activity

Cleanup and salvage of dead or diseased trees is recommended periodically to ensure the longevity of the stand. No other management activities are recommended.

**Stand 11: 10 acres**

***Description*** – Mixed bottomland hardwoods, walnut

DBH (Avg): 14"                      BA: 50

***Management Class*** – Active Forest Management

***Management Prescription*** – Harvest

This stand is a potential harvest site of silver maple and walnut.



# Cedar Creek Unit

## Compartment 2

### Stand 1: 5 acres

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* - No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

### Stand 2: 134 acres

*Description* – Red oak, white oak, hickory; scattered oak wilt pockets are present

DBH (Avg): 12”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### Stand 3: 49 acres

*Description* – Bottomland mixed hardwoods, red oak

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is potentially a harvest area. There are large red oak present and other mixed bottomland hardwoods. Shelterwood method is recommended.

### Stand 4: 9 acres

*Description* – White oak, hickory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 5: 8 acres**

*Description* – Successional woody; regeneration cut completed in 2005

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand needs a post-logging treatment. Residual trees should be felled and treated or killed standing to reduce competition for oak regeneration.

**Stand 6: 37 acres**

*Description* – Red oak, white oak, hickory overstory; ironwood understory

DBH (Avg): 8”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

Crop tree release was completed in 2002. Weed tree removal for ironwood was completed in 2003. The stand was accidentally burned through in 2004. This stand will be re-evaluated for FSI in 10-15 years.

**Stand 7: 18 acres**

*Description* – Open field; previous CRP

*Management Class* – Non-Forest

*Management Prescription* - No Activity

This field will put in a crop lease once the CRP contract is up fall of 2009.

**Stand 8: 7 acres**

*Description* – Tree planting 2004; mixed hardwoods and shrubs

*Management Class* – Limited Forest Management

*Management Prescription* - No Activity

No management activities are recommended. This stand will be retained as an aesthetic and wildlife corridor. Periodic thinning and brush removal is recommended.

**Stand 9: 108 acres**

*Description* - Red oak, white oak, and hickory, heavily stocked overstory; ironwood, hickory, ash understory

DBH (Avg): 10”                      BA: 130

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be done on the stand to release 35-45 trees per acre.

**Stand 10: 90 acres**

*Description* – Black oak, bur oak, hickory

DBH (Avg): 12”                      BA: 80

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 11: 19 acres**

*Description* – Red oak, white oak, hickory overstory; evidence of previous logging

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* - No Activity

No management activities are recommended.

**Stand 12: 51 acres**

*Description* – Mixed bottomland hardwoods; at the south edge of the stand is the largest diameter red oak currently recorded at Stephens SF (47” diameter)

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 13: 44 acres**

*Description* – White oak, hickory

DBH (Avg): 12”                      BA: 90

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 14: 4 acres**

*Description* – Open grassy area, previously old farm lots; part of stand was planted to mixed hardwoods

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

Mixed hardwoods will be planted on the site.

**Cedar Creek Unit  
Compartment 3**

**Stand 1: 32 acres**

*Description* – Red oak, white oak, hickory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release (35-40 crop trees per acre) and weed tree removal are recommended in this stand.

### **Stand 2: 8 acres**

*Description* – Mixed pine; mostly dead or dying

DBH (Avg): 8”                      BA: 230

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The remaining pine in the stand needs to be removed. The stand will be converted to hardwoods through natural regeneration and some planting of hardwoods.

### **Stand 3: 17 acres**

*Description* – White oak, hickory

DBH (Avg): 8”                      BA: 150

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be done on the stand to release 35-45 crop trees per acre.

### **Stand 4: 45 acres**

*Description* – White oak, red oak, hickory overstory; brushy understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 5: 7 acres**

***Description*** – Successional woody

***Management Class*** – Active Forest Management

***Management Prescription*** – Natural Reforestation

This stand will be allowed to naturally convert to forest.

**Stand 6: 12 acres**

***Description*** – White oak

DBH (Avg): 8”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

A basal area thinning was completed in 2003 on part of the stand. No management activities are recommended.

**Stand 7: 18 acres**

***Description*** – Successional woody

***Management Class*** – Active Forest Management

***Management Prescription*** – Natural Reforestation

This stand will be allowed to naturally convert to forest.

**Stand 8: 15 acres**

***Description*** – Red oak, white oak, hickory

DBH (Avg): 10”                      BA: 110

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be done on the stand to release 35-45 crop trees per acre.

**Stand 9: 16 acres**

***Description*** - Red oak, white oak, and hickory overstory; open understory with multiflora rose present

DBH (Avg): 12”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 10: 36 acres**

***Description*** – Successional woody

***Management Class*** – Active Forest Management

***Management Prescription*** – Natural Reforestation

This stand will be allowed to naturally convert to forest.

**Stand 11: 20 acres**

***Description*** – Red oak, white oak, hickory

DBH (Avg): 14”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** - Harvest

This stand will be harvested and regenerated in FY 2011.

**Stand 12: 5 acres**

***Description*** – Open field, previously farmed

***Management Class*** – Non-Forest

*Management Prescription* – Tree Planting

This stand will be planted to mixed bottomland hardwoods including walnut.

**Stand 13: 38 acres**

*Description* – Bottomland mixed hardwoods, walnut

DBH (Avg): 14”                      BA: 50

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 14: 9 acres**

*Description* – Walnut plantation

*Management Class* – Active Forest Management

*Management Prescription* – Tree Planting

Most of this stand needs to be removed, as the site is too wet and poorly drained. The site should be planted to mixed bottomland species better suited for the site such as silver maple and hackberry.

**Stand 15: 6 acres**

*Description* – White pine

DBH (Avg): 10”                      BA: 100

*Management Class* – Limited Forest Management

*Management Prescription* - No Activity

No management activities are recommended. Dead or diseased trees may be periodically removed to ensure the longevity of the stand for aesthetics and wildlife habitat.

**Stand 16: 41 acres**



*Description* – Successional woody

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally convert to forest.

**Stand 17: 12 acres**

*Description* – Native prairie

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

The stand will be periodically burned to encourage native plants and control unwanted woody vegetation.

**Stand 18: 3 acres**

*Description* – Direct Seeding 2003 – white oak, bur oak, walnut

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 19: 2 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 20: 5 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 21: 13 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 22: 11 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 23: 2 acres**

*Description* – Tree planting 2001

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 24: 32 acres**

*Description* – Black oak, hickory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* - No Activity

No management activities are recommended.

**Stand 25: 28 acres**

*Description* – Red oak, white oak, hickory

DBH (Avg): 12”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will performed on this stand at a rate of 35-40 crop trees per acre.

**Stand 26: 13 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 27: 3 acres**

*Description* – Walnut plantation

*Management Class* - Active Forest Management

*Management Prescription* – Forest Stand Improvement

This walnut plantation will be thinned and pruned.

**Stand 28: 140 acres**

*Description* – Red oak, white oak, hickory

DBH (Avg): 12”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release is recommended in this stand, desirable stems will be released at a rate of 30-40 crop trees per acre.

**Stand 29: 19 acres**

*Description* – Shagbark hickory

DBH (Avg): 8”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 30: 8 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally convert to forest.

**Stand 31: 23 acres**

*Description* – Black oak, hickory

DBH (Avg): 8”                      BA: 80

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 32: 5 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 33: 5 acres**

*Description* – Red oak, basswood

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand will be harvested and replanted in FY 2011.

**Stand 34: 44 acres**

*Description* – Mixed bottomland hardwoods; cottonwood, walnut

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand will be harvested in 2021. The area will be allowed to regenerate naturally, except walnut may be hand planted to supplement natural regeneration.

**Stand 35: 6 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 36: 4 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

*Management Prescription* - No Activity

No management activities are recommended.

**Stand 37: 2 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 38: 8 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

## **Cedar Creek Unit Compartment 4**

**Stand 1: 4 acres**

*Description* – Red oak, white oak, hickory

DBH (Avg): 10”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* - No Activity

TSI completed in 2006 with firewood cutting. No management practices are recommended.

**Stand 2: 6 acres**

*Description* – Open grassy area; old farm lots

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

The area will be seeded to native grasses and periodically burned to control unwanted woody vegetation.

### **Stand 3: 2 acres**

*Description* – Hazelnut plantation

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 4: 8 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

### **Stand 5: 7 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally convert to forest.

### **Stand 6: 6 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

### **Stand 7: 8 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 8: 6 acres**

***Description*** – White oak, hickory

DBH (Avg): 8”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be done on the stand to improve tree quality and mast production for wildlife (35-45 crop trees per acre).

**Stand 9: 71 acres**

***Description*** - Red oak, white oak, hickory

DBH (Avg): 10”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Southwest 10 acres of the stand was thinned in 2002 to improve mast production for wildlife.

Additional firewood cutting has also been allowed on these 10 acres. The remainder of the stand needs crop tree release (30-40 crop trees per acre).

**Stand 10: 83 acres**

***Description*** – Successional woody

***Management Class*** – Active Forest Management

***Management Prescription*** – Natural Reforestation

This stand will be allowed to naturally convert to forest.

**Stand 11: 9 acres**



*Description* – Open field

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This area will be planted to native hardwood species.

**Stand 12: 2 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This stand will be planted to mixed bottomland hardwoods including walnut.

**Stand 13: 3 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – Tree planting

This stand will be planted to mixed bottomland hardwoods including walnut.

**Stand 14: 40 acres**

*Description* – Cottonwood, walnut

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 15: 4 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 16: 3 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 17: 2 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 18: 42 acres**

*Description* – Black oak, hickory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 19: 1 acre**

*Description* – Tree planting 2001; mixed hardwoods

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 20: 4 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This stand will be planted to mixed bottomland hardwoods including walnut.

**Stand 21: 4 acres**

*Description* – Tree planting 2001; mixed hardwoods

*Management Class* - Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 22: 13 acres**

*Description* – Black oak, hickory

DBH (Avg): 8”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 23: 3 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 24: 2 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 25: 2 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 26: 2 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

## **Cedar Creek Unit Compartment 5**

**Stand 1: 14 acres**

*Description* – Hackberry, ash, elm

DBH (Avg): 6”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* - No Activity

No management activities are recommended.

**Stand 2: 26 acres**

*Description* – Black oak, elm, ash

DBH (Avg): 8”

BA: 80

*Management Class* – Active Forest Management

*Management Prescription* - No Activity

No management activities are recommended.

**Stand 3: 2 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 4: 1 acre**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 5: 1 acre**

*Description* – Open, grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This stand will be planted to mixed bottomland hardwoods including walnut.

**Stand 6: 19 acres**

*Description* – Black oak, bur oak, hickory

DBH (Avg): 8”

BA: 80

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 7: 18 acres**

***Description*** – Agricultural field

***Management Class*** – Non-Forest

***Management Prescription*** – Tree Planting

The area will be planted to mixed hardwood species.

**Stand 8: 14 acres**

***Description*** – Red oak, white oak, hickory

DBH (Avg): 8”                      BA: 130

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be done on the stand to improve tree quality and mast production for wildlife (35-45 crop trees per acre).

**Stand 9: 28 acres**

***Description*** - Red oak, white oak, hickory

DBH (Avg): 10”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 10: 2 acres**

***Description*** – Open field

***Management Class*** – Non-Forest

*Management Prescription* – Tree Planting

This area should be planted to mixed bottomland hardwoods including walnut.

**Stand 11: 5 acres**

*Description* – Walnut, silver maple

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 12: 4 acres**

*Description* – Open field

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This area should be planted to mixed bottomland hardwoods including walnut.

**Stand 13: 3 acres**

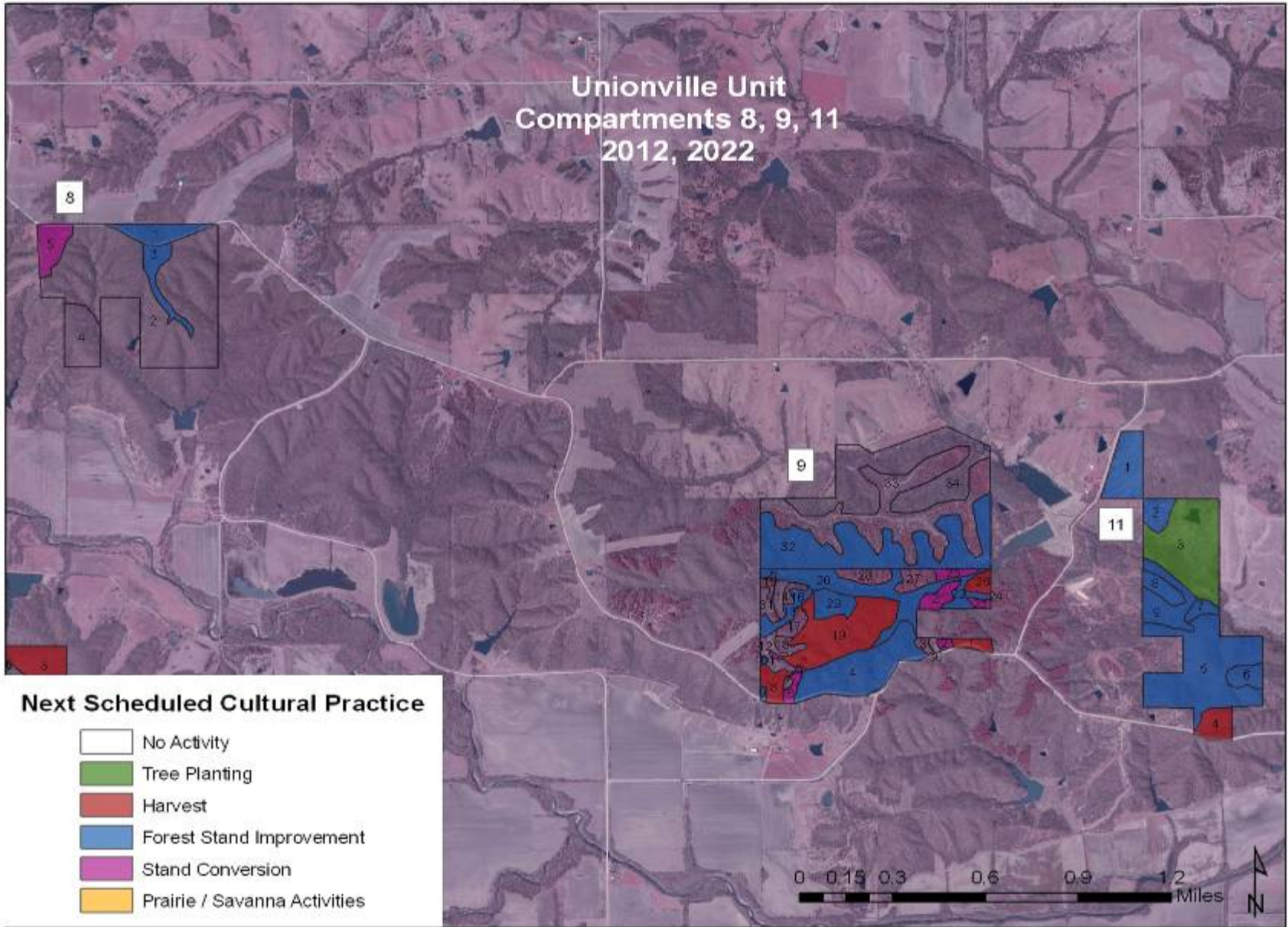
*Description* – Black oak, bur oak

DBH (Avg): 12”                      BA: 80

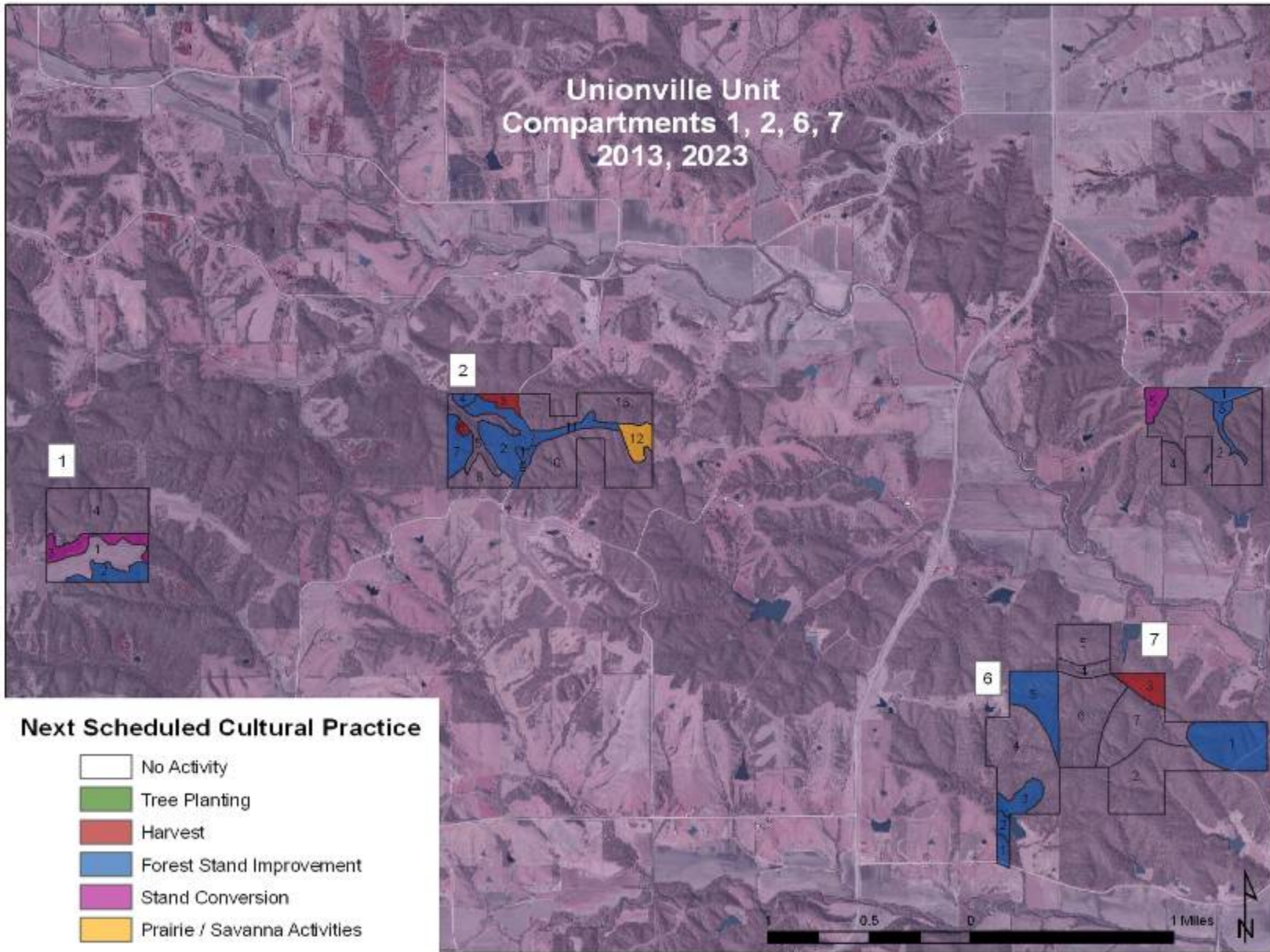
*Management Class* – Active Forest Management

*Management Prescription* – No Activity

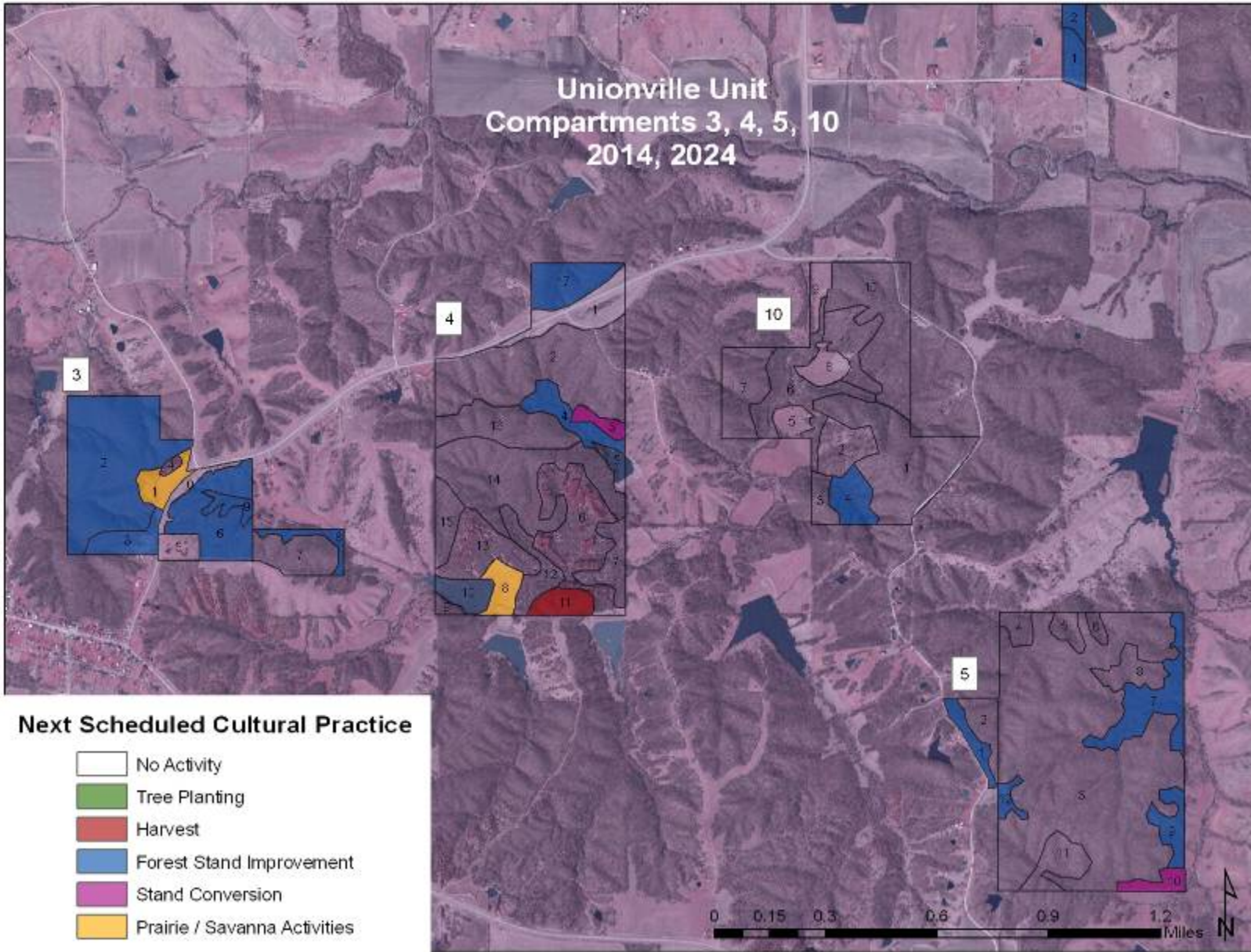
No management activities are recommended











# Unionville Unit Compartment 1

## **Stand 1: 38 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. Field will continue to be leased for agriculture.

## **Stand 2: 18 acres**

*Description* – White oak, hickory, elm, ash, red oak, shingle oak, cherry, hackberry

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release; oaks and other desirables will be released at 35-45 crop trees per acre. Ridge tops have been cut over and have pockets of small pole size oak and hickory that need FSI.

## **Stand 3: 21 acres**

*Description* – Black locust, hickory, shingle oak, ash, cherry, elm overstory; multiflora rose and coralberry under

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

This stand will be converted from black locust to desirable native hardwoods including oak by removal of the overstory and planting of desirables.

### **Stand 4: 80 acres**

*Description* – White oak, red oak, hickory overstory; hickory, bitternut understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

## **Unionville Unit Compartment 2**

### **Stand 1: 2 acres**

*Description* – Successional woody; ash, oak, dogwood, ninebark, sumac; prairie plants present; parking area

*Management Class* – Active Forest Management

*Management Prescription* – Prairie / Savanna Activities

This stand will be cleared of brush and burned to clear the parking area and to increase and encourage native grasses and forbs on the site.

### **Stand 2: 42 acres**

*Description* – Hickory, ash, black oak, shingle oak, white oak, cherry, bitternut overstory; ironwood, elm understory; scattered large white ‘wolf trees’ present

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized on this site to improve species composition and growing conditions. Crop trees will be released at a rate of 35-45 trees per acre. Large ‘wolf trees’ will be left on site for wildlife and aesthetic purposes.

### **Stand 3: 8 acres**

*Description* – Red oak, white oak, hickory overstory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and can be harvested. This will be a small sale, so include with adjacent stands. Oak wilt is present on the site, so removal of mature oaks will help in the health of the surrounding stands.

### **Stand 4: 4 acres**

*Description* – Black oak, bur oak, hickory overstory; hickory, oak, prickly ash understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized on this stand to improve species composition and decrease competition; trees will be released at a rate of 35-45 crop trees per acre.

### **Stand 5: 22 acres**

*Description* – Mixed bottomland hardwoods: red oak, cottonwood, hackberry, bitternut, basswood, elm, cherry, ash, walnut overstory; bitternut, ash understory

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 6: 2 acres**

***Description*** – White oak, hickory, red oak overstory

DBH (Avg): 12”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – Harvest

This stand has mature trees and is ready for harvest. Shelterwood method will be used to increase regeneration that is currently lacking on the site.

**Stand 7: 17 acres**

***Description*** – White oak, hickory, red oak, ash overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized on this stand; 35-45 crop trees per acre will be released.

**Stand 8: 20 acres**

***Description*** – White oak, red oak, ash, hickory overstory; elm, ironwood, hickory understory

DBH (Avg): 12”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 9: 4 acres**

*Description* – Successional woody; red oak, hickory, shingle oak, ash, walnut, cherry

DBH (Avg): 6”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to improve species composition at a rate of 40-50 crop trees per acre. Stand will also be cleared of brush and shingle oak.

### **Stand 10: 81 acres**

*Description* – White oak, hickory, red oak, ash overstory; cherry, ironwood, hickory understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This site has good timber potential.

### **Stand 11: 13 acres**

*Description* – Ash, elm, silver maple, red oak, shingle oak, cedar overstory; oak, elm, ash understory

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release. Select, desirable trees will be released at a rate of 35 – 45 crop trees per acre.

### **Stand 12: 15 acres**

*Description* – Native grasses and forbs; woody encroachment of oaks, dogwood, sumac, ash, cedar



*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This stand will be cleared of brush and encroaching woody species and will be burned to encourage native grasses and forbs.

**Stand 13: 57 acres**

*Description* – White oak, red oak, ash, hickory, cherry overstory; ironwood, ash, elm, hickory understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

## **Unionville Unit Compartment 3**

**Stand 1: 7 acres**

*Description* – Open, grassy area with mixed oak including white, red, shingle, blackjack; open grown white oak present

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be cleared of brush, burned and maintained as savanna. A parking area will also be maintained in this stand.

**Stand 2: 61 acres**

*Description* – White oak, hickory, red oak, ash overstory; hickory, ironwood understory; large, mature white and red oak scattered throughout the stand

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized, releasing 40-50 crop trees per acre. Large, scattered ‘wolf trees’ will also be released for wildlife, aesthetics and mast production.

**Stand 3: 9 acres**

*Description* – Hickory, red oak, white oak, shingle oak, blackjack oak, elm overstory; ironwood, hickory understory

DBH (Avg): 8”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release (40-50 crop trees per acre). The stand is low quality and will be given low priority for FSI.

**Stand 4: 1 acre**

*Description* – Red pine, white pine, jack pine

DBH (Avg): 8”                      BA: 190

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This stand will be monitored for insect or disease problems; jack pine is currently in decline.

**Stand 5: 5 acres**

*Description* – Cemetery

*Management Class* – Non-Forest

**Management Prescription** – No Activity

No management practices are recommended.

**Stand 6: 26 acres**

**Description** – White oak, hickory, red oak, black oak, blackjack oak overstory; ash, elm, ironwood understory

DBH (Avg): 10”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized to release 35-40 desirable crop trees per acre. Oak wilt is present in the stand.

**Stand 7: 14 acres**

**Description** – White oak, red oak, black oak, hickory, ash overstory; elm, ash, ironwood understory

DBH (Avg): 14”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management practices are recommended at this time; re-evaluate for harvest potential.

**Stand 8: 5 acres**

**Description** – Ash, walnut, white oak, bur oak, honeylocust, elm, red oak, hackberry, bitternut overstory; elm, hickory, ash understory

DBH (Avg): 10”                      BA: 120

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

There is storm damage and oak wilt present in the stand. Crop tree release will be utilized to release select oak and walnut at a rate of 40-50 crop trees per acre.

**Stand 9: 4 acres**

*Description* – Mixed bottomland hardwoods, walnut overstory; elm, bitternut understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release. Select oak and walnut will be released at a rate of 35-45 crop trees per acre.

**Stand 10: 4 acres**

*Description* – Grassy, open field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

**Unionville Unit  
Compartment 4**

**Stand 1: 15 acres**

*Description* – Grassy field, ditch

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 2: 61 acres**

*Description* – White oak, red oak, hickory, black oak, bur oak overstory; oak, ironwood, hickory understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 3: 4 acres**

*Description* – Mixed pine; jack pine, red pine overstory; oak, elm, ash understory

DBH (Avg): 10”                      BA: 190

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

This stand will be converted to native hardwoods by removal of pine overstory and planting of native hardwood seedlings.

### **Stand 4: 11 acres**

*Description* – Black oak, hickory, shingle oak, ash, elm, Osage orange, walnut, basswood, bur oak, white oak, bitternut, hackberry, cherry overstory; ironwood, elm, hickory understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release walnut, oak and cherry at a rate of 35-45 crop trees per acre.

### **Stand 5: 4 acres**

*Description* – Pond

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 6: 34 acres**

*Description* – Demonstration plantings; jack pine, scotch pine, red pine, spruce, bald cypress, ponderosa pine; brushy understory

DBH (Avg): 12”                      BA: 160

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. The jack and scotch pine in this stand are declining; monitor closely and use stand conversion if necessary.

**Stand 7: 10 acres**

*Description* – Black oak, hickory, elm, bur oak, walnut, hackberry, swamp white oak, honeylocust, sycamore, Osage orange, silver poplar / bigtooth aspen hybrid

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 8: 7 acres**

*Description* – Grassy field; pond dam; small brushy cedars

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This field will be periodically burned to stimulate natives and discourage woody encroachment.

### **Stand 9: 2 acres**

*Description* – White oak, red oak, hickory overstory; ironwood, hickory understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 10: 8 acres**

*Description* – Pond

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 11: 7 acres**

*Description* – White oak, red oak, bitternut, basswood, hickory, bur oak overstory; ironwood, buckeye understory

DBH (Avg): 16”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest (shelterwood). There is oak wilt present in red oak family. A pre- or post-harvest will be needed to improve site for regeneration before final cut.

### **Stand 12: 10 acres**

*Description* – Walnut, bur oak, sycamore, elm, larch, ash, shingle oak, silver poplar / bigtooth aspen hybrid, cherry, silver maple, honeylocust; demonstration plantings

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 13: 19 acres**

*Description* – Cedar, shingle oak, hickory, red oak, black oak, jack pine, elm, ponderosa pine; demonstration plantings

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. Monitor health of jack and ponderosa pine; utilize stand conversion if necessary.

**Stand 14: 49 acres**

*Description* – Red oak, white oak, black oak, hickory, bur oak, basswood overstory; hickory, ironwood understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 15: 8 acres**

*Description* – Black oak, hickory; bur oak, white oak, ash, walnut, hackberry, Osage orange, honeylocust overstory; elm, hickory understory

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity



No management activities are recommended.

**Stand 16: 22 acres**

*Description* – White oak, hickory, red oak overstory; ironwood (heavy) understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 17: 15 acres**

*Description* – White oak, red oak, hickory, black locust overstory; ironwood understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be utilized to remove black locust from the stand.

## **Unionville Unit Compartment 5**

**Stand 1: 5 acres**

*Description* – Shingle oak, black oak, cedar, walnut, red oak overstory; oak, ash, hickory  
understory

DBH (Avg): 8”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-45 crop trees per acre; focus on oak and walnut.

**Stand 2: 8 acres**

*Description* – White oak, red oak, black oak, hickory, ash overstory; hickory, elm, ash, cherry, oak understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. Re-evaluate for potential harvest site.

### **Stand 3: 184 acres**

*Description* – White oak, red oak, black oak, ash, hickory overstory; ash, hickory, oak understory

DBH (Avg): 14”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 4: 4 acres**

*Description* – Ash, walnut, red oak, white oak, bitternut, elm overstory; ash, elm understory

DBH (Avg): 12”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 5: 4 acres**

*Description* – Red oak, hickory, white oak, cherry, walnut overstory; ironwood, elm understory

DBH (Avg): 16”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

Re-evaluate next cycle for potential harvest.

**Stand 6: 2 acres**

*Description* – Red oak, hickory, ash, white oak, elm, basswood overstory; ironwood, elm understory

DBH (Avg): 18”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

Re-evaluate next cycle for potential harvest.

**Stand 7: 20 acres**

*Description* – Shingle oak, black oak, bur oak, honeylocust overstory; elm understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release and weed tree eradication will improve species composition and release potential crop trees. Locust will be removed and walnut and oak will be selected as crop trees (35-45 crop trees per acre).

**Stand 8: 9 acres**

*Description* – Black oak, shingle oak, bur oak, hickory, white oak overstory; hickory understory

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

Re-evaluate next cycle for potential harvest.

### **Stand 9: 8 acres**

*Description* – Walnut, honeylocust, hickory, shingle oak, black oak overstory; elm, hickory understory

DBH (Avg): 12”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release and weed tree eradication will improve species composition and release potential crop trees. Walnut will be released as crop trees (30-40 crop trees per acre) and locust will be removed.

### **Stand 10: 5 acres**

*Description* – Honeylocust, shingle oak, elm, Osage orange, black oak overstory; elm understory

DBH (Avg): 12”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

This stand will be converted to desirable, native hardwoods by girdling the overstory in patches and under-planting.

### **Stand 11: 11 acres**

*Description* – Red oak, white oak, ash overstory; elm, hickory understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

Re-evaluate next cycle for potential harvest.

### **Stand 12: 3 acres**

**Description** – Hickory, cherry, black oak, bur oak, shingle oak overstory; elm, ash, cherry understory

DBH (Avg): 10”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized on this stand to improve growth rates and vigor. Oaks and cherry will be released at a rate of 35-40 crop trees per acre.

## **Unionville Unit Compartment 6**

### **Stand 1: 6 acres**

**Description** – Shingle oak, black oak, hickory, walnut overstory; elm, oak understory

DBH (Avg): 8”                      BA: 60

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized; crop trees (oak and walnut) be released at a rate of 35-45 crop trees per acre.

### **Stand 2: 5 acres**

**Description** – White oak, hickory, bitternut, shingle oak, bur oak overstory; hickory, elm, ironwood, oak understory

DBH (Avg): 12”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop trees will be released at a rate of 30-40 crop trees per acre; focus on oak as crop trees.

### **Stand 3: 17 acres**

*Description* – Shingle oak, black oak, honeylocust, hickory, walnut overstory; oak, hickory, cherry, elm understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Oaks and walnuts will be released and selected for using crop tree release; select crop trees will be released at a rate of 35-40 crop trees per acre.

### **Stand 4: 90 acres**

*Description* – White oak, bur oak, hickory, walnut, black oak, red oak overstory; hickory, ironwood, oak, elm understory

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

Re-evaluate 20-25 years for potential harvest; good site for shelterwood harvest.

### **Stand 5: 40 acres**

*Description* – White oak, hickory, black oak, red oak, elm overstory; oak, hickory, ironwood, ash understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will release 30-35 crop trees per acre; focus on oak.

## **Unionville Unit**

## Compartment 7

### Stand 1: 57 acres

*Description* – White oak, hickory, walnut, red oak, black oak, cherry, ash overstory; hickory, ironwood understory

DBH (Avg): 10”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-45 crop trees per acre with a focus on oak and walnut.

### Stand 2: 76 acres

*Description* – White oak, red oak, hickory, black oak, ash, cherry, walnut overstory; ironwood, hickory understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### Stand 3: 17 acres

*Description* – White oak, red oak, hickory, walnut, ash, bitternut overstory; ironwood understory

DBH (Avg): 14”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. There is oak wilt and moderate storm damage present on the stand. A pre- or post-harvest treatment will be needed to remove heavy ironwood understory and improve regeneration potential.

#### **Stand 4: 12 acres**

*Description* – White oak, red oak, swamp white oak, cherry, shingle oak, hackberry, bitternut, walnut overstory; ironwood, buckeye understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

#### **Stand 5: 34 acres**

*Description* – White oak, red oak, hackberry, hickory, ash overstory; ironwood understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

#### **Stand 6: 76 acres**

*Description* – White oak, red oak, hickory, black oak, cherry overstory; ironwood, hickory understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.



### **Stand 7: 63 acres**

*Description* – White oak, red oak, hickory, black oak, ash, cherry, walnut overstory; ironwood understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

## **Unionville Unit Compartment 8**

### **Stand 1: 10 acres**

*Description* – Ash, shingle oak, bur oak, black oak, cherry, elm overstory; hickory, oak, elm, ash understory

DBH (Avg): 8”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-45 crop trees per acre with a focus on oak.

### **Stand 2: 112 acres**

*Description* – White oak, hickory, red oak, black oak, ash, walnut overstory; oak, ash, ironwood, elm understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 3: 9 acres**

*Description* – Red oak, cherry, cedar, ash, swamp white oak overstory; dogwood, oak, hickory understory

DBH (Avg): 8”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 crop trees per acre with a focus on oak.

### **Stand 4: 16 acres**

*Description* – White oak, ash, red oak, black oak, hickory overstory; ironwood, hickory, oak, ash understory

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 5: 9 acres**

*Description* – Ash, red oak, silver maple, bur oak, swamp white oak overstory; oak, ironwood, ash, hickory, cedar understory

DBH (Avg): 8”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

Removal of ash will release oaks in the understory.

## **Unionville Unit Compartment 9**

### **Stand 1: 3 acres**

*Description* – White oak, red oak, basswood, hickory, ash overstory; ironwood understory

DBH (Avg): 18”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. Shelterwood method will be used to increase oak regeneration before final cut. This stand will also benefit from a pre-harvest understory removal.

### **Stand 2: 1 acre**

*Description* – Mixed pine overstory; oak, ash, ironwood, hickory understory

DBH (Avg): 14”                      BA: 120

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

This stand will be converted from mixed pine to native hardwood by removal of the overstory to release native hardwoods in the understory.

### **Stand 3: 1 acre**

*Description* – Mixed pine; visual corridor

DBH (Avg): 14”                      BA: 200

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will be monitored for insect and disease problems; otherwise it will be maintained for wildlife and aesthetic reasons.

### **Stand 4: 34 acres**

**Description** – Hickory, white oak, black oak, red oak, bitternut, basswood hickory overstory; elm, hickory, ironwood, ash understory

DBH (Avg): 10”                      BA: 110

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

This stand will benefit from crop tree release; 35-45 crop trees per acre will be released.

### **Stand 5: 0.5 acre**

**Description** – Aspen overstory; oak, hickory, elm, prickly ash understory

DBH (Avg): 10”                      BA: 60

**Management Class** – Active Forest Management

**Management Prescription** – Stand Conversion

Removal of the aspen overstory will release oak seedlings in the understory. Forest stand improvement will be utilized in the future to ensure desirable species composition.

### **Stand 6: 2 acres**

**Description** – Mixed pine, black locust, white oak overstory; oak, elm, hickory understory

DBH (Avg): 14”                      BA: 130

**Management Class** – Limited Forest Management

**Management Prescription** – Stand Conversion

The pine and locust overstory will be removed to release oak regeneration underneath. The stand will be assessed for FSI in the future.

### **Stand 7: 1 acre**

**Description** – Tulip poplar plantation; tulip poplar, oak, hickory, elm understory

DBH (Avg): 16”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The tulip poplar will be removed from the stand and will be replaced with native hardwoods that are already in the understory.

**Stand 8: 6 acres**

*Description* – Red oak, white oak, hickory, black oak, mixed pine overstory; hickory, elm, ironwood understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. Shelterwood method will be used because of inadequate oak regeneration.

**Stand 9: 1 acre**

*Description* – Tulip poplar plantation, ash, red oak, black oak, white oak overstory; tulip poplar, cherry, elm understory

DBH (Avg): 6”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be used in this stand to remove tulip poplar and elm. This will open the stand up to create less competition and better growth for the desired residuals.

**Stand 10: 0.5 acre**

*Description* – White oak, elm, hickory, ash, tulip poplar overstory; oak, elm, cherry understory

DBH (Avg): 6”                      BA: 40

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be used to remove undesirable species from the stand.

**Stand 11: 0.5 acre**

*Description* – Tulip poplar plantation

DBH (Avg): 12                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The tulip poplar will be removed from the stand and the area will be planted to native, desirable hardwoods.

**Stand 12: 5 acres**

*Description* – White oak, red oak, shingle oak, hickory, black oak, ash overstory; oak, hickory, elm, tulip poplar understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 13: 6 acres**

*Description* – Ash, cherry, hickory, honeylocust, elm, bur oak, white oak, black oak overstory; ash, elm, oak, hickory understory

DBH (Avg): 6”                      BA: 40

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be performed on this stand to release 30-45 crop trees per acre.

**Stand 14: 3 acres**

*Description* – Silver maple, honeylocust, black locust, ash, cherry, red oak, walnut overstory; elm, ash, hickory understory

DBH (Avg): 14”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 15: 2 acres**

*Description* – Red pine, white pine, ash, red oak overstory; oak, hickory, ash understory

DBH (Avg): 14”                      BA: 140

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 16: 2 acres**

*Description* – Mixed pine, white oak, hickory, ash, red oak overstory; ash, elm, oak, hickory understory

DBH (Avg): 14”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 17: 4 acres**

*Description* – Mixed pine, red oak, black oak, cherry overstory; oak, hickory, cherry understory

DBH (Avg): 14”                      BA: 140

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 18: 3 acres**

*Description* – Mixed pine, ash overstory; prickly ash, elm, ash, oak understory

DBH (Avg): 12”                      BA: 160

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 19: 34 acres**

*Description* – White oak, black oak, hickory, red oak overstory; oak, hickory, elm, ash, ironwood understory

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. Shelterwood method will be used to encourage more oak regeneration on the site before final overstory removal.

**Stand 20: 25 acres**

*Description* – Mixed bottomland hardwoods including oak and walnut; prickly ash, hickory, ironwood, oak understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management



***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to focus on oak and walnut growth (30-40 crop trees per acre).

Weed tree eradication will remove honeylocust and other undesirables from the stand.

**Stand 21: 4 acres**

***Description*** – Mixed pine, red oak, honeylocust, bitternut, walnut overstory; ash, ironwood, oak, elm, hickory, cherry understory

DBH (Avg): 14”                      BA: 160

***Management Class*** – Active Forest Management

***Management Prescription*** – Stand Conversion

This stand will be converted to native hardwoods; the overstory of pine and honeylocust will be removed to release the pole-size oaks and oak regeneration.

**Stand 22: 4 acres**

***Description*** – Walnut, hickory, hackberry, red oak, basswood, black locust overstory; ironwood, elm, oak, hickory, hackberry understory

DBH (Avg): 10”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized on this stand to improve growing conditions for oak and walnut; crop trees will be released at a rate of 30-40 trees per acre.

**Stand 23: 1 acre**

***Description*** – Scotch pine, cherry, elm, ash, red oak, walnut, hackberry overstory; oak, elm, cherry, hackberry understory

DBH (Avg): 12”                      BA: 60

**Management Class** – Active Forest Management

**Management Prescription** – Stand Conversion

Scotch pine is currently dead or dying; all pine will be removed from the stand to release native hardwoods. Crop tree release will be used to control species composition of the residual stand (30-40 crop trees per acre).

**Stand 24: 1 acre**

**Description** – Ash, hickory, red oak, white oak, honeylocust, cottonwood, hackberry overstory; hickory, elm, oak, hackberry understory

DBH (Avg): 10”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Weed tree eradication will be performed on this stand to remove undesirable species such as honeylocust, hackberry and ash.

**Stand 25: 3 acres**

**Description** – Red oak, hickory, white oak, black oak overstory; oak, hickory, cherry, elm, hackberry, ironwood understory

DBH (Avg): 18”                      BA: 70

**Management Class** – Active Forest Management

**Management Prescription** – Harvest

This stand has oak wilt present and red oak species are currently in decline. The stand will be clearcut to remove oak wilt and regenerate a new oak stand. A pre-harvest treatment will open up the understory to help improve oak regeneration.

**Stand 26: 3 acres**

**Description** – Mixed pine, walnut, river birch, bitternut, sycamore, red oak, honeylocust overstory; elm, hackberry, oak, cherry understory

DBH (Avg): 12”                      BA: 30

**Management Class** – Active Forest Management

**Management Prescription** – Stand Conversion

The pines in this stand are dead and dying; the stand will be converted to oak. The overstory of pines and certain hardwoods will be removed to allow oak to occupy the site.

**Stand 27: 5 acres**

**Description** – Mixed conifer including white pine, red pine, Scotch pine, spruce overstory; ironwood, oak, hickory understory

DBH (Avg): 14”                      BA: 160

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management practices are recommended. This stand will be monitored for insects and disease problems.

**Stand 28: 5 acres**

**Description** – Mixed conifer; similar to Stand 27

DBH (Avg): 14”                      BA: 170

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management practices are recommended. This stand will be monitored for insects and disease problems.

**Stand 29: 7 acres**

*Description* – Red oak, elm, cherry, ironwood, hickory overstory; small pole stand – possible past clearcut

DBH (Avg): 8”                      BA: 40

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand to improve growing conditions and improve species composition. The trees will be released at a rate of 35-45 crop trees per acre.

### **Stand 30: 0.5 acre**

*Description* – Shingle oak, black oak, hickory, elm, black locust overstory; shingle oak, raspberry understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 31: 3 acres**

*Description* – White oak, red oak, shingle oak, hickory, black oak, ash overstory; oak, hickory, elm understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 32: 61 acres**

*Description* – Hickory, red oak, bur oak; pole hickory with scattered large red oak

DBH (Avg): 8”

BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand to improve diversity and encourage growth. Large oaks will be used for mast production and wildlife purposes.

**Stand 33: 66 acres**

*Description* – Scattered honeylocust, hedge, shingle oak, cedar, black oak

DBH (Avg): 8”

BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This stand will serve as a wildlife area.

**Stand 34: 59 acres**

*Description* – Black oak, bur oak, hickory overstory

DBH (Avg): 10”

BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Unionville Unit  
Compartment 10**

**Stand 1: 45 acres**

*Description* – White oak, hickory, red oak overstory; cherry, ironwood, hickory, oak understory

DBH (Avg): 12”

BA: 100

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 2: 12 acres**

***Description*** – Successional woody; cedar, shingle oak, dogwood, cherry, hickory, black oak, bur oak

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 3: 5 acres**

***Description*** – Red oak, white oak, walnut, elm, ash, basswood, cottonwood overstory; ironwood, elm understory

DBH (Avg): 14”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 4: 10 acres**

***Description*** – Red oak, white oak, shingle oak, cherry, walnut, hickory, bitternut

DBH (Avg): 6”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to release 35-40 crop trees per acre; this FSI can wait until second cycle.

**Stand 5: 5 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 6: 24 acres**

*Description* – Hackberry, bitternut, walnut, red oak, cherry, river birch, bur oak, silver maple, cottonwood overstory; buckeye, elm understory

DBH (Avg): 14”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 7: 18 acres**

*Description* – White oak, red oak, hickory, black oak, basswood, walnut overstory; buckeye, bitternut, ironwood, maple understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 8: 7 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 9: 5 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 10: 38 acres**

*Description* – White oak, red oak, hickory, black oak, bur oak overstory; ironwood, maple understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 11: 13 acres**

*Description* – Bur oak, hickory, black oak, shingle oak, cedar, white oak, cherry overstory; open, shrubby understory

DBH (Avg): 12”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Unionville Unit  
Compartment 11**

**Stand 1: 17 acres**

*Description* – Successional woody; cedar, honeylocust, cherry, shingle oak



**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Weed tree eradication will be utilized to control species composition on the naturally regenerating site.

**Stand 2: 6 acres**

**Description** – Honeylocust, walnut, shingle oak, black oak overstory; ash, elm understory

DBH (Avg): 10”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

A combination of crop tree release and weed tree eradication will be utilized on this site. Any desirable oak and walnut will be crop trees (35-45 crop trees per acre). Cedars and honeylocust will be removed from the stand.

**Stand 3: 41 acres**

**Description** – Open area with cedar, honeylocust, shingle oak, red oak, bur oak, willow, boxelder

**Management Class** – Active Forest Management

**Management Prescription** – Tree Planting

This site will need removal of undesirables and planting of native hardwood seedlings.

**Stand 4: 7 acres**

**Description** – White oak, ash, hickory, bitternut, black oak, red oak, cherry overstory; oak, hickory, ash, ironwood understory

DBH (Avg): 14”                      BA: 100

**Management Class** – Active Forest Management

**Management Prescription** – Harvest

This stand is mature and the overstory can be removed by harvest. Clearcut method can be used as the site has adequate oak regeneration.

**Stand 5: 55 acres**

*Description* – White oak, red oak, ash, hickory, black oak, cherry, walnut overstory; ash, oak, elm, ironwood, hickory understory

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release at a rate of 30-40 crop trees per acre, focusing on oak and scattered walnut.

**Stand 6: 6 acres**

*Description* – Hickory, black oak, white oak, cherry, ash, red oak overstory; ironwood, oak, ash understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of weed tree eradication and crop tree release will be utilized on this stand. Ironwood will be removed to release oak regeneration and trees will be released at a rate of 30-40 crop trees per acre.

**Stand 7: 3 acres**

*Description* – Mixed bottomland hardwoods, walnut overstory; elm, oak, buckeye understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will benefit this stand; select oak and walnut will be released at a rate of 35-45 crop trees per acre.

**Stand 8: 5 acres**

***Description*** – Shingle oak, black oak, hickory, honeylocust, white oak, ash overstory; ash, multiflora rose, oak, ironwood understory

DBH (Avg): 12”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Desirable oak in this stand will be released with crop tree release at a rate of 30-40 crop trees per acre.

**Stand 9: 14 acres**

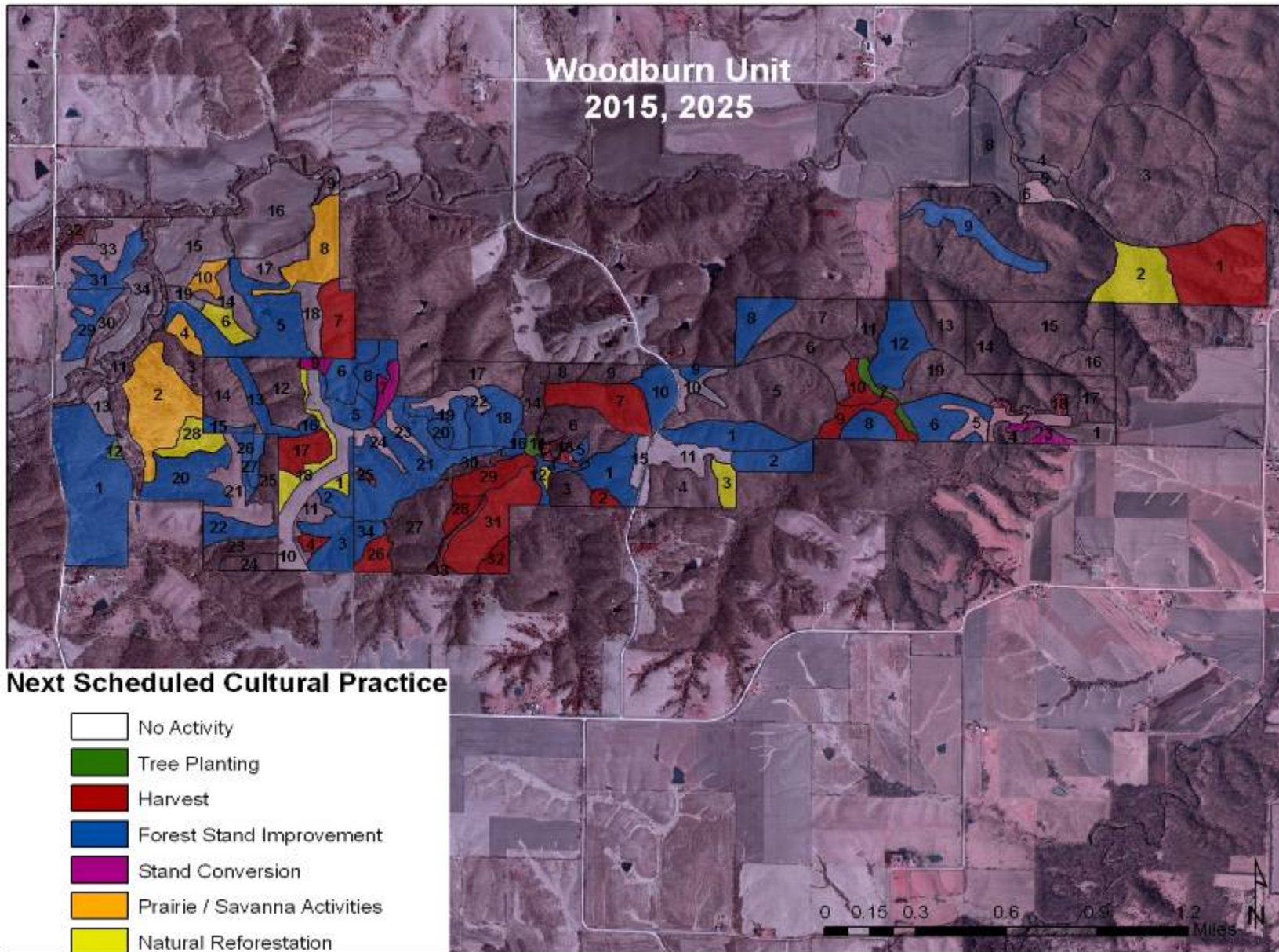
***Description*** – Mixed bottomland hardwoods, walnut overstory; ash, hickory, oak, elm, ironwood understory

DBH (Avg): 10”                      BA: 70

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Any desirable oak and walnut will be released with crop tree release at a rate of 30-40 crop trees per acre.



# Woodburn Unit Compartment 1

## **Stand 1: 8 acres**

*Description* – Tree planting 2006; mixed upland hardwoods

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

This stand will need initial mowing maintenance, then periodic thinning while reforestation takes place.

## **Stand 2: 7 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

## **Stand 3: 5 acres**

*Description* – Mixed pine; brushy understory

DBH (Avg): 10”                      BA: 160

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand should be managed for longevity of pine: clear understory and thin as needed.

## **Stand 4: 5 acres**

*Description* – Bur oak, hickory overstory; cedar, elm, honeysuckle understory

DBH (Avg): 10”

BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 5: 6 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

This field will continue to be leased for agriculture.

**Stand 6: 20 acres**

*Description* – Red oak, black oak, hickory overstory; ironwood understory

DBH (Avg): 8”

BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be done on this stand to release 30-35 crop trees per acre. A weed tree eradication treatment is recommended to remove ironwood.

**Stand 7: 5 acres**

*Description* – Open field, previously farmed

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This stand will be planted into mixed bottomland hardwoods, including walnut.

**Stand 8: 10 acres**

*Description* – White oak, black oak, bur oak pole size, scattered larger trees

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will manage select pole-sized trees at a rate of 30-40 crop trees per acre.

Scattered larger trees will remain for wildlife purposes.

**Stand 9: 11 acres**

*Description* – Bur oak, walnut, bitternut, hackberry overstory; elm, hackberry understory

DBH (Avg): 12”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand will benefit from the removal of large, mature walnuts. Regeneration will need to be supplemented by planting of walnut seedlings.

**Stand 10: 7 acres**

*Description* – Walnut, bitternut hickory, hackberry overstory

DBH (Avg): 16”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand will be harvested in FY 2015 (walnut sale). Post-harvest treatment will include replanting of walnut seedlings.

**Stand 11: 13 acres**

*Description* – Walnut, hackberry, silver maple

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 12: 24 acres**

***Description*** – Red oak, white oak, hickory overstory; ironwood understory

DBH (Avg): 10”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will improve the oak component and weed tree eradication will remove the ironwood understory to aid oak regeneration.

**Stand 13: 18 acres**

***Description*** – White oak, red oak, hickory; large pole-size trees (good quality north/east slope)

DBH (Avg): 12”                      BA: 110

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 14: 25 acres**

***Description*** – White oak, red oak, black oak, hickory overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended.

**Stand 15: 43 acres**

***Description*** – White oak, black oak, hickory overstory



DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 16: 13 acres**

*Description* – Hickory, black oak, bur oak

DBH (Avg): 8”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 17: 35 acres**

*Description* – White oak, red oak, hickory overstory; hickory, elm understory; large pole to small sawtimber

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 18: 5 acres**

*Description* – Mixed pine

DBH (Avg): 10”                      BA: 180

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

Thin stand as necessary to improve pines for longevity, wildlife and aesthetics; salvage dead trees.

**Stand 19: 24 acres**

*Description* – Black oak, hickory, bur oak overstory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management recommendations.

## **Woodburn Unit Compartment 2**

**Stand 1: 22 acres**

*Description* – Red oak, white oak, hickory overstory; ironwood, hickory, ash understory

DBH (Avg): 10”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will improve the oak component (40-45 crop trees per acre) and weed tree eradication will remove the ironwood understory to aid oak regeneration.

**Stand 2: 14 acres**

*Description* – White oak, bur oak, black oak overstory; ironwood understory (south slope, poorer quality)

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Utilize weed tree eradication to remove ironwood understory to aid oak regeneration – low priority.

### **Stand 3: 6 acres**

*Description* – Successional woody; some native prairie patches present

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally convert to forest; black oak, bur oak, hickory and cedar are present. Re-evaluate for FSI in 10 – 15 years.

### **Stand 4: 21 acres**

*Description* – White oak, bur oak, black oak, hickory overstory; elm, ash, hickory understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 5: 66 acres**

*Description* – Black oak, white oak, hickory overstory; elm, ash, ironwood understory

DBH (Avg): 10”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 6: 22 acres**

*Description* – Red oak, white oak, hickory overstory (good quality); ironwood, elm understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 7: 22 acres**

*Description* – Black oak, white oak, hickory (poorer quality)

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 8: 16 acres**

*Description* – White oak, red oak, hickory (good quality stand)

DBH (Avg): 10”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A basal area thinning will be performed to reduce competition in the stand and improve growth.

**Stand 9: 3 acres**

*Description* – Red oak, white oak, hickory overstory (small sawtimber); ironwood, elm understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Utilize weed tree eradication to increase oak regeneration; potential harvest in 20 – 25 years.

**Stand 10: 8 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture (row crop / hay rotation).

**Stand 11: 17 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture (row crop / hay rotation).

## **Woodburn Unit Compartment 3**

**Stand 1: 18 acres**

*Description* – White oak, bur oak overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release; with a focus on oaks, releasing 40-50 crop trees per acre.

**Stand 2: 3 acres**

*Description* – White oak, black oak overstory; elm, ash understory. Good white oak regeneration.

DBH (Avg): 18”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and will be harvested using a regeneration cut. There is adequate oak regeneration already on site so no pre-harvest treatment will be needed.

**Stand 3: 10 acres**

*Description* – Red oak, bur oak, hickory overstory; elm, hickory understory.

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 4: 5 acres**

*Description* – Walnut, mixed bottomland hardwoods overstory; elm, hazelnut understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to focus on releasing high quality walnut stems at a rate of 30-45 crop trees per acre.

**Stand 5: 2 acres**

*Description* – Walnut, bur oak; open stand – no understory

DBH (Avg): 8”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand to release high quality oak and walnut stems at a rate of 30-45 crop trees per acre.

**Stand 6: 24 acres**

*Description* – Bur oak, hickory, black oak overstory; elm understory; some larger walnut along base of slope

DBH (Avg): 10”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 7: 26 acres**

*Description* – White oak, black oak, red oak overstory; elm, hickory understory

DBH (Avg): 18”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This site contains oak wilt pockets; the timber is mature and could be harvested within 15 years.

A pre-harvest treatment five years prior to harvest will encourage oak regeneration.

**Stand 8: 5 acres**

*Description* – Red oak, walnut overstory; walnut, elm understory; good regeneration of oak and walnut

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 9: 8 acres**

*Description* – White oak, red oak, swamp white oak, bur oak, walnut, cherry overstory; elm understory

DBH (Avg): 12”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 10: 13 acres**

*Description* – Red oak, hickory, black oak, bur oak overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A basal area thinning in this stand will help improve species composition and stand vigor.

### **Stand 11: 2 acres**

*Description* – Open grassy field

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be either planted to walnut and mixed hardwoods or can be used for future Tree Improvement Study Site.

### **Stand 12: 1 acre**

*Description* – Open grassy field

*Management Class* – Non-Forest

*Management Prescription* – Natural Reforestation



This site will be allowed to convert to native hardwood species including oak and walnut. Future FSI may be necessary.

**Stand 13: 4 acres**

*Description* – Red and white pine mix; grassy areas in between

DBH (Avg): 14”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This site will be monitored for decline, including pest and disease issues.

**Stand 14: 12 acres**

*Description* – Mixed bottomland hardwoods including bur oak, ash, elm with few scattered walnuts

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 15: 5 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 16: 3 acres**

*Description* – Walnut, hackberry, black locust, mixed oak overstory; elm understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand to select and release high quality walnut at a rate of 35-45 crop trees per acre.

**Stand 17: 20 acres**

*Description* – Red oak, white oak overstory; ash, elm understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 18: 20 acres**

*Description* – White oak, hickory overstory; elm, buckeye understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 19: 11 acres**

*Description* – Hickory dominated (pole-size); some oak regeneration in openings

DBH (Avg): 8”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

In this stand, hickory needs to be thinned by approximately 50% to improve oak regeneration success and to decrease percentage of hickory in the overall composition.

**Stand 20: 4 acres**

*Description* – Black oak, red oak, elm overstory; bur oak, hickory, elm understory; shrubby, with pockets of pole size and larger

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be performed on this stand to improve species composition and to increase light for encouragement of oak regeneration.

**Stand 21: 52 acres**

*Description* – Hickory, cedar overstory and understory; shrubby ravines; prairie pockets, few scattered oaks throughout

DBH (Avg): 8”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be utilized to remove undesirable species such as cedar; a basal area thinning will reduce competition and select for highest quality stems.

**Stand 22: 7 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 23: 4 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 24: 5 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. The field will continue to be leased for agriculture.

**Stand 25: 1 acre**

*Description* – Mixed pine stand

DBH (Avg): 10”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will be monitored for any signs of decline.

**Stand 26: 8 acres**

*Description* – Black oak, hickory, white oak, red oak, hackberry, basswood overstory; elm, hickory understory

DBH (Avg): 18”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This site should be re-evaluated next cycle for possible harvest.

**Stand 27: 37 acres**

*Description* – Bur oak, hickory, hackberry, white oak overstory; elm understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 28: 6 acres**

*Description* – White oak, hickory, red oak overstory; elm, hickory understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This site should be reevaluated for potential harvest in two cycles; there is currently adequate oak regeneration in the stand.

**Stand 29: 13 acres**

*Description* – White oak, bur oak, red oak, hickory, black oak overstory; elm, hickory understory

DBH (Avg): 18”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and is ready to be harvested. Clearcut method will be utilized as there is adequate oak regeneration present on the site; no pre-harvest treatment will be needed.

**Stand 30: 5 acres**

*Description* – Walnut, hickory, elm, red oak, bur oak, bitternut hickory; hickory, elm understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

### **Stand 31: 31 acres**

*Description* – White oak, black oak, hickory, bur oak, red oak overstory; elm, hickory, ash understory

DBH (Avg): 18”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and will benefit from removal of mature trees (low priority harvest). A shelterwood method will assist in increasing oak regeneration.

### **Stand 32: 6 acres**

*Description* – Red oak, ash, hickory, white oak overstory; elm, hickory, ash understory

DBH (Avg): 18”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This site is mature and will benefit from removal of mature trees; there is evidence of oak wilt pockets. Oak regeneration is adequate; no pre-harvest treatment will be needed.

### **Stand 33: 5 acres**

*Description* – Mixed pine; white and red

DBH (Avg): 12”                      BA: 140

***Management Class*** – Limited forest Management

***Management Prescription*** – No Activity

No management activities are recommended. This stand should be monitored for any signs of decline, insects or diseases.

**Stand 34: 6 acres**

***Description*** – Hickory overstory; elm, mixed oak understory

DBH (Avg): 8”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

There is good oak regeneration and advanced oak regeneration on this stand; the hickory component will be thinned to reduce overall percentage. This will leave openings for oak regeneration to flourish and will improve species composition on the stand.

## **Woodburn Unit Compartment 4**

**Stand 1: 3 acres**

***Description*** – Successional woody; elm, cedar, cherry, oak, autumn olive

***Management Class*** – Non-Forest

***Management Prescription*** – Natural Reforestation

This site will be allowed to convert naturally to forest. Invasive species (including autumn olive) should be controlled to slow the spread into nearby forest area.

**Stand 2: 8 acres**

***Description*** – Bur oak, white oak, hickory, elm, cherry overstory; hackberry, elm, hickory understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to select for the best oak and cherry on the site at a rate of 35-45 crop trees per acre. Wolf trees will remain for habitat purposes.

**Stand 3: 17 acres**

*Description* – Shagbark hickory (almost pure stand), shingle oak, elm, cherry overstory; hickory, elm, hazelnut understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

There is good oak regeneration present on the site; hickory should be thinned to release oak seedlings. This will increase diversity and improve overall species composition.

**Stand 4: 3 acres**

*Description* – White oak, bur oak, black oak, hickory, cherry overstory; hackberry, elm understory

DBH (Avg): 14”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

The white oak in this stand will be mature in two cycles. Pre-harvest treatment will be needed to encourage oak regeneration before harvest is scheduled.

**Stand 5: 10 acres**



**Description** – Brushy area with scattered wolf trees (oak and walnut); small walnut planting on south end

DBH (Avg): 8”                      BA: 70                      \* for walnut plantation\*

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Walnut plantation will need to be thinned next cycle; re-evaluate for pruning at that time.

Release and thin selected walnuts and oaks throughout the stand and control invasive species.

### **Stand 6: 13 acres**

**Description** – White oak (almost pure stand), red oak, black oak, hickory overstory; hickory, elm, oak understory

DBH (Avg): 12”                      BA: 120

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized in areas dominated by pole size oaks (35-40 crop trees per acre). Small sawtimber size will be left alone until mature. Monitor for oak wilt.

### **Stand 7: 6 acres**

**Description** – Mixed pine stand; red and jack pine

DBH (Avg): 10”                      BA: 160

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management activities are recommended. This stand should be monitored for insect and disease problems.

### **Stand 8: 10 acres**

**Description** – Red oak, black oak, white oak, hickory overstory; hickory, elm understory; oak wilt present in red / black oaks

DBH (Avg): 12”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

A non-commercial harvest of infected red and black oaks will be utilized to control the spread of oak wilt within the stand. This stand may also be used for a firewood cut area.

### **Stand 9: 3 acres**

**Description** – Jack pine plantation

DBH (Avg): 8”                      BA: 140

**Management Class** – Active Forest Management

**Management Prescription** – Pine Conversion

This pine is in poor health and showing signs of decline; there is some oak regeneration along the edges of the plantation. The pine will be removed and planted to mixed upland hardwoods.

### **Stand 10: 28 acres**

**Description** – Agriculture field

**Management Class** – Non-Forest

**Management Prescription** – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

### **Stand 11: 7 acres**

**Description** – Agriculture field

**Management Class** – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 12: 23 acres**

***Description*** – White oak, black oak, red oak, hickory overstory; hickory, elm understory; good oak regeneration (white and red)

DBH (Avg): 10”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended. This stand is mostly pole size with scattered small sawtimber with good oak regeneration.

**Stand 13: 10 acres**

***Description*** – Walnut, bur oak, ash, elm, red oak, basswood, hackberry overstory; elm, ash, hackberry understory

DBH (Avg): 10”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to release 40-50 select walnut and oak stems per acre.

**Stand 14: 20 acres**

***Description*** – White oak, red oak, black oak, hickory overstory; hickory, elm understory; good oak regeneration throughout the stand

DBH (Avg): 12”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management activities are recommended. This stand consists of pole size with scattered, small sawtimber.

**Stand 15: 20 acres**

***Description*** – White oak, red oak, black oak, hickory, bur oak overstory; hickory, elm, cedar understory

DBH (Avg): 8”                      BA: 110

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

This stand will benefit from crop tree release (35-45 crop trees per acre) to improve composition and favor oaks.

**Stand 16: 2 acres**

***Description*** – Shagbark hickory (almost pure stand), ash, bur oak, white oak overstory; oak, elm understory; good advanced oak regeneration

DBH (Avg): 10”                      BA: 70

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

The hickory component in this stand will be thinned to release oak advanced regeneration and to increase diversity in the stand.

**Stand 17: 13 acres**

***Description*** – White oak, red oak, black oak, cherry, hickory overstory; oak, hickory, ash understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

The oaks in this stand are near maturity and will need to be harvested in the next 20 years. There is adequate regeneration on the site, so no pre-harvest treatment will be necessary.

**Stand 18: 10 acres**

*Description* – Successional woody; oak, elm, ash, cedar, dogwood, sumac, autumn olive

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally convert to forest; invasive species will be controlled. Re-evaluate for future FSI.

## **Woodburn Unit Compartment 5**

**Stand 1: 73 acres**

*Description* – White oak, red oak, hickory overstory; hickory, elm, ironwood understory; scattered large white oak – wolf trees

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Utilize weed tree eradication to remove ironwood understory and crop tree release (35-45 crop trees per acre) to encourage growth and mast production.

**Stand 2: 43 acres**

*Description* – Open grassy area with scattered large white oak, white oak / hickory drainages and scattered cedars and brush.

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

Utilize prescribed burning to encourage native species, monitor response of natives.

**Stand 3: 12 acres**

*Description* – White oak, black oak, hickory overstory; brushy understory; good oak regeneration; few large “wolf” white oaks scattered throughout

DBH (Avg): 14:                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 4: 6 acres**

*Description* – Old field with prairie species present; scattered encroaching cedars

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will benefit from periodic prescribed burning to discourage woody species and invigorate remnant species.

**Stand 5: 46 acres**

*Description* – Black oak, white oak, hickory pole stand; scattered bur and walnut poles and large white oak “wolf” trees; hickory understory and regeneration

DBH (Avg): 8                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from a crop tree release that will release 30-35 trees per acre to control species composition; FSI should favor oak species.

**Stand 6: 7 acres**

*Description* – Successional woody; mixed stand of walnut, cedar, oaks, cherry, elm

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally regenerate; stand will need to be re-evaluated for species composition and possible FSI at a later date.

**Stand 7: 19 acres**

*Description* – Pockets of large white oak, red oak, mixed with 12-14” white oak, hickory

DBH (Avg): 16”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand will be harvested in the second ten-year cycle using the shelterwood method.

**Stand 8: 24 acres**

*Description* – Successional woody; scattered hickory, oak, cedar; remnant prairie vegetation

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be cleared of woody species and burned periodically to maintain and improve the remnant prairie.

**Stand 9: 4 acres**

*Description* – Bur oak, mixed bottomland hardwoods

DBH (Avg): 16”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 10: 6 acres**

*Description* – Open grassy area with scattered trees and brush

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

Periodic, prescribed burning will control unwanted woody species and encourage native species.

**Stand 11: 45 acres**

*Description* – Mixed bottomland hardwoods including cottonwood, walnut, maple, hackberry

DBH (Avg): 14”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This is major riparian corridor.

**Stand 12: 1 acre**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to mixed oak, walnut and shrub species.

**Stand 13: 6 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity



No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 14: 10 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 15: 31 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 16: 47 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 17: 11 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 18: 10 acres**

***Description*** – Agriculture field

***Management Class*** – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 19: 4 acres**

***Description*** – Agriculture field

***Management Class*** – Non-Forest

***Management Prescription*** – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 20: 27 acres**

***Description*** – Bur oak, white oak, hickory overstory; hickory, elm, multiflora rose, prickly ash understory

DBH (Avg): 10”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

This stand will benefit from crop tree release to encourage growth, increase mast production, and control species composition at a rate of 35-40 crop trees per acre.

**Stand 21: 17 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 22: 11 acres**

*Description* – Red oak, hickory, bur oak pole size; doghair thicket; scattered 8”+ oaks, hackberry

DBH (Avg): 4”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from a basal area thinning; the basal area should be reduced by approximately 50%.

**Stand 23: 10 acres**

*Description* – Bur oak, red oak, white oak, hickory small sawtimber; elm, hickory, cherry understory; oak regeneration is limited

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

This site has harvest potential in 20+ years; this stand will need a pre-harvest treatment to reduce the understory and encourage oak regeneration.

**Stand 24: 7 acres**

*Description* – Red oak, hickory, bur oak overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 25: 11 acres**

*Description* – Bur oak, white oak, hickory, black walnut overstory; ash, elm understory; nice small, straight sawtimber

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 26: 5 acres**

*Description* – Ash, red oak, hickory, white oak; small diameter stand; open, grassy underneath

DBH (Avg): 4”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from a basal area thinning to reduce the basal area by 50%; this will increase growth of residuals and control species composition.

**Stand 27: 5 acres**

*Description* – White oak, red oak, hickory, ash overstory; ash, hickory understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be used to increase growth rates of residual trees and to increase mast production; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 28: 11 acres**

*Description* – Successional woody; pole size hickory, red oak, ash; oak regeneration in openings

DBH (Avg): 6”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Natural Reforestation

This stand will be allowed to naturally regenerate to forest; re-evaluate for FSI.

**Stand 29: 14 acres**

*Description* – Walnut, elm, white oak, red oak, bur oak, hickory overstory; elm, ironwood understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to select for the best walnut and oak stems (40-50 crop trees per acre).

**Stand 30: 11 acres**

*Description* – Cottonwood, elm, boxelder, willow

DBH (Avg): 16”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 31: 14 acres**

*Description* – White oak, red oak, black oak, hickory overstory; hickory, oak, cedar understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release (40-50 crop trees per acre). There are scattered 16-18” oaks that could be removed in conjunction with other harvests in the area.

**Stand 32: 11 acres**

*Description* – Bur oak, cedar, cherry, black oak, bitternut, hackberry overstory; cedar, elm, cherry understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. This stand will be left alone for wildlife habitat.

**Stand 33: 34 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 34: 15 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

## Woodburn Unit Compartment 6

### **Stand 1: 52 acres**

*Description* – White oak, bur oak overstory; ironwood understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

Potential harvest on south ridge; fair to poor oak reproduction. West end more open and savanna-like. Pre-harvest treatment may be needed to improve oak regeneration.

### **Stand 2: 28 acres**

*Description* – Successional woody; brushy small mixed oaks and weed trees (Osage orange and cedar)

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended. Re-evaluate for FSI in 10 years.

### **Stand 3: 133 acres**

*Description* – Mixed oak, hickory; uneven age

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 4: 3 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 5: 7 acres**

*Description* – Mixed bottomland hardwoods; ash, elm, walnut

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management activities are recommended.

**Stand 6: 6 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

**Stand 7: 143 acres**

*Description* – White oak, hickory (pole-size)

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management



*Management Prescription* – No Activity

No management activities are recommended.

**Stand 8: 29 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be leased for agriculture.

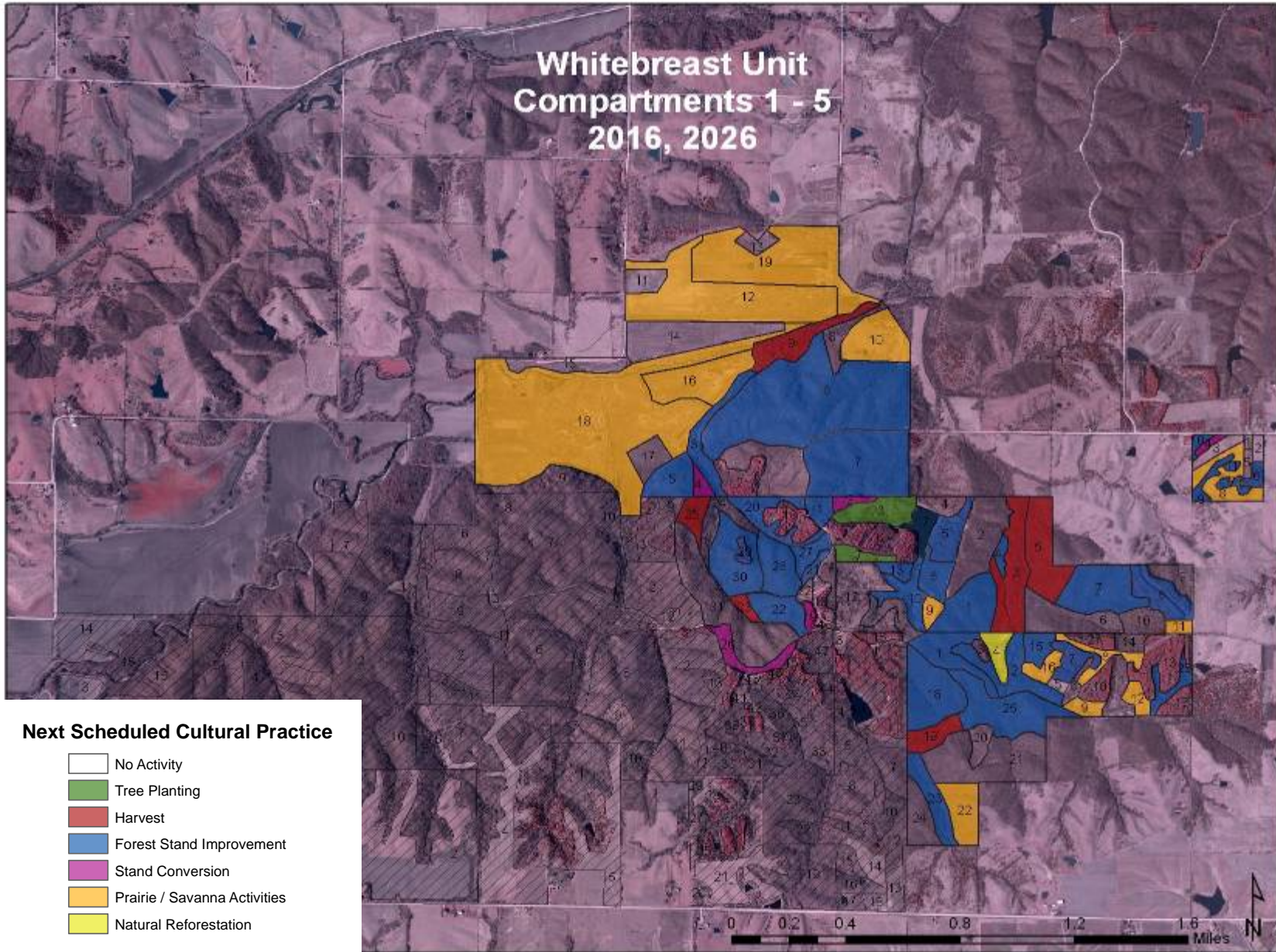
**Stand 9: 18 acres**

*Description* – Successional woody – open ridge; scattered honeylocust and Osage orange

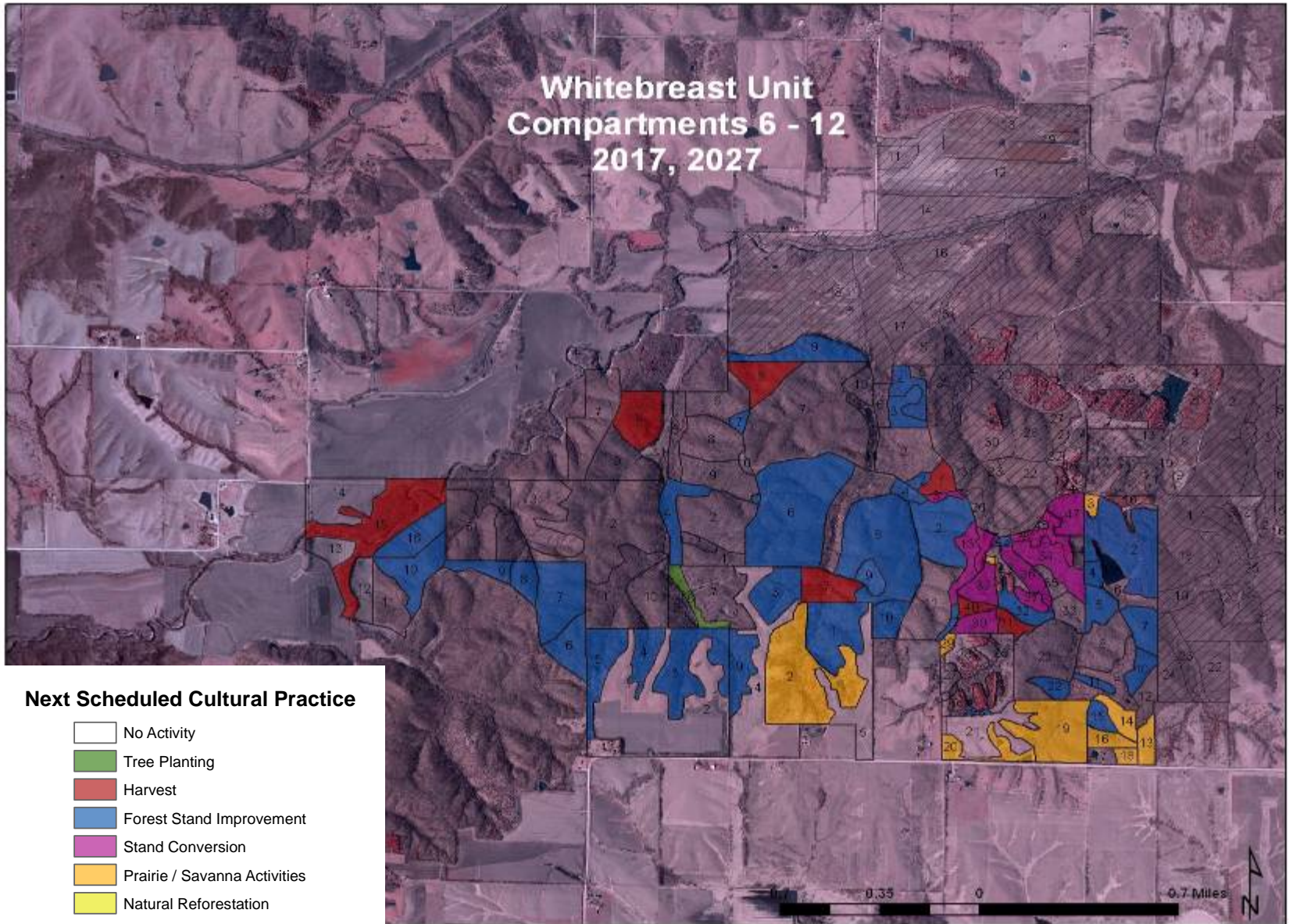
*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be utilized to control undesirable species. Re-evaluate for burning or reforestation.



Whitebreast Unit  
Compartments 6 - 12  
2017, 2027



# Whitebreast Unit Compartment 1

## **Stand 1: 1 acre**

*Description* – Building, parking lot, storage

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

## **Stand 2: 3 acres**

*Description* – Tree planting; native hardwoods and pine species

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

## **Stand 3: 5 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management activities are recommended. This field will continue to be used for agriculture (hay).

## **Stand 4: 2 acres**

*Description* – Red pine, jack pine overstory; Osage, autumn olive understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

The overstory and understory of this stand will be removed and planted to native hardwood species.

### **Stand 5: 2 acres**

*Description* – Grassy field, weather station

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 6: 3 acres**

*Description* – White pine overstory; cedar, Osage, autumn olive, elm understory

DBH (Avg): 12”                      BA: 140

*Management Class* – Limited Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from the removal of weed tree species and invasive species. White pine is currently in good health but will benefit from future thinning.

### **Stand 7: 2 acres**

*Description* – Mixed conifer including red pine, jack pine, cedar; Osage, autumn olive

DBH (Avg): 10”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

The autumn olive and cedars will be removed from this stand. The pines will also benefit from thinning.

### **Stand 8: 15 acres**

*Description* – Successional woody with mix of pine, autumn olive, cedar, multiflora rose, Osage

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will have the brush and invasive species removed and prescribed burning will be utilized to control unwanted woody vegetation and encourage native grasses and forbs.

**Stand 9: 4 acres**

*Description* – Mixed bottomland hardwoods, walnut

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of weed tree eradication and crop tree release will be used to improve the species composition and decrease competition on this stand.

**Stand 10: 2 acres**

*Description* – Elm, walnut, ash overstory; Osage, elm, autumn olive understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to improve growing conditions for select walnuts (35-45 crop trees per acre). This FSI can wait for second cycle.

**Stand 11: 1 acre**

*Description* – Hybrid poplar plantation; oak understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

The entire stand will be cut to encourage stump sprouts to create early successional habitat.

## **Whitebreast Unit Compartment 2**

### **Stand 1: 22 acres**

*Description* – Bur oak, hickory, white oak, black oak, red oak overstory; hickory, hackberry, ironwood understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 30-40 crop trees per acre.

### **Stand 2: 28 acres**

*Description* – White oak, red oak, bur oak, black oak, hickory overstory; hickory, elm understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 3: 29 acres**

*Description* – Mixed bottomland hardwoods, walnut overstory; buckeye understory

DBH (Avg): 16”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This site is nearly mature and will be ready for harvest in the second cycle.

### **Stand 4: 3 acres**

**Description** – Mixed bottomland hardwoods, walnut overstory; hackberry, elm, bur oak, bitternut understory

DBH (Avg): 10”                      BA: 60

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized to release desirable walnut stems at a rate of 30-40 crop trees per acre.

**Stand 5: 26 acres**

**Description** – Bur oak, hackberry, walnut, black oak, hickory, bitternut overstory; cherry, elm, hickory understory

DBH (Avg): 12”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management practices are recommended. Scattered large, mature walnut can be harvested second cycle with any adjacent sales to open up the stand for regeneration.

**Stand 6: 22 acres**

**Description** – Bur oak, black oak, bitternut, walnut, basswood, hackberry overstory; oak, bitternut, elm understory

DBH (Avg): 14”                      BA: 70

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management practices are recommended.

**Stand 7: 27 acres**



*Description* – Black oak, hickory, bur oak, elm, cherry, honeylocust, Osage overstory; hickory, elm, hackberry understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release (35-40 crop trees per acre) and weed tree eradication will be utilized to release desirable oak stems and remove undesirable species.

### **Stand 8: 16 acres**

*Description* – White pine, red pine, cedar overstory; elm, honeylocust understory

DBH (Avg): 12”                      BA: 160

*Management Class* – Limited Forest Management

*Management Prescription* – Forest Stand Improvement

This pine stand will be thinned to improve health of white pine along trail.

### **Stand 9: 8 acres**

*Description* – Bur oak, elm, cherry, black oak, cottonwood, boxelder, hackberry, Osage, white oak, walnut, silver maple

DBH (Avg): 10”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 10: 9 acres**

*Description* – Elm, cedar, cherry, Osage, walnut, oak, dogwood, honeylocust, autumn olive, white pine

DBH (Avg): 8”

BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 11: 3 acres**

*Description* – Cedar, elm, ash, oak, walnut, white pine, autumn olive, honeylocust, native grasses/forbs present

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be cleared of brush and prescribed fire will be utilized to improve native component and to discourage woody species.

## **Whitebreast Unit Compartment 3**

**Stand 1: 17 acres**

*Description* – Black oak, white oak, hickory, bur oak overstory; elm, hickory, hackberry understory

DBH (Avg): 10”

BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release; select oaks will be released at a rate of 30-40 crop trees per acre. Part of this stand has oak wilt present and oak wilt affected trees are marked for removal by firewood cuts.

**Stand 2: 20 acres**

**Description** – Bur oak, basswood, elm, bitternut, hickory, walnut overstory; hickory, elm, hackberry understory

DBH (Avg): 10”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized in this stand to release 35-40 crop trees per acre with a focus on oak and walnut.

### **Stand 3: 2 acres**

**Description** – White pine, walnut overstory; hackberry, elm understory

DBH (Avg): 10”                      BA: 200

**Management Class** – Limited Forest Management

**Management Prescription** – No Activity

No management practices are recommended. This stand will be monitored for insect and disease problems.

### **Stand 4: 7 acres**

**Description** – Fallow field, brushy; old poplar test plot(?)

**Management Class** – Non-Forest

**Management Prescription** – Natural Reforestation

This site will be allowed to naturally convert to forest; re-evaluate in the future for FSI.

### **Stand 5: 2 acres**

**Description** – Walnut progeny site; fenced/maintained

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

This site will continue to be monitored and maintained as a research plot.

**Stand 6: 3 acres**

*Description* – Mixed bottomland hardwoods

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 7: 9 acres**

*Description* – White pine, red pine overstory; black locust, honeysuckle understory

DBH (Avg): 12”                      BA: 140

*Management Class* – Limited Forest Management

*Management Prescription* – Forest Stand Improvement

Invasive species will be removed and chemically treated. Pine will be thinned as needed for increased vigor.

**Stand 8: 8 acres**

*Description* – Native prairie

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to control unwanted woody vegetation and encourage native grasses and forbs. A small patch of Chinese Lespedeza is present – will be chemically controlled and monitored.

**Stand 9: 5 acres**

*Description* – Grassy field with native prairie species present, previously walnut progeny site that was unsuccessful

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be burned periodically to control woody vegetation and improve diversity of native grasses and forbs.

**Stand 10: 7 acres**

*Description* – Red pine, white pine overstory; honeysuckle understory

DBH (Avg): 10”                      BA: 190

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This stand will continue to be monitored for insect and disease problems. Honeysuckle will also be monitored to be maintained at an acceptable level or controlled.

**Stand 11: 10 acres**

*Description* – Elm, cherry, honeylocust, white oak, bur oak, hackberry overstory; mulberry, Osage understory

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 12: 5 acres**

*Description* – Native prairie, scattered cedars

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

The cedars will be removed from this site and prescribed burning will control unwanted woody vegetation and improve diversity.

**Stand 13: 21 acres**

*Description* – White pine plantation

DBH (Avg): 12”                      BA: 210

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended. The white pine is currently in good health; stand will be thinned if / when needed.

**Stand 14: 5 acres**

*Description* – Bur oak, basswood, hackberry, elm overstory; hackberry, elm understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 15: 7 acres**

*Description* – Black oak, bitternut, bur oak, walnut, white oak

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized on this stand to focus on oak and walnut. Trees will be released at a rate of 30-40 crop trees per acre.

**Stand 16: 6 acres**

*Description* – Native prairie, brushy, cedar

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will have cedars / brush removed and will be periodically burned to improve prairie component.

**Stand 17: 6 acres**

*Description* – White pine

DBH (Avg): 12”                      BA: 160

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 18: 28 acres**

*Description* – Black oak, hickory, white oak, red oak, elm, bur oak, ash, hackberry overstory; ash, elm, hickory, ironwood understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand has storm damage and is near the trail system; a free thinning will be utilized to improve the safety and aesthetics of the stand near trail.

**Stand 19: 10 acres**

*Description* – White oak, red oak, black oak, walnut, elm, bur oak

DBH (Avg): 12”                      BA: 60

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand will benefit from shelterwood harvest; scattered mature trees will be removed in first cut to open up canopy for regeneration before the second and final cut is made.

**Stand 20: 6 acres**

*Description* – Successional woody – harvested in 1994; oak, hackberry, ash, bitternut, walnut, basswood, cherry

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended at this time. The stand will need FSI in 15-20 years.

**Stand 21: 42 acres**

*Description* – Hickory, bur oak, white oak, red oak, black oak, basswood overstory; elm, hickory understory

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 22: 16 acres**

*Description* – Bur oak, hickory, black oak, hackberry overstory; heavy ironwood understory

DBH (Avg): 12”                      BA: 60

*Management Class* – Non-Forest



***Management Prescription*** – Prairie / Savanna Activities

Clear understory of ironwood and use prescribed burning to maintain this site as savanna.

**Stand 23: 14 acres**

***Description*** – Walnut, bur oak, bitternut, honeylocust, hackberry, silver maple overstory; elm, hackberry understory

DBH (Avg): 10”                      BA: 60

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized on this stand to release select walnut at a rate of 35-45 crop trees per acre. Large, mature bur oaks can be removed with an adjacent sale.

**Stand 24: 13 acres**

***Description*** – Bur oak, hickory, black oak, walnut, Osage overstory; hickory, elm understory

DBH (Avg): 12”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 25: 34 acres**

***Description*** – Walnut, elm, bur oak, bitternut, basswood, hackberry overstory; elm, walnut understory

DBH (Avg): 10”                      BA: 70

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

This site has good walnut timber potential. Crop tree release will be utilized to release select walnut at a rate of 30-40 crop trees per acre.

**Stand 26: 7 acres**

*Description* – Bur oak, black oak, elm, hackberry, ash, hickory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to improve species composition and release select oak at a rate of 30-40 crop trees per acre.

**Stand 27: 5 acres**

*Description* – White pine, red pine

DBH (Avg): 12”                      BA: 140

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended at this time. Monitor stand for insect and disease problems; thin if needed.

## **Whitebreast Unit Compartment 4**

**Stand 1: 26 acres**

*Description* – White oak, red oak, hickory, black oak, bur oak overstory; hickory, elm, oak, ironwood understory

DBH (Avg): 12”                      BA: 120

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 2: 11 acres**

***Description*** – Mixed pine; white pine, red pine, jack pine overstory; oak, cherry, ash, grassy understory

DBH (Avg): 12”                      BA: 220

***Management Class*** – Limited Forest Management

***Management Prescription*** – No Activity

No management practices are recommended; this stand will be monitored for insect and disease problems. Chinese Lespedeza is present in openings.

**Stand 3: 14 acres**

***Description*** – Black locust, ash, walnut, elm, buckeye, silver maple, hackberry overstory; hackberry, elm, buckeye understory

DBH (Avg): 12”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

A combination of weed tree eradication and crop tree release will be used to remove black locust from the stand and to release desirable oak and walnut stems at a rate of 30-40 crop trees per acre.

**Stand 4: 4 acres**

***Description*** – Black locust, elm, bur oak overstory; cherry, elm understory

DBH (Avg): 8”                      BA: 80

***Management Class*** – Active Forest Management

***Management Prescription*** – Stand Conversion

The overstory of this stand will be removed. Regeneration will be supplemented with planting of native hardwoods.

**Stand 5: 14 acres**

***Description*** – Hickory, walnut, bitternut, hackberry, white oak overstory; hickory, elm understory

DBH (Avg): 8”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to release walnut and oak at a rate of 35-45 crop trees per acre.

**Stand 6: 122**

***Description*** – White oak, red oak, black oak, hickory overstory; ironwood understory

DBH (Avg): 10”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to release oaks at a rate of 40-50 crop trees per acre. Part of this stand had CTR completed in 2000.

**Stand 7: 55 acres**

***Description*** – White oak, hickory, ash, red oak, black oak, bur oak, bitternut, cherry

DBH (Avg): 10”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to release oaks at a rate of 35-45 crop trees per acre.

### **Stand 8: 8 acres**

*Description* – Red oak, black oak, basswood, white oak, hickory, walnut overstory; ironwood, buckeye understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 9: 18 acres**

*Description* – Silver maple, walnut, elm, buckeye, hackberry

DBH (Avg): 18”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. Regeneration will be natural by seed.

### **Stand 10: 23 acres**

*Description* – White oak, bur oak, red oak and open grassy area; cherry, prickly ash, ironwood understory

DBH (Avg): 18”                      BA: 80

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be cleared of any undesirable species and periodically burned to restore savanna conditions.

### **Stand 11: 8 acres**

*Description* – Wetland Reserve Program; tree plantings: south planted in 1996, north planted in 2001

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; the planting will be re-evaluated for FSI second cycle.

### **Stand 12: 75 acres**

*Description* – Wetland Reserve Program; native grass planting completed in 2003, partially burned in 2005

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to discourage woody species and encourage native component.

### **Stand 13: 5 acres**

*Description* – Wetland Reserve Program; tree planting completed in 2001

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; this site will be re-evaluated for FSI second cycle.

### **Stand 14: 35 acres**

*Description* – Wetland Reserve Program; tree planting completed in 1999

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; this site will be re-evaluated for FSI second cycle.

**Stand 15: 13 acres**

*Description* – Wetland Reserve Program; tree planting completed in 2000

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; this site will be re-evaluated for FSI second cycle.

**Stand 16: 29 acres**

*Description* – Wetland Reserve Program; native grass planting completed in 2003

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to discourage woody species and encourage native component.

**Stand 17: 9 acres**

*Description* – Wetland Reserve Program; tree planting completed in 1998

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; this site will be re-evaluated for FSI second cycle.

**Stand 18: 197 acres**

*Description* – Wetland Reserve Program

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be burned periodically to discourage woody species and encourage native component.

**Stand 19: 68 acres**

*Description* – Wetland Reserve Program

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be burned periodically to discourage woody species and encourage native component.

## **Whitebreast Unit Compartment 5**

### **Stand 1: 6 acres**

*Description* – Hickory, bur oak, black oak overstory; hickory, oak understory

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release hickory and oak at a rate of 30-40 crop trees per acre.

### **Stand 2: 3 acres**

*Description* – Jack pine plantation; elm, autumn olive, black oak understory

DBH (Avg): 10”                      BA: 180

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

The jack pine, autumn olive and elm will be removed to release oak seedlings. New stand may need to be supplemented with planting.

### **Stand 3: 15 acres**

*Description* – Open grassy area with scattered early successional species; cedar, elm, boxelder, dogwood



*Management Class* – Active Forest Management

*Management Prescription* – Tree Planting

This stand will be modified in 2009 with repairs and improvements to North Pond area. Chinese Lespedeza is present in grassland component. Tree planting will take place after all site work is completed; species will include native hardwoods.

**Stand 4: 6 acres**

*Description* – Weed tree species; elm, cedar, autumn olive

DBH (Avg): 8”                      BA: 40

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; this stand will be left alone for wildlife habitat.

**Stand 5: 13 acres**

*Description* – Red pine, white pine overstory; elm, oak, honeysuckle understory

DBH (Avg): 10”                      BA: 200

*Management Class* – Limited Forest Management

*Management Prescription* – Forest Stand Improvement

This stand is in the viewshed of North Pond. Red pine is currently declining in the stand; thinning will be completed to improve growing conditions and sanitize the stand.

**Stand 6: 21 acres**

*Description* – White pine, red pine overstory; brushy draws

DBH (Avg): 10”                      BA: 180

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This stand will be monitored for insect and disease problems. Future FSI may be needed.

**Stand 7: 6 acres**

*Description* – Open grassy area; previously food plot

*Management Class* – Non-Forest

*Management Prescription* – Tree planting

This site will be planted to native hardwood species to improve connectivity and increase forested acres.

**Stand 8: 10 acres**

*Description* – Black oak, bur oak, hickory overstory; hickory understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand; trees will be released at a rate of 30-40 crop trees per acre.

**Stand 9: 4 acres**

*Description* – Native prairie; large population of Sericea lespedeza

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

The Chinese Lespedeza is very heavy in this native prairie. Chemical and mechanical controls will be attempted over the next cycle to determine if the prairie can be returned to a natural state.

If control methods fail, this site will be planted to native hardwoods.

**Stand 10: 13 acres**

*Description* – Walnut, elm overstory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release walnut at a rate of 30-40 crop trees per acre.

**Stand 11: 9 acres**

*Description* – Bur oak, black oak, hickory overstory; honeysuckle, autumn olive understory

DBH (Avg): 14”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended. Monitor population of honeysuckle and autumn olive.

**Stand 12: 26 acres**

*Description* – Successional woody

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 13: 4 acres**

*Description* – Bur oak, hickory, black oak overstory; autumn olive scattered understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 30-40 crop trees per acre.

### **Stand 14: 5 acres**

*Description* – Black oak, white oak, hickory overstory; elm, olive, ash, brushy understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 15: 6 acres**

*Description* – Development / recreation area; campgrounds; pine stands

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended. Monitor for pest and disease problems in pine plantations; thin if necessary for health or aesthetics. Control / monitor garlic mustard on north site of stand.

### **Stand 16: 4 acres**

*Description* – White pine, red pine

DBH (Avg): 12”                      BA: 170

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This stand will be monitored for health and thinned if necessary.

### **Stand 17: 7 acres**

*Description* – North Pond

*Management Class* – Non-Forest

***Management Prescription*** – No Activity

No management practices are recommended. Improvements to dam and access scheduled for 2009.

**Stand 18: 11 acres**

***Description*** – Mixed conifer; white pine, cedar overstory; elm, oak understory

DBH (Avg): 14”                      BA: 150

***Management Class*** – Limited Forest Management

***Management Prescription*** – No Activity

No management practices are recommended. This stand will be monitored for health and thinned if necessary.

**Stand 19: 2 acres**

***Description*** – Jack pine overstory; oak, olive, honeysuckle understory

DBH (Avg): 8”                      BA: 210

***Management Class*** – Limited Forest Management

***Management Prescription*** – Stand Conversion

The overstory in this stand will be removed and the site will be planted to native hardwood species.

**Stand 20: 14 acres**

***Description*** – White oak, red oak, hickory overstory; hickory, elm, cedar, ironwood understory

DBH (Avg): 8”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 35-45 crop trees per acre.

### **Stand 21: 3 acres**

*Description* – White oak, hickory, red oak, ash, walnut overstory; ironwood, ash, elm, hickory understory

DBH (Avg): 12”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 30-40 crop trees per acre. Weed tree eradication will also be utilized to decrease amount of ironwood on the stand; ironwood will be cut and chemically treated.

### **Stand 22: 13 acres**

*Description* – White oak, red oak, hickory overstory; ironwood understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 30-40 crop trees per acre. The few, scattered large oaks in the stand will remain as wildlife trees.

### **Stand 23: 3 acres**

*Description* – White oak, red oak overstory; ironwood understory

DBH (Avg): 16”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand has mature sawtimber and oak wilt present and will be harvested. Re-evaluate regeneration before harvest.

### **Stand 24: 11 acres**

*Description* – Elm, red oak, walnut, cottonwood, hickory overstory; ironwood, elm understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 25: 7 acres**

*Description* – Red oak, white oak, hickory overstory; ironwood understory

DBH (Avg): 14”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

There are large pockets of oak wilt in this stand. The stand should be harvested with shelterwood method; all infected red oaks will be removed on first cut and white and residual red on the final cut.

### **Stand 26: 10 acres**

*Description* – Ash, elm, bur oak, hickory, red oak, black locust, jack pine, red pine overstory; hickory, elm, black locust understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The overstory in this stand will be removed and the site will be planted to native hardwood species. Crop tree release will be utilized where desirable species are at a sufficient level (30-40 crop trees per acre).

**Stand 27: 6 acres**

*Description* – Red oak, hickory, elm, cedar, ash overstory; elm, ironwood, hickory understory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 35-45 crop trees per acre.

**Stand 28: 17 acres**

*Description* – White oak (almost pure pole stand), red oak overstory; oak, hickory, prickly ash understory

DBH (Avg): 10”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Crop tree release will be utilized to release select walnut and oak at a rate of 40-50 crop trees per acre.

**Stand 29: 2 acres**

*Description* – White pine, walnut, black locust overstory; cherry, elm, hickory understory

DBH (Avg): 14”                      BA: 190

*Management Class* – Limited Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be utilized to remove undesirable species such as black locust and elm. Pine will be monitored for health.

**Stand 30: 25 acres**

*Description* – White oak, hickory, bur oak, red oak overstory; hickory understory

DBH (Avg): 10”                      BA: 90



*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release oak at a rate of 30-40 crop trees per acre.

**Stand 31: 44 acres**

*Description* – White oak, red oak, bur oak, ash, hickory overstory; hickory, elm understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 32: 3 acres**

*Description* – Development / recreational area; campground

*Management Class* – Limited Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

## **Whitebreast Unit Compartment 6**

**Stand 1: 3 acres**

*Description* – Tree planting; mixed oak/hardwoods; pine is naturally seeding in

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 2: 42 acres**

*Description* – Mixed pine; red pine, white pine, Scotch pine; elm, ash, multiflora understory

DBH (Avg): 10”                      BA: 180

*Management Class* – Limited Forest Management

*Management Prescription* – Forest Stand Improvement

This stand is a viewshed along pond and road. The stand will be thinned to improve health and longevity of the stand.

**Stand 3: 2 acres**

*Description* – Open grassy area with scattered trees and brush

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This is adjacent to, and includes, the equestrian day use parking. The area will be cleared of brush and periodically burned to improve native component and discourage woody species encroachment.

**Stand 4: 4 acres**

*Description* – Black oak, hickory, walnut

DBH (Avg): 8”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized on this stand; select walnut and oak will be released at a rate of 35-45 crop trees per acre. This stand is a viewshed along pond with good potential for a demonstration area.

**Stand 5: 9 acres**

*Description* – Elm, bur oak, hickory overstory; hickory, elm understory

DBH (Avg): 8”                      BA: 70

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

This stand is currently low quality in terms of species composition. A combination of crop tree release and weed tree eradication will improve composition and growing conditions for desirable species.

**Stand 6: 7 acres**

**Description** – Successional woody; brushy, small trees (mostly elm)

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management practices are recommended.

**Stand 7: 11 acres**

**Description** – Bur oak, black oak, walnut overstory; hickory, elm, ash

DBH (Avg): 10”                      BA: 100

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized to release select walnut and oak in the stand at a rate of 35-40 crop trees per acre.

**Stand 8: 19 acres**

**Description** – Black oak, hickory, bur oak overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 80

**Management Class** – Active Forest Management

**Management Prescription** – No Activity

No management practices are recommended.

### **Stand 9: 17 acres**

*Description* – Successional woody; cedar, oak, elm

DBH (Avg): 4”                      BA: 40

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 10: 7 acres**

*Description* – Black oak, hickory, walnut, white oak overstory; hickory, elm understory

DBH (Avg): 8”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release select walnut and oak at a rate of 35-45 crop trees per acre. The few, scattered large oaks in the stand will remain as wildlife trees.

### **Stand 11: 3 acres**

*Description* – Black oak, hickory, scattered large oaks; elm, hickory understory

DBH (Avg): 8”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release select walnut and oak at a rate of 30-40 crop trees per acre. The few, scattered large oaks in the stand will remain as wildlife trees.

### **Stand 12: 8 acres**

*Description* – Hickory, black oak, bur oak overstory; hickory, elm, cedar

DBH (Avg): 8”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 13: 7 acres**

*Description* – Native grass (planted)

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to improve composition and discourage woody and invasive species.

**Stand 14: 8 acres**

*Description* – Native grass (planted)

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to improve composition and discourage woody and invasive species.

**Stand 15: 5 acres**

*Description* – Black oak, bur oak, cedar, elm

DBH (Avg): 6”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand; select oak will be released at a rate of 35-45 crop trees per acre. Weed tree eradication will remove elm and cedar.

**Stand 16: 7 acres**

*Description* – Scattered bur oak overstory; elm understory

DBH (Avg): 24”                      BA: 50

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This stand will be managed as savanna and a demonstration site. The understory and mid-story will be removed and prescribed fire will be introduced to improve the herbaceous layer.

**Stand 17: 4 acres**

*Description* – Walnut plantation, honeylocust

DBH (Avg): 6”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This is a poor site for walnut production. Future plans may include stand conversion.

**Stand 18: 3 acres**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be burned along with adjacent areas to improve native composition.

**Stand 19: 36 acres**

*Description* – Scattered, large bur oak; hackberry, elm, basswood understory

DBH (Avg): 22”                      BA: 80

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This stand will be managed as savanna and a demonstration site. The understory and mid-story will be removed and prescribed fire will be introduced to improve the herbaceous layer.

**Stand 20: 11 acres**

*Description* – Successional woody; cedar

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be cleared of brush and periodically burned to improve native component and discourage invasive and woody species.

**Stand 21: 23 acres**

*Description* – Agriculture field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 22: 5 acres**

*Description* – Black oak, hickory

DBH (Avg): 6”                      BA: 130

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release select oak at a rate of 35-45 crop trees per acre.

**Stand 23: 34 acres**

*Description* – Black oak, bur oak, hickory overstory; elm, hickory understory

DBH (Avg): 14”                      BA: 70

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 24: 20 acres**

***Description*** – Successional woody; scattered oak, elm

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 25: 12 acres**

***Description*** – Mixed conifer; pine plantations surrounded by cedar

DBH (Avg): 8”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended. This stand will be monitored for insect and disease problems and will be thinned if necessary.

**Stand 26: 1 acre**

***Description*** – Walnut plantation

DBH (Avg): 8”                      BA: 100

***Management Class*** – Active Forest Management

***Management Prescription*** – Forest Stand Improvement

This plantation will be thinned to improve growing conditions and decrease competition.

**Stand 27: 4 acres**

***Description*** – Black oak, hickory overstory; prickly ash understory

DBH (Avg): 10”                      BA: 80



*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 28: 12 acres**

*Description* – Mixed pine, cedar

DBH (Avg): 8”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 29: 2 acres**

*Description* – Fallow agricultural field

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to remove invasive and woody species and improve native component. Chinese Lespedeza present on the site will be chemically controlled.

**Stand 30: 8 acres**

*Description* – Elm, ash, locust overstory; brushy understory

DBH (Avg): 8”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The complete overstory of this stand will be removed and the site will be planted with native hardwood species.

**Stand 31: 5 acres**

*Description* – Red oak overstory; hickory, ash understory

DBH (Avg): 18”                      BA: 130

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. The regeneration will need to be re-evaluated before harvest.

**Stand 32: 8 acres**

*Description* – Bur oak, black oak, walnut overstory; hickory, elm understory

DBH (Avg): 8”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release walnut and oak at a rate of 35-45 crop trees per acre. Primary focus will be on walnut, secondary on oak.

**Stand 33: 8 acres**

*Description* – Bur oak, black oak overstory; hickory, elm understory

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 34: 16 acres**

*Description* – Jack pine, elm, locust

DBH (Avg): 10”                      BA: 40

*Management Class* – Active Forest Management

***Management Prescription*** – Stand Conversion

The jack pine in this stand is currently dead / dying. The overstory of pine, elm and locust will be removed and native hardwoods will be planted on the site.

**Stand 35: 4 acres**

***Description*** – Ash, mixed bottomland species

DBH (Avg): 10”                      BA: 110

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 36: 9 acres**

***Description*** – Black locust, elm overstory; elm understory

DBH (Avg): 8”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Stand Conversion

The overstory in this stand will be removed and the site will be planted to native hardwood species.

**Stand 37: 4 acres**

***Description*** – Jack pine, weed tree species

DBH (Avg): 10”                      BA: 50

***Management Class*** – Limited Forest Management

***Management Prescription*** – Stand Conversion

The overstory in this stand will be removed and the site will be planted to native hardwood species.

### **Stand 38: 3 acres**

*Description* – White pine plantation

DBH (Avg): 12”                      BA: 160

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended. This stand is currently in good health; the stand will be monitored for insect and disease issues.

### **Stand 39: 9 acres**

*Description* – Jack pine, weed tree species

DBH (Avg): 10”                      BA: 70

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

The overstory in this stand will be removed and the site will be planted to native hardwood species.

### **Stand 40: 4 acres**

*Description* – White oak, black oak overstory; hickory, prickly ash understory

DBH (Avg): 18”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. Currently, oak regeneration is not adequate; shelterwood method of harvest will be used to improve regeneration before final cut.

### **Stand 41: 1 acre**

*Description* – Open grassy area

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This site will be periodically burned to improve composition and discourage woody and invasive species.

**Stand 42: 4 acres**

*Description* – White oak overstory; hickory, ash understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 43: 1 acre**

*Description* – Past demonstration site (arboretum), brushy, invasive species

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This site will be cleared of unwanted brush and invasive species. The demonstration planting will be re-assessed; then kept or removed.

**Stand 44: 4 acres**

*Description* – Bur oak, black oak, hickory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 45: 1 acre**

*Description* – White oak (plantation?)

DBH (Avg): 12”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 46: 9 acres**

*Description* – Mixed pine

DBH (Avg): 10”                      BA: 160

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

The overstory in this stand will be removed and the site will be planted to native hardwood species.

**Stand 47: 11 acres**

*Description* – Weed tree species, scattered jack pine

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The overstory in this stand will be removed and the site will be planted to native hardwood species.

**Stand 48: 1 acre**

*Description* – Developed area next to campground (mowed triangle w/ white pine)

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 49: 5 acres**

*Description* – South Pond

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended. Keep dam clear of brush.

## Whitebreast Unit Compartment 7

**Stand 1: 4 acres**

*Description* – Mixed pine; red pine, white pine, jack pine overstory; elm, ironwood, oak, cedar understory

DBH (Avg): 12”                      BA: 170

*Management Class* – Limited Forest Management

*Management Prescription* – Forest Stand Improvement

Red and jack pine are currently in decline; remove overstory and replant with native hardwoods.

White pine is in good health; thin as needed.

**Stand 2: 28 acres**

*Description* – Black oak, hickory, white oak, cherry, elm overstory; heavy ironwood understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release select oaks at a rate of 35-45 crop trees per acre.

Large ‘wolf trees’ near roadway will be kept for aesthetic and wildlife purposes.

### **Stand 3: 2 acres**

*Description* – Red pine, white pine overstory; ash, elm, ironwood, hickory, bitternut understory

DBH (Avg): 10”                      BA: 120

*Management Class* – Limited Forest Management

*Management Prescription* – Stand Conversion

The red pine in this stand will be converted to native hardwoods by removal of pine overstory and planting of native hardwoods. The white pine will be thinned as needed to maintain good health.

### **Stand 4: 4 acres**

*Description* – Bur oak, elm, hickory, hackberry, bitternut, walnut

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from weed tree eradication and crop tree release. Select oak and walnut will be released at a rate of 30-40 crop trees per acre. Weed tree eradication will control elm and bitternut.

### **Stand 5: 23 acres**

*Description* – Walnut, bitternut, white oak, red oak, elm

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 6: 75 acres**



**Description** – White oak, red oak, ash, hickory overstory; ironwood, elm, hickory, ash understory

DBH (Avg): 10”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

Crop tree release will be utilized to release 35-45 crop trees per acre. Oak wilt is present on the south end of the stand.

**Stand 7: 14 acres**

**Description** – White oak, red oak, hickory, ash, cherry, walnut overstory; heavy ironwood, hickory, prickly ash understory

DBH (Avg): 14”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Harvest

This stand has oak wilt present in mature red oak; a shelterwood harvest will be completed. The affected red oak should be removed in first cut to open canopy for regeneration before final cut. An understory removal may be needed before final cut.

**Stand 8: 58 acres**

**Description** – White oak, hickory, ash, red oak overstory; heavy ironwood understory

DBH (Avg): 10”                      BA: 90

**Management Class** – Active Forest Management

**Management Prescription** – Forest Stand Improvement

This stand will benefit from crop tree release at a rate of 30-40 crop trees per acre. Part of the stand is heavy with pole hickory; that part of the stand will be thinned to improve species composition.

### **Stand 9: 6 acres**

*Description* – Successional woody; harvested in early 2000's; scattered 10" oaks, ironwood and oak regeneration present

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be utilized to control ironwood in the stand and residual large diameter trees will be removed to complete clearcut.

### **Stand 10: 9 acres**

*Description* – Successional woody; harvested in early 2000's; scattered residuals

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Weed tree eradication will be utilized to improve species composition in this early successional stand and scattered large diameter residuals will be removed.

### **Stand 11: 27 acres**

*Description* – White oak, red oak, hickory, ash overstory; ironwood, hickory, elm understory

DBH (Avg): 12"                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 12: 2 acres**

*Description* – Oak, hickory, elm pole

DBH (Avg): 8”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to improve species composition and reduce competition for 30-40 crop trees per acre.

**Stand 13: 9 acres**

*Description* – Jack pine, mixed hardwoods, cedar overstory; ironwood, hickory, oak, understory

DBH (Avg): 8”                      BA: 50

*Management Class* – Active Forest Management

*Management Prescription* – Stand Conversion

The jack pine, ironwood and black locust will be removed from the stand. FSI will be used on the native hardwoods remaining. No planting should be necessary as oak and walnut regeneration are adequate.

## **Whitebreast Unit Compartment 8**

**Stand 1: 7 acres**

*Description* – White oak, bur oak, red oak overstory; black oak, walnut, hackberry, hickory overstory

DBH (Avg): 18”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. Shelterwood harvest method will be utilized to improve regeneration conditions before the final cut.

**Stand 2: 24 acres**

*Description* – White oak, red oak, hickory overstory; ash, elm, hickory understory

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 3: 8 acres**

*Description* – Bur oak, hickory, black oak overstory; hackberry, hickory understory

DBH (Avg): 8”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A basal area thinning on this stand will improve growing conditions for residual trees.

**Stand 4: 10 acres**

*Description* – Cedar and mixed hardwoods; black oak, hickory, bur oak

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release and weed tree eradication will improve growing conditions, remove cedars and release 35-40 crop trees per acre.

**Stand 5: 3 acres**

*Description* – Hickory overstory; ironwood, hickory understory

DBH (Avg): 8"                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 6: 6 acres**

*Description* – Elm, ash, honeylocust overstory; brushy understory

DBH (Avg): 10"                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 7: 86 acres**

*Description* – White oak, red oak overstory; ironwood, elm, ash understory

DBH (Avg): 12"                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 8: 15 acres**

*Description* – White oak, red oak, hickory overstory; elm, hickory understory

DBH (Avg): 16"                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

Shelterwood harvest will be performed beginning in either first or second cycle. Re-evaluate first cycle.

### **Stand 9: 18 acres**

*Description* – Bur oak, white oak, hickory overstory; scattered ‘wolf trees’ and cedar

DBH (Avg): 8”                      BA: 130

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-45 crop trees per acre in pole stand. Large, scattered ‘wolf trees’ will be left for wildlife and aesthetic purposes.

### **Stand 10: 7 acres**

*Description* – Mixed bottomland hardwoods, walnut

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; this is a high quality walnut site.

### **Stand 11: 7 acres**

*Description* – Successional woody; clearcut in 2002; good oak regeneration

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended; this stand will be re-evaluated for FSI second cycle.

### **Stand 12: 2 acres**

*Description* – Successional woody; clearcut in 1994; good oak regeneration

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A post-harvest treatment will be performed to improve regeneration composition and to decrease number of undesirable species on the stand.

## **Whitebreast Unit Compartment 9**

### **Stand 1: 9 acres**

*Description* – Bur oak, red oak, hickory, white oak, black oak overstory; ironwood, hickory, elm, hackberry understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended. Oak wilt is present in the stand; re-evaluate for harvest (possibly non-commercial) second cycle.

### **Stand 2: 30 acres**

*Description* – Bur oak, hickory, red oak, cherry overstory; hickory, elm understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

### **Stand 3: 3 acres**

*Description* – Bur oak, basswood, hackberry, red oak, elm, silver maple

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 4: 14 acres**

*Description* – Walnut, hackberry, bur oak, red oak, honeylocust, river birch, cottonwood, silver maple overstory; hackberry, elm understory

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release walnut at a rate of 30-40 crop trees per acre.

**Stand 5: 10 acres**

*Description* – Bur oak, black oak, elm, red oak, cherry, cottonwood, honeylocust, ash overstory; ironwood, hackberry, elm understory; pockets of cedar

DBH (Avg): 14”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 6: 16 acres**

*Description* – White oak, red oak, hickory, black oak, bur oak, cherry overstory; ironwood, prickly ash, hackberry, hickory understory (heavy understory component)

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 7: 3 acres**



*Description* – White oak, red oak, bur oak, hickory overstory; elm, hickory understory

DBH (Avg): 10”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized in this stand to release oaks at a rate of 35-45 crop trees per acre.

**Stand 8: 20 acres**

*Description* – White oak, red oak, bur oak, hickory, black oak, cherry overstory; elm, hickory understory

DBH (Avg): 12”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 9: 19 acres**

*Description* – Bur oak, hickory, white oak, black oak, cherry, hackberry overstory; ironwood, elm understory

DBH (Avg): 12”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 10: 2 acres**

*Description* – Recreational area; campground / latrines

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 11: 1 acre**

*Description* – Previous firewood cut area; successional woody: bur oak, ironwood, hackberry, elm

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A basal area thinning will be completed in second cycle to open up the site and improve conditions for the regeneration of oak. Ironwood, elm and hackberry will be cut and chemically treated.

## **Whitebreast Unit Compartment 10**

**Stand 1: 30 acres**

*Description* – Bur oak, black oak overstory; elm understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 2: 72 acres**

*Description* – White oak, red oak, hickory overstory; elm, ash understory

DBH (Avg): 12”                      BA: 130

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 3: 32 acres**

*Description* – Red oak, white oak overstory; ironwood, elm understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 4: 12 acres**

*Description* – White oak, red oak, hickory overstory; elm, ash understory

DBH (Avg): 10”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 5: 28 acres**

*Description* – White oak, red oak overstory; elm, ash understory

DBH (Avg): 10”                      BA: 120

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 6: 12 acres**

*Description* – Mixed bottomland hardwoods, walnut

DBH (Avg): 12”                      BA: 110

*Management Class* – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 7: 31 acres**

***Description*** – Red oak, white oak, hickory overstory; ironwood, elm, ash, oak understory

DBH (Avg): 12”                      BA: 120

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 8: 20 acres**

***Description*** – White oak, red oak, hickory overstory; ironwood, cedar understory

DBH (Avg): 14”                      BA: 90

***Management Class*** – Active Forest Management

***Management Prescription*** – Harvest

This stand is mature and ready for harvest. A pre-harvest treatment will be needed to improve conditions for regeneration before harvest.

**Stand 9: 22 acres**

***Description*** – White oak, red oak, hickory overstory; ironwood, elm understory

DBH (Avg): 14”                      BA: 110

***Management Class*** – Active Forest Management

***Management Prescription*** – No Activity

No management practices are recommended.

**Stand 10: 18 acres**

***Description*** – Bur oak, hickory overstory; elm, hickory understory

DBH (Avg): 12”

BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 11: 10 acres**

*Description* – Fallow, grassy field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; leave open for wildlife.

## **Whitebreast Unit Compartment 11**

**Stand 1: 5 acres**

*Description* – Grassy field, old farmstead site, parking area

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 2: 92 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 3: 31 acres**

*Description* – Black oak, bur oak, ash, cherry, red oak, hickory

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 crop trees per acre.

**Stand 4: 12 acres**

*Description* – Basswood, bur oak, elm, cherry, honeylocust, Osage, ironwood, red oak

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-40 crop trees per acre. Weed tree eradication will be utilized to remove undesirable species from the stand.

**Stand 5: 19 acres**

*Description* – Elm, red oak, hickory, honeylocust, Osage; large, scattered oaks present

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of weed tree eradication and crop tree release (35-45 crop trees per acre) will be utilized to improve growing conditions and species composition.

**Stand 6: 15 acres**

*Description* – Hickory, bur oak, red oak, hackberry

DBH (Avg): 8”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 crop trees per acre.

**Stand 7: 29 acres**

*Description* – Red oak, hickory, white oak, bur oak, black oak

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 crop trees per acre.

**Stand 8: 8 acres**

*Description* – Red oak, white oak pole

DBH (Avg): 10”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This stand will benefit from crop tree release at a rate of 35-45 crop trees per acre.

**Stand 9: 8 acres**

*Description* – Black oak, ash, hickory, white oak

DBH (Avg): 10”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 crop trees per acre.

**Stand 10: 21 acres**

*Description* – White oak, red oak, hickory

DBH (Avg): 10”                      BA: 110

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-50 crop trees per acre.

**Stand 11: 16 acres**

*Description* – Red oak, cherry, elm, ash, hickory, white oak, bur oak

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 12: 11 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 13: 9 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 14: 27 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.



### **Stand 15: 49 acres**

*Description* – Silver maple, cottonwood, ash, walnut

DBH (Avg): 14”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – Harvest

This stand is mature and ready for harvest. Re-evaluate regeneration before harvest.

### **Stand 16: 70 acres**

*Description* – Red oak, bur oak, white oak

DBH (Avg): 10”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 35-45 crop trees per acre.

## **Whitebreast Unit Compartment 12**

### **Stand 1: 28 acres**

*Description* – Hickory, white oak, elm, cherry, walnut, ash

DBH (Avg): 8”                      BA: 70

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

This pole-sized stand will benefit from crop tree release at a rate of 35-45 crop trees per acre;

large, scattered ‘wolf trees’ will be kept for aesthetics and wildlife purposes.

### **Stand 2: 59 acres**

*Description* – Cedar, hickory, cherry, oak, honeylocust, Osage, autumn olive

DBH (Avg): 8”

BA: 40

*Management Class* – Non-Forest

*Management Prescription* – Prairie / Savanna Activities

This stand will be cleared of invasive species and prescribed burning will improve the diversity of the native grasses and forbs.

**Stand 3: 17 acres**

*Description* – Red oak, white oak, hickory, cherry

DBH (Avg): 10”

BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be utilized to release 30-40 crop trees per acre.

**Stand 4: 48 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 5: 25 acres**

*Description* – Agricultural field

*Management Class* – Non-Forest

*Management Prescription* – No Activity

No management practices are recommended; continue crop lease.

**Stand 6: 7 acres**

*Description* – Grassy, fallow fields

*Management Class* – Non-Forest

*Management Prescription* – Tree Planting

This site will be planted to native hardwoods, including oak and walnut.

**Stand 7: 26 acres**

*Description* – Hickory, bur oak, hackberry, elm, white oak, red oak overstory; heavy ironwood, elm, hackberry understory

DBH (Avg): 12”                      BA: 100

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 8: 8 acres**

*Description* – Red oak, white oak, bur oak, hackberry, hickory overstory; hickory, elm understory

DBH (Avg): 12”                      BA: 90

*Management Class* – Active Forest Management

*Management Prescription* – No Activity

No management practices are recommended.

**Stand 9: 15 acres**

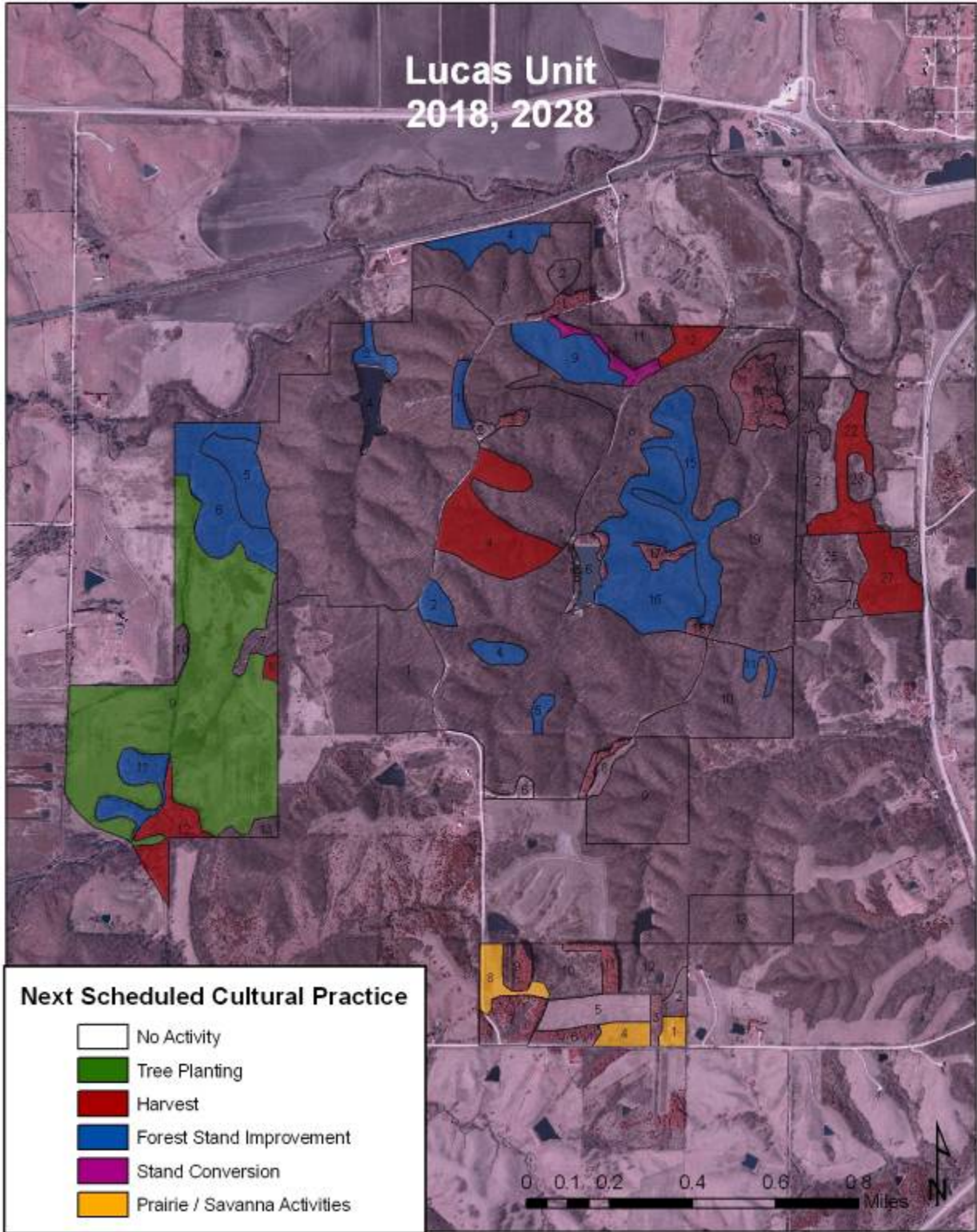
*Description* – Black oak, hickory, ash, elm, honeylocust

DBH (Avg): 10”                      BA: 80

*Management Class* – Active Forest Management

*Management Prescription* – Forest Stand Improvement

A combination of crop tree release and weed tree eradication will improve species composition and decrease competition in the stand; trees will be released at a rate of 30-40 crop trees per acre.



# Lucas Unit Compartment 1

## **Stand 1: 3 acres**

*Description* – Mixed pine

DBH (Avg): 14”                      BA: 160

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

Cleanup and salvage of dead or diseased trees is recommended periodically to ensure the longevity of the stand. No other management activities are recommended.

## **Stand 2: 3 acres**

*Description* - Mixed oak, hickory overstory; brushy understory; original stand was clearcut approximately 15 years ago

DBH (Avg): 4”                      BA: 70

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement

A crop tree release was completed in 2005. Weed tree removal of undesirable species such as elm and black locust was also done at this time. The stand should be revisited the next cutting cycle to determine if more thinning or weed tree removal is necessary.

## **Stand 3: 14 acres**

*Description* - Red oak, white oak, hickory; prickly ash, hickory understory

DBH (Avg): 14”                      BA: 120

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

#### **Stand 4: 10 acres**

*Description* – Elm, black walnut; parts of the stand are very boggy

DBH (Avg): 8”                      BA: 90

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement

Crop tree release was done on the walnut in 2006 on the better sites in the stand. This site needs to be revisited in 10-15 years to determine if more thinning is necessary.

## **Lucas Unit Compartment 2**

#### **Stand 1: 3 acres**

*Description* - Red pine

DBH (Avg): 12”                      BA: 180

*Management Class* - Limited Forest Management

*Management Prescription* - Forest Stand Improvement

Dead or diseased material will periodically be thinned and destroyed to allow sunlight to reach the native hardwood layer underneath. The stand will gradually be converted to oak / walnut using existing natural hardwood regeneration.

#### **Stand 2: 178 acres**

*Description* - Red oak, white oak, hickory overstory; ironwood, hickory, ash understory

DBH (Avg): 12”                      BA: 110

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 3: 3 acres**

*Description* – Successional woody; the area lies in a drainage behind the Hidden Pond dam

*Management Class* - Non-Forest

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 4: 6 acres**

*Description* - Hidden Pond

*Management Class* - Non-Forest

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 5: 12 acres**

*Description* - Mixed bottomland hardwoods, silver maple, walnut

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement

This stand was clearcut in 2007. Post-harvest treatment is needed to improve site for regeneration.

**Stand 6: 27 acres**

*Description* - Mixed bottomland hardwoods, walnut

DBH (Avg): 14”                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement



Crop tree release will be performed on the walnut in the stand to improve vigor and growth (30-35 crop trees per acre).

### **Stand 7: 6 acres**

*Description* - Mixed bottomland hardwoods; maple, hackberry

DBH (Avg): 12"                      BA: 70

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended at this time.

### **Stand 8: 1 acre**

*Description* – Cottonwood, maple; good quality stems

DBH (Avg): 16"                      BA: 140

*Management Class* - Active Forest Management

*Management Prescription* - Harvest

This site needs to be clearcut and regenerated. The site will regenerate naturally by seed from surrounding trees.

### **Stand 9: 143 acres**

*Description* - Open grassy area, historically in row crop; area contains many boggy and naturally wet areas

*Management Class* - Non-Forest

*Management Prescription* – Tree Planting

Structures need to be added to enhance shallow water areas in the stand. The drier areas will be planted to native hardwood species suitable to soils of the site.

### **Stand 10: 2 acres**

*Description* – Mixed bottomland hardwoods; hackberry, elm, bur oak, silver maple

DBH (Avg): 12”                      BA: 90

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended at this time.

**Stand 11: 10 acres**

*Description* - Mixed bottomland hardwoods, with a few good walnut stems

DBH (Avg): 12”                      BA: 80

*Management Class* - Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be performed on the stand to release the walnut and other favorable hardwoods (30-35 crop trees per acre).

**Stand 12: 12 acres**

*Description* - Silver maple, cottonwood.

DBH (Avg): 18”                      BA: 80

*Management Class* - Active Forest Management

*Management Prescription* - Harvest

This stand is mature and will be harvested. A regeneration cut will completely remove the stand allowing natural regeneration by seed.

**Stand 13: 3 acres**

*Description* - Mixed oak, shagbark hickory

DBH (Avg): 8”                      BA: 70

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

## Lucas Unit Compartment 3

### Stand 1: 68 acres

*Description* - Bur oak, black oak, hickory

DBH (Avg): 14"                      BA: 80

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

### Stand 2: 1 acre

*Description* - Campground; developed area

*Management Class* - Non-Forest

*Management Prescription* - No Activity

No management practices are recommended.

### Stand 3: 1 acre

*Description* - Red pine

DBH (Avg): 10"                      BA: 240

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended. Periodic salvage of dead or diseased trees is recommended to improve the longevity of the stand for aesthetics.

### Stand 4: 29 acres

*Description* - Red oak, white oak, hickory

DBH (Avg): 16"                      BA: 90

*Management Class* - Active Forest Management

*Management Prescription* - Harvest

This area will be harvested. All merchantable material will be removed and the residual stand will be cut to allow natural regeneration of the stand.

**Stand 5: 2 acres**

*Description* – Campground; developed area

*Management Class* - Non-Forest

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 6: 6 acres**

*Description* – Mine Pond

*Management Class* - Non-Forest

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 7: 1 acre**

*Description* - Mixed pine

DBH (Avg): 12"                      BA: 160

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended. Periodic salvage of dead trees or small scale brush clearing is recommended in this stand.

### **Stand 8: 48 acres**

*Description* - Mixed bottomland hardwoods, walnut

DBH (Avg): 12"                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

Crop tree release was completed on the walnut in 2006. The site needs to be re-evaluated for crop tree release in 10 years.

### **Stand 9: 15 acres**

*Description* - Hickory, red oak, white oak

DBH (Avg): 8"                      BA: 110

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement

Crop tree release will be performed on the stand to release some hickory and encourage the oak to try to improve diversity in the stand (40-45 crop trees per acre).

### **Stand 10: 5 acres**

*Description* - Black locust, conifers

DBH (Avg): 10"                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

### **Stand 11: 11 acres**

*Description* - Black oak, elm, black locust

DBH (Avg): 12"                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended at this time.

**Stand 12: 5 acres**

*Description* - Red oak

DBH (Avg): 18"                      BA: 120

*Management Class* - Active Forest Management

*Management Prescription* - Harvest

A shelterwood system was started on this stand in 2005 to remove approximately 60% of the stand. This is being completed using firewood permits to completely remove the material from the stand. A regeneration cut will completely remove the stand, allowing natural regeneration of red oak after adequate regeneration is on site.

**Stand 13: 8 acres**

*Description* - Red oak

DBH (Avg): 14"                      BA: 140

*Management Class* - Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be done to release the highest quality stems (30-40 crop trees per acre).

**Stand 14: 11 acres**

*Description* - Red pine

DBH (Avg): 10"                      BA: 200

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 15: 23 acres**

*Description* - Mixed conifers; successional woody

DBH (Avg): 10”                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement

The original pine stands (primarily Jack pine) are deteriorating and native hardwoods and black locust are taking over the area. The pine needs to be completely removed, along with black locust, elm, and other undesirable hardwoods. TSI was performed on part of this stand in 2006.

**Stand 16: 45 acres**

*Description* - Bur oak, black oak, hickory

DBH (Avg): 10”                      BA: 90

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement

TSI will be done to release desirable stems and remove tolerant hardwoods. Weed trees will be removed to create sunlight for oak regeneration.

**Stand 17: 3 acres**

*Description* - Red pine

DBH (Avg): 14”                      BA: 180

*Management Class* - Limited Management

*Management Prescription* - No Activity

No management practices are recommended. The stand appears healthy. It will be maintained for aesthetic and wildlife value for as long as possible through the removal of dead or diseased trees.

**Stand 18: 1 acre**

*Description* - Red pine

DBH (Avg): 12”                      BA: 180

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended. The stand will be maintained for aesthetic and wildlife value for as long as possible through the removal of dead or diseased trees. It will then be converted to native hardwoods.

**Stand 19: 74 acres**

*Description* - Red oak, white oak, hickory

DBH (Avg): 12”                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 20: 9 acres**

*Description* - Black oak, hickory, black locust

DBH (Avg): 10”                      BA: 80

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement



FSI was performed in 2006 to release black oak and hickory, and removed most of the black locust from the stand. A follow-up treatment needs to be done to remove residual black locust.

**Stand 21: 14 acres**

*Description* - Remnant native prairie

*Management Class* - Non-Forest

*Management Prescription* – Prairie / Savanna Activities

The area will be periodically burned to promote native vegetation. Competing trees and brush will be removed.

**Stand 22: 15 acres**

*Description* - Mixed bottomland hardwoods

DBH (Avg): 18”                      BA: 80

*Management Class* - Active Forest Management

*Management Prescription* - Harvest

The area is mature and will be harvested. The stand will be regenerated naturally from seed and from saplings in the residual stand.

**Stand 23: 4 acres**

*Description* – Successional woody

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 24: 9 acres**

*Description* - Black oak, hickory, elm

DBH (Avg): 8”                      BA: 80

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended at this time.

**Stand 25: 11 acres**

*Description* - Savanna

*Management Class* - Non-Forest

*Management Prescription* - Prairie / Savanna Activities

The area will be periodically burned to promote native vegetation. Competing trees and brush will be removed.

**Stand 26: 2 acres**

*Description* - Open grassy area

*Management Class* - Non-Forest

*Management Prescription* - Prairie / Savanna Activities

The area will be periodically burned to promote native vegetation. Competing trees and brush will be removed.

**Stand 27: 15 acres**

*Description* - Red oak, white oak, hickory overstory; ironwood understory

DBH (Avg): 18"                      BA: 90

*Management Class* - Active Forest Management

*Management Prescription* - Harvest

This stand is mature and should be harvested. A pre-harvest treatment is necessary to improve oak regeneration before cut.

**Stand 28: 4 acres**

*Description* - Mixed bottomland hardwoods

DBH (Avg): 16”                      BA: 60

*Management Class* - Limited Management

*Management Prescription* - No Activity

No management practices are recommended at this time.

## **Lucas Unit Compartment 4**

### **Stand 1: 27 acres**

*Description* - Red oak, white oak, hickory

DBH (Avg): 12”                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

### **Stand 2: 4 acres**

*Description* - Successional woody; clearcut in 1996

*Management Class* - Active Forest Management

*Management Prescription* – Forest Stand Improvement

Crop tree release will be performed to release 30-40 stems per acre and improve the vigor of the new stand in the second cycle.

### **Stand 3: 155 acres**

*Description* - Bur oak, black oak, hickory

DBH (Avg): 12”                      BA: 90

*Management Class* - Active Forest Management

***Management Prescription*** - No Activity

No management activities are recommended at this time.

**Stand 4: 4 acres**

***Description*** - Successional woody; clearcut around 1996

***Management Class*** - Active Forest Management

***Management Prescription*** - Forest Stand Improvement

A post-harvest treatment will remove undesirable residuals and shade-tolerant species that compete with oak regeneration.

**Stand 5: 2 acres**

***Description*** - Successional woody; clearcut in the 1990's

***Management Class*** - Active Forest Management

***Management Prescription*** - Forest Stand Improvement

Crop tree release will be performed to improve the vigor of the stand, releasing 30-45 trees per acre.

**Stand 6: 2 acres**

***Description*** - Campground; developed area

***Management Class*** - Non-Forest

***Management Prescription*** - No Activity

No management practices are recommended.

**Stand 7: 2 acres**

***Description*** - White pine

DBH (Avg): 10"

BA: 200

***Management Class*** - Limited Forest Management

***Management Prescription*** - No Activity

No management practices are recommended. Periodic salvage of dead trees or small scale brush clearing is recommended to improve the aesthetics of the stand.

**Stand 8: 3 acres**

***Description*** - Open grassy area; some native prairie present

***Management Class*** - Non-Forest

***Management Prescription*** - Prairie / Savanna Activities

The area will be periodically burned to promote native vegetation. Competing trees and brush will be removed.

**Stand 9: 34 acres**

***Description*** - Red oak, white oak, hickory

DBH (Avg): 12"                      BA: 100

***Management Class*** - Active Forest Management

***Management Prescription*** - No Activity

No management practices are recommended.

**Stand 10: 36 acres**

***Description*** - Black oak, bur oak, hickory

DBH (Avg): 10"                      BA: 90

***Management Class*** - Active Forest Management

***Management Prescription*** - No Activity

No management practices are recommended.

**Stand 11: 3 acres**

***Description*** - Black oak, hickory; previously clearcut

DBH (Avg): 4”

BA: 60

*Management Class* - Active Forest Management

*Management Prescription* - Forest Stand Improvement

Crop tree release will be performed to improve the vigor of the stand, releasing 30-40 trees per acre.

## Lucas Unit Compartment 5

### **Stand 1: 3 acres**

*Description* - Parking area; developed area

*Management Class* - Non-Forest

*Management Prescription* - No Activity

No management practices are recommended at this time.

### **Stand 2: 3 acres**

*Description* - Tree planting 2003; mixed conifer

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended. This area will be preserved as an aesthetic area.

Periodic brush clearing and thinning will help improve the stand.

### **Stand 3: 2 acres**

*Description* – White pine, red pine

DBH (Avg): 6”

BA: 80

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended. This stand was thinned in 2006 for the first time. Periodic brush clearing and thinning will help improve the stand. This area will be preserved as an aesthetic area.

**Stand 4: 5 acres**

*Description* - Open grassy area; scattered trees

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

This area will be preserved as an aesthetic area.

**Stand 5: 12 acres**

*Description* – Open, grassy area; previously hay field

*Management Class* - Non-Forest

*Management Prescription* - Prairie / Savanna Activities

The area will be periodically burned to promote native vegetation. Competing trees and brush will be removed.

**Stand 6: 6 acres**

*Description* - Mixed pine

DBH (Avg): 6”                      BA: 120

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended. Periodic salvage of dead or diseased trees is recommended to improve the longevity of the stand.

**Stand 7: 10 acres**

*Description* – Mixed pine

DBH (Avg): 8"

BA: 100

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended. Periodic salvage of dead trees or small scale brush clearing is recommended in this stand.

**Stand 8: 7 acres**

*Description* - Native prairie remnant

*Management Class* - Non-Forest

*Management Prescription* - Prairie / Savanna Activities

The area will be periodically burned to promote native vegetation. Competing trees and brush will be removed.

**Stand 9: 5 acres**

*Description* - Mixed pine

DBH (Avg): 8"

BA: 160

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended. Periodic salvage of dead trees or small scale brush clearing is recommended in this stand.

**Stand 10: 12 acres**

*Description* - Native prairie remnant

*Management Class* - Non-Forest

*Management Prescription* - Prairie / Savanna Activities



The area will be periodically burned to promote native vegetation. Competing trees and brush will be removed.

**Stand 11: 4 acres**

*Description* - Mixed pine

DBH (Avg): 8”                      BA: 160

*Management Class* - Limited Forest Management

*Management Prescription* - No Activity

No management practices are recommended. Periodic salvage of dead trees or small scale brush clearing is recommended in this stand.

**Stand 12: 12 acres**

*Description* – Elm, oak overstory; brushy understory

DBH (Avg): 10”                      BA: 70

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

**Stand 13: 19 acres**

*Description* - Red oak, white oak

DBH (Avg): 12”                      BA: 100

*Management Class* - Active Forest Management

*Management Prescription* - No Activity

No management practices are recommended.

## **Glossary**

**Acre:** An area of land containing 43,560 square feet. A *forty* of land contains 40 acres and a *section* of land contains 640 acres.

**All-aged:** An uneven-aged stand that represents all ages or age classes from seedlings to mature trees.

**Annual ring:** Trees in climates where growths stops or slows during portion of the year will form annual rings which can be read to determine tree age and growth rate. Annual rings are highly visible in species that form less dense wood during favorable growing conditions early in the season and denser wood less favorable conditions later in the year. In some tree species this differentiation does not occur and annual rings are difficult to see. In tropical species growth never, or seldom, ceases and annual rings may not be apparent.

**Bark:** The outer layer of the stems, limbs and twigs of woody plants. Often bark is characteristic of the species and can be used for identification.

**Basal area:** The cross-sectional area of the base of any object. In forestry, it is the cross-sectional area of a tree at 4.5 feet above the ground, expressed in square feet. The sum of all the trees on an acre is a measure of the density of the trees growing on the acre and is useful for making forest management decisions. Basal area can be calculated from tree diameter or can be easily measured with an angle gauge when certain relationships are known. Basal area will commonly range from 20 to 70 square feet per acre for poorly stocked stands to more than 200 square feet per acre for dense stands of conifers.

**Biodiversity (biological diversity):** The variety and abundance of species, their genetic composition and the communities and landscapes in which they occur, including the ecological structures, functions and processes occurring at all of those levels.

**Board foot:** A unit of measure of wood 1" thick and 1 foot on each side equaling 1/12 cubic foot of wood.

**Bole:** The stem or trunk of a tree; usually thought of as being that part without limbs- the merchantable part of the stem.

**Canker:** An imperfection on the trunk, limb or twig of a tree caused by an organism that kills a part of the tree's tissue. Canker-causing organisms sometimes exist in some sort of a balance with the host, never killing enough tissue to cause death. Cankers tend to weaken trees.

**Clearcut:** A method of regenerating a forest in which all trees on a given area are cut. Clearcutting results in conditions which allow the greatest amount of sunlight to reach the forest floor, a desirable condition for the regrowth of certain valuable tree species which need a lot of sunlight to grow, such as oak and walnut. Clearcutting also can create certain benefits for wildlife.

**Competition:** The struggle between trees to obtain sunlight, nutrients, water and growing space. Every part of the tree, from the roots to the crown, competes for space and food.

**Conversion:** A change though forest management from one tree species or association to another within a forest stand or site.

**Coppice:** All trees in the previous stand are cut and the majority of regeneration results from sprouts or roots suckers. *Coppice selection* -only selected stems of merchantable size are cut at each felling, giving uneven-aged stands. *Coppice with reserves*- reserve trees are retained to attain goals other than regeneration.

**Cord:** A unit of measure of wood that is equivalent to a pile of round wood 4 feet wide by 8 feet long by 4 feet high. A cord contains 128 cubic feet of wood and space.

**Cover type:** Expressed as the tree species having the greatest representation in a forest stand. A stand where the major species is oak would be called an oak cover type.

**Crop:** The vegetation growing on a forest area, more particularly the major woody growth having commercial value.

**Crop tree release:** Crop tree release is the practice of selecting the individual trees that are to remain in the stand until maturity and then removing the trees competing with them. Crop trees could be selected on the basis of any of the values associated with trees such as aesthetics, wildlife or economic values. Selected trees should be straight with long, clear boles, dominant or co-dominant and should be the trees bringing the best returns upon maturity.

**Crown:** Refers to that part of the tree consisting of limbs, branches, twigs and leaves.

**Cruise:** A survey of forest land to identify timber and estimate its species composition, products, size, quality or other characteristics.

**Cubic foot:** A wood volume measurement. A cubic foot of wood contains approximately six to 10 usable board feet of wood.

**Cull:** Refers to a tree having no commercial value, usually from having rot, holes, large knots or being crooked. It is important to note that a cull, though having no commercial value, may have wildlife, aesthetic or other values.

**Cultural practice:** The manipulation of vegetation to meet objectives of controlling stand composition or structure such as site improvement, forest stand improvement, increased regeneration, increased growth or insect and disease control measures.

**D.B.H.:** Stands for Diameter at Breast Height. Always taken at 4.5 feet above the ground.

**Defect:** An imperfection in a tree making it less desirable for some purpose. The term is commonly used to refer to some imperfection that will reduce the value of a tree or log for a product.

**Den tree:** A tree that has a hole in its stem that can be used as shelter by wildlife.

**Disturbance:** Any event, either natural or human induced, that alters the structure, composition or functions of an ecosystem. Examples include forest fires, insect infestations, windstorms and timber harvesting.

**Dominant (trees):** Individuals or species of the upper layer of the forest canopy.

**Early successional forest:** The forest community that develops immediately following the removal or destruction of vegetation in an area. Plant succession is the progression of plants from bare ground (e.g., after a forest fire or timber harvest) to mature forest. Succession consists of a gradual change of plant and animal communities over time. Early succession forests commonly depend on and develop first following disturbance events. Each stage of succession provides different benefits for a variety of species.

**Endangered species:** A plant or animal species that is threatened with extinction throughout all, or a significant portion, of its native range.

**Even-aged stand:** A stand of trees composed of a single age class.

**Floodplain forest:** Characterized by species such as silver maple, cottonwood, walnut, green ash, elm, hackberry and willows; forests that are on relatively level areas inundated by water periodically.

**Forest:** A forest is an ecosystem, an association of plants and animals. Trees are its dominant feature. They provide many benefits including habitat, water quality improvement, recreation, climatic amelioration and wood products. The plants and animals that make up a forest are interdependent and often essential to its integrity.

**Forester:** A professional engaged in the science and profession of forestry; foresters are commonly accredited by states or other certifying bodies (e.g., the Society of American Foresters) and may be licensed, certified or registered indicating specific education and abilities.

**Forest cover:** All trees and other plants occupying the space in a forest, including any ground cover.

**Forest fire:** An uncontrolled fire on lands covered wholly or in part by timber, brush, grass, grain or other flammable vegetation.

**Forest floor:** The accumulated organic matter at the soil surface, including litter and unincorporated humus.

**Forest inventory:** A set of objective sampling methods designed to quantify the spatial distribution, composition and rates of change of forest parameters within specified levels of precision for the purposes of management.

**Forest management:** The practical application of biological, physical, quantitative, managerial, economic, social and policy principles to the regeneration, management, utilization and conservation of forests to meet specified goals and objectives while maintaining the productivity of the forest. Forest management includes management for aesthetics, fish, recreation, urban values, water, wilderness, wildlife, wood products and other forest resource values.

**Forest stand:** A stand may loosely be defined as a contiguous group of trees sufficiently uniform in species composition, arrangement of age classes and general condition to be a homogeneous and distinguishable unit. A stand is usually treated as a basic silvicultural unit, but it seldom represents a natural ecological unit. Its composition and structure are most strongly affected by management, other disturbances and chance factors affecting seed distribution, germination and seedling survival.

**Forest Stand Improvement (FSI):** A practice in which the quality of a residual forest stand is improved by removing less desirable trees to achieve the desired stocking of the best quality trees or to improve the reproduction, composition, structure, condition and / or volume growth of a stand.

**Fully-stocked stand:** A forest stand in which all growing space is effectively occupied but having ample space for development of crop trees.

**Game species:** Game species include those terrestrial species that are hunted and trapped.

**Gap:** The space occurring in forest stands due to individual tree or groups of trees' mortality or blow-down. Gap management uses timber harvesting methods to emulate his type of forest spatial pattern.

**Geographic Information System (GIS):** Computer software used to manipulate, analyze and visually display inventory and other data.

**Group selection:** A process of harvesting patches of selected trees to create openings in the forest canopy and to encourage reproduction of uneven-aged stands.

**Hardwood:** Hardwoods are generally defined as the woods of deciduous trees (i.e., trees which shed their leaves in the winter).

**Landform:** Any physical, recognizable form or feature of the earth's surface having a characteristic shape and produced by natural causes. Examples of major landforms are plains, plateaus and mountains. Examples of minor landforms are hills, valleys, slopes, eskers and dunes. Together, landforms make up the surface configuration of the earth.

**Landscape:** A general term referring to geographic areas that are usually based on some sort of natural feature or combination of natural features. They can range in scale from very large to very small.

**Leave trees:** Live trees selected to remain on a site to provide present and future benefits, such as shelter, resting sites, cavities, perches, nest sites, foraging sites, mast and coarse woody debris.

**Management goals:** Overall purpose for managing the composition and structure of forest land. For example: to protect land from erosion, to maintain wildlife habitat, to control insect and disease outbreaks, etc.

**Management objectives:** Defined conditions for the property, or segments of property (e.g. stands or management units), that will achieve management goals.

**Management plan:** A plan outlining the objectives for individual management units and describing steps for achieving them. Silvicultural procedures are identified in broad terms, but detailed prescriptions are developed in the field.

**Mast:** Nuts, seeds, catkins, flower buds and fruits of woody plants that provide food for wildlife.

**Mature tree:** A tree that has reached the desired size or age for its intended use. Size or age will vary considerably depending on the species, intended uses and site conditions.

**Merchantable timber:** Trees or stands having the size, quality and condition suitable for marketing under a given economic condition.

**Multiple use:** Using and managing a forested area to provide more than one benefit simultaneously. Common uses may include wildlife, timber, recreation and improvement of water quality.

**Native plant community:** A group of native plants that interact with each other and with its environment in ways not greatly altered by modern human activity or by introduced organisms. Native plants communities are classified and described by physiognomy, hydrology, landforms, soils and natural disturbance regimes (e.g., wild fires, wind storms, normal flood cycles).

**Natural disturbances:** Disruption of existing conditions by natural events such as wildfires, windstorms, droughts, flooding, insects and disease.

**Natural regeneration:** The growth of new trees from one of the following ways: (a) seeds naturally dropped from trees or carried by wind or animals, (b) seeds stored on the forest floor or (c) stumps that sprout or roots that sucker.

**Non-forest land:** Land that has never supported forests, and land formerly forested where use for timber management is precluded by development for other uses such as crops, pasture, residential areas, city parks, improved roads and power line clearings.

**Non-game species:** Non-game species include amphibians, reptiles, and those mammal and bird species that are not hunted or trapped.

**Old-growth forests:** Forests defined by age, structural characteristics and relative lack of human disturbance. These forests are essentially free from catastrophic disturbances, contain old trees (generally over 120 years old), large snags and downed trees.

**Overstory:** The canopy in a stand of trees.

**Plantation:** A stand composed primarily of trees established by planting or artificial seeding.

**Pole or pole timber:** A young tree or stand of young trees between 3.5 inches and 12.9 inches dbh.

**Prairie:** An extensive tract of level or rolling land that was originally treeless and grass covered. A prairie is generally characterized by deep fertile soil and regular disturbance, usually by fire.

**Prescribed burn:** To deliberately burn wild lands in either their natural or their modified state under specified environmental conditions, which allows the fire to be confined to a predetermine area and produces the intensity and spread required to attain planned resource management objectives.

**Pruning:** The practice of removing tree limbs so that a straight bole, free of limbs, will develop. Pruning can be a component of FSI.

**Recreation:** Leisure activities involving the enjoyment and use of natural resources.

**Recreation facility:** The improvements within a developed recreation site offered for visitor's enjoyment.

**Regeneration:** The act of renewing tree cover by establishing generation usually maintaining the same forest type forest that was removed. Regeneration may be artificial (direct seeding or planting) or natural (natural seeding or planting).

**Release (release operation):** A treatment designed to free young trees from undesirable, usually over-topping, competing vegetation.

**Restoration:** A new planting of seedlings, direct seeding or regeneration of roots. This creates new habitat that will be of higher quality for wildlife.

**Riparian:** Related to, living or located in conjunction with a wetland, river, stream or lake.

**Riparian buffer:** Woodland next to streams, lakes and wetlands that are managed to enhance and protect aquatic resources. Buffers provide woody cover that will enhance soil and water conservation while providing wildlife habitat.

**Rotation age:** The period of years between when a forest stand is established and when it receives its final harvest. This time period is an administrative decision based on economics, site conditions, growth rates and other factors.

**Round wood:** Wood products that are used in their original form, only being cut to length. Includes firewood, posts, pulpwood and similar products.

**Salvage cut:** A harvest made to remove trees killed or damaged by fire, wind, insects, disease, or other agents. The purpose of salvage cuts is to use available wood fiber before further deterioration occurs to recover value that otherwise would be lost.

**Sanitation cut:** A cutting made to remove trees killed or injured by fire, insects, disease or other injurious agents (and sometimes trees susceptible to such injuries).

**Sapling:** A young tree larger than a seeding but smaller than a pole (dbh < 3.5 inches).

**Sapwood:** The wood found closest to the bark or outside of the bole and usually distinguished from heart wood by being lighter in color.

**Savanna:** Natural grassland, generally with a scattering of trees or shrubs.

**Saw log:** A log large enough to produce lumber or other products that can be sawed. Its size and quality vary with the utilization practices of the region.

**Sawtimber:** Trees that yield logs suitable in size and quality for the production of lumber.

**Scarify:** To break up the forest floor and topsoil preparatory to natural regeneration or direct seeding.

**Seedling:** A baby plant. In forestry the term usually used to refer to young trees that have grown beyond the stage where they have just emerged from the soil up to the point that they become saplings.

**Seed tree:** Any tree that bears seed; specifically, a tree left standing to provide the seed for natural regeneration.

**Seed tree method:** The harvest of all trees except for a small number of widely dispersed trees retained for seed production and to produce a new age class. Seed trees are usually removed after regeneration is established.

**Selective harvest:** Removal of single scattered trees or small groups of trees at relatively short intervals. The continuous establishment of reproduction is encouraged and an all-aged stand is maintained. A management option used for shade-tolerant species.

**Selection harvest:** A method of harvesting whereby individual trees are selected for harvest. A characteristic is that the form and appearance of the forest is maintained and the site is not exposed to sunlight and weathering. This scheme favors a tree species which tolerate shading such as maple and basswood.

**Shade tolerance:** Relative ability of a tree species to reproduce and grow under shade. The capacity to withstand low-light intensities caused by shading from surrounding vegetation.

**Shelterwood:** A method of regenerating a forest whereby a portion of the stand is harvested and the rest of the stand is evenly distributed over the area to protect the site and provide seed to regenerate the area. After the new stand is well established, the residual trees are harvested. This method is used to regenerate shade intolerant species.

**Shelterwood harvest:** A harvest cutting in which trees in the harvest area are removed in a series of two or more cuttings to allow the establishment and early growth of new seedlings under partial shade and protection of older trees. Produces an even-aged forest.

**Silvics:** The study of the life history and general characteristics of forest trees and stands, with particular reference to environmental factors, as basis for the practice of silviculture.

**Silviculture:** The art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

**Silvicultural prescription:** Specific steps prescribed to achieve specific management objectives.

**Single tree selection:** Individual trees of all sizes classes are removed more or less uniformly throughout the stand, to promote growth of remaining trees and to provide space for regeneration; synonym: individual tree selection.

**Site index:** A measure of the productive quality of an area where trees grow. Site index is based on the height of dominant and co-dominant trees at age 50. That is to say, if the average height of dominant and co-dominant trees on a site was 70 feet at age 50, 70 would be the site index. Graphs are developed to enable determination of site index over a range of tree ages.

**Site potential:** Collective physical resources (e.g., soil moisture, nutrients, light, heat) available for plant growth. Different potentials facilitate growth of some species and limit growth of others. Consequently, site potential has a strong effect on plant community development.

**Slash:** The non-utilized and generally unmarketable accumulation of woody material in the forest, such as limbs, tops, cull logs and stumps that remain in the forest as residue after timber harvesting.

**Snag:** A snag tree is a dead tree; commonly a tall, limbless tree. Though of little or no commercial value, they are a very valuable wildlife resource.

**Softwood:** Generally considered to be the wood of conifers.

**Stand:** A contiguous group of trees similar in age, species composition, structure and growing on a site of similar quality. One stand will usually have characteristics that will distinguish it from other stands. Differences could include species, average diameter, density and location.

**Stumpage:** The value of standing timber.

**Succession:** The natural replacement, over time, of one plant community with another.

**Sucker:** A shoot rising from below ground level from a root.

**Suppressed:** The condition of a tree characterized by low growth rate and low vigor due to competition from overtopping trees or shrubs.

**Sustainability:** Protecting and restoring the natural environment while enhancing economic opportunity and community well-being. Sustainability addresses three related elements: the environment, the economy and the community. The goal is to maintain all three elements in a

healthy state indefinitely. Meeting the needs of the present without compromising the ability of future generations to meet their needs.

**Thinning:** A silvicultural treatment made to reduce the density of trees within a forest stand; primarily used to improve growth, enhance forest health or recover potential mortality. *Row thinning* is where selected rows are harvested, usually the first thinning, which provides equipment operating room for future selective thinning. *Selective thinning* is where individual trees are marked or specified (e.g., by diameter, spacing, or quality) for harvest. *Commercial thinning* is thinning after the trees are of merchantable size for timber markets. *Pre-commercial thinning* is done before the trees reach merchantable size, usually done in overstocked stands to provide more growing space for crop trees.

**Threatened species:** A plant or animal species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its native range.

**Tolerance (shade tolerance):** A plant's ability to tolerate conditions under a forest canopy. Normally thought of as tolerance to low light conditions, but other understory conditions, such as root competition for water and nutrients, are also factors.

**Two-aged stand:** A stand with trees of two distinct age class separated in age by more than 20 percent of the rotation age.

**Under plant:** The planting of seedlings under an existing canopy or overstory.

**Under-stocked:** A stand of trees so widely spaced that even with full growth potential realized, crown closure will not occur.

**Understory:** The shorter vegetation (shrubs, seedlings, saplings, small trees) within a forest stand that forms a layer between the overstory and the herbaceous plants of the forest floor.

**Uneven-aged stand:** A stand with trees of three or more distinct age classes, either mixed or in small groups.

**Uneven-aged management:** A planned sequence of treatments designed to maintain and regenerate a stand with three or more age classes. Uneven-aged (selection) methods will maintain a multi-aged structure by removing some trees in all sizes classes either singly, in small groups or in strips: synonym: all-aged method.

**Viewshed:** A physiographic area composed of land, water biotic and cultural elements which may be viewed from one or more viewpoints and which has inherent scenic qualities and/ or aesthetic values as determined by those who view it. Viewsheds are a habitat factor that will be primarily a "hands-off" area for aesthetics and proper soil and water conservation, along with providing special wildlife values.

**Volume:** Refers to the amount of wood in a tree or log. Expressed as board feet, cords or other measures.

**Well-stocked:** The situation in which a forest stand contains trees spaced widely enough to prevent competition yet closely enough to utilize the entire site.

**Wolf tree:** A generally predominant tree with a broad, spreading crown that occupies more growing space than its neighbors.

**Woodland:** A plant community in which, in contrast to a typical forest, the trees are often small, characteristically short-boled relative to their crown depth, and forming an open canopy with intervening area occupied by lower vegetation, commonly grass.

**Woodland edge:** An area of habitat transition that consists of vegetation (herbaceous and woody) of different heights and densities. Edge can favor early successional wildlife species.



## Threatened and Endangered Species by County

*The following is a list of species that are state and / or federally listed as threatened or endangered. These species have been recorded / surveyed to be found in the corresponding county. Lists taken from Iowa DNR Natural Areas Inventory webpage.*

### **Summary by Species Report**

Total Unique Listed Species In This County: 29

County	Common Name	Scientific Name	Class	State Status	Federal Status
APPANOOSE	Crawfish Frog	Rana areolata	AMPHIBIANS	E	
APPANOOSE	Bald Eagle	Haliaeetus leucocephalus	BIRDS	E	
APPANOOSE	Henslow's Sparrow	Ammodramus henslowii	BIRDS	T	
APPANOOSE	Northern Harrier	Circus cyaneus	BIRDS	E	
APPANOOSE	Chestnut Lamprey	Ichthyomyzon castaneus	FISH	T	
APPANOOSE	Byssus Skipper	Problema byssus	INSECTS	T	
APPANOOSE	Indiana Bat	Myotis sodalis	MAMMALS	E	E
APPANOOSE	Least Shrew	Cryptotis parva	MAMMALS	T	
APPANOOSE	Southern Bog Lemming	Synaptomys cooperi	MAMMALS	T	
APPANOOSE	Downy Woodmint	Blephilia ciliata	PLANTS (DICOTS)	T	
APPANOOSE	Earleaf Foxglove	Tomanthera auriculata	PLANTS (DICOTS)	S	
APPANOOSE	Golden Corydalis	Corydalis aurea	PLANTS (DICOTS)	T	
APPANOOSE	Hortulan Plum	Prunus hortulana	PLANTS (DICOTS)	S	
APPANOOSE	Lance-leaf Ragweed	Ambrosia bidentata	PLANTS (DICOTS)	S	
APPANOOSE	Spring Avens	Geum vernum	PLANTS (DICOTS)	S	
APPANOOSE	St. John's Wort	Hypericum canadense	PLANTS (DICOTS)	S	
APPANOOSE	Winged Monkey Flower	Mimulus alatus	PLANTS (DICOTS)	T	
APPANOOSE	Broom Sedge	Andropogon virginicus	PLANTS (MONOCOTS)	S	
APPANOOSE	Bush's Sedge	Carex bushii	PLANTS (MONOCOTS)	S	
APPANOOSE	False Hellebore	Veratrum woodii	PLANTS (MONOCOTS)	T	
APPANOOSE	Foxtail	Setaria geniculata	PLANTS (MONOCOTS)	S	
APPANOOSE	Glomerate Sedge	Carex aggregata	PLANTS (MONOCOTS)	S	
APPANOOSE	Great Plains Ladies'-tresses	Spiranthes magnicamporum	PLANTS (MONOCOTS)	S	
APPANOOSE	Slender Ladies'-tresses	Spiranthes lacera	PLANTS (MONOCOTS)	T	
APPANOOSE	Slim-leaved Panic Grass	Dichanthelium linearifolium	PLANTS (MONOCOTS)	T	
APPANOOSE	Tuberclad Orchid	Platanthera flava	PLANTS (MONOCOTS)	E	
APPANOOSE	Diamondback Water Snake	Nerodia rhombifer	REPTILES	T	

APPANOOSE	Slender Glass Lizard	Ophisaurus attenuatus	REPTILES	T	
APPANOOSE	Western Worm Snake	Carphophis amoenus	REPTILES	T	

**Summary by Species Report**

Total Unique Listed Species In This County: 19

County	Common Name	Scientific Name	Class	State Status	Federal Status
DAVIS	Bald Eagle	Haliaeetus leucocephalus	BIRDS	E	
DAVIS	Orangethroat Darter	Etheostoma spectabile	FISH	T	
DAVIS	Indiana Bat	Myotis sodalis	MAMMALS	E	E
DAVIS	Southern Bog Lemming	Synaptomys cooperi	MAMMALS	T	
DAVIS	Bent Milk-vetch	Astragalus distortus	PLANTS (DICOTS)	S	
DAVIS	Downy Woodmint	Blephilia ciliata	PLANTS (DICOTS)	T	
DAVIS	Earleaf Foxglove	Tomanthera auriculata	PLANTS (DICOTS)	S	
DAVIS	False Loosestrife	Ludwigia peploides	PLANTS (DICOTS)	S	
DAVIS	Lance-leaf Ragweed	Ambrosia bidentata	PLANTS (DICOTS)	S	
DAVIS	Waxweed	Cuphea viscosissima	PLANTS (DICOTS)	S	
DAVIS	Winged Monkey Flower	Mimulus alatus	PLANTS (DICOTS)	T	
DAVIS	Broom Sedge	Andropogon virginicus	PLANTS (MONOCOTS)	S	
DAVIS	Bush's Sedge	Carex bushii	PLANTS (MONOCOTS)	S	
DAVIS	False Hellebore	Veratrum woodii	PLANTS (MONOCOTS)	T	
DAVIS	Meadow Bluegrass	Poa wolfii	PLANTS (MONOCOTS)	S	
DAVIS	Slender Ladies'-tresses	Spiranthes lacera	PLANTS (MONOCOTS)	T	
DAVIS	Copperhead	Agkistrodon contortrix	REPTILES	E	
DAVIS	Slender Glass Lizard	Ophisaurus attenuatus	REPTILES	T	
DAVIS	Speckled Kingsnake	Lampropeltis getulus	REPTILES	T	

**Summary by Species Report**

Total Unique Listed Species In This County: 7

County	Common Name	Scientific Name	Class	State Status	Federal Status
CLARKE	Barn Owl	Tyto alba	BIRDS	E	
CLARKE	Long-eared Owl	Asio otus	BIRDS	T	
CLARKE	Mead's Milkweed	Asclepias meadii	PLANTS (DICOTS)	E	T
CLARKE	Prairie Bush Clover	Lespedeza leptostachya	PLANTS (DICOTS)	T	T
CLARKE	Slim-leaved Panic Grass	Dichanthelium linearifolium	PLANTS (MONOCOTS)	T	
CLARKE	Slender Glass Lizard	Ophisaurus attenuatus	REPTILES	T	
CLARKE	Speckled Kingsnake	Lampropeltis getulus	REPTILES	T	

**Summary by Species Report**

Total Unique Listed Species In This County: 24

County	Common Name	Scientific Name	Class	State Status	Federal Status
LUCAS	Bald Eagle	Haliaeetus leucocephalus	BIRDS	E	
LUCAS	Long-eared Owl	Asio otus	BIRDS	T	
LUCAS	Northern Harrier	Circus cyaneus	BIRDS	E	
LUCAS	Red-shouldered Hawk	Buteo lineatus	BIRDS	E	
LUCAS	Byssus Skipper	Problema byssus	INSECTS	T	
LUCAS	Edwards' Hairstreak	Satyrium edwardsii	INSECTS	S	
LUCAS	Indiana Bat	Myotis sodalis	MAMMALS	E	E
LUCAS	Southern Bog Lemming	Synaptomys cooperi	MAMMALS	T	
LUCAS	Southern Flying Squirrel	Glaucomys volans	MAMMALS	S	
LUCAS	Spotted Skunk	Spilogale putorius	MAMMALS	E	
LUCAS	Cutleaf Water-milfoil	Myriophyllum pinnatum	PLANTS (DICOTS)	S	
LUCAS	Earleaf Foxglove	Tomanthera auriculata	PLANTS (DICOTS)	S	
LUCAS	False Loosestrife	Ludwigia peploides	PLANTS (DICOTS)	S	
LUCAS	Lance-leaf Ragweed	Ambrosia bidentata	PLANTS (DICOTS)	S	
LUCAS	Pink Milkwort	Polygala incarnata	PLANTS (DICOTS)	T	
LUCAS	Prairie Bush Clover	Lespedeza leptostachya	PLANTS (DICOTS)	T	T
LUCAS	Bush's Sedge	Carex bushii	PLANTS (MONOCOTS)	S	
LUCAS	Glomerate Sedge	Carex aggregata	PLANTS (MONOCOTS)	S	
LUCAS	Kidneyleaf Mud-plantain	Heteranthera reniformis	PLANTS (MONOCOTS)	S	
LUCAS	Slender Ladies'-tresses	Spiranthes lacera	PLANTS (MONOCOTS)	T	

LUCAS	Slender Sedge	Carex tenera	PLANTS (MONOCOTS)	S	
LUCAS	Yellow Trout-lily	Erythronium americanum	PLANTS (MONOCOTS)	T	
LUCAS	Slender Glass Lizard	Ophisaurus attenuatus	REPTILES	T	
LUCAS	Speckled Kingsnake	Lampropeltis getulus	REPTILES	T	

**Summary by Species Report**

Total Unique Listed Species In This County: 16

County	Common Name	Scientific Name	Class	State Status	Federal Status
MONROE	Red-shouldered Hawk	Buteo lineatus	BIRDS	E	
MONROE	Indiana Bat	Myotis sodalis	MAMMALS	E	E
MONROE	Southern Bog Lemming	Synaptomys cooperi	MAMMALS	T	
MONROE	Spotted Skunk	Spilogale putorius	MAMMALS	E	
MONROE	Earleaf Foxglove	Tomanthera auriculata	PLANTS (DICOTS)	S	
MONROE	Forked Aster	Aster furcatus	PLANTS (DICOTS)	T	
MONROE	Lance-leaf Ragweed	Ambrosia bidentata	PLANTS (DICOTS)	S	
MONROE	Rough Buttonweed	Diodia teres	PLANTS (DICOTS)	S	
MONROE	Broom Sedge	Andropogon virginicus	PLANTS (MONOCOTS)	S	
MONROE	Bush's Sedge	Carex bushii	PLANTS (MONOCOTS)	S	
MONROE	False Hellebore	Veratrum woodii	PLANTS (MONOCOTS)	T	
MONROE	Oval Ladies'-tresses	Spiranthes ovalis	PLANTS (MONOCOTS)	T	
MONROE	Philadelphia Panic Grass	Panicum philadelphicum	PLANTS (MONOCOTS)	T	
MONROE	Crowfoot Clubmoss	Lycopodium digitatum	PLANTS (PTERIODOPHYTES)	S	
MONROE	Ground Pine	Lycopodium clavatum	PLANTS (PTERIODOPHYTES)	E	
MONROE	Slender Glass Lizard	Ophisaurus attenuatus	REPTILES	T	

## Field Checklist for Stephens Forest BCA

Compiled by Iowa DNR Wildlife Diversity Program

\* = likely area breeder

**Iowa Wildlife Action Plan Migratory Species of Greatest Conservation Need**

**Iowa Wildlife Action Plan Nesting Species of Greatest Conservation Need**

- Snow Goose
- Canada Goose\*
- Wood Duck\*
- Gadwall
- American Wigeon
- Mallard
- Blue-winged Teal
- Northern Shoveler
- Hooded Merganser
  
- Ring-necked Pheasant\*
- Ruffed Grouse\***
- Wild Turkey\*
- Northern Bobwhite\***
  
- Pied-billed Grebe
  
- Double-crested Cormorant
  
- Great Blue Heron\*
- Great Egret
- Green Heron\*
  
- Turkey Vulture\*
  
- Osprey**
- Bald Eagle**
- Northern Harrier**
- Sharp-shinned Hawk\*
- Cooper's Hawk\*
- Northern Goshawk
- Red-shouldered Hawk\***
- Broad-winged Hawk\***
- Swainson's Hawk**
- Red-tailed Hawk\*
- Rough-legged Hawk
- Golden Eagle
  
- American Kestrel\*
  
- Sora
- American Coot
  
- Killdeer\*
  
- Spotted Sandpiper
- Lesser Yellowlegs**
- Semipalmated Sandpiper
- Least Sandpiper
- Pectoral Sandpiper

- \_\_\_ Wilson's Snipe
- \_\_\_ **American Woodcock\***
- \_\_\_ Ring-billed Gull
- \_\_\_ Rock Pigeon\*
- \_\_\_ Mourning Dove\*
- \_\_\_ **Yellow-billed Cuckoo\***
- \_\_\_ **Black-billed Cuckoo\***
- \_\_\_ Eastern Screech-Owl\*
- \_\_\_ Great Horned Owl\*
- \_\_\_ Barred Owl\*
- \_\_\_ **Long-eared Owl**
- \_\_\_ Northern Saw-whet Owl
- \_\_\_ **Common Nighthawk\***
- \_\_\_ Chuck-will's-widow\*
- \_\_\_ **Whip-poor-will\***
- \_\_\_ Chimney Swift\*
- \_\_\_ Ruby-throated Hummingbird\*
- \_\_\_ Belted Kingfisher\*
- \_\_\_ **Red-headed Woodpecker\***
- \_\_\_ Red-bellied Woodpecker\*
- \_\_\_ Yellow-bellied Sapsucker
- \_\_\_ Downy Woodpecker\*
- \_\_\_ Hairy Woodpecker\*
- \_\_\_ Northern Flicker\*
- \_\_\_ Pileated Woodpecker\*
- \_\_\_ Olive-sided Flycatcher
- \_\_\_ Eastern Wood-Pewee\*
- \_\_\_ **Acadian Flycatcher\***
- \_\_\_ **Willow Flycatcher\***
- \_\_\_ **Least Flycatcher\***
- \_\_\_ Eastern Phoebe\*
- \_\_\_ Great Crested Flycatcher\*
- \_\_\_ Eastern Kingbird\*
- \_\_\_ **Loggerhead Shrike\***
- \_\_\_ Northern Shrike
- \_\_\_ **White-eyed Vireo\***
- \_\_\_ **Bell's Vireo\***
- \_\_\_ Yellow-throated Vireo\*
- \_\_\_ Blue-headed Vireo
- \_\_\_ Warbling Vireo\*
- \_\_\_ Red-eyed Vireo\*
- \_\_\_ Blue Jay\*
- \_\_\_ American Crow\*

- Horned Lark\*
- Purple Martin\*
- Tree Swallow\*
- N. Rough-winged Swallow\*
- Bank Swallow\*
- Cliff Swallow\*
- Barn Swallow\*
  
- Black-capped Chickadee\*
- Tufted Titmouse\*
  
- Red-breasted Nuthatch
- White-breasted Nuthatch\*
  
- Brown Creeper**
  
- Carolina Wren\*
- House Wren\*
- Sedge Wren\***
  
- Golden-crowned Kinglet
- Ruby-crowned Kinglet
  
- Blue-gray Gnatcatcher\*
  
- Eastern Bluebird\*
- Veery\***
- Gray-cheeked Thrush
- Swainson's Thrush
- Hermit Thrush
- Wood Thrush\***
- American Robin\*
  
- Gray Catbird\*
- Northern Mockingbird\***
- Brown Thrasher\*
  
- European Starling\*
  
- Cedar Waxwing\*
  
- Blue-winged Warbler\***
- Golden-winged Warbler**
- Tennessee Warbler
- Orange-crowned Warbler
- Nashville Warbler
- Northern Parula\*
- Yellow Warbler\*
- Chestnut-sided Warbler\*
- Magnolia Warbler
- Yellow-rumped Warbler
- Black-throated Green Warbler
- Blackburnian Warbler
- Yellow-throated Warbler
- Bay-breasted Warbler

\_\_\_ Blackpoll Warbler  
\_\_\_ **Cerulean Warbler\***  
\_\_\_ **Black-and-white Warbler\***  
\_\_\_ American Redstart\*  
\_\_\_ **Prothonotary Warbler**  
\_\_\_ Ovenbird\*  
\_\_\_ Northern Waterthrush  
\_\_\_ **Louisiana Waterthrush\***  
\_\_\_ **Kentucky Warbler\***  
\_\_\_ Mourning Warbler  
\_\_\_ Common Yellowthroat\*  
\_\_\_ **Hooded Warbler**  
\_\_\_ Wilson's Warbler  
\_\_\_ **Canada Warbler**  
\_\_\_ **Yellow-breasted Chat\***

\_\_\_ Summer Tanager\*  
\_\_\_ Scarlet Tanager\*

\_\_\_ **Eastern Towhee\***  
\_\_\_ American Tree Sparrow  
\_\_\_ Chipping Sparrow\*  
\_\_\_ **Field Sparrow\***  
\_\_\_ Vesper Sparrow\*  
\_\_\_ **Lark Sparrow\***  
\_\_\_ Savannah Sparrow\*  
\_\_\_ **Grasshopper Sparrow\***  
\_\_\_ **Henslow's Sparrow\***  
\_\_\_ Fox Sparrow  
\_\_\_ Song Sparrow\*  
\_\_\_ Swamp Sparrow  
\_\_\_ White-throated Sparrow  
\_\_\_ Harris's Sparrow  
\_\_\_ White-crowned Sparrow  
\_\_\_ Dark-eyed Junco

\_\_\_ Northern Cardinal\*  
\_\_\_ Rose-breasted Grosbeak\*  
\_\_\_ Indigo Bunting\*  
\_\_\_ **Dickcissel\***

\_\_\_ **Bobolink\***  
\_\_\_ Red-winged Blackbird\*  
\_\_\_ **Eastern Meadowlark\***  
\_\_\_ Western Meadowlark\*  
\_\_\_ Common Grackle\*  
\_\_\_ Brown-headed Cowbird\*  
\_\_\_ Orchard Oriole\*  
\_\_\_ Baltimore Oriole\*

\_\_\_ Purple Finch  
\_\_\_ House Finch\*  
\_\_\_ American Goldfinch\*



**2008 Agriculture Tenants and Acreage Leased**

**Stephens State Forest**  
Updated December 2008

<b>Tenant Name</b>	<b>Leased Acres</b>
Bear, Terry	189.1
Herndon, Edwin	84.3
Cormeny, Letha	12.1
Wade, Jack	113.4
Boldt, Dennis	188
D'Attilio, Jerry	23
Grief, Mark	166.2
Hoffman, Robert	40
<b>Total</b>	<b>816.1</b>

Farm Management: Mid States Farm Management Company  
Darrell Limkeman, Farm Manager  
641-682-4107