Forest Wildlife Stewardship Plan
Willie Suchy Wildlife Management Area

Mahaska County

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Actively managing the forestlands owned by the Iowa DNR Wildlife Bureau are critical to improving habitat for a variety of wildlife species and improving the forest ecosystem structure and function. Stand maps, stand descriptions and work summary tables are provided to direct the forest management across 145 acres of forested land at Willie Suchy Wildlife Management Area in Mahaska County, Iowa.

Introduction

Conservation, preservation and enhancement of natural resources to ensure a legacy for future generations are central to the mission of the Iowa DNR. Within the DNR, the Wildlife Bureau manages more than 400,000 acres of land as wildlife management areas (WMAs) for a variety of public users. Many of these WMAs are either partially or mostly forest covered. These forests provide a unique opportunity for the DNR to carry out its mission by demonstrating science based management of these lands for enhancement and conservation of forest resources for the many species that depend on these habitats to survive.

The Wildlife Bureau recognizes the need for forest wildlife stewardship plans (FWSPs) to properly manage public forest resources. Forests, like all ecosystems, need management to sustain overall health. Although most forest management is more long term than other local ecosystems, it is still very important. Some forest stands may take more than 120 years to mature, a time span that may extend through the careers of several managers. This slow change requires managers to plan over the long term and create a detailed record of planning and work completed in the form of FWSPs.

Willie J. Suchy WMA is a 225-acre WMA located in northern Mahaska County. The WMA consists of a variety of different habitats which includes 146 acres of forested habitat. The forest habitat consists of approximately 100 acres of bottomland/riparian forest and the remaining 46 acres is composed of different age classes of upland forest. Managing forests is essential to improve the areas for wildlife and recreation.

This FWSP is a cooperative effort among DNR staff including the Sugema Wildlife Unit and District Forester. Stand mapping was completed by the District Forester. Fifteen unique stands are identified by tree species, tree size, relative stand density, topography, and management system. The biologist and forester discuss the options for each stand and how management of that stand will fit into the overall management objectives for the WMA. The forester's prescriptions are designed to manage each stand to reach the established goals and objectives for the WMA and to implement the goals and strategies of the 2020 Iowa Forest Action Plan as well as the 2015 Iowa Wildlife Action Plan .

Forest Stand Map of Willie Suchy WMA

Current Distribution of Tree Size on Willie Suchy WMA

The forest stands were cruised and mapped according to average tree size classes. Refer to the map on the following page 5.

Tree Size Class	Acres	% of Total Area
Seedlings (<1" DBH)	19.1	13%
Saplings (1-4" DBH)	0	0%
Pole size (5-11" DBH)	21.2	15%
Small sawlog size (12-18" DBH)	58.9	40%
Sawlog size (≥18" DBH)	47.0	32%
Total	146.2	100%

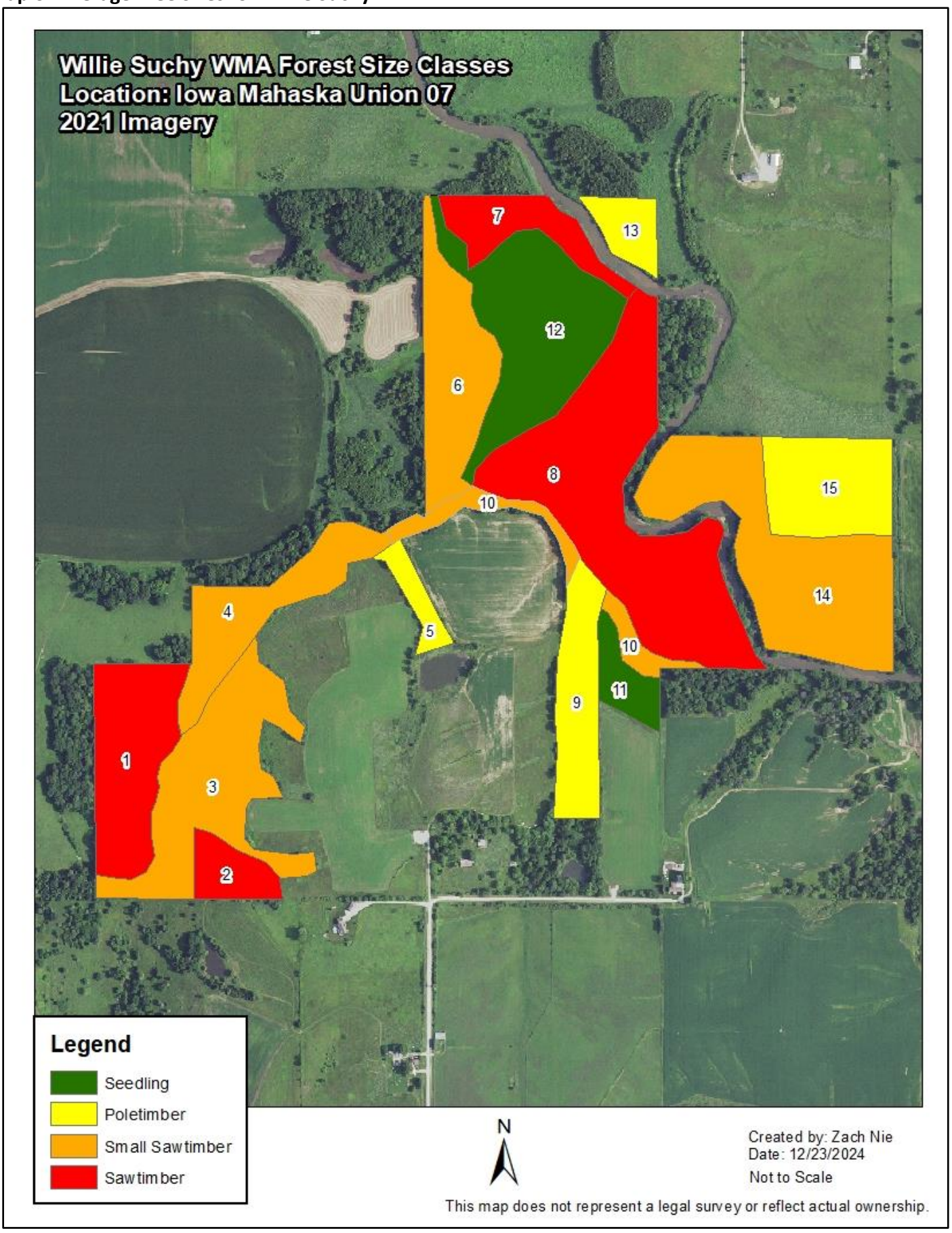
Proposed Management Systems for Willie Suchy WMA

Recommendations for each stand were based on whether the area will be managed to create early successional growth, on an even age system, uneven age system, or as viewshed. The decision on what system would be used was based on the objectives for the area to maintain an oak component, develop a diverse woodland landscape, protect fragile sites, improve water quality and increase the acres of early successional growth.

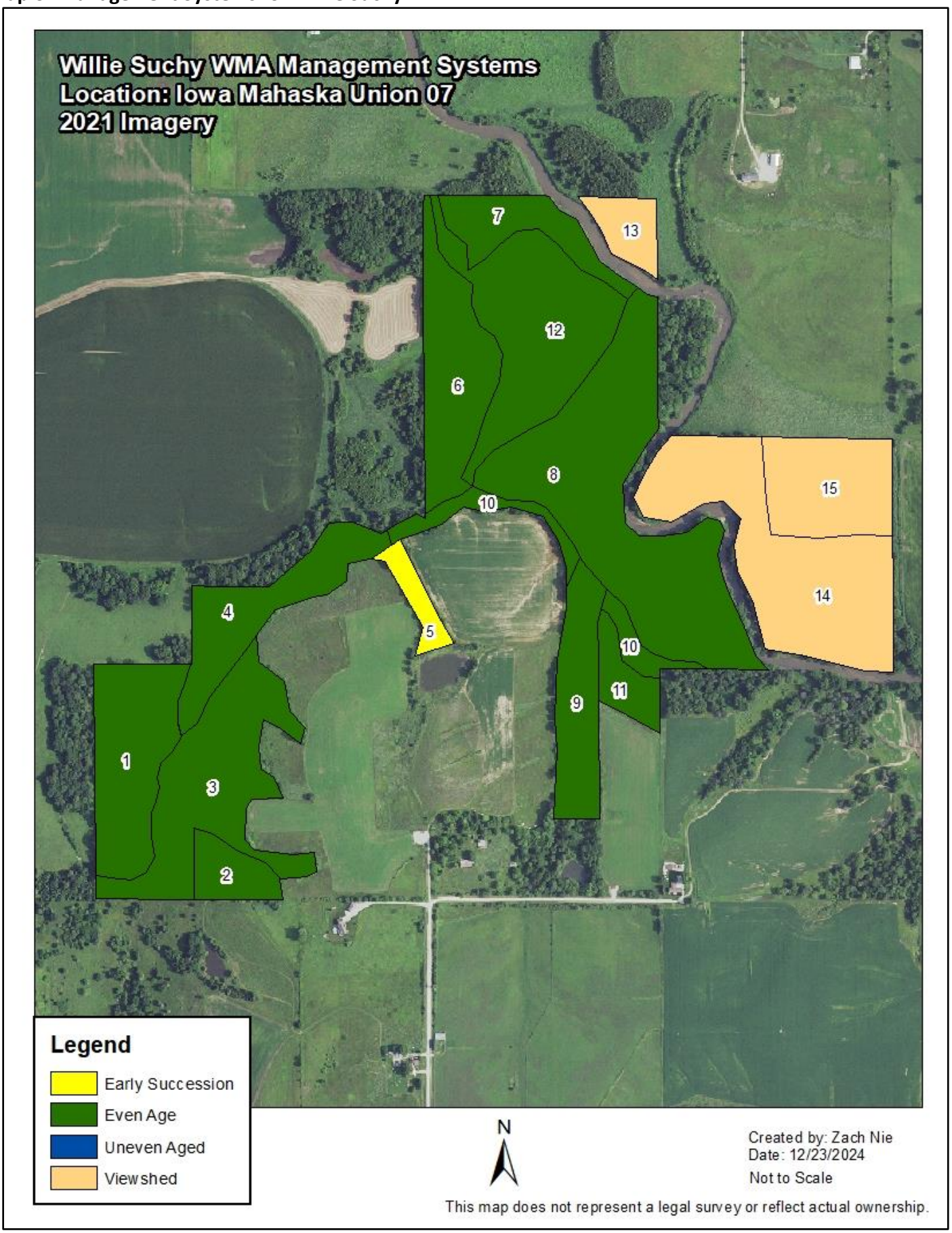
Based on recommendations for the areas, the acres under each management system are as follows. Refer to the map on the following page 6.

Management System	Acres	% of Total Area
Early Successional	2.0	1.4%
Even Age	112.2	76.7%
Uneven Age	0	0%
Viewshed	32	21.9%
Total	146.2	100%

Map of Average Tree Sizes for Willie Suchy WMA



Map of Management Systems for Willie Suchy WMA



Even Age Management

Even age management involves growing a stand of trees which are close to the same age. At some point in a stand's life, the area is clearcut which results in the even age structure. This type of management creates excellent habitat for deer, turkey, squirrels and other game and nongame wildlife species. It is essential for regeneration of oak, which requires full sunlight. The only way that oak can be maintained as a component of the forest over the long run is by practicing some form of even age management. The target rotation age for oak at Willie Suchy is 120 years. Even age management is also an effective way to manage bottomland hardwoods. The target rotation age for bottomland hardwoods at Willie Suchy is 80 years.

Each stage or age class of an even age stand provides habitat for a suite of wildlife species. For example, regenerating stands (1-10 years old) benefit the same species as do early successional stands, i.e. blue-winged warblers, black-billed cuckoo, yellow-billed cuckoo, eastern towhee, as well as bobwhite quail and American woodcock.

Sapling to small pole size stands between 10-20 years old may be used by black-and-white, Kentucky, and worm-eating warblers. Pole size to medium sized trees (20-60 years) tend to be used by canopy nesters such as scarlet tanagers and ground nesters such as ovenbirds and black-and-white warblers.

Mature stands of 60-125+ years of age are used by birds such as the wood thrush, Acadian flycatcher, ovenbird, pileated woodpecker worm-eating warbler and scarlet tanager.

As woodland stands age, they constantly lose trees to competition, insects, disease, etc. The dead and dying trees provide habitat for cavity nesters such as woodpeckers, nuthatches, titmice, and bluebirds. The state and federally endangered Indiana bat and federally endangered northern long-eared bat use loose barked live trees such as shagbark hickory as well as the sloughing bark from dying trees for their maternity colonies.

Thus, even age management has the potential to provide a large variety of age classes that can meet the needs of a variety of wildlife species.

While there are many methods to open a stand to sunlight, clearcutting and shelterwood harvesting are the most common. Clearcutting is a practice that opens the stand all at once. Clearcutting also provides highly desired early successional habitat for the first 15-20 years until the tree canopy closes. Regeneration via clearcutting requires there be sufficient oak seedlings or advanced regeneration present. Minus these seedlings, bare root planting may be necessary following clearcutting.

Shelterwood harvests are one way of recruiting seedling production prior to a clearcut. Shelterwood harvests include several thinnings done prior to the final clearcut. If the shelterwood is done correctly, the trees left after the thinnings will provide seed and the forest will be open enough to allow sunlight to reach the forest floor. The trees left will also help provide shade that limits the growth of undesirable or invasive plant species. This method can take 15-20 years to create the next oak stand and may need mechanical or fire disturbance to keep out undesirable species. After sufficient seedling or advanced regeneration is present, the stand needs to be clearcut to successfully regenerate the oak stand.

Patch-clearcuts are also an effective way to regenerate bottomland hardwood stands. Bottomland hardwoods are seeded via wind blown seed and flood waters. Patch-clearcuts are normally smaller than their total stand size depending on the topography and surrounding land features. All merchantable trees in the selected area will be harvested. Following the harvest, all remaining trees will be felled or girdled and left standing for wildlife. Surrounding trees on the edge of the patch-clearcut will be a seed source to reforest the opening. This makes patch-clear cuts ½ acre to 5 acres in size a good method to regenerate bottomland hardwoods with the full sunlight it needs. Patch openings allow seed from nearby trees to seed the site. Patch-clearcuts are a great way to diversify the age class of forest stands. If tree species that are not present in the surrounding area are desired a bareroot seedling planting may be needed. This can be done by planting 25-50 trees per acre and protecting them with 5' tree tubes or seedlings can be planted at a heavier rate of 200-300 trees per acre instead of using protection.

Crop tree release is discussed in this plan as a type of timber stand improvement. This practice is done most frequently when the trees are pole sized. The goal of the practice is to choose up to 50 trees per acre that are considered to have the best genetics. These trees are typically tallied and marked with paint, and then the trees that touch the canopy of the crop tree are killed to allow the crop tree to reach maximum growth potential, increase mast production, and improve forest health.

Thinning from below, also known as understory removal or weed tree removal is a practice also used in even age management. This practice involves removing trees that are below the main canopy to allow more sunlight to get to the forest floor. Ironwood, bitternut hickory, buckeye, elm, hackberry and other shade tolerant species warrant this practice when species like oak are desired in the future.

Prescribed fire is an effective and relatively inexpensive tool that has a long history of use, and continues to be studied, in managing oak stands. Occasional burning of the leaf litter in the woods will kill thin barked species that are less than two-inches in diameter such as invasive shrubs, hackberry, hard maple, buckeye, cherry, elm, bitternut hickory and ironwood. Fire will expose mineral soil and open up the ground to sunlight. These conditions favor the natural regeneration of oak. Depending on the extent of root system development, some oak seedlings will tolerate fire better than others, but as a whole, oaks tolerate fire better than other tree species. The top of an oak seedling often will die back following fire, but the roots will send up new growth soon thereafter. Oak has a superior competitive advantage thanks to their strong root collar and ability to sprout. Most shade tolerant trees, such as elm, bitternut hickory, ironwood and hackberry do not possess strong resprouting capabilities.

Uneven Age Management

Uneven age management develops a stand of trees with all DBH size classes. The stand structure is developed by selectively harvesting mature and defective trees, and removing unwanted small trees that are damaged or defective. Because uneven age stands always have large trees present, this system favors species that will grow in shade such as hackberry, hickory, hard maple and basswood. Sustainable harvest guidelines dictate the ability to selectively harvest mature and defective trees every 20 to 25-years in these stands.

Uneven age management will maintain blocks of woodland that will always have larger trees. This system is desirable where the overstory is lacking oaks, on steep slopes, and in areas where always having large trees is important.

Uneven age management areas will provide continuous tracts of woodland with infrequent disturbance. Large tracts of uneven age management will provide necessary habitat for Neotropical migratory bird species such as cerulean, hooded, Canada, and Kentucky warblers and is also important post-fledging habitat for songbirds that breed in early successional forest. Selective harvesting will create small openings in the canopy, which will increase ground cover, and enhance stand structure. Den trees will be left to provide cavities for wildlife such as woodpeckers, bats, and squirrels. Large oaks that are healthy will be left to provide acorns and host caterpillars, important food sources for many wildlife species. Timber stand improvement and selective harvesting will create woody debris on the forest floor for reptiles and amphibians and small mammals.

Early Successional Management

Many breeding bird species such as bobwhite quail, American woodcock, blue-winged warbler, black-billed cuckoo, yellow-billed cuckoo and eastern towhee are dependent on the early successional stages of woody growth. The high stem density of both trees and shrubs provides suitable nesting habitat and protection from predators. High levels of sunlight foster the growth of many flowering and fruiting plants in early successional forest, making them important foraging habitat for pollinators, bats, and migrating birds. Feathering and softening the edges may lessen nest parasitism of interior forest bird species by brown-headed cowbirds. The early successional management areas will be managed on a 15-year rotation. In other words, every 15-years the stands will be cut to maintain areas with high stem density and herbaceous plants. Shelterwood and clearcut harvesting in even age stands will also increase the overall early successional acreage on the WMA during certain periods of time.

Viewshed Management

Viewshed areas are typically areas with poor access, steep/fragile slopes and areas along streams that are best left to naturally progress through succession. Viewsheds may also be used to protect areas for endangered species or be used to protect certain public use facilities. Management can take place in these areas where desirable, but the major objective is to have minimal disturbance. Invasive species control is the most typical management in these stands.

Income from Timber Harvests

Income generated from timber harvesting operations must be reinvested into the WMA to promote oak regeneration and manage the forest for wildlife by thinning young stands, removing weed trees in the understory, providing conditions favorable to oak regeneration, and controlling invasive species. Without this reinvestment, there is little chance that the WMA annual budget will allow the recommendations in this plan to be implemented. Harvesting is not a significant portion of this plan. The majority of work recommended is directed at thinning young stands so the oak is not shaded by other trees and removing undesirable species to encourage regeneration of desirable oak species.

Work Plan for Willie Suchy WMA

The work plan for the Willie Suchy WMA is designed to aid foresters and natural resource managers in the implementation of forest management practices. It is written with the presumption that these professionals have a basic understanding of forest management principles and techniques. Every detail has not been outlined in the plan because the plan would become too long to be of practical use. This plan is intended to get work accomplished on the ground.

Stand 1: 10.9 ac

The overstory is moderately dense sawtimber size bur oak with a little black oak. There are also scattered small sawtimber size hackberry, elm, honey locust, black walnut, red mulberry and black cherry in the overstory. In the midstory there is hackberry, bitternut hickory, elm, hedge, black cherry, and basswood. Desirable regen is nearly absent due to shaded conditions, but there are some hackberry seedlings. Eastern wahoo was observed on the northern edge of this stand. The invasive species present in this stand are honeysuckle, multiflora rose, black locust, and barberry (southeast portion). Overall, the invasive species are found in light populations.

Prescription: Invasive species control should be done first, followed by a thinning from below (cutting trees in the understory that are suppressed or intermediate canopy class regardless of species). This stand should also be burned on approximately a 3-5-year burn interval. A shelterwood harvest could be considered in the future after the midstory removal.

Stand 2: 3.2 ac

This stand is very similar to stand 1. The overstory is sawtimber size oak with an understory of shade tolerant species including hackberry and bitternut hickory. There is more honeysuckle in this stand compared to stand 1.

Prescription: Honeysuckle control should be the highest priority, followed by a thinning from below. This stand should also be burned on a 3-5-year burn interval.

Stand 3: 15.4 ac

This stand consists of pole and small sawtimber size black cherry, hackberry, bitternut hickory, elm, honey locust, silver maple, black walnut, and bur oak in the overstory. Overall, oak is a very small component of this stand, approximately 5%. The midstory is mostly suppressed and intermediate hackberry, bitternut hickory, elm, and pockets of eastern red cedar. There is a heavy population of honeysuckle.

Prescription: Invasive species should be controlled, especially the honeysuckle. Perform a crop tree release. This stand can be included in the burn unit for stand 1 and 2, but it likely will not burn well due to lack of adequate fuels to support fire.

Stand 4: 8.9 ac

This stand is mostly small sawtimber size silver maple, river birch, honey locust, black walnut, and black cherry. The midstory is hedge, hackberry, and box elder. There are small amounts of honeysuckle present.

Prescription: This stand is lower priority than other stands. Control honeysuckle and perform a light crop tree release.

Stand 5: 2.0 ac
This stand has a significant amount of dead ash. The residual trees are mostly pole size honey locust, black cherry, and box elder.

Prescription: Maintain this area as early successional habitat. Clear cut this stand every 5-15 years. Maintain snags (target 6-10 per acre) for cavity nesting species.

Stand 6: 10.4 ac
This stand is mostly moderately dense small sawtimber silver maple with some scattered sawtimber size silver maple. There is also some elm, honey locust, and hackberry mixed in. Overall, the quality of timber in this stand is low. There are some openings with reed canary grass.

Prescription: Let this stand grow for at least the next ten years. At some point in the future this stand could be considered for a harvest and regeneration planting.

Stand 7: 5.4 ac
This stand is dominated by sawtimber size silver maple with some cottonwood and hackberry. The trees are somewhat scattered compared to stand 8. There is silver maple, mulberry, box elder, and suppressed black walnut. There are some elderberry shrubs on the edge of this stand. There are non native and invasive Japanese hops very prevalent on the northern edge of this stand and reed canary grass is on the forest floor.

Prescription: Control the Japanese hops. This stand can be considered for a harvest and regeneration planting.

Stand 8: 27.5 ac
This stand consists of dense sawtimber size silver maple. Other species present are elm and box elder, and mulberry. There is very little regen present. There are small patches of reed canary grass on the forest floor. There are also small patches of Japanese hops near the river.

Prescription: This stand is suitable for patch clearcuts 0.5 - 5 acres in size and regeneration plantings. Consider planting species like swamp white oak, pin oak, bur oak, and sycamore following harvest.

Stand 9: 7.4 ac
The overstory is poletimber size black walnut, honey locust, elm, black cherry, elm, silver maple, and scattered bur oak. The midstory is elm, honey locust, mulberry, hackberry, box elder, and hedge. The understory is thick with dogwood, honeysuckle. There is a significant amount of black walnut seedlings.

Prescription: Invasive species removal to control the honeysuckle. Weed tree removal to remove the mulberry, box elder, hedge, and honey locust.

Stand 10: 4.0 ac
This is an oak hickory stand with scattered large sawtimber size bur oak and white oak especially in the eastern half of the stand. There is also pole to small sawtimber size shagbark hickory, red oak, honey locust, black cherry, bitternut hickory, basswood, black walnut, and hackberry.

Prescription: Perform a crop tree release and honeysuckle control.

Stand 11: 2.8 ac
This is a tree planting that was planted in 2017. The stand consists of swamp white oak one to eight feet tall, white oak two feet tall, and pin oak. There are volunteer silver maple seedlings and scattered honey locust. The eastern half of this field does not have established tree seedlings.

Prescription: Fill in the eastern half of the field with tree planting and re-evaluate in 10 years for thinning or weed tree removal.

Stand 12: 16.3 ac
This is an open field dominated with reed canary grass. The soils are Colo and Kennebec.

Prescription: This field is suitable for reforestation. Establish trees via machine planting the field with 600+ trees per acre or a direct seeding.

Stand 13: 2.8 ac
This stand is across the river and access is very difficult. The stand consists of pole size cottonwood and willow with reed canary grass. Nearly half of the stand is open reed canary grass.

Prescription: Due to poor access this stand will be maintained as a viewshed.

Stand 14: 20.2 ac
This stand is very similar to stand 8 and is also across the river.

Prescription: Due to poor access this stand will be maintained as a viewshed.

Stand 15: 9.0 ac
This stand is an approximately 15 year old pole timber stand of silver maple and cottonwood and is located across the river.

Prescription: Due to poor access this stand will be maintained as a viewshed.

High Priority Projects

Management	Stand	Prescription	Acres
FSI	1	Thin From Below	10.9
FSI	2	Thin From Below	3.2
FSI	3	Crop Tree Release	15.4
Invasive Species	1	Honeysuckle, Japanese Barberry	10.9
Invasive Species	2	Honeysuckle	3.2
Invasive Species	3	Honeysuckle	15.4
Tree Planting	12	Reforestation	16.3

Summary of Stands

STAND #	ACRES	OVERSTORY	SIZE CLASS	MANAGEMENT	PRESCRIPTIONS	PRIORITY
1	10.9	Bur Oak	Sawtimber	Even Age	Invasive Species- L, Thin from Below, Prescribed Fire	H
2	3.2	Oak/Hickory	Sawtimber	Even Age	Honeysuckle Control-M, Thin From Below, Prescribed Fire	H
3	15.4	Central Hardwoods	Small Sawtimber	Even Age	Honeysuckle Control-VH, Crop Tree Release	H
4	8.9	Bottomland Hardwoods	Small Sawtimber	Even Age	Weed Tree Removal	L

STAND #	ACRES	OVERSTORY	SIZE CLASS	MANAGEMENT	PRESCRIPTIONS	PRIORITY
5	2.0	Dead ash, honey locust, black cherry	Pole Timber	Early Successional	Early Successional	M
6	10.4	Bottomland Hardwoods	Small Sawtimber	Even Age	No Management	L
7	5.4	Bottomland Hardwoods	Sawtimber	Even Age	Japanese Hops Control	L
8	27.5	Bottomland Hardwoods	Sawtimber	Even Age	Patch Clearcuts and Underplant	M
9	7.4	Central Hardwoods	Pole Timber	Even Age	Invasive Species Control- H Weed Tree Removal	M
10	4.0	Bur oak & White oak	Small Sawtimber	Even Age	Honeysuckle Control- L, Crop Tree Release	M
11	2.8	Plantation	Seedling	Even Age	Weed Tree Removal, Tree Planting	L
12	16.3	Open Field	RCG	Even Age	Herbicide Treatment, Tree Planting	H
13	2.8	Bottomland Hardwoods	Pole Timber	Viewshed	Viewshed	
14	20.2	Bottomland Hardwoods	Small Sawtimber	Viewshed	Viewshed	
15	9.0	Bottomland Hardwoods	Pole Timber	Viewshed	Viewshed	

Guidelines for Protecting Northern Long-Eared Bat, Indiana Bat, and Tricolored Bat

The Indiana Bat (*Myotis sodalis*) is a federal (50CFR Part 17) and state (Code of Iowa, Chapter 481B) endangered species that occurs in southern Iowa as far north as Highway 30. The Northern Long-Eared Bat (*Myotis septentrionalis*) is a federally Endangered Species that can occur in any county of Iowa. The Tricolored Bat (*Perimyotis subflavus*) is a federally Proposed Endangered Species that can occur in any county in Iowa. All three bats can be active from April through September in forested areas. Female Indiana bat and Northern Long-Eared Bats may roost and rear young in standing trees 3" DBH and larger, either dead or alive, with loose, shaggy, or peeling slabs of bark, cavities in the trunk or large limbs, or large cracks or openings. Tricolored bats roost in similar forested habitat but roost within leaf clusters instead of under loose bark.

To protect summer habitat for all three species of bats, adhere to the following guidance:

- Avoid felling any dead standing or live trees 3" DBH and larger that contain cavities, cracks or crevices, or loose, platy, peeling, or shaggy bark from April 1st through September 30th.
  - Such trees meeting the above criteria may be felled beginning October 1 through March 31; however, in all forest management projects, retain a minimum of 9 suitable habitat trees per acre if present above this rate.
  - Live trees may be girdled any time of year to create habitat snags in Forest Stand Improvement operations.
- Avoid conducting prescribed burns in woodlands from May 15 - August 15.
- Avoid clearcuts, seed tree harvests, or site preparation projects larger than 10 acres that could negatively affect suitable habitat.

Current List of Endangered, Threatened & Special Concern Species in Mahaska county.

County	Common Name	Scientific Name	Class	State Status	Federal Status	Link To Species Profile
MAHASKA	Bald Eagle	Haliaeetus leucocephalus	BIRDS	S		Bald Eagle
MAHASKA	Barn Owl	Tyto alba	BIRDS	E		Barn Owl
MAHASKA	Henslow's Sparrow	Ammodramus henslowii	BIRDS	T		Henslow's Sparrow

County	Common Name	Scientific Name	Class	State Status	Federal Status	Link To Species Profile
MAHASKA	Regal Fritillary	Speyeria idalia	INSECTS	S		
MAHASKA	Indiana Bat	Myotis sodalis	MAMMALS	E	E	Indiana Bat
MAHASKA	Northern Long-eared Bat	Myotis septentrionalis	MAMMALS		T	
MAHASKA	Southern Bog Lemming	Synaptomys cooperi	MAMMALS	T		Southern Bog Lemming
MAHASKA	Curved-pod Corydalis	Corydalis curvisiliqua ssp grandibracteata	PLANTS (DICOTS)	E		
MAHASKA	Downy Woodmint	Blephilia ciliata	PLANTS (DICOTS)	T		
MAHASKA	Earleaf Foxglove	Tomanthera auriculata	PLANTS (DICOTS)	S		
MAHASKA	Frost Grape	Vitis vulpina	PLANTS (DICOTS)	S		
MAHASKA	Hill's Thistle	Cirsium hillii	PLANTS (DICOTS)	S		
MAHASKA	Larkspur	Delphinium carolinianum	PLANTS (DICOTS)	S		
MAHASKA	Paw Paw	Asimina triloba	PLANTS (DICOTS)	S		
MAHASKA	Rough Bedstraw	Galium asprellum	PLANTS (DICOTS)	S		
MAHASKA	Rough Buttonweed	Diodia teres	PLANTS (DICOTS)	S		
MAHASKA	Roundstem Foxglove	Agalinis gattingeri	PLANTS (DICOTS)	T		
MAHASKA	Spring Avens	Geum vernum	PLANTS (DICOTS)	S		
MAHASKA	Winged Monkey Flower	Mimulus alatus	PLANTS (DICOTS)	T		
MAHASKA	Broom Sedge	Andropogon virginicus	PLANTS (MONOCOTS)	S		
MAHASKA	Bush's Sedge	Carex bushii	PLANTS (MONOCOTS)	S		
MAHASKA	Glomerate Sedge	Carex aggregata	PLANTS (MONOCOTS)	S		
MAHASKA	Meadow Bluegrass	Poa wolfii	PLANTS (MONOCOTS)	S		
MAHASKA	Oval Ladies'-tresses	Spiranthes ovalis	PLANTS (MONOCOTS)	T		
MAHASKA	Pale Green Orchid	Platanthera flava	PLANTS (MONOCOTS)	E		
MAHASKA	Shallow Sedge	Carex lurida	PLANTS (MONOCOTS)	S		
MAHASKA	Slender Ladies'-tresses	Spiranthes lacera	PLANTS (MONOCOTS)	T		
MAHASKA	Soft Rush	Juncus effusus	PLANTS (MONOCOTS)	S		
MAHASKA	Virginia Spiderwort	Tradescantia virginiana	PLANTS (MONOCOTS)	S		
MAHASKA	Crowfoot Clubmoss	Lycopodium digitatum	PLANTS (PTERIODOPHYTES)	S		
MAHASKA	Northern Adder's-tongue	Ophioglossum pusillum	PLANTS (PTERIODOPHYTES)	S		
MAHASKA	Bullsnake	Pituophis catenifer sayi	REPTILES	S		Bullsnake
MAHASKA	Smooth Green Snake	Liochlorophis vernalis	REPTILES	S		Smooth Green Snake

Legend
E= Endangered
T= Threatened
S= Special Concern