

Conservation Stewardship Management Plan Sample

Plan Prepared For:

Jill and John Doe
1 Natural Resources Way
Springfield, IL 62702
(217) 555-5555
dnr.csp@illinois.gov

Plan Prepared By:

Jill and John Doe
1 Natural Resources Way
Springfield, IL 62702
(217) 555-5555
dnr.csp@illinois.gov

Plan Preparation Date:

10/21/2022

Plan Expiration Date:

12/31/2032

Plan Acreage: 56.12

PIN: 14-15.0-100-012

Description: NW ¼ of Section 15, T16N, R5W, Springfield Township, Sangamon County, Illinois

GPS: 39.841032, -89.646002

Adjacent Land Use:

North – Agriculture

South – Mixed Timber and Agriculture

East – Mixed Timber and Agriculture

West – Agriculture

Property Access:

Access to the Doe property is from a gravel drive behind a locked gate at the corner of County Road 123 N and County Road 456 W. Contact landowners for a description on how to get a key for access.

Historically, the Doe property has been subject to many land uses. Much of the land was once cleared and used for row crop production or pasturing. Portions that are currently mature timber have likely been forested since agricultural abandonment in the late 1950s. Recently, invasive species have been treated and a select timber harvest was implemented 25 years ago to encourage desired natural regeneration and improve wildlife habitat. The Doe property consists of 5 different stands comprising of 55.64 total acres.

Stand Descriptions and Analysis

Stand 1

Stand 1 is a 35.30-acre upland hardwood forest with slopes ranging from 5-35% grade. Topography is gently rolling hills with some steeper incised ravines. Aspect is primarily southern and eastern facing exposure. It is estimated that the dominant trees are around 70 years old.

The dominant and codominant trees in Stand 1 primarily consist of oak species (Black, White, Bur, Shingle & Chinkapin) and hickory species (Shagbark & Bitternut) but there are areas where midstory sugar maples and honeylocust are receiving direct sunlight. Dominant trees have a DBH range of 18” to 26” and it is estimated that canopy cover is about 90%. The forest midstory is dominated by sugar maple, black cherry, hackberry, Osage-orange, honeylocust and elm species. There are few desirable tree species (oaks/hickories) in the midstory class.

Stand 1’s understory consists of mixed tree seedlings and saplings and a heterogeneous herbaceous (mixed grasses/forbs) layer. Lack of available light has reduced the occurrence of seedlings and saplings within the stand. While few in total, the most abundant tree seedling species noted was sugar maple, but elm, hickory, oak, and hawthorn species were noted along with hackberry, white ash, and honeylocust. Most saplings within the stand are either sugar maple, elm, or hackberry. Sassafras, bitternut hickory and buckeye saplings were also noted during the stand inventory.

Two different non-native invasive species were noted competing directly with the forest understory. Multiflora-rose and Asian bush honeysuckle were seen in varying abundance throughout the stand. They are most persistent along forest edges and pose a true threat to the longevity and health of the Doe property. These woody shrubs range from 2’ – 15’ tall. The approximate percent cover of Asian bush honeysuckle is 10% and multiflora-rose is 3%.

Stand 1 was selectively harvested approximately 25 years ago. The harvest targeted mature and over-mature trees and was aimed at opening light to the forest floor to increase desired oak/hickory regeneration and improving wildlife habitat. Some stumps remain throughout the stand, but evidence of this practice almost entirely gone. The site has recovered well, but the desired regeneration did not follow, likely due to a lack of post-harvest management and heavy deer populations. Currently, the landowners have been working to reduce undesirable tree species and eliminate non-native invasive species throughout the stand.

Stand 2

Stand 2 is a 7.92-acre, mostly flat (<10% slope) field currently being cut for hay production. The field is to be afforested by mechanical planting with desired, native hardwood tree species. Access for planting is adequate and soils should support the healthy growth of deciduous hardwood trees. Site index (Table 1) is approximately 80 feet of height after 50 years of growth for white oak. The stand will need to be prepared for planting properly and followed up with to ensure weeding is completed and to control any potential non-native invasive species threats. Currently no non-native invasive species are present within the stand.

Table 1. Soil Data for Stand 2.

Code	Name	Slope	Acreage	Site Index
8cD2	Hickory	10-18%	.1	85 White Oak
46A	Herrick	0-2%	2.0	NA
119C2	Elco	5-10%	.6	80 White Oak
127B	Harrison	2-5%	.2	NA
279B	Rozetta	2-5%	5.0	80 White Oak

Stand 3

Stand 3 is a 11.30-acre field currently in soybean production. The field is to be converted into a pollinator/prairie from the historic land use of agriculture to further diversify the property and maximize wildlife habitat and value. Slope within the stand ranges from 2-10%. Ample access already exists to the stand which will aid in the development and maintenance of this land cover type. The site must be properly prepared for seeding and maintained to eliminate any woody and non-native, invasive species. A mixture of native perennial grasses and wildflowers is desired. See the Stand Prescriptions for a more detailed list of desired species.

Stand 4

Stand 4 is a .30-acre constructed wetland residing within Stand 1. This unique feature is fed by ground seeps and holds water for the majority of the year. Water depth ranges from under one foot to about 3 feet. Little aquatic vegetation is present aside from woody buttonbush and black willow. The buffer around this wetland is entirely forested and this system serves as a sink for any upstream pollutants before the groundwater reaches the creek at the southern edge of the property. It is exceptional habitat for amphibians, reptiles, crayfish and many bird and game mammal species. The wetland buffer is maintained to eliminate invasive species and ensure the stabilization of the soils around it.

Stand 5

Stand 5 is a 1.30-acre pond that ranges from 3' feet near the shoreline to 16' near the dam. The pond was developed 5 years ago, and initial stocking was 700 bluegill, 125 largemouth bass, and 125 channel catfish all of fingerling size. In the second and fourth years after establishment, 25 – 10" channel catfish were stocked. Additionally, turtles, snakes, amphibians, crayfish, mammals and birds all utilize this pond for habitat. The shoreline is approximately 1000' in length, and the pond was installed with a 3' depth at the shoreline to reduce undesired aquatic vegetation. The pond border is only mowed/trimmed after August 1st to a height of 12" but two spots are maintained for access and the dam is kept tree free to increase its longevity.

Stand Prescriptions

Stand 1

Stand 1 is a 35.30-acre upland hardwood forest with mixed oak and hickory serving as the majority of dominant and codominant trees. Sugar maple and honeylocust trees dominate most of the midstory and greatly reduce available light to the forest floor and are often found competing directly with more desired (oaks/hickory) trees in the canopy. Invasive species (Asian bush honeysuckle/multiflora rose) are present and are currently at very treatable levels.

Goals:

Reduce impact of undesirable tree species throughout the stand.

Eliminate non-native invasive species throughout the stand.

Improve wildlife habitat throughout the stand.

Provide access to the stand by maintaining the current trail system.

It is recommended that Stand 1 receives a timber stand improvement treatment within the first four years of the management plan implementation. This prescription will involve culling undesirable (sugar maple, elm, hackberry, honeylocust, Osage-orange) and poor form tree species that are directly competing with desired (oaks/hickories) tree species. Culling may be completed by many methods. Cut-stump, hack & squirt, and girdling are some of the recommended methods for TSI. Cut stump involves severing the top living portion of the target tree and spraying or painting the living cambium (outer 1-2") cut surface with herbicide labeled for

this use. Hack & squirt involves using a hatchet or similar implement to place downward cuts through the bark and into the living tree tissue. The cuts are then filled with herbicide labeled for this use. Depending on the herbicide used, it may or may not be diluted and the number of cuts will vary. Generally, 1 cut for every 2" DBH is needed but always consult herbicide label. Girdling involves cutting two rings around a tree effectively severing the cambium. The lower ring should be treated with herbicide labeled for this use. Girdling is generally recommended for larger trees. Caution must be taken to only cut through the bark and into the living cambium but not so deep as to impair the structural integrity of the tree creating a hazardous situation. Avoid these treatments during peak sap flow (February-April).

Target trees to cull during this practice are mid and understory sugar maple, hackberry, black locust, and elm species seen directly competing with more desired tree species or noticeably inhibiting the natural regeneration of these more desired tree species. Additionally, any honeylocust, Osage-orange, and black locust within the stand must be culled during this practice. These weed trees have a negligent impact on your forest and should be cut and treated when encountered.

During the TSI treatment, non-native invasive species should be eliminated. Multiflora-rose and Asian bush honeysuckle are both within the stand and should be treated when seen during the TSI operation. The cut-stump method listed above may be the most effective approach, but foliar spraying is another acceptable method. Foliar spraying may be completed in the early spring or late fall when the invasive target species has leaves but desired native vegetation does not. Follow label instructions for rates, surfactant use, and instructions. Follow up spot spraying after an initial stand wide treatment is implemented will be necessary.

Underplanting, or mechanically adding seedlings to the forest floor beneath the culled undesirable over and midstory trees, is not needed at this time. The expectation exists that this new light to the forest floor will improve the understory regeneration of desired hard-mast trees currently in the overstory. Additionally, no timber harvest is expected during this 10-year plan duration.

It is strongly recommended that these practices are completed by a professional. Following these prescriptions should result in exceptionally improved wildlife habitat and timber quality. Reducing the impacts on undesirable trees and non-native invasive species will result in more advanced regeneration present which will create a desired future stock of trees, thicker wildlife cover, and large amounts of available woody browse. The TSI operation will create many "cavity" trees which are essential to wildlife for habitat and forage. A trail natural surface trail system is already present within the property and should be maintained for proper access, management, and recreation.

Stand 2

Stand 2 is a 7.92-acre field currently being utilized for hay production. The soils are primarily Rozetta silt loam and are suitable for afforestation provided the necessary pre and post planting steps are followed.

Goals:

Establish hardwood trees throughout the stand by means of mechanical planting.

Control and prohibit non-native invasive species from establishing within the stand.

Proposed planting species are white oak, bur oak, northern red oak, black walnut, pecan, and persimmon. Trees will be planted on a 10' by 10' grid, approximately 3,445 bareroot trees will be mechanically planted. 574 of each species should be planted and they must be sourced from within 100 miles north or 200 miles south of the planting location. Trees must be planted by May 15th of the establishment year. The site should be disked in the fall prior to spring planting and any emergent vegetation after disking should be sprayed. This will aid in

hardwood tree establishment and reduce herbaceous competition pressure on the planted tree seedlings. Following planting, herbicide that targets grasses should be applied in the following two springs to get trees above their competition level. Tree guards may be implemented and will undoubtedly improve the success of survival from anticipated deer pressure. After planting, the site should be monitored for invasive species, specifically, multiflora rose, Asian bush honeysuckle, autumn olive, and the herbaceous lespedeza. They should be treated when encountered as they pose a serious threat to the success of this planting.

It is expected that many non-planted species will colonize the site along with the planted trees. The surrounding forest has many species that will likely show up in the planting including sycamore, elm species, ash species, cottonwood, and hackberry. During this plan duration, these species should act as cover for our planted trees and will hopefully aid in training them to grow tall and straight at a faster rate. Control of volunteer tree species may be necessary in the following plan cycle.

Stand 3

Stand 3 is a 11.30-acre field currently in soybean production. This field is to be developed into a prairie/pollinator stand to further diversify the habitat within the Doe property.

Goals:

Establish a prairie/pollinator stand by means of mechanical and broadcast planting.

Develop/maintain fire breaks around perimeter.

Establish a mowing and prescribed burn plan.

Control and prohibit non-native invasive species from establishing within the stand.

Following agricultural abandonment, the site should be treated (disking and herbicide) for unwanted perennial weeds, if present. Disking should be followed by rolling and completed in the fall and herbicide should be completed in the spring provided it is short-lived. Planting of a prairie mix must be completed by June 15th of the installation year and native seed must be sourced from within 200 miles. On a stand of this size, drill planting is recommended. A mix of native prairie grass and native forbs should be planted throughout the site. Species to incorporate include big blue stem, little blue stem, switchgrass, Indian grass, side oats, black eyed Susan, pale purple coneflower, wild bergamot and others. Note that more aggressive forbs tend to dominate plantings the first couple of years and then the stand will slowly trend towards a grass dominated ecosystem.

The maintenance of this planting should be completed by high mowing (after August 1st) when weeds get to be about 18” tall. Mow down to roughly 6” and multiple mows may take place in a given year. In year two mow down to about 12” once during the growing season if weeds (ragweed, lamb’s quarters, dock, mare’s tail etc.) are still persistent. After year two fire may become more useful to manage the prairie in its natural state. If fire is used, consult professionals, ensure fire breaks are in place and never attempt to burn alone. All or part of the prairie may be mowed or burned at least every other year. This will aid in creating a natural mosaic, controlling woody tree species, and further enhancing the effectiveness of the prairie planting. Burning should not be completed from April-August to reduce impacts on ground nesting birds.

Stand 4

Stand 4 is a .30-acre wetland located within the boundary of Stand 1. The wetland depth ranges from less than 1 foot up to about 3 feet, holds water much of the year, and is fed by groundwater leaching through the forested buffer.

Goals:

Maintain the health of structure and integrity of the forested buffer and wetland bank.

Reduce the impact of unwanted aquatic vegetation.

Monitor and treat any non-native invasive species within the wetland boundary.

Work in wetlands must be completed when the ground is hard, either frozen or dry. Any herbicide use must be completed with herbicides labeled for use in wetlands and care must be taken to prevent spills, over-spraying and excessive use. Do not move slash (cut woody debris) into wetland areas, especially open water. This wetland serves as great wildlife habitat and a filter for the southern creek throughout much of the year. Ensuring the buffer is kept intact all the while reducing the impact of non-native invasive species is essential in ensuring the wetland's health and longevity. The wetland should be periodically monitored for unwanted vegetation such as creeping Jenny, *Phragmites*, Johnson grass, reed canary grass, Brazilian elodea, *Hydrilla*, Eurasian watermilfoil etc. and they should be treated as soon as possible if encountered. Only herbicides labeled for aquatic use should be applied near the wetland.

Stand 5

Stand 5 is a 1.3-acre pond with 1000' of shoreline and depths ranging from 3' - 16'. The pond was developed 5 years ago and has been restocked with channel catfish twice per IDNR recommendation. The pond is fished recreationally by family and friends.

Goals:

Maintain stable banks and access for recreation.

Monitor water for aquatic invasive species.

Monitor banks and dam for woody and herbaceous invasive species.

Improve aquatic habitat for stocked fish.

The shoreline will be monitored for stability and improved where needed. As it is a young pond, there few current issues and if vegetation is allowed to persist there should be few issues that arise. The pond was installed to be about 3 feet deep at the shoreline which has drastically reduced the amount undesirable aquatic vegetation present.

The pond will be monitored for *Phragmites*, Brazilian elodea, Eurasian watermilfoil, and *Hydrilla*. If noted, these species will be treated as soon as possible with herbicides labeled for aquatic use. Monitor the pond for unwanted mammals and reach out to DNR wildlife biologist with questions and concerns. Fish biologists should be consulted with questions regarding stocking and surveying your fish population. Fish habitat may be improved by adding some structure (PVC, evergreen trees) for cover and structural diversity.

Practice Schedule

Year(s)	Stand	Acreage	Treatment	Completed On:
2023-24	1	35.60	Brush management (light) – invasive species treatment	
2023-24	1	35.60	Timber stand improvement (light)	
2024-25	2	7.92	Site prep	
2024-25	2	7.92	Hardwood tree planting	
2024-27	2	7.92	Herbaceous weed control	
2024-25	3	11.30	Site prep	
2025-26	3	11.30	Prairie/pollinator establishment	
2024-26	3	11.30	Herbaceous Weed control	
2026-32	3	11.30	Rx burning or mowing (at least every other year)	
2023-32	4 & 5	1.60	Aquatic invasive species monitor and treat	
2023-32	5	1.3	Fish habitat installation (as needed)	
ALL	ALL	56.12	Invasive species monitoring and follow-up.	

Doe CSP Stand Map



- CSP Boundary**
- Stand 1 - Forest**
- Stand 2 - Tree Planting**
- Stand 3 - Pollinator/Prairie Planting**
- Stand 4 - Wetland**
- Stand 5 - Pond**

Year(s)	Stand	Acreage	Treatment	Completed On:
2023-24	1	35.60	Brush management (light) – invasive species treatment	
2023-24	1	35.60	Timber stand improvement (light)	
2024-25	2	7.92	Site prep	
2024-25	2	7.92	Hardwood tree planting	
2024-27	2	7.92	Herbaceous weed control	
2024-25	3	11.30	Site prep	
2025-26	3	11.30	Prairie/pollinator establishment	
2024-26	3	11.30	Herbaceous Weed control	
2026-32	3	11.30	Rx burning or mowing (at least every other year)	
2023-32	4 & 5	1.60	Aquatic invasive species monitor and treat	
2023-32	5	1.3	Fish habitat installation (as needed)	
ALL	ALL	56.12	Invasive species monitoring and follow-up.	

**Doe Property Assessor's Map
Springfield Township, Sangamon County , IL**



Plat Map

SPRINGFIELD NORTH CENTRAL CAPITAL T.16N.-R.5W.

