Sauk County Farm

FOREST STEWARDSHIP PLAN

Property Location: T12N R4E Section 28, 33 & 34 Reedsburg Township, Sauk County, Wisconsin

Tom Hill Forestry

PREPARED FOR SAUK COUNTY • BY TOM HILL FORESTRY LLC

Forest Stewardship Plan

January 2023

Actively managed forests provide timber, fuel wood, wildlife habitat, watershed protection, recreational opportunities, and many other benefits. They also benefit adjacent lands by creating healthier, more resilient landscapes overall. This Forest Stewardship Plan was developed to help you identify goals and objectives for your land and the management activities needed to meet them. As a private landowner, you may be concerned about keeping your land productive and healthy now and into the future. You may want to increase its economic value while protecting water and air quality, wildlife habitat, and natural beauty. You can accomplish all these objectives by using this Forest Stewardship Plan.

Plan Contents

Tom Hill Forestry LLC
(608) 574-7446
thompsonh.hill@gmail.com
www.TomHillForestry.com

FOREST STEWARDSHIP PLAN

Landowner(s) as Shown on Deed:

SAUK COUNTY FARM FOREST STEWARDSHIP PLAN

Name and Address of Contact Person:

SAUK COUNTY FARM FOREST STEWARDSHIP PLAN, ATTN: CASSANDRA FOWLER

505 BROADWAY ST
BARABOO, WI 53913-2183

Plan Period: 25 years **Starting** January 1, 2022 **Ending** December 31, 2046

Municipality(s): Town of Reedsburg (Sauk County) **Total Acres:** 121.000

Attached map(s) show the location of the lands included in this Forest Stewardship Plan.

Purpose of the Forest Stewardship Program

The purpose of the Forest Stewardship Program is to encourage the long-term stewardship of nonindustrial private forest lands, by assisting these owners to plan for and more actively manage their forest and related resources. The Forest Stewardship Program provides assistance to owners of forest lands and other lands where good stewardship will enhance and sustain the long-term productivity of multiple forest resources. The program provides landowners with the professional planning and technical assistance they need to keep their land in a productive and healthy condition.

The Forest Stewardship Program is a federal program that is authorized by the Cooperative Forestry Assistance Act of 1978, as amended, 16 U.S.C. 210sA. In Wisconsin the program is administered by the Wisconsin Department of Natural Resources Division of Forestry.

Management Plan

Your Forest Stewardship management plan incorporates “sound forestry practices” for Wisconsin. *"Sound forestry practices”* includes timber cutting, transporting, pruning, planting, and other activities recommended or approved by the WDNR for the effective propagation and improvement of the various timber types common to Wisconsin. It includes management of forest resources other than trees including wildlife habitat, watersheds, aesthetic and endangered and threatened plant and animal species. Forest management guidelines for Wisconsin can be found in the Department of Natural Resources Silviculture Handbook and the Forest Management Guidelines. To read these publications go to http://dnr.wi.gov and search ‘Forest Management’.

An approved Forest Stewardship Plan may provide access to cost-share assistance through USDA conservation programs like the Natural Resources Conservation Service (NRCS) Environmental Quality Incentive Program and the WDNR Wisconsin Forest Landowner Grant program.

Your plan identifies important management practices prescribed for your property. The plan writer determines management practices based on the types and conditions of your forests, the capability of the land, and the objectives or goals you have expressed for your forest land. The plan writer prescribes a completion year for each practice. You should review your plan periodically so you can prepare for the work that is needed. Consult your WDNR forester when you have questions on what is included in your plan.

Your management plan is just one component of Wisconsin's strategy to promote and support sustainable forestry practices on privately owned lands. Other resources are available to provide you with the most current information available on natural resources management. You can access those resources on the WDNR public website using the addresses referenced in this plan. You are encouraged to consult this information regularly.

Management Plan Updates

You and your forester should monitor your management plan throughout the period covered by the plan to address concerns that are newly present or newly identified since the date your plan was written. Updates might include changes in tree species, tree stocking, damage from weather (wind, ice, snow), insects and disease, forest fire, flooding, land management goals, new management information (silvicultural science), invasive species, fire management, riparian management zones, or presence of endangered, threatened or high conservation value species or communities. An update will usually change the type of practice recommended or the year it should be completed.

Landowner Goals

Your management plan blends your goals with site capabilities and Forest Stewardship program standards to guide your land management. You identified the following as your goals:

- The primary goal of ownership for the Sauk County Land Resource and Environment lands is wildlife and habitat management for educational and recreational benefits.
- Including management/mitigation of invasive species.
- Utilizing climate adaptive species.
- Development of recreational trails for non-motorized recreation (walking, hiking, biking snowshoeing etc...)
- Silvo-pasture when possible(pastures to the north end of the wooded acreage).
- Maintain the "tree canopy"...."softening transitional edges " and harvesting when thinning is necessary.

Management Practices

The management practices in this plan include practices that will enhance the growth rate and species composition of your forest; provide for the establishment of a new stand of trees; improve wildlife habitat and recreational activities; increase carbon sequestration; reduce fire hazards on your property; improve access; and help you meet your other goals. The table below is a summary of the recommended management practices that are specific to the individual timber stands described later in this plan. If a year is provided the practice should be completed or in progress by the end of that year to keep your forest in a productive and healthy condition. If there is no year provided you can complete the practice at any time.

You are encouraged to work with a cooperating forester to establish and administer timber sales. Use the Forestry Assistance Locator to find a cooperating forester; go to http://dnr.wi.gov and search 'Forest Landowner'.

Practices that are not considered commercial may be eligible for cost-share assistance under the Wisconsin Forest Landowner Grant Program (WFLGP) or USDA conservation programs like the Natural Resources Conservation Services (NRCS) Environmental Quality Incentive Program (EQIP).

Listed here are practices common to all timber stands:

- Seeding and mowing of trails and openings – Please contact your local WDNR Wildlife Biologist for information about seed mixtures
- Maintaining snags, den trees, and "wolf" trees – Retain trees during timber harvests and improvement cuts
- Controlling invasive species
- To learn more wildlife friendly ideas, go to http://dnr.wi.gov and search 'Wildlife'.

Management Practices Summary (by Individual Stand)

YEAR	STAND(S)	ACRES	TIMBER TYPE	PRACTICE
2025	8	3	Oak	SITE PREP FOR NATURAL REGENERATION
2027	1	5	Red Pine	OVERSTORY REMOVAL HARVEST
2027	1	5	Red Pine	SANITATION and SALVAGE CUTTING
2027	10	6	White Pine	THINNING

2027	16	4	Central Hardwoods	THINNING
2029	2	5	Central Hardwoods	THINNING
2029	4	7	Central Hardwoods	TIMBER STAND IMPROVEMENT/CROP TREE RELEASE
2029	8	3	Oak	OVERSTORY REMOVAL HARVEST
2034	5	17	Central Hardwoods	THINNING
2034	7	14	Red Maple	PATCH SELECTION HARVEST
2034	9	15	Central Hardwoods	THINNING
2045	4	7	Central Hardwoods	THINNING
2045	5	17	Central Hardwoods	THINNING
2045	7	14	Red Maple	PATCH SELECTION HARVEST
2045	9	15	Central Hardwoods	THINNING
2045	10	6	White Pine	THINNING
ANY	1	5	Red Pine	HAND PLANT
ANY	1	5	Red Pine	INVASIVE PLANT CONTROL
ANY	2	5	Central Hardwoods	INVASIVE PLANT CONTROL
ANY	4	7	Central Hardwoods	INVASIVE PLANT CONTROL
ANY	5	17	Central Hardwoods	INVASIVE PLANT CONTROL
ANY	7	14	Red Maple	INVASIVE PLANT CONTROL
ANY	8	3	Oak	INVASIVE PLANT CONTROL
ANY	9	15	Central Hardwoods	INVASIVE PLANT CONTROL
ANY	10	6	White Pine	INVASIVE PLANT CONTROL
ANY	11	15	Central Hardwoods	HAND PLANT
ANY	11	15	Central Hardwoods	INVASIVE PLANT CONTROL
ANY	11	15	Central Hardwoods	OVERSTORY REMOVAL HARVEST
ANY	12	2	Red Pine	HAND PLANT
ANY	12	2	Red Pine	INVASIVE PLANT CONTROL
ANY	13	3	Lowland Herbaceous Vegetation	INVASIVE PLANT CONTROL
ANY	14	14	Herbaceous Vegetation	INVASIVE PLANT CONTROL
ANY	14	14	Herbaceous Vegetation	MACHINE PLANT
ANY	15	11	Walnut	DIRECT SEED
ANY	15	11	Walnut	HAND PLANT
ANY	15	11	Walnut	INVASIVE PLANT CONTROL
ANY	16	4	Central Hardwoods	INVASIVE PLANT CONTROL
ANY	16	4	Central Hardwoods	TIMBER STAND IMPROVEMENT/WEEDING

County Cutting Notice

At least 14 days prior to harvesting timber a notice of your intent to harvest (cut) must be filed with the county clerk. Property taxes must be current prior to receiving approval to cut timber.

General Description of Areas Identified on Your Property

Foresters combine areas of land with similar vegetative and non-vegetative characteristics for management purposes and call these areas “stands”. The plan describes these stands and you can view the stands on the Forest Stewardship map(s). Listed below are the descriptions of forest and non-forest areas on your property.

Central Hardwood Forest

Central Hardwood Forests consist of mixtures of upland hardwood species, predominantly oaks, hickory, elms, black cherry, red maple, ash, basswood, hackberry, or sugar maple. Depending upon site conditions and history, the relative abundance of these tree species can vary greatly, but oak or maple do not dominate these stands. Many central hardwood forests are in the process of succession from oak forests.

Central hardwoods grow best on well-drained loamy soils.

Herbaceous Vegetation

Herbaceous (non-woody) Vegetation grows on upland sites and contains a variety of plants, including bracken fern, sweet clover, giant ragweed, stinging nettle, upland aster, goldenrod, prairie dock and other types of herbaceous plants. Many sites with herbaceous vegetation are former agricultural fields left fallow for a number of years that are unable to grow trees because of frost pockets or other environmental conditions. Tree or shrub seedlings may have started from natural seed dispersal but the grassland still dominates. Herbaceous vegetation grows on a variety of soils.

Lowland Herbaceous Vegetation

Lowland Herbaceous Vegetation contains 50% or more of non-woody vegetation, such as lowland asters, stinging nettle, and wild sunflowers, but few trees. Lowland herbaceous vegetation can grow in a variety of soils, but usually grows in wetter silt and clay soils.

Red Maple Forest

Red Maple Forests are composed of over 50% red maple. Ash, elm, aspen, white birch, white pine, balsam fir, white cedar, oak and other native trees commonly grow with red maple. Over the last century, red maple has dramatically increased in abundance throughout the state. Red maple can produce abundant seed and stumps readily sprout. It tolerates shade, and grows on a wide range of soils from sands to loams, and in conditions from dry to wet. It grows best on well-drained loamy soils.

Oak Forest

Oak Forests are composed of over 50% oak. In Wisconsin, red oak, black oak, pin oak, white oak, and bur oak are common types of oak trees. Aspen, red maple, hickory, white pine, white birch, basswood, black cherry, sugar maple, elm, and jack pine commonly grow in oak forests. Oak forests are abundant, occurring throughout the state and growing on most soil types. Composition of oak forests varies depending on their location within Wisconsin and on site quality. On nutrient-poor, dry sites, oak forests might include black oak, white oak, northern pin oak, and bur oak. On dry sites, hickories, black cherry, aspen, red maple, and paper birch commonly grow with oak. In northern Wisconsin, pines may also grow in dry oak forests. Sites with a better nutrient and moisture supply may support mixtures of red and white oak, or may be dominantly red oak. On sites with more nutrients, basswood, hickories, ironwood, black cherry, elms, red maple, or white pine may grow with oak. On the richest sites, sugar maple or white ash might also grow with oak. While oaks are still very common trees in Wisconsin, the abundance of high-quality red and white oaks on nutrient-rich sites has declined considerably due to forest succession and failed regeneration. In general, oaks grow best on well-drained loamy soils. All oaks require drastic disturbance of the forest, both overstory and understory, in order to regenerate. On richer sites, oak forests are particularly difficult to regenerate and competition control is essential. Fire is one tool that facilitates the regeneration and maintenance of oak forests. To regenerate oak, foresters commonly mimic the effects of fire using mechanical tools or chemical application.

Red Pine Forest

Red Pine Forests are composed of more than 50% red pine. White and jack pine, aspen, oak and other native trees commonly grow with red pine. Red pine has been a common tree in plantations.

Red pine grows best in well-drained loamy sands and sandy loams within its range in northern and central Wisconsin. It can grow well on a wide range of other soil conditions if introduced by planting.

White Pine Forest

White Pine Forests consist of more than 50% white pine. Red and jack pine, aspen, paper birch, red maple, oak, balsam fir, white spruce, eastern hemlock and other native trees commonly grow with white pine. White pine is a long-lived tree species that was common in Wisconsin's historic forests. Heavy logging during the cutover made white pine scarce for a time. As trees are becoming old enough to be good seed producers, its numbers are increasing.

White pine grows in almost all soil conditions in Wisconsin but does best on loamy sands, sandy loams, and loam soils.

Black Walnut Forest

Black Walnut Forests consist of more than 50% black walnut. Black walnut stands naturally occur in southwestern Wisconsin. Elsewhere in Wisconsin, shorter growing seasons limit growth of quality sawtimber. Central hardwoods, oaks, northern hardwood species as well as red cedar, box elder and white pine commonly grow with walnut.

Good soil quality is extremely important to walnut trees. Well-drained, fertile loamy soils support the best growth.

Resource Protection and Management

Special records and inventories identify important natural, historical or archeological resources on or near your property. The plan writer designed your management practices to protect these resources from disturbance.

You can go to the WDNR website to find information used to evaluate stand conditions and determine management practices for your property. Go to http://dnr.wi.gov and search using the keywords shown.

- To learn about Ecological Landscapes of Wisconsin, search for 'Landscapes'.
- To learn about Wildlife Management, Habitat and Natural Communities, search for 'Wildlife' and 'Biodiversity'.
- To see the Wisconsin Wildlife Action Plan, and from there Explore Species Profiles, search for 'ER' or 'Wildlife'.

Your lands lie within a landscape known as Western Coulees and Ridges. You can find an overview of the landscape, species of greatest conservation need, management opportunities and much more. Go to: http://dnr.wi.gov and search 'Landscapes'.

Endangered, Threatened and Special Concern Species and Plant Communities

Natural Heritage Inventory (NHI) searches determine if your plan may affect endangered, threatened, or special concern animals, plants or plant communities. To learn about rare plants, animals and natural plant communities in Wisconsin visit http://dnr.wi.gov and search for 'NHI'.

The Natural Heritage Inventory (NHI) review showed that that there are no known Endangered, Threatened or Special Concerns Species or Natural Communities present on or within the surrounding area.

When implementing management practices, mitigation might be necessary, such as:

- Best management practices that protect water quality and habitat for rare or aquatic species
- Harvest limits or restrictions to avoid impacts to nesting birds or NHI Working List species
- Surveys for rare species prior to timber sale establishment

Archeological and Historical Resources

State Historical Society records searches determine if your plan may affect archeological and historical sites. These sites require protection from disturbance, including road building, grading or gravelling. Contact your local WDNR Forester for additional information on archaeological and historical sites.

The Archeological Resources Inventory lists the following resources within this property:

- There are two Native American campsite locations within the wooded acreage of the FSP.
- These areas must be excluded from any harvesting OR harvesting in the site area should only be on WELL-frozen ground, ideally with snow cover, to minimize soil disturbance.
- NO stump pulling, NO road cuts in the site area.
- Contact the WDNR Historic Preservation Unit for more information.

The Historical Resources Inventory lists the following resources within this property:

- There are two Native American campsite locations within the wooded acreage of the FSP.
- These areas must be excluded from any harvesting OR harvesting in the site area should only be on WELL-frozen ground, ideally with snow cover, to minimize soil disturbance.
- NO stump pulling, NO road cuts in the site area.
- Contact the WDNR Historic Preservation Unit for more information.

Invasive Plant Species

Invasive plants may decrease the productivity, regeneration, wildlife habitat, and recreational value of your property. It is essential to identify and control small populations of invasive plants to minimize their spread. The individual stand descriptions list any invasive plant species identified on your property. For more information on invasive plant control, consult the Wisconsin Council on Forestry's website on Invasive Species Best Management Practices for Forestry.

Best Management Practices for Water Quality (BMPs)

To protect the water quality in Wisconsin's lakes, streams and wetlands and to prevent soil erosion, implement *Wisconsin's Forestry Best Management Practices for Water Quality* during all forest management activities, such as road building or timber harvesting. Specific BMPs will be included in detailed practice or harvest plans. Water regulations permits may be required to cross wetlands and streams. Please go to http://dnr.wi.gov and search 'Forest Management' to review all BMPs for water quality.

Forest Health

Over time, your forest may suffer from insects, disease, windstorm, fire, flooding or drought, etc. These problems may alter your management prescriptions. If you are concerned about forest health, please contact your local WDNR Forester or go to http://dnr.wi.gov and search 'Forest Health'.

	STAND NUMBER 1	5 Acres
Primary Type:	**Red Pine Forest -- Small Sawtimber**	
Secondary Type:	**Red Pine Forest -- Poletimber**	

Stand Information

The most abundant tree species in this stand include Red Pine (42%), White Pine (31%), Box Elder (15%) and Black Cherry (10%).

These trees make up an even aged stand that originated about 1956. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Garlic Mustard
- Bush Honeysuckle Spp.
- Common Buckthorn

Stand Conditions, Special Features or Characteristics

Stand P1 is located 3/4 mile north of all the 'other' forested lands. These conifers (red pine and white pine) were planted approximately 60-70 years ago. The topography within this area is gently rolling and there is good access to this area via the agricultural fields and Herritz Road. The white pine here are doing well. Some are spectacular. A white pine was measured to be 31" in diameter and 105 feet tall. Over the years there has been some natural mortality in the pine, there are some larger white pines in need of salvage at some point. The red pine has done well up to this point, however now they are showing signs of stress. Silt loam soils are not ideal for red pine growth. Future management should include eliminating the red pine(overstory removal) and thinning/salvaging some of the white pine. Desirable seedling regeneration is not present. Before harvesting the pine there should be a plan in place to replant with white pine or native hardwoods (white oak/walnut).

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

FORCED CONVERSION -- Force a conversion of this stand to white pine, black walnut or white oak. after harvesting or completing your prescribed management treatments. Natural conversion is not expected because these species are not present. Some action on your part, such as planting trees or developing the proper seedbed, light and crown conditions for self-seeding, is necessary in order for these species to become established. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Cutting will remove the old stand to provide the necessary open conditions and sunlight to allow regeneration practices to occur.

Year Scheduled	Management Practice
2027	OVERSTORY REMOVAL HARVEST. Harvest all overstory trees in this stand except designated reserve trees to allow full sunlight to reach established seedlings and saplings. Evaluation of the number and size of desirable seedlings and saplings present determines if there is adequate establishment of advanced regeneration. A variation of overstory removal is without reserve trees.
2027	SANITATION and SALVAGE CUTTING. Remove trees damaged by natural events (wind, fire, etc.), or trees infected by or highly susceptible to insect damage or disease to keep the rest of the stand healthy. Work with your local WDNR Forester to identify the trees to harvest.
ANY	HAND PLANT. Hand plant a mixture of White Pine, Walnut Black and White Oak at a rate of 800 trees per acre. Please contact your local WDNR forester for spacing recommendations. Custom planting crews may be available for hire to complete your tree planting project. Check this stand for successful regeneration. If this stand has not adequately regenerated three years after hand planting, additional management practices may be needed.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 2		5 Acres
Primary Type:	**Central Hardwood Forest -- Large Sawtimber**	
Secondary Type:	**Red Maple Forest -- Poletimber**	

Stand Information

The most abundant tree species in this stand include Black Locust (41%), Red Maple (26%), White Oak (14%) and Red Oak (6%).

These trees make up an even aged stand that originated about 1969. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Garlic Mustard
- Bush Honeysuckle Spp.
- Multiflora Rose

Stand Conditions, Special Features or Characteristics

Stand 2 is found in the NW corner of the property along the edge of the field (stand 14). Black locust is dominant in all size classes. The locust is tall, estimated to be 60 years old and appear healthy. There is also a significant presence of red maple here. Conversion to red maple over time should be the future goal. Over time, thinning the black locust will encourage more red maple along with other desirable hardwoods. Black locust can 'take over' a forest. Minimizing the locust to this area will benefit the entire forest. The north side of this stand has much less locust. A group of big white oak and red oak are present here as you move towards the east end of the stand. It may be possible to regenerate some oak here at some point. Controlling the understory brush and minimizing the presence of undesirable trees in the 2"-12" size class will be necessary. Along the edge of the field is dense prickly ash. Maintain large white oak for wildlife habitat.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL CONVERSION -- This stand will convert to red maple naturally after harvesting or completing your prescribed management treatments. Expect natural conversion because these tree species are already present as younger trees or will be able to seed in and become established once the proper seedbed, light and crown canopy conditions exist. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to convert your stand naturally.

Year Scheduled	Management Practice
2029	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website.

STAND NUMBER 4		7 Acres
Primary Type:	**Central Hardwood Forest -- Poletimber**	
Secondary Type:	**Black Walnut Forest -- Small Sawtimber**	

Stand Information

The most abundant tree species in this stand include Walnut Black (24%), Big-tooth Aspen (24%), Bitternut Hickory (18%) and Elm (13%).

These trees make up an even aged stand that originated about 1980. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Garlic Mustard
- Multiflora Rose
- Japanese Barberry

Stand Conditions, Special Features or Characteristics

Gently rolling south facing slope. Understory is dominated by gooseberry with a bit of multiflora rose along the field edge. There are some stumps which give evidence of previous logging. A young central hardwood forest with 10 species documented, walnut is the most prevalent, growing well, healthy, and the most valuable. White ash is present and dying from EAB (emerald ash borer). The upper slope has a bit more aspen and red maple, walnut is mixed throughout. Walnut is the preferred crop tree in this area, growing walnut to economic maturity is the goal (25"+ dbh). Utilizing non-commercial thinning to release the crowns of the crop tree walnut is recommended (cutting competing trees (including elm, bitternut hickory, basswood, aspen and red maple) to allow room for the walnut). Commercial thinning in 15-20 years is a possibility, however this cannot result in any damage to the crop tree walnut.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL EVEN-AGED REGENERATION OF TIMBER TYPE WITH FUTURE THINNING -- Manage the stand through its rotation (the period between initial regeneration and the stand’s final cutting) as a single aged forest. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to regenerate the stand naturally.

Year Scheduled	Management Practice
2029	TIMBER STAND IMPROVEMENT/CROP TREE RELEASE. The goal of this practice is to promote the health and vigor of those trees that best achieve your management goals (walnut). Identify the best crop trees in the stand. Ensure the crowns of these trees are 'free to grow' on 2-3 sides by cutting/girdling undesirable trees nearby. Local DNR forestry staff can help you with identifying crop trees and trees in need of cutting. This method has been demonstrated to increase the growth of released crop trees.
2045	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 5		17 Acres
Primary Type:	**Central Hardwood Forest -- Poletimber**	
Secondary Type:	**Central Hardwood Forest -- Small Sawtimber**	

Stand Information

The most abundant tree species in this stand include Big-tooth Aspen (32%), Red Maple (22%), Bitternut Hickory (20%) and White Oak (8%).

These trees make up an even aged stand that originated about 1979. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Garlic Mustard

Stand Conditions, Special Features or Characteristics

Located at the top of the hill, this area is flat to gently rolling. Overall, this stand is dominated by a young trees in the 5"-11" size class (11 different species predominantly 40-50 years old). Aspen, red maple and bitternut hickory are most dominant in this size class. A few walnuts are mixed in.
Scattered large sawlog size(15"+) white oak, white ash and red oak are also present. Ash is dying from EAB. During future thinning operations, favor walnut, red maple, shagbark hickory, black cherry and oak. Discriminate against bitternut hickory and elm when possible. During the next 25 years thinning will only be necessary. Regeneration harvesting will not be necessary for 30 years. If commercial thinning is not feasibel/possible utilize non-commercial timber stand improvement practices to release the better trees. Towards the NE corner of the stand is an old concrete foundation (possible old manure storage?) and excavated roads/trails to this foundation.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL EVEN-AGED REGENERATION OF TIMBER TYPE WITH FUTURE THINNING -- Manage the stand through its rotation (the period between initial regeneration and the stand's final cutting) as a single aged forest. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to regenerate the stand naturally.

Year Scheduled	Management Practice
2034	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
2045	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 7		14 Acres
Primary Type:	**Red Maple Forest -- Large Sawtimber**	
Secondary Type:	**Red Maple Forest -- Poletimber**	

Stand Information

The most abundant tree species in this stand include Red Maple (48%), White Oak (16%), Bitternut Hickory (12%) and Big-tooth Aspen (7%).

These trees make up an even aged stand that originated about 1964. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Bush Honeysuckle Spp.
- Japanese Barberry
- Multiflora Rose
- Common Buckthorn

Stand Conditions, Special Features or Characteristics

Primarily steep east facing slopes. Stand 7 is in two separate locations. Understory dominated by gooseberry and prickly ash. Eastern edge of the stand has invasive brush problem (more open here towards highway). Overstory in both locations are dominated by red maple in all size classes. Scattered 'open grown' white oak and bur oak towards the tops of the slopes (field edge of one area). South facing aspect of stand 7 has good oak regeneration 'under white oak sawlogs'. Sugar maple seedlings are present in minimal quantities throughout and will begin to become more common in the understory (this should be encouraged). Patch selection harvesting is encouraged with the initial harvest taking 1/3 of the stand in 1/2-2 acre patches, focusing on areas with more aspen, bitternut hickory, elm and less desirable red maple. The second harvest should also include 1/3 the stand and will probably include mostly red maple. Take oak overstory in any harvest IF oak regeneration is present.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL CONVERSION -- This stand will convert to northern hardwood naturally after harvesting or completing your prescribed management treatments. Expect natural conversion because these tree species are already present as younger trees or will be able to seed in and become established once the proper seedbed, light and crown canopy conditions exist. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to convert your stand naturally.

Year Scheduled	Management Practice
2034	PATCH SELECTION HARVEST. Naturally regenerate this stand using the patch selection regeneration method. This involves harvesting to create even-aged patches from ½ to 2 acres in size. This system is most appropriate for the management of species mid-tolerant of shade, but can also be applied to manage shade intolerant and tolerant tree species. Sources of regeneration may include any of: well-established advanced regeneration, vegetative sprouts, or seed. If depending on seed, time regeneration practices, including site preparation, to take advantage of good seed years. In most stands, thin the remainder of the stand to reduce stocking and concentrate growth on more desirable trees by following the order of removal and tree retention guidelines.
2045	PATCH SELECTION HARVEST. Naturally regenerate this stand using the patch selection regeneration method. This involves harvesting to create even-aged patches from ½ to 2 acres in size. This system is most appropriate for the management of species mid-tolerant of shade, but can also be applied to manage shade intolerant and tolerant tree species. Sources of regeneration may include any of: well-established advanced regeneration, vegetative sprouts, or seed. If depending on seed, time regeneration practices, including site preparation, to take advantage of good seed years. In most stands, thin the remainder of the stand to reduce stocking and concentrate growth on more desirable trees by following the order of removal and tree retention guidelines.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 8		3 Acres
Primary Type:	**Oak Forest -- Large Sawtimber**	
Secondary Type:	**Oak Forest -- Small Sawtimber**	

Stand Information

The most abundant tree species in this stand include Red Oak (59%), White Oak (20%), Red Maple (9%) and Shagbark Hickory (3%).

These trees make up an even aged stand that originated about 1912. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Multiflora Rose
- Garlic Mustard

Stand Conditions, Special Features or Characteristics

Steep north facing slope with a lot of large sawlog size red oak trees. Soils are Dorerton, very stony-Elbaville complex on 30-60% slope(cobbly/stony). Minimal understory brush on the steep slope. An old woods road was identified in the stand. The flatter NW corner dominated by prickly ash, raspberry and multiflora rose (not much sawlog volume in this area). The red oak appears to be in the 110–120- year-old age class. The trees are healthy but showing signs of old age and stress. Understory desirable seedling regeneration is mostly not present(white ash most dominant 333/acre). An overstory removal of all the mature red oak is recommended, however an effort should be made prior to this cutting to establish more desirable hardwood seedling/sapling regeneration (most likely red maple). There is enough red maple presence in sawlog size trees to "seed in" and help establish a desirable future forest. Site prep for natural regeneration prior to cutting is recommended.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL CONVERSION -- This stand will convert to central hardwoods naturally after harvesting or completing your prescribed management treatments. Expect natural conversion because these tree species are already present as younger trees or will be able to seed in and become established once the proper seedbed, light and crown canopy conditions exist. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to convert your stand naturally.

Year Scheduled	Management Practice
2025	SITE PREP FOR NATURAL REGENERATION. Regeneration is presently dominated by white ash, bitternut hickory, and ironwood with scattered red maple and red oak. To increase the presence of more red maple, oak, walnut and cherry, it would be beneficial to cut all trees within the understory in the 2"-12" dbh size class 2-5 years prior to commercial cutting. This site prep will allow more sunlight to the forest floor thereby providing the conditions needed to establish more desirable hardwoods.
2029	OVERSTORY REMOVAL HARVEST. Harvest all overstory trees in this stand except designated reserve trees to allow full sunlight to reach established seedlings and saplings. Evaluation of the number and size of desirable seedlings and saplings present determines if there is adequate establishment of advanced regeneration. A variation of overstory removal is without reserve trees.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 9		15 Acres
Primary Type:	**Central Hardwood Forest -- Poletimber**	
Secondary Type:	**Central Hardwood Forest -- Small Sawtimber**	

Stand Information

The most abundant tree species in this stand include Bitternut Hickory (51%), Shagbark Hickory (26%), Elm (6%) and Box Elder (3%).

These trees make up an even aged stand that originated about 1979. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Multiflora Rose
- Common Buckthorn
- Bush Honeysuckle Spp.
- Japanese Barberry

Stand Conditions, Special Features or Characteristics

Located in two locations. This stand has a lot of variety in topography, including gently sloping (nearly flat) to a steep/rocky north facing aspect(far N end above the creek/pond). Extensive thickets of prickly ash and multiflora rose give evidence of previous pasturing along with the few scattered older open grown white oak. The stand is dominated by over 75% hickory (bitternut and shagbark), and over 50% of the trees are found in the 5"-11" size class. In the far SW location, sugar maple is present, and conversion is inevitable. The utilization of commercial and/or non-commercial thinning practices (crop tree release) is recommended. An effort should be made during the thinning's to release the better stems of walnut, red maple, sugar maple, oak and also the best formed shagbark hickory and bitternut hickory. All of the scattered big oak in this stand should be retained for wildlife habitat. Mitigate invasive woody brush as resources allow (focus on areas with best timber).

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL CONVERSION -- This stand will convert to northern hardwood naturally after harvesting or completing your prescribed management treatments. Expect natural conversion because these tree species are already present as younger trees or will be able to seed in and become established once the proper seedbed, light and crown canopy conditions exist. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to convert your stand naturally.

Year Scheduled	Management Practice
2034	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
2045	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by plowing, disking, raking, chopping, scalping, trenching, or use another recommended method. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 10		**6 Acres**
Primary Type:	**White Pine Forest -- Large Sawtimber**	
Secondary Type:	**White Pine Forest -- Small Sawtimber**	

Stand Information

The most abundant tree species in this stand include White Pine (92%), Black Cherry (3%), Walnut Black (2%) and Red Pine (2%).

These trees make up an even aged stand that originated about 1964. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Bush Honeysuckle Spp.
- Japanese Barberry
- Multiflora Rose
- Common Buckthorn

Stand Conditions, Special Features or Characteristics

This white pine planting is located just east of highway 23 above the un-named creek/tributary to Narrows Creek. There is good access to this location from the south through an agricultural field. The site is not steep but not flat (most of the site is conducive to harvesting equipment operation). Understory is dominated by gooseberry, raspberry, scattered honeysuckle and a bit of multiflora rose. Prior to planting this field looks like it may have been disc trenched (as the trenches are still obvious). The stand appears to have never been thinned as the density is high, no stumps area evident and natural mortality is beginning (self-thinning is ongoing). Many of the treetops are spindly/small. Despite the high density and lack of thinning, most of the trees appear healthy, vigorous and very tall! A white pine was measured with 29" diameter and over 90' tall. The best white pine should be encouraged to grow another 50+ years...will be spectacular aesthetically above the creek.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL EVEN-AGED REGENERATION OF TIMBER TYPE WITH FUTURE THINNING -- Manage the stand through its rotation (the period between initial regeneration and the stand's final cutting) as a single aged forest. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to regenerate the stand naturally.

Year Scheduled	Management Practice
2027	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
2045	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 11		15 Acres
Primary Type:	**Central Hardwood Forest -- Poletimber**	
Secondary Type:	**Central Hardwood Forest -- Large Sawtimber**	

Stand Information

The most abundant tree species in this stand include Box Elder (45%), Cottonwood Eastern (25%), Walnut Black (11%) and Willow (includes Black) (6%).

These trees make up an even aged stand that originated about 1974. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Garlic Mustard
- Bush Honeysuckle Spp.
- Multiflora Rose

Stand Conditions, Special Features or Characteristics

Stand 11 stretches from Hwy 23, 1/2 mile to the SE, meandering along the creek. Predominantly the riparian corridor to the creek, the ultimate goal of any management in this area should be to minimize soil erosion and protect the integrity of the creek banks. Presently there is some significant bank sloughing and erosion on the north facing slope above the creek and the banks show signs of erosion. Nearly 50% of the timber in this area is box-elder, with some scattered areas having excellent quality black walnut and red oak. Much more box elder is present (to nearly all box elder) as you get further from the Hwy. The east most area is dominated by cottonwood stems. More walnut regeneration could be encouraged by cutting/treating box elder in the areas with walnut sawlog size trees present. IF a commercial operation would be interested in the box elder, it would be possible to cut/treat box elder and then prior, or following, plant walnut or swamp white oak in the understory.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL CONVERSION -- This stand will convert to central hardwoods naturally after harvesting or completing your prescribed management treatments. Expect natural conversion because these tree species are already present as younger trees or will be able to seed in and become established once the proper seedbed, light and crown canopy conditions exist. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Regeneration cutting will remove the old stand to provide the necessary open conditions and sunlight to convert your stand naturally.

Year Scheduled	Management Practice
ANY	HAND PLANT. Hand plant a mixture of Walnut Black and Swamp White Oak at a rate of 800 trees per acre. Please contact your local WDNR forester for spacing recommendations. Custom planting crews may be available for hire to complete your tree planting project. Check this stand for successful regeneration. If this stand has not adequately regenerated three years after hand planting, additional management practices may be needed.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.
ANY	OVERSTORY REMOVAL HARVEST. Harvest all overstory trees in this stand except designated reserve trees to allow full sunlight to reach established seedlings and saplings. Evaluation of the number and size of desirable seedlings and saplings present determines if there is adequate establishment of advanced regeneration. A variation of overstory removal is without reserve trees.

STAND NUMBER 12		2 Acres
Primary Type:	**Red Pine Forest -- Small Sawtimber**	
Secondary Type:	**Miscellaneous (Other) Conifer Forest -- Poletimber**	

Stand Information

The most abundant tree species in this stand include Red Pine (67%) and Red Cedar (33%).

These trees make up an even aged stand that originated about 1987. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Multiflora Rose
- Bush Honeysuckle Spp.

Stand Conditions, Special Features or Characteristics

This is a small area along the southeast border of the wooded acreage. Scattered red pine and a few white pine trees were planted here (35 years ago) in addition to the already existent eastern red cedar. Stocking level is not very good...alot of open grassy/brush areas between trees. The north end of the stand has a bit more white pine and then box elder making its way over from stand 11. Overall, most of the trees are short, indicative of being planted "off-site" for the species. Black locust and elm saplings and seedlings were also documented across this area. Going forward it will be beneficial to keep any invasive woody brush (and black locust trees) from invading this area. It may also be possible to convert this area to more desirable hardwoods (hand plant) as bur oak, swamp white oak or walnut. Another option would be a conversion to native grasses. Deer browse will need to be considered if planting as extensive deer traffic was evident during the site visit.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

FORCED CONVERSION -- Force a conversion of this stand to oak, walnut or native grasses. after harvesting or completing your prescribed management treatments. Natural conversion is not expected because these species are not present. Some action on your part, such as planting trees or developing the proper seedbed, light and crown conditions for self-seeding, is necessary in order for these species to become established. Periodically thin the stand throughout the life of the stand to improve quality and vigor. Cutting will remove the old stand to provide the necessary open conditions and sunlight to allow regeneration practices to occur.

Year Scheduled	Management Practice
ANY	HAND PLANT. Hand plant a mixture of Bur Oak, Swamp White Oak and Walnut Black at a rate of 800 trees per acre. Please contact your local WDNR forester for spacing recommendations. Custom planting crews may be available for hire to complete your tree planting project. Check this stand for successful regeneration. If this stand has not adequately regenerated three years after hand planting, additional management practices may be needed.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 13		3 Acres
Primary Type:	**Lowland Herbaceous Vegetation**	
Secondary Type:	**Lowland Grass**	

Stand Information

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Reed Canary Grass
- Multiflora Rose
- Bush Honeysuckle Spp.

Stand Conditions, Special Features or Characteristics

This is an area with minimal to no desirable tree presence. There are a few scattered elm, red cedar and cottonwood towards the creek and along the edge of the agricultural field but most of this area is either wet cattail swamp or a bit higher ground consisting of box elder saplings/seedlings, lowland brush and perennial herbaceous plants (queen anne's lace and golden rod). Options for this area include "leave as is"(possibly prescribed burning this field to keep the woody plants from establishing), or convert to native grasses, sedges or forbs. A conversion to native plants would involve mitigating the present invasive brush/grasses etc... and planting the desired native plants. Both options could be maintained with periodic prescribed burning. The native plant option would be more desirable for wildlife habitat.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NO SILVICULTURAL SYSTEM APPLICABLE -- This stand has been designated as non-productive. If you choose to passively manage this stand, it will be subject to natural processes like forest succession, wildlife and insect activity, tree aging and decay, windstorms, fire, etc. If you choose to actively manage this stand, in the future a new silvicultural system and management practices should be prescribed.

Year Scheduled	Management Practice
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 14		14 Acres
Primary Type:	**Herbaceous Vegetation**	
Secondary Type:	**Upland Brush**	

Stand Information

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Black Locust
- Multiflora Rose
- Bush Honeysuckle Spp.

Stand Conditions, Special Features or Characteristics

Large open area in the far western portion of the wooded entry. There is a large 'earthen berm' stretching from N to S across the middle of the field. I was told this used to be a rock quarry. Field is covered with grasses, perennial herbaceous plants (golden rod, queen anne's lace etc..), 'pockets' of dense upland brush (including multiflora rose, prickly ash, honeysuckle), and scattered elm, black locust, honey locust, walnut and box elder. Going forward it is important this field does not develop into an invasive species dominated environment. Options for management include leaving "as is" a rogue field, converting to a native grass/forb planting, commercial agriculture (preferably hay ground to avoid erosion into the woods), or machine planting trees into some or all of the field (conifers or hardwoods or both). Avoid what was previously rock quarry. With these options it would be important to establish a strategy to eliminate the field "filling with invasive woody brush".

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NO SILVICULTURAL SYSTEM APPLICABLE -- This stand has been designated as non-productive. If you choose to passively manage this stand, it will be subject to natural processes like forest succession, wildlife and insect activity, tree aging and decay, windstorms, fire, etc. If you choose to actively manage this stand, in the future a new silvicultural system and management practices should be prescribed.

Year Scheduled	Management Practice
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.
ANY	MACHINE PLANT. Machine plant a mixture of White Pine, White Oak, Bur Oak and Walnut Black at a rate of 800 trees per acre. Please contact your local WDNR forester for spacing recommendations. Custom planting crews may be available for hire to complete your tree planting project. Check this stand for successful regeneration. If this stand has not adequately regenerated three years after machine planting, additional management practices may be needed.

STAND NUMBER 15		11 Acres
Primary Type:	**Black Walnut Forest -- Seedlings and Saplings**	
Secondary Type:	**Upland Brush**	

Stand Information

The most abundant tree species in this stand include Walnut Black and Box Elder seedlings and/or saplings. In addition, scattered overstory trees are present, including Red Oak (30%) and Willow (includes Black) (10%).

These trees make up an even aged stand that originated about 2010. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Multiflora Rose
- Bush Honeysuckle Spp.
- Common Buckthorn

Stand Conditions, Special Features or Characteristics

This is a north facing slope located on the north side of the forested acreage. The small pond area is included in this stand. This area was previously pasture, evidenced by some old foundations, machinery etc....Mostly covered with grasses, golden rod, queen anne's lace, multi-flora rose, raspberries and pockets of dense prickly ash, walnut saplings, box elder saplings. Along the creek and around the pond are scattered larger walnut trees, box elder, elm, willow and a few red oaks. Walnut is "seeding in everywhere" near the pond and along the creek.... not so much near the interior of the stand and west end. Apple trees and thick prickly ash is more prevalent on the west end. Plans going forward should include mitigation of invasive woody brush and undesirable trees(box-elder) along with continuing to allow/favor walnut to seed in from the wood's edges etc... Augmenting the walnut natural regeneration with planting is also an option. Deer browse is heavy in this area.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL CONVERSION -- This stand will convert to black walnut. naturally after harvesting or completing your prescribed management treatments. Expect natural conversion because these species are already present or will be able to seed in and become established once the proper seedbed, light and crown canopy conditions exist. Your plan writer will prescribe future sound forestry management practices to meet your management goals.

Year Scheduled	Management Practice
ANY	DIRECT SEED. Broadcast or drill Walnut Black at a rate of 200 lbs/acre. Please contact your local WDNR forester for spacing recommendations. Custom planting crews may be available for hire to complete your direct seeding project. Check this stand for successful regeneration. If this stand has not adequately regenerated three years after direct seeding, additional management practices may be needed.
ANY	HAND PLANT. Hand plant a mixture of Walnut Black and White Oak at a rate of 800 trees per acre. Please contact your local WDNR forester for spacing recommendations. Custom planting crews may be available for hire to complete your tree planting project. Check this stand for successful regeneration. If this stand has not adequately regenerated three years after hand planting, additional management practices may be needed.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.

STAND NUMBER 16		4 Acres
Primary Type:	**Central Hardwood Forest -- Poletimber**	
Secondary Type:	**Central Hardwood Forest -- Small Sawtimber**	

Stand Information

The most abundant tree species in this stand include Black Locust (59%), Elm (13%), Box Elder (9%) and Walnut Black (9%).

These trees make up an even aged stand that originated about 1956. Tree ages in even-aged stands may vary slightly, but the trees began growing in relatively the same period.

Soil type, moisture and nutrient availability affect site quality, which limits the kind of tree species that will grow on a site, as well as the growth rate and quality of individual trees. Soil productivity also determines the amount of timber harvesting that is sustainable over time. It also affects other forest attributes, such as wildlife habitat and biodiversity.

This stand has a loam soil. Loam soils are a mixture of sand, silt and clay particles. Loam soils are 23% to 52% sand, 28% to 50% silt, and 48% to 78% clay. Silt loam or silt soils have relatively higher amounts of silt particles. Loam soils typically have an abundance of moisture and nutrients to sustain excellent growth rates for many tree species. Take care to prevent compaction and rutting when using equipment on these soils.

Your plan writer found the following invasive plant species during the forest inventory process:

- Garlic Mustard
- Multiflora Rose
- Bush Honeysuckle Spp.
- Common Buckthorn

Stand Conditions, Special Features or Characteristics

Surrounded by cornfields and near the creek. The snowmobile trail travels through this stand. Understory dominated by gooseberry, box elder and elm. Mostly gently sloped/flat...bit more rugged/steep near the creek as this stand adjoins stands 10/11. A few scattered farm implements from "days gone by" are in the woods in several locations. Black locust is the dominant tree species in all size classes (averaging over 140 trees/acre). Black walnut is the most valuable tree here (8-11 trees per acre) and should be the focal point of management. Favor walnut in all practices, do not allow any damage to walnut crowns/stems during activity.....grow walnuts to economic maturity (25"+ dbh). The north end of the stand has more desirable hardwoods and walnut. South end is nearly all black locust (many in the 7"-11" size class). An effort to thin some locust and elm from this stand could be made when thinning the pine in stand 10. Do not allow if damage to walnut is possible.

Management (Silvicultural) System

Manage and regenerate this stand within generally accepted silvicultural guidelines for the primary type according to the following management system.

NATURAL CONVERSION -- This stand will convert to black walnut. naturally after harvesting or completing your prescribed management treatments. Expect natural conversion because these species are already present or will be able to seed in and become established once the proper seedbed, light and crown canopy conditions exist. Your plan writer will prescribe future sound forestry management practices to meet your management goals.

Year Scheduled	Management Practice
2027	THINNING. Remove trees to reduce stand density thereby improving tree growth and enhancing forest health, or to utilize trees that are at risk of mortality. Thin the stand to reduce stocking and concentrate growth on trees that are more desirable by following the order of removal and tree retention guidelines.
ANY	INVASIVE PLANT CONTROL. Take specific measures to manage plant or tree species whose aggressive growth or reproductive patterns threaten the health or regeneration of the stand. Get the latest information on control measures from your local WDNR office or WDNR Website. Prepare your site by pulling, cutting or girdling competing vegetation with chain saws, hand saws, weed whips, brush saws, etc. Select the right herbicide and apply all chemical treatments according to the label instructions.
ANY	TIMBER STAND IMPROVEMENT/WEEDING. The understory forest and mid-level canopy (2"-14" size class) is presently dominated by undesirable species and suppressed/poorly formed hardwood trees (elm and box elder). This area would benefit from the mitigation of these trees. Cutting and treating the stumps will allow more room for desirable hardwood trees to establish and mitigate the presence of undesirable species. Contact your local DNR forester to help establish a cost share project related to this work.

ADDITIONAL INFORMATION FOR MANAGEMENT OF YOUR PROPERTY

Cost Share on Forest Management or Tree Planting

State and Federal programs are available to help share the cost of implementing certain forest management or tree planting projects. You can find more information about financial help and cost share programs; go to http://dnr.wi.gov and search 'Forest Landowner'.

You can purchase seedlings through the state nursery program. To learn more about tree availability or to create your own tree planting plan visit: http://dnr.wi.gov and search 'Tree Planting'.

Timber Harvest Contracts

It is very important that you and your logging contractor have a written and signed contract to guide the harvesting process before starting any harvesting. For more information on writing contracts for timber sales please visit http://dnr.wi.gov and search 'Forest Landowner'.

Non-Timber Forest Products

If you harvest non-timber products, including but not limited to mushrooms, berries, ferns, evergreen boughs, cones, nuts, seeds, maple sap, bark, twigs, moss, and edible and/or medicinal plants be sure to follow all applicable laws. Wisconsin statutes may regulate some of these non-timber products, such as ginseng. Others might be threatened or endangered species, and protected by law. Also take care to prevent over-harvesting and reducing biological diversity and ecosystem functions. For additional information on how harvesting of non-timber forest products will affect management of your forestland please contact your local WDNR Forester using the Forestry Assistance Locator; go to http://dnr.wi.gov and search 'Forest Landowner '.

Forest Certification

Forest certification systems are market-based, non-regulatory means to assure end users that the wood products they purchase have been grown, managed, and harvested in socially acceptable and environmentally responsible ways. More and more wood-using industries and consumers demand proof they are buying wood from sustainably managed woodlands.

Third party certification is beneficial in many ways, some of which are the ability to sell to the certified marketplace; future ability to participate in carbon markets; and an opportunity to educate the public about the importance of well-managed private forests.

Landowners who have a Forest Stewardship Plan for their property and have implemented practices according to the plan may be eligible to participate in the American Tree Farm System (ATFS) forest certification program through the Wisconsin (State) Tree Farm Committee (WTFC) group. Applications and information on the ATFS Forest Certification program can be found online at American Tree Farm System Certification (https://www.treefarmsystem.org/certification-american-tree-farm-system) and the Wisconsin Tree Farm Committee (http://witreefarm.org/).

For more information about forest certification, please contact your DNR Forester or visit http://dnr.wi.gov and search for 'Forest Certification'.

Wildfire Prevention and Planning

Every year in Wisconsin, thousands of wildfires occur, destroying dozens of structures and threatening to burn hundreds more. An increasing number of people living and recreating in Wisconsin's wildland-urban interface is creating a growing need for fire prevention and planning for fires that will inevitably occur.

Because of their proximity to forested lands, there is the potential for homes and property to be at significant risk of damage or destruction in the event of a wildfire. As part of the landscape planning process, it is important to determine the level of danger to properties and learn how to mitigate those dangers.

You can take action to reduce the exposure of your home or property to fire. Use fire resistant building materials, incorporate fuel breaks into the landscape, and know the local burning restrictions.

For more information on fire danger and burning permit restrictions, go to http://dnr.wi.gov and search 'Fire'. For more information on making your home and property more survivable in the event of a wildfire, go to http://dnr.wi.gov and search 'Firewise'.

Forest Carbon

Forests are a significant piece of the global carbon cycle because of their ability to absorb and sequester carbon dioxide. Learn how your forest adds to the global carbon balance and be aware of the rules affecting your participation in forest carbon markets. For information, visit the US Forest Service website: http://www.na.fs.fed.us/ecosystemservices/carbon/.

Lands included in the Forest Stewardship Plan

In conjunction with your maps and air photos, this land information helps you to identify your lands covered by this plan.

Town/Range/Section	Legal Description	Tax Parcel ID No.	Certified Survey Map Information	Enrolled Acreage	
				Open to Public Access	Closed to Public Access
County: Sauk		Municipality: Town of Reedsburg			
12N-04E-28	NESE, PART OF	030-0954-00000		0.000	5.000
12N-04E-33	NENE, PART OF	030-1057-00000		0.000	14.000
12N-04E-33	SWNE	030-1059-00000		0.000	40.000
12N-04E-33	SENE, PART OF	030-1060-00000		0.000	30.000
12N-04E-34	SWNW, PART OF	030-1087-00000		0.000	13.000
12N-04E-34	SENW, PART OF	030-1088-00000		0.000	2.000
12N-04E-34	NESW, PART OF	030-1090-00000		0.000	9.000
12N-04E-34	NWSW, PART OF	030-1091-00000		0.000	8.000
			Total Acreage:	0.000	121.000

Forester Contact Information

Contact your local DNR Forester for information about:

- **activities addressed in your plan**
- **implementing your plan**
- **planning for a timber harvest and sample timber sale contracts**
- **State and Federal cost-sharing available for some practices**
- **the Managed Forest Law (MFL) a Wisconsin property tax incentive program**

Plan Preparer Contact Information	DNR Forester Contact Information
HILL, TOM	KLOPPENBURG, PAUL
TOM HILL FORESTRY, LLC	DEPARTMENT OF NATURAL RESOURCES
706 PRAIRIE HILLS DRIVE	124 2ND STREET STE 31
DODGEVILLE, WI 53533	BARABOO, WI 53913-2474
(608) 574-7446	(608) 604-4846
THOMPSONH.HILL@GMAIL.COM	PAUL.KLOPPENBURG@WISCONSIN.GOV

Department of Natural Resources

Primary Owner

SAUK COUNTY FARM FOREST STEWARDSHIP PLAN, ATTN: CASSANDRA FOWLER
505 BROADWAY ST
BARABOO, WI 53913-2183

Other Owners

LAND EXAM AND PRACTICES REPORT

Form 2450-128 Run Date: 02/20/2023

1st Year: 2022 **Length:** 25 yrs. **Last Year:** 12/31/2046

Stewardship #: 57-S11-2022 -- Sauk Co. -- Reedsburg (T)

A. Stand Number		P 1				2				4			
1	Productivity												
2	Stand Prefix	P=Plantation											
3	Exam Date	12/27/2022				12/26/2022				12/26/2022			
4	Age Structure	Even-Aged				Even-Aged				Even-Aged			
5	Timber Type - Primary	Red Pine	9-15	3		Central Hardwoods	15+	3		Central Hardwoods	5-11	3	
	Timber Type - Secondary	Red Pine	5-9	1		Red Maple	5-11	2		Walnut	11-15	1	
	Timber Type - Understory	Upland Brush				Central Hardwoods	0-5	2		Central Hardwoods	0-5	1	
6	Habitat Type												
7	Acres	5				5				7			
8	Year of Origin	1956				1969				1980			
9	Total Height	107				68				68			
10	Mean Stand Diameter	9				9				7			
11	Site Index & Species	84 - Pine, White				66 - Oak, Red				68 - Walnut, Black			
12	Total Basal Area	130				128				110			
13	Total Volume-Cds/Acre	23				14				22			
	Total Volume-BF/Acre	5860				4890				260			
14	Tree Species	Species	BA	Cds	BF	Species	BA	Cds	BF	Species	BA	Cds	BF
	1st Major Tree Species	Pine, Red	55	19	0	Locust, Black	53	5	3,030	Walnut, Black	26	7	120
	2nd Major Tree Species	Pine, White	40	1	5,700	Maple, Red	33	6	240	Aspen, Big-tooth	26	8	0
	3rd Major Tree Species	Box Elder	20	1	0	Oak, White	18	0	1,150	Hickory, Bitternut	20	2	0
	4th Major Tree Species	Cherry, Black	13	2	0	Oak, Red	8	1	180	Elm	14	2	0
15	Invasive Level	Present				Present				Present			
	1st Inv Species/Density	Common Buckthorn		5% - 20%		Garlic Mustard		5% - 20%		Garlic Mustard		20% - 35%	
	2nd Inv Species/Density	Garlic Mustard		20% - 35%		Bush Honeysuckle Spp.		5% - 20%		Multiflora Rose		5% - 20%	
	3rd Inv Species/Density	Bush Honeysuckle Spp.		5% - 20%		Multiflora Rose		<5%		Japanese Barberry		<5%	
	4th Inv Species/Density												
16	Soil Type	Loam (may include silt loam or silt)				Loam (may include silt loam or silt)				Loam (may include silt loam or silt)			
17	Management Objective	Forced Conversion to white pine, black walnut or white oak. after treatment				Natural Conversion to RED MAPLE				Natural even-aged regeneration of Timber Type with future thinning			
18	Last Changed	2/8/2023 6:03:08 PM				12/29/2022 5:39:03 PM				2/8/2023 6:13:46 PM			

B. Non-Mandatory Practice	Practice	Yr	Practice	Yr	Practice	Yr
	Overstory Removal	2027	Thinning	2029	Other-Timber Stand	2029
	Sanitation and Salvage Cutting	2027	Invasive Plant Control	ANY	Thinning	2045
	Hand Plant	ANY			Invasive Plant Control	ANY
	Invasive Plant Control	ANY				

Stand Conditions, Special Features or Characteristics	**Stand Number: P 1**	**Stand Number: 2**	**Stand Number: 4**
	Stand P1 is located 3/4 mile north of all the 'other' forested lands. These conifers (red pine and white pine) were planted approximately 60-70 years ago. The topography within this area is gently rolling and there is good access to this area via the agricultural fields and Herritz Road. The white pine here are doing well. Some are spectacular. A white pine was measured to be 31" in diameter and 105 feet tall. Over the years there has been some natural mortality in the pine, there are some larger white pines in need of salvage at some point. The red pine has done well up to this point, however now they are showing signs of stress. Silt loam soils are not ideal for red pine growth. Future management should include eliminating the red pine(overstory removal) and thinning/salvaging some of the white pine. Desirable seedling regeneration is not present. Before harvesting the pine there should be a plan in place to replant with white pine or native hardwoods (white oak/walnut).	Stand 2 is found in the NW corner of the property along the edge of the field (stand 14). Black locust is dominant in all size classes. The locust is tall, estimated to be 60 years old and appear healthy. There is also a significant presence of red maple here. Conversion to red maple over time should be the future goal. Over time, thinning the black locust will encourage more red maple along with other desirable hardwoods. Black locust can 'take over' a forest. Minimizing the locust to this area will benefit the entire forest. The north side of this stand has much less locust. A group of big white oak and red oak are present here as you move towards the east end of the stand. It may be possible to regenerate some oak here at some point. Controlling the understory brush and minimizing the presence of undesirable trees in the 2"-12" size class will be necessary. Along the edge of the field is dense prickly ash. Maintain large white oak for wildlife habitat.	Gently rolling south facing slope. Understory is dominated by gooseberry with a bit of multiflora rose along the field edge. There are some stumps which give evidence of previous logging. A young central hardwood forest with 10 species documented, walnut is the most prevalent, growing well, healthy, and the most valuable. White ash is present and dying from EAB (emerald ash borer). The upper slope has a bit more aspen and red maple, walnut is mixed throughout. Walnut is the preferred crop tree in this area, growing walnut to economic maturity is the goal (25"+ dbh). Utilizing non-commercial thinning to release the crowns of the crop tree walnut is recommended (cutting competing trees (including elm, bitternut hickory, basswood, aspen and red maple) to allow room for the walnut). Commercial thinning in 15-20 years is a possibility, however this cannot result in any damage to the crop tree walnut.

Department of Natural Resources

Primary Owner

SAUK COUNTY FARM FOREST STEWARDSHIP PLAN, ATTN: CASSANDRA FOWLER
505 BROADWAY ST
BARABOO, WI 53913-2183

Other Owners

LAND EXAM AND PRACTICES REPORT

1st Year: 2022 **Length:** 25 yrs. **Last Year:** 12/31/2046

Stewardship #: 57-S11-2022 -- Sauk Co. -- Reedsburg (T)

A. Stand Number		5				7				8			
1	Productivity												
2	Stand Prefix												
3	Exam Date	12/26/2022				12/26/2022				12/26/2022			
4	Age Structure	Even-Aged				Even-Aged				Even-Aged			
5	Timber Type - Primary	Central Hardwoods	5-11	3		Red Maple	15+	3		Oak	15+	3	
	Timber Type - Secondary	Central Hardwoods	11-15	1		Red Maple	5-11	2		Oak	11-15	1	
	Timber Type - Understory	Central Hardwoods	0-5	2		Central Hardwoods	0-5	3		Central Hardwoods	0-5	2	
6	Habitat Type												
7	Acres	17				14				3			
8	Year of Origin	1979				1964				1912			
9	Total Height	64				72				87			
10	Mean Stand Diameter	7				11				14			
11	Site Index & Species	66 - Hickory, Bitternut				65 - Maple, Red				62 - Oak, Red			
12	Total Basal Area	112				108				113			
13	Total Volume-Cds/Acre	19				15				4			
	Total Volume-BF/Acre	1290				3940				6980			
14	Tree Species	Species	BA	Cds	BF	Species	BA	Cds	BF	Species	BA	Cds	BF
	1st Major Tree Species	Aspen, Big-tooth	36	10	160	Maple, Red	52	11	920	Oak, Red	67	0	5,440
	2nd Major Tree Species	Maple, Red	25	4	160	Oak, White	17	0	1,100	Oak, White	23	2	900
	3rd Major Tree Species	Hickory, Bitternut	22	3	0	Hickory, Bitternut	13	2	380	Maple, Red	10	0	500
	4th Major Tree Species	Oak, White	9	0	560	Aspen, Big-tooth	8	1	560	Hickory, Shagbark	3	1	0
15	Invasive Level	Present				Present				Present			
	1st Inv Species/Density	Garlic Mustard		5% - 20%		Common Buckthorn		<5%		Garlic Mustard		5% - 20%	
	2nd Inv Species/Density					Bush Honeysuckle Spp.		5% - 20%		Multiflora Rose		5% - 20%	
	3rd Inv Species/Density					Multiflora Rose		<5%					
	4th Inv Species/Density					Japanese Barberry		<5%					
16	Soil Type	Loam (may include silt loam or silt)				Loam (may include silt loam or silt)				Loam (may include silt loam or silt)			
17	Management Objective	Natural even-aged regeneration of Timber Type with future thinning				Natural Conversion to NORTHERN HARDWOODS				Natural Conversion to CENTRAL HARDWOODS			
18	Last Changed	12/29/2022 11:53:24 AM				12/29/2022 12:22:55 PM				12/29/2022 12:52:11 PM			

B. Non-Mandatory Practice

Practice	Yr	Practice	Yr	Practice	Yr
Thinning	2034	Patch Selection Harvest	2034	Pre-harvest treatment	2025
Thinning	2045	Patch Selection Harvest	2045	Overstory Removal	2029
Invasive Plant Control	ANY	Invasive Plant Control	ANY	Invasive Plant Control	ANY

Stand Conditions, Special Features or Characteristics

Stand Number: 5
Located at the top of the hill, this area is flat to gently rolling. Overall, this stand is dominated by a young trees in the 5"-11" size class (11 different species predominantly 40-50 years old). Aspen, red maple and bitternut hickory are most dominant in this size class. A few walnuts are mixed in. Scattered large sawlog size(15"+) white oak, white ash and red oak are also present. Ash is dying from EAB. During future thinning operations, favor walnut, red maple, shagbark hickory, black cherry and oak. Discriminate against bitternut hickory and elm when possible. During the next 25 years thinning will only be necessary. Regeneration harvesting will not be necessary for 30 years. If commercial thinning is not feasibel/possible utilize non-commercial timber stand improvement practices to release the better trees. Towards the NE corner of the stand is an old concrete foundation (possible old manure storage?) and excavated roads/trails to this foundation.

Stand Number: 7
Primarily steep east facing slopes. Stand 7 is in two separate locations. Understory dominated by gooseberry and prickly ash. Eastern edge of the stand has invasive brush problem (more open here towards highway). Overstory in both locations are dominated by red maple in all size classes. Scattered 'open grown' white oak and bur oak towards the tops of the slopes (field edge of one area). South facing aspect of stand 7 has good oak regeneration 'under white oak sawlogs'. Sugar maple seedlings are present in minimal quantities throughout and will begin to become more common in the understory (this should be encouraged). Patch selection harvesting is encouraged with the initial harvest taking 1/3 of the stand in 1/2-2 acre patches, focusing on areas with more aspen, bitternut hickory, elm and less desirable red maple. The second harvest should also include 1/3 the stand and will probably include mostly red maple. Take oak overstory in any harvest IF oak regeneration is present.

Stand Number: 8
Steep north facing slope with a lot of large sawlog size red oak trees. Soils are Dorerton, very stony-Elbaville complex on 30-60% slope(cobbly/stony). Minimal understory brush on the steep slope. An old woods road was identified in the stand. The flatter NW corner dominated by prickly ash, raspberry and multiflora rose (not much sawlog volume in this area). The red oak appears to be in the 110–120-year-old age class. The trees are healthy but showing signs of old age and stress. Understory desirable seedling regeneration is mostly not present(white ash most dominant 333/acre). An overstory removal of all the mature red oak is recommended, however an effort should be made prior to this cutting to establish more desirable hardwood seedling/sapling regeneration (most likely red maple). There is enough red maple presence in sawlog size trees to "seed in" and help establish a desirable future forest. Site prep for natural regeneration prior to cutting is recommended.

Department of Natural Resources

Primary Owner

SAUK COUNTY FARM FOREST STEWARDSHIP PLAN, ATTN: CASSANDRA FOWLER
505 BROADWAY ST
BARABOO, WI 53913-2183

Other Owners

LAND EXAM AND PRACTICES REPORT

Form 2450-128 Run Date: 02/20/2023

1st Year: 2022 **Length:** 25 yrs. **Last Year:** 12/31/2046

Stewardship #: 57-S11-2022 -- Sauk Co. -- Reedsburg (T)

A. Stand Number		9				P 10				F 11			
1	Productivity												
2	Stand Prefix					P=Plantation				F=Riparian Stand			
3	Exam Date	12/27/2022				12/27/2022				12/27/2022			
4	Age Structure	Even-Aged				Even-Aged				Even-Aged			
5	Timber Type - Primary	Central Hardwoods	5-11	2		White Pine	15+	5		Central Hardwoods	5-11	2	
	Timber Type - Secondary	Central Hardwoods	11-15	1		White Pine	9-15	3		Central Hardwoods	15+	1	
	Timber Type - Understory	Central Hardwoods	0-5	3		Central Hardwoods	0-5	1		Central Hardwoods	0-5	1	
6	Habitat Type												
7	Acres	15				6				15			
8	Year of Origin	1979				1964				1974			
9	Total Height	64				92				53			
10	Mean Stand Diameter	8				11				8			
11	Site Index & Species	66 - Hickory, Bitternut				80 - Pine, White				54 - Oak, Red			
12	Total Basal Area	87				173				64			
13	Total Volume-Cds/Acre	11				37				7			
	Total Volume-BF/Acre	1770				10890				800			
14	Tree Species	Species	BA	Cds	BF	Species	BA	Cds	BF	Species	BA	Cds	BF
	1st Major Tree Species	Hickory, Bitternut	44	8	430	Pine, White	160	35	10,890	Box Elder	29	4	0
	2nd Major Tree Species	Hickory, Shagbark	23	3	740	Cherry, Black	5	1	0	Cottonwood, Eastern	16	1	310
	3rd Major Tree Species	Elm	5	0	0	Walnut, Black	3	0	0	Walnut, Black	7	1	0
	4th Major Tree Species	Box Elder	3	0	0	Pine, Red	3	1	0	Willow (includes Black)	4	1	0
15	Invasive Level	Present				Present				Present			
	1st Inv Species/Density	Multiflora Rose		35% - 50%		Bush Honeysuckle Spp.		5% - 20%		Garlic Mustard		20% - 35%	
	2nd Inv Species/Density	Japanese Barberry		<5%		Common Buckthorn		<5%		Bush Honeysuckle Spp.		5% - 20%	
	3rd Inv Species/Density	Common Buckthorn		<5%		Japanese Barberry		<5%		Multiflora Rose		<5%	
	4th Inv Species/Density	Bush Honeysuckle Spp.		<5%		Multiflora Rose		<5%					
16	Soil Type	Loam (may include silt loam or silt)				Loam (may include silt loam or silt)				Loam (may include silt loam or silt)			
17	Management Objective	Natural Conversion to NORTHERN HARDWOODS				Natural even-aged regeneration of Timber Type with future thinning				Natural Conversion to CENTRAL HARDWOODS			
18	Last Changed	12/29/2022 1:21:29 PM				12/29/2022 1:59:35 PM				12/29/2022 3:10:05 PM			

B. Non-Mandatory Practice	Practice	Yr	Practice	Yr	Practice	Yr
	Thinning	2034	Thinning	2027	Hand Plant	ANY
	Thinning	2045	Thinning	2045	Invasive Plant Control	ANY
	Invasive Plant Control	ANY	Invasive Plant Control	ANY	Overstory Removal	ANY

Stand Conditions, Special Features or Characteristics	**Stand Number: 9**	**Stand Number: P 10**	**Stand Number: F 11**
	Located in two locations. This stand has a lot of variety in topography, including gently sloping (nearly flat) to a steep/rocky north facing aspect(far N end above the creek/pond). Extensive thickets of prickly ash and multiflora rose give evidence of previous pasturing along with the few scattered older open grown white oak. The stand is dominated by over 75% hickory (bitternut and shagbark), and over 50% of the trees are found in the 5"-11" size class. In the far SW location, sugar maple is present, and conversion is inevitable. The utilization of commercial and/or non-commercial thinning practices (crop tree release) is recommended. An effort should be made during the thinning's to release the better stems of walnut, red maple, sugar maple, oak and also the best formed shagbark hickory and bitternut hickory. All of the scattered big oak in this stand should be retained for wildlife habitat. Mitigate invasive woody brush as resources allow (focus on areas with best timber).	This white pine planting is located just east of highway 23 above the un-named creek/tributary to Narrows Creek. There is good access to this location from the south through an agricultural field. The site is not steep but not flat (most of the site is conducive to harvesting equipment operation). Understory is dominated by gooseberry, raspberry, scattered honeysuckle and a bit of multiflora rose. Prior to planting this field looks like it may have been disc trenched (as the trenches are still obvious). The stand appears to have never been thinned as the density is high, no stumps area evident and natural mortality is beginning (self-thinning is ongoing). Many of the treetops are spindly/small. Despite the high density and lack of thinning, most of the trees appear healthy, vigorous and very tall! A white pine was measured with 29" diameter and over 90' tall. The best white pine should be encouraged to grow another 50+ years...will be spectacular aesthetically above the creek.	Stand 11 stretches from Hwy 23, 1/2 mile to the SE, meandering along the creek. Predominantly the riparian corridor to the creek, the ultimate goal of any management in this area should be to minimize soil erosion and protect the integrity of the creek banks. Presently there is some significant bank sloughing and erosion on the north facing slope above the creek and the banks show signs of erosion. Nearly 50% of the timber in this area is box-elder, with some scattered areas having excellent quality black walnut and red oak. Much more box elder is present (to nearly all box elder) as you get further from the Hwy. The east most area is dominated by cottonwood stems. More walnut regeneration could be encouraged by cutting/treating box elder in the areas with walnut sawlog size trees present. IF a commercial operation would be interested in the box elder, it would be possible to cut/treat box elder and then prior, or following, plant walnut or swamp white oak in the understory.

Department of Natural Resources

Primary Owner

SAUK COUNTY FARM FOREST STEWARDSHIP PLAN, ATTN: CASSANDRA FOWLER
505 BROADWAY ST
BARABOO, WI 53913-2183

Other Owners

LAND EXAM AND PRACTICES REPORT

Form 2450-128 Run Date: 02/20/2023 Page 31

1st Year: 2022 **Length:** 25 yrs. **Last Year:** 12/31/2046

Stewardship #: 57-S11-2022 -- Sauk Co. -- Reedsburg (T)

A. Stand Number		12				H 13				H 14			
1	Productivity												
2	Stand Prefix					H=Mgmt Obj. Not Yet Deter.				H=Mgmt Obj. Not Yet Deter.			
3	Exam Date	12/27/2022				12/27/2022				12/27/2022			
4	Age Structure	Even-Aged											
5	Timber Type - Primary	Red Pine	9-15	1		Lowland Herbaceous				Herbaceous Vegetation			
	Timber Type - Secondary	Miscellaneous Coniferous	5-9	1		Lowland Grass				Upland Brush			
	Timber Type - Understory	Lowland Herbaceous								Low - Growing Shrubs			
6	Habitat Type												
7	Acres	2				3				14			
8	Year of Origin	1987											
9	Total Height	35											
10	Mean Stand Diameter	8											
11	Site Index & Species	49 - Pine, Red											
12	Total Basal Area	30											
13	Total Volume-Cds/Acre	2											
	Total Volume-BF/Acre	10											
14	Tree Species	Species	BA	Cds	BF	Species	BA	Cds	BF	Species	BA	Cds	BF
	1st Major Tree Species	Pine, Red	20	2	10								
	2nd Major Tree Species	Cedar, Red	10	0	0								
	3rd Major Tree Species												
	4th Major Tree Species												
15	Invasive Level	Present				Present				Present			
	1st Inv Species/Density	Bush Honeysuckle Spp.		5% - 20%		Bush Honeysuckle Spp.		<5%		Black Locust		5% - 20%	
	2nd Inv Species/Density	Multiflora Rose		5% - 20%		Reed Canary Grass		5% - 20%		Bush Honeysuckle Spp.		5% - 20%	
	3rd Inv Species/Density					Multiflora Rose		<5%		Multiflora Rose		5% - 20%	
	4th Inv Species/Density												
16	Soil Type	Loam (may include silt loam or silt)				Loam (may include silt loam or silt)				Loam (may include silt loam or silt)			
17	Management Objective	Forced Conversion to oak, walnut or native grasses. after treatment				Designated as a non-forest management zone				Designated as a non-forest management zone			
18	Last Changed	12/29/2022 3:05:09 PM				12/29/2022 3:28:07 PM				2/8/2023 6:13:18 PM			

B. Non-Mandatory Practice	Practice	Yr	Practice	Yr	Practice	Yr
	Hand Plant	ANY	Invasive Plant Control	ANY	Invasive Plant Control	ANY
	Invasive Plant Control	ANY			Machine Plant	ANY

Stand Conditions, Special Features or Characteristics

Stand Number: 12
This is a small area along the southeast border of the wooded acreage. Scattered red pine and a few white pine trees were planted here (35 years ago) in addition to the already existent eastern red cedar. Stocking level is not very good...alot of open grassy/brush areas between trees. The north end of the stand has a bit more white pine and then box elder making its way over from stand 11. Overall, most of the trees are short, indicative of being planted "off-site" for the species. Black locust and elm saplings and seedlings were also documented across this area. Going forward it will be beneficial to keep any invasive woody brush (and black locust trees) from invading this area. It may also be possible to convert this area to more desirable hardwoods (hand plant) as bur oak, swamp white oak or walnut. Another option would be a conversion to native grasses. Deer browse will need to be considered if planting as extensive deer traffic was evident during the site visit.

Stand Number: H 13
This is an area with minimal to no desirable tree presence. There are a few scattered elm, red cedar and cottonwood towards the creek and along the edge of the agricultural field but most of this area is either wet cattail swamp or a bit higher ground consisting of box elder saplings/seedlings, lowland brush and perennial herbaceous plants (queen anne's lace and golden rod). Options for this area include "leave as is"(possibly prescribed burning this field to keep the woody plants from establishing), or convert to native grasses, sedges or forbs. A conversion to native plants would involve mitigating the present invasive brush/grasses etc... and planting the desired native plants. Both options could be maintained with periodic prescribed burning. The native plant option would be more desirable for wildlife habitat.

Stand Number: H 14
Large open area in the far western portion of the wooded entry. There is a large 'earthen berm' stretching from N to S across the middle of the field. I was told this used to be a rock quarry. Field is covered with grasses, perennial herbaceous plants (golden rod, queen anne's lace etc..), 'pockets' of dense upland brush (including multiflora rose, prickly ash, honeysuckle), and scattered elm, black locust, honey locust, walnut and box elder. Going forward it is important this field does not develop into an invasive species dominated environment. Options for management include leaving "as is" a rogue field, converting to a native grass/forb planting, commercial agriculture (preferably hay ground to avoid erosion into the woods), or machine planting trees into some or all of the field (conifers or hardwoods or both). Avoid what was previously rock quarry. With these options it would be important to establish a strategy to eliminate the field "filling with invasive woody brush".

Primary Owner

SAUK COUNTY FARM FOREST STEWARDSHIP PLAN, ATTN: CASSANDRA FOWLER
505 BROADWAY ST
BARABOO, WI 53913-2183

Other Owners

1st Year: 2022 **Length:** 25 yrs. **Last Year:** 12/31/2046

Stewardship #: 57-S11-2022 -- Sauk Co. -- Reedsburg (T)

A. Stand Number		15				16			
1	Productivity								
2	Stand Prefix								
3	Exam Date	12/27/2022				12/27/2022			
4	Age Structure	Even-Aged				Even-Aged			
5	Timber Type - Primary	Walnut		0-5	2	Central Hardwoods		5-11	2
	Timber Type - Secondary	Upland Brush				Central Hardwoods		11-15	1
	Timber Type - Understory					Central Hardwoods		0-5	1
6	Habitat Type								
7	Acres	11				4			
8	Year of Origin	2010				1956			
9	Total Height	20				59			
10	Mean Stand Diameter	11				9			
11	Site Index & Species	60 - Walnut, Black				59 - Elm, American			
12	Total Basal Area	10				80			
13	Total Volume-Cds/Acre	1				9			
	Total Volume-BF/Acre	230				1420			
14	Tree Species	Species	BA	Cds	BF	Species	BA	Cds	BF
	1st Major Tree Species	Walnut, Black	3	0	130	Locust, Black	47	5	300
	2nd Major Tree Species	Oak, Red	3	0	100	Elm	10	1	0
	3rd Major Tree Species	Willow (includes Black)	1	0		Box Elder	7	1	0
	4th Major Tree Species	Box Elder	1	1		Walnut, Black	7	2	0
15	Invasive Level	Present				Present			
	1st Inv Species/Density	Common Buckthorn			<5%	Common Buckthorn			<5%
	2nd Inv Species/Density	Bush Honeysuckle Spp.			5% - 20%	Garlic Mustard			5% - 20%
	3rd Inv Species/Density	Multiflora Rose			35% - 50%	Bush Honeysuckle Spp.			<5%
	4th Inv Species/Density					Multiflora Rose			<5%
16	Soil Type	Loam (may include silt loam or silt)				Loam (may include silt loam or silt)			
17	Management Objective	Natural Conversion to black walnut.				Natural Conversion to black walnut.			
18	Last Changed	12/29/2022 4:49:03 PM				12/29/2022 5:10:41 PM			

B. Non-Mandatory Practice

Practice	Yr	Practice	Yr
Direct Seed	ANY	Thinning	2027
Hand Plant	ANY	Invasive Plant Control	ANY
Invasive Plant Control	ANY	Other-Timber Stand	ANY

Stand Conditions, Special Features or Characteristics

Stand Number: 15
This is a north facing slope located on the north side of the forested acreage. The small pond area is included in this stand. This area was previously pasture, evidenced by some old foundations, machinery etc....Mostly covered with grasses, golden rod, queen anne's lace, multi-flora rose, raspberries and pockets of dense prickly ash, walnut saplings, box elder saplings. Along the creek and around the pond are scattered larger walnut trees, box elder, elm, willow and a few red oaks. Walnut is "seeding in everywhere" near the pond and along the creek.... not so much near the interior of the stand and west end. Apple trees and thick prickly ash is more prevalent on the west end. Plans going forward should include mitigation of invasive woody brush and undesirable trees(box-elder) along with continuing to allow/favor walnut to seed in from the wood's edges etc... Augmenting the walnut natural regeneration with planting is also an option. Deer browse is heavy in this area.

Stand Number: 16
Surrounded by cornfields and near the creek. The snowmobile trail travels through this stand. Understory dominated by gooseberry, box elder and elm. Mostly gently sloped/flat...bit more rugged/steep near the creek as this stand adjoins stands 10/11. A few scattered farm implements from "days gone by" are in the woods in several locations. Black locust is the dominant tree species in all size classes (averaging over 140 trees/acre). Black walnut is the most valuable tree here (8-11 trees per acre) and should be the focal point of management. Favor walnut in all practices, do not allow any damage to walnut crowns/stems during activity.....grow walnuts to economic maturity (25"+ dbh). The north end of the stand has more desirable hardwoods and walnut. South end is nearly all black locust (many in the 7"-11" size class). An effort to thin some locust and elm from this stand could be made when thinning the pine in stand 10. Do not allow if damage to walnut is possible.

Additional Plan Recommendations

Field Edges.

- Switchgrass/native prairie forb/grass mixtures along field edges. This cover would provide excellent habitat and act as filter strips to mitigate soil erosion into forested areas.
- "Feathered edges" – combine native grass plantings (as above) with planted wildlife shrubs. Ensure these shrubs are native (non-invasive) varieties. Eliminate "edges" dominated by invasive woody brush before establishing these plantings.

Tree Planting/Wildlife Plantings.

- There are open fields (stand 14 and stand 15) that could be machine planted with conifers or hardwoods. Species as white pine, white oak and walnut would all thrive in these environments and are climate change adaptive/resilient. These plantings would also create additional wildlife habitat. Machine plant hardwoods 800-1000/acre and conifers at 800/acre. Contact local DNR forestry staff for assistance with planning and seedling purchase.
- Additional wildlife shrub plantings within the above plantings would also enhance wildlife habitat. Utilize only native shrubs.

Forest Trails and Landings.

- Develop a system of forest roads to use as access for forest management, including timber stand improvement, invasive woody brush control, Rx burning/breaks etc. Maintain numerous areas open as food plots or native grass plantings that can also be used as harvest landings. Follow DNR BMPs for Water Quality in all activities within the RMZ of the creek that meanders thru the ownership.

Stream Crossings/Rock Fords.

- Stream crossings are valuable for all commercial and non-commercial forest management activities. The addition of 1-2 stream crossings would be beneficial. Locate these in strategic locations that allow access to all areas of the property. Follow DNR BMPs for Water Quality in all activities within the RMZ of both navigable and non-navigable streams/waterways.

Walnut Conversion/Box Elder dominated woodlands.

- Numerous stands/locations within stand 11 and stand 15 are dominated by box elder. Box elder albeit native is not a desirable timber species, however it is an indicator of good soil quality. These areas grow excellent native walnut trees. A successful conversion technique is to hand plant 500-800 trees/acre 'under the box elder', then cut/treat the overstory box elder.

Additional Plan Recommendations continued……

Native Grass/Forb Plantings.

- Native grasses and forbs provide excellent wildlife habitat for habitat, nesting and forage. These plantings also provide excellent structural diversity to the overall landscape. Stands 14, 15, 13, and 12 along with the surrounding agricultural fields all provide opportunities to establish native grass/forb plantings. Contact local NRCS/local DNR wildlife biologists for assistance establishing this type of cover.

Deer Management/Deer Herbivory

- Throughout all the forested acres, significant deer browsing was present. Successful sustainable forestry is dependent on mitigating deer browsing on tree regeneration. Continue to allow and encourage the harvest of deer on the property.

Invasive Species Mitigation and Monitoring

- Invasive woody plants are one of the biggest threats to the sustainability of your forest. Invasive honeysuckle, buckthorn, autumn olive, barberry and multi-flora rose are the predominant invasive woody plants in Sauk County. You have varying levels of all of these. You can't eliminate in one year what took 25+/- years to establish. Utilizing the attached forest stewardship plan to guide your mitigation efforts will be helpful. Becoming educated in plant identification and regularly spending time walking your land looking for any additional plant threats is a good practice.

Tom Hill Forestry

FOREST STEWARDSHIP PLAN MAP

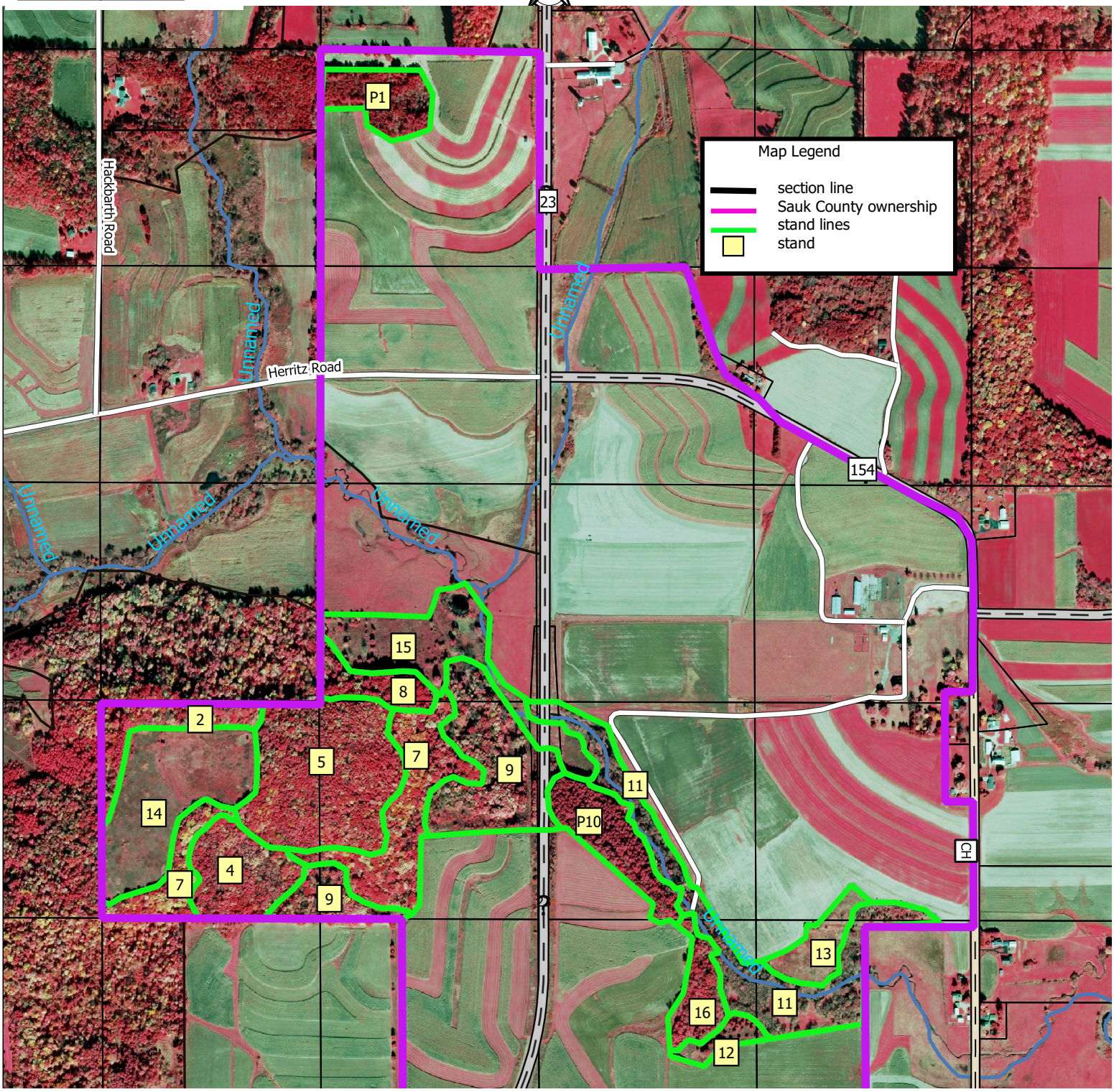
Owner's Name		Municipality Name			County
Sauk County Farm Forest Stewardship Plan		Reedsburg Township			Sauk
Stewardship Plan No.	Acreage	Township #	Range #	Section	
57-S11-2022	121 forested acres	12 N	4E	28, 33, 34	

0 500 1,000 ft

N

Prepared By: Tom Hill

Date: 12/28/2022



Tom Hill Forestry

FOREST STEWARDSHIP PLAN MAP

Owner's Name	Municipality Name	County
Sauk County Farm Forest Stewardship Plan	Reedsburg Township	Sauk

Stewardship Plan No.	Acreage	Township #	Range #	Section
57-S11-2022	121 forested acres	12 N	4E	28, 33, 34

0 500 1,000 ft

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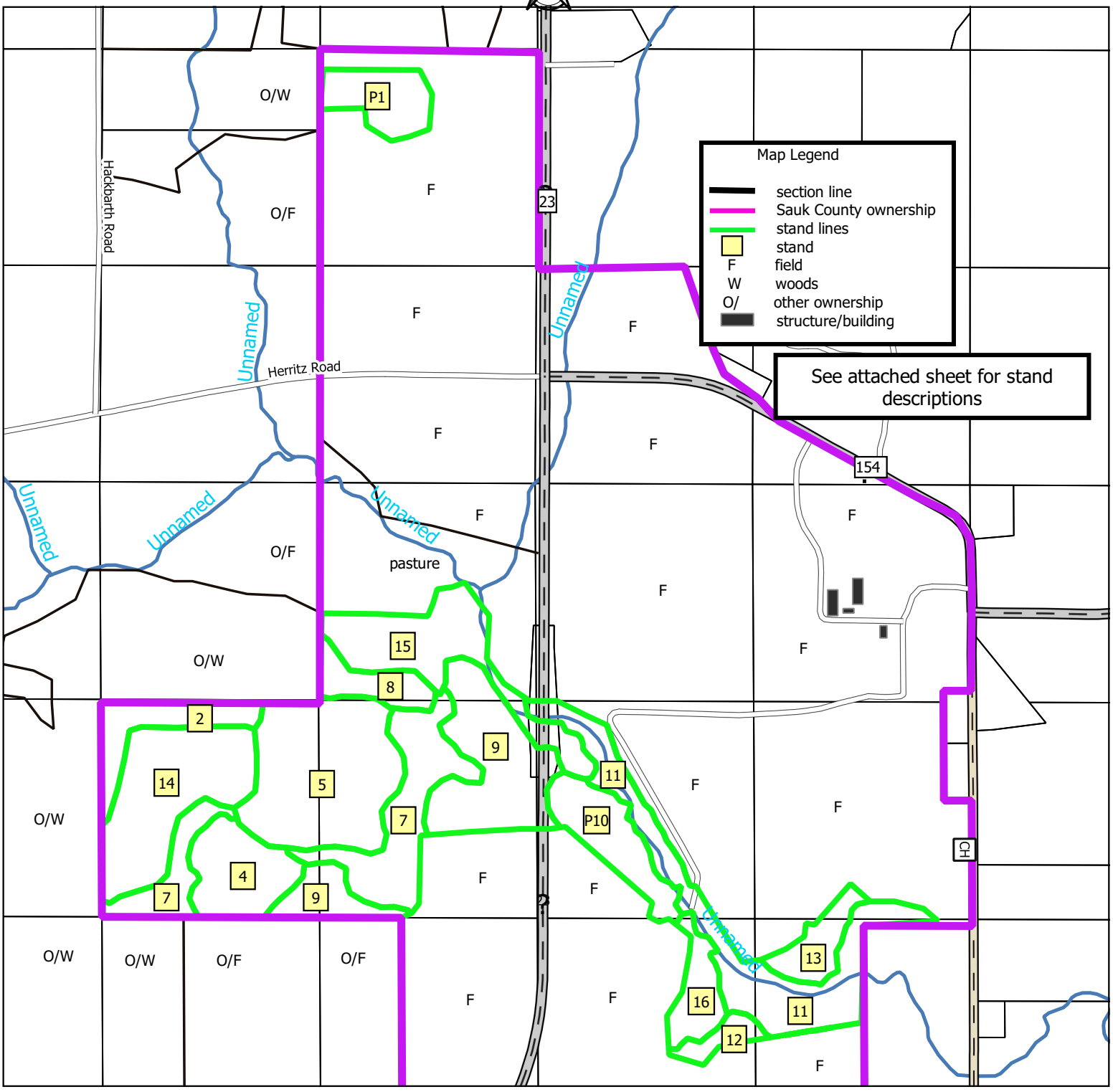


Tom Hill Forestry

FOREST STEWARDSHIP PLAN MAP

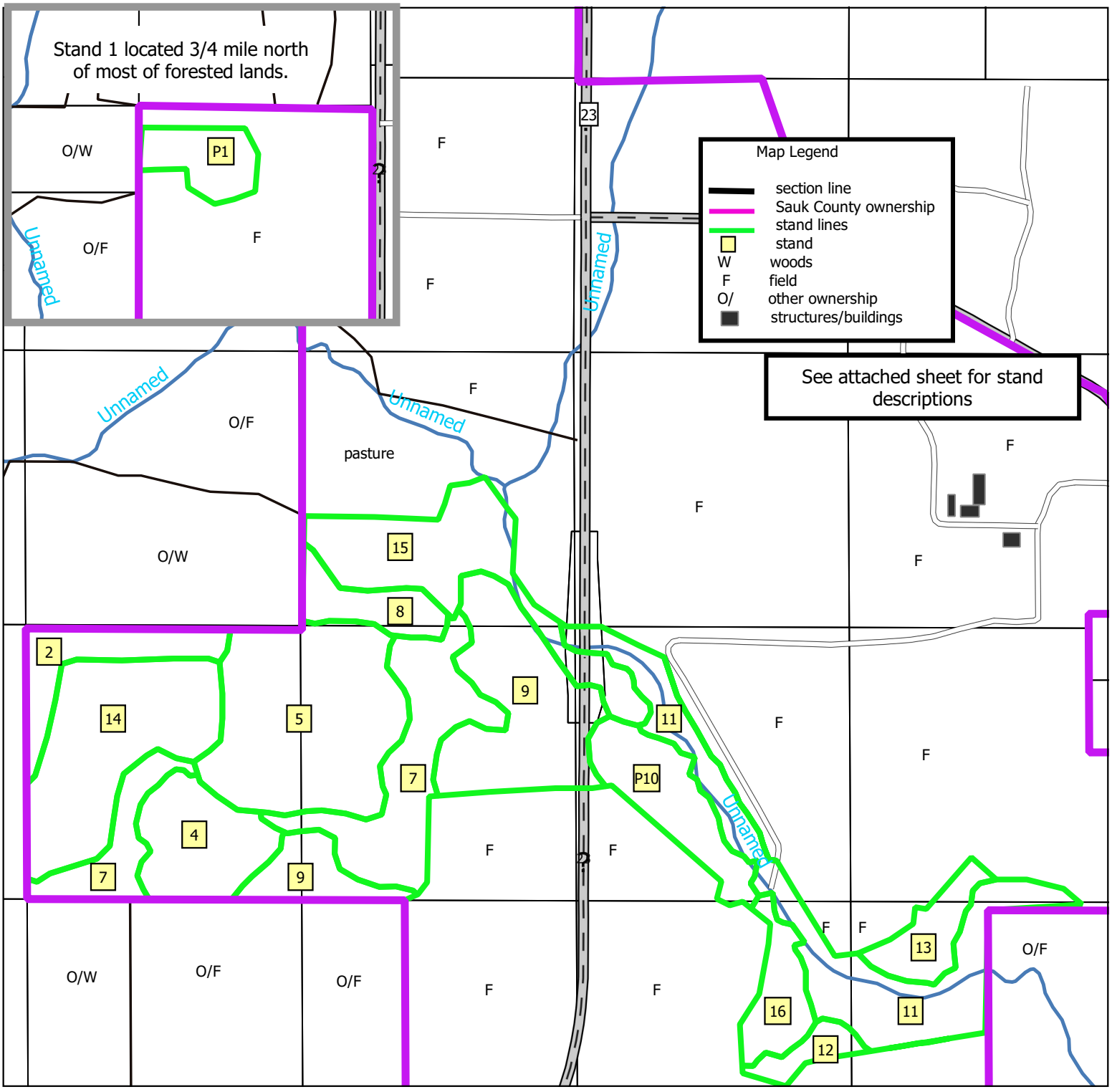
Owner's Name	Municipality Name	County
Sauk County Farm Forest Stewardship Plan	Reedsburg Township	Sauk

Stewardship Plan No.	Acreage	Township #	Range #	Section
57-S11-2022	121 forested acres	12 N	4E	28, 33, 34

Prepared By: Tom Hill

Date: 12/28/2022

Section Diagram 8" = 1 mile



Tom Hill Forestry

FOREST STEWARDSHIP PLAN MAP

Owner's Name	Municipality Name	County
Sauk County Farm Forest Stewardship Plan	Reedsburg Township	Sauk

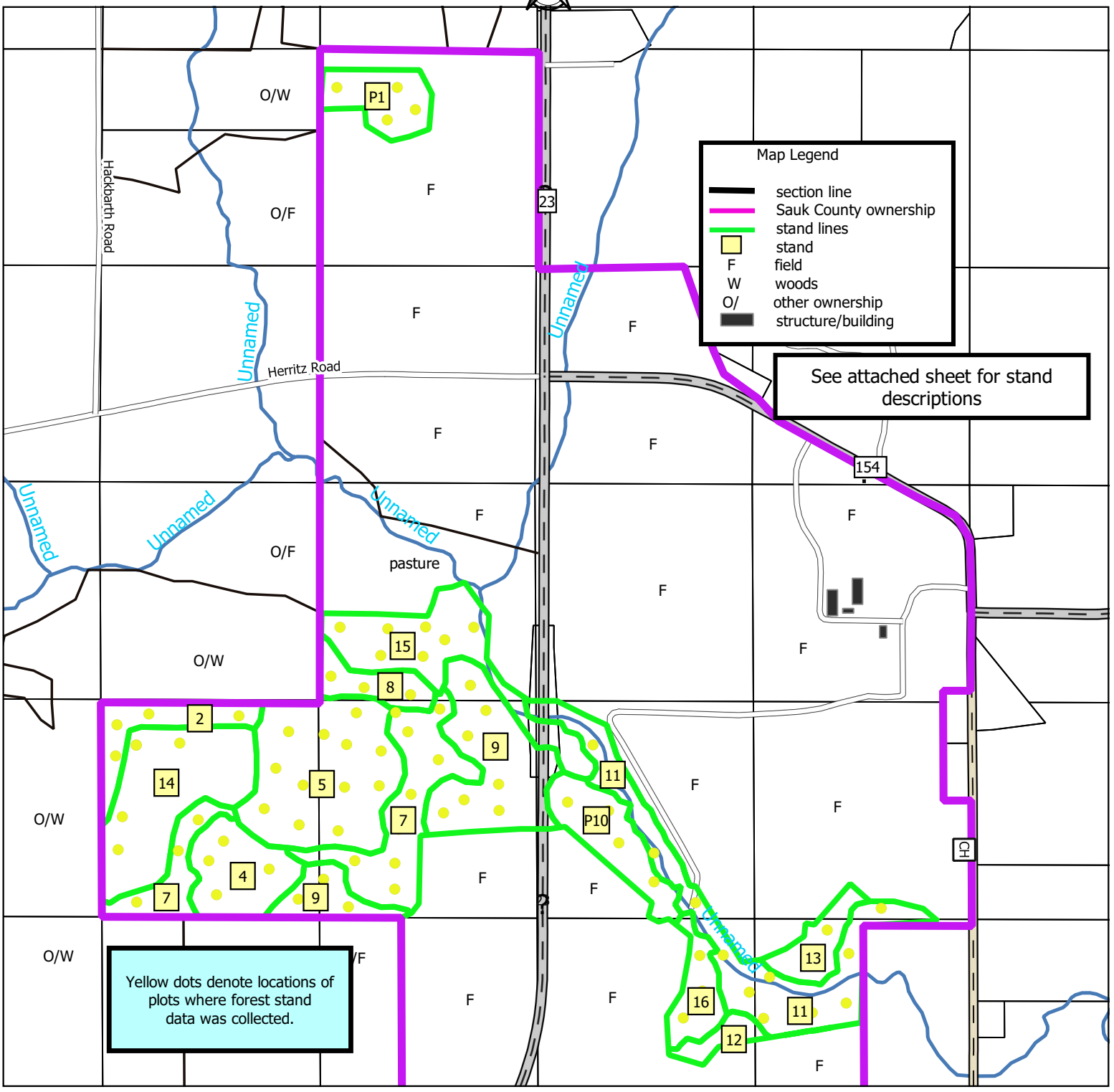
Stewardship Plan No.	Acreage	Township #	Range #	Section
57-S11-2022	121 forested acres	12 N	4E	28, 33, 34

0 500 1,000 ft

N

Prepared By: Tom Hill

Date: 12/28/2022



Sauk County Farm Forest Stewardship Plan -- Stand Descriptions

Stand	Acres	Stand Description
P1	5	red pine 9-15’’’ / red pine 5-9’
2	5	central hardwoods 15+’’’ / central hardwoods 5-11’’
4	7	central hardwoods 5-11’’’ / walnut 11-15’
5	17	central hardwoods 5-11’’’ / central hardwoods 11-15’
7	14	red maple 15+’’’ / red maple 5-11’’
8	3	oak 15+’’’ / oak 11-15’
9	15	central hardwoods 5-11’’ / central hardwoods 11-15’
P10	6	white pine 15+’’’’’ / white pine 9-15’’’
11	15	central hardwoods 5-11’’ / central hardwoods 15+’
12	2	red pine 9-15’ / miscellaneous conifers 5-9’
13	3	lowland herbaceous / lowland grass
14	14	herbaceous vegetation / upland brush / low growing shrubs
15	11	walnut 0-5’’ / upland brush
16	4	central hardwoods 5-11’’ / central hardwoods 11-15’

Plot Data/Cruise Summary

The information contained in your stewardship plan is based on a detailed timber cruise. The sample design of the cruise included the following. The merchantable timber was cruised using variable plot sampling with a 10 basal area factor. Plot spacing was a computer-generated randomized grid with plots spacing 80 meters by 80 meters. A total of 83 plots were distributed across 14 stands throughout the 121 forested acres. Sawtimber and pulp wood were the two products identified. Sawtimber trees were identified as trees 12" dbh and larger. Merchantable timber on sawtimber trees was estimated up to 10" diameter inside the bark (dib). Pulpwood trees were identified as trees between 5" -11" dbh. Pulpwood trees were estimated up to 4" dib. Trees within the sawtimber classification that were defective and not sawtimber quality were tallied as pulpwood trees. Regeneration data for seedlings was collected on a 1/1000th acre plots while saplings were tallied on 1/300th acre plots. Both size classes are tallied in the same table, however the appropriate plot size is applied based on the "seedling" or "sapling" designation. Woody invasive brush was ocularly estimated at each plot and summarized by stand. Field notes are taken at each plot and archived by location in the database. All data is collected and summarized using an IPad, Forest Metrix Version 3.220102 and Filemaker version: Go_iPad 19.5.2.200.

Timber Typing, Mapping, and Acreage:

Timber types were delineated using infrared aerial orthographic photography within Qgis software. Parcel ownership lines were defined by Sauk County geo-data and combined with air photos in Qgis to create a detailed cruise map. Computer generated randomized plots were then overlaid on the map for plot location. Maps were developed for cruising utilizing Qgis. The maps were loaded onto an iPad and each plot was identified on the ground using GPS technology. The maps included in this report can be supplied as Geo-referenced maps capable of using on most standard mobile devices. AVENZA is the mobile map app that is most commonly used, and allows you to upload these maps and use on most iOS, Android and Windows tablets/phones. You can then use your devices built-in GPS to track your location on the maps.

STAND 1

ACRES 5.0 **4 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	130.0	276.8	9.3	28.5	5.86	22.96
Sampling Error	45.0%	51.8%			107.6%	127.0%
Probable Lower Limit	71.6	133.4				
Probable Upper Limit	188.4	420.2			12.18	52.10

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	130.0		276.8	9.3	28.5	5.86	22.96	29.32	114.78
red pine	55.0	42.3%	106.8	9.7	46.5		18.89		94.45
white pine	40.0	30.8%	17.6	20.4	43.0	5.70	0.85	28.52	4.25
boxelder	20.0	15.4%	102.0	6.0	11.0		1.25		6.26
black cherry	12.5	9.6%	48.0	6.9	20.8		1.96		9.82
black walnut	2.5	1.9%	2.3	14.0	16.0	0.16		0.81	

STAND 2

ACRES 5.0 **4 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	127.5	317.9	8.6	22.4	4.89	13.69
Sampling Error	24.3%	40.9%			86.7%	58.7%
Probable Lower Limit	96.6	187.9			0.65	5.65
Probable Upper Limit	158.4	447.9			9.13	21.73

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	127.5		317.9	8.6	22.4	4.89	13.69	24.44	68.45
black locust	52.5	41.2%	94.7	10.1	28.6	3.03	5.15	15.13	25.76
red maple	32.5	25.5%	121.6	7.0	26.5	0.24	6.08	1.19	30.42
white oak	17.5	13.7%	21.9	12.1	17.1	1.15	0.25	5.75	1.27
northern red oak	7.5	5.9%	8.8	12.5	26.7	0.18	1.18	0.89	5.91
white ash	5.0	3.9%	25.5	6.0	8.0		0.51		2.54
bitternut hickory	5.0	3.9%	31.1	5.4	8.0		0.25		1.27
American elm	2.5	2.0%	12.7	6.0	8.0		0.25		1.27
shagbark hickory	2.5	2.0%	1.1	20.0	16.0	0.18		0.91	
bur oak	2.5	2.0%	0.4	32.0	8.0	0.11		0.56	

STAND 4

ACRES 7.0 **5 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	110.0	404.6	7.1	24.6	0.26	21.92
Sampling Error	32.4%	44.8%			130.7%	40.4%
Probable Lower Limit	74.3	223.3				13.06
Probable Upper Limit	145.7	585.9			0.60	30.79

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	110.0		404.6	7.1	24.6	0.26	21.92	1.82	153.46
black walnut	26.0	23.6%	51.3	9.6	34.5	0.12	6.49	0.87	45.46
bigtooth aspen	26.0	23.6%	77.9	7.8	40.0		7.76		54.35
bitternut hickory	20.0	18.2%	115.1	5.6	17.6		2.04		14.31
American elm	14.0	12.7%	55.6	6.8	19.4		2.17		15.16
red maple	10.0	9.1%	30.1	7.8	22.4	0.14	1.36	0.95	9.55
white ash	4.0	3.6%	24.9	5.4	16.0		0.43		2.99
shagbark hickory	4.0	3.6%	24.9	5.4	12.0		0.32		2.21
black cherry	2.0	1.8%	10.2	6.0	16.0		0.32		2.21
northern red oak	2.0	1.8%	4.5	9.0	40.0		0.60		4.23
American basswood	2.0	1.8%	10.2	6.0	24.0		0.43		2.99

STAND 5

ACRES 17.0 **12 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	111.7	385.4	7.3	26.4	1.29	19.13
Sampling Error	11.9%	19.4%			48.2%	21.8%
Probable Lower Limit	98.4	310.5			0.67	14.96
Probable Upper Limit	124.9	460.3			1.92	23.30

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	111.7		385.4	7.3	26.4	1.29	19.13	21.98	325.20
bigtooth aspen	35.8	32.1%	118.4	7.4	38.0	0.16	9.62	2.66	163.55
red maple	25.0	22.4%	93.0	7.0	23.5	0.16	3.85	2.65	65.47
bitternut hickory	21.7	19.4%	112.5	5.9	19.7		2.80		47.57
white oak	9.2	8.2%	6.3	16.3	21.1	0.56	0.39	9.56	6.66
black cherry	6.7	6.0%	28.7	6.5	22.0		1.20		20.32
American elm	5.8	5.2%	14.8	8.5	19.4	0.06	0.73	1.00	12.36
butternut	2.5	2.2%	5.7	9.0	18.7		0.38		6.49
northern red oak	1.7	1.5%	2.7	10.6	28.0	0.11	0.16	1.79	2.76
black walnut	1.7	1.5%	1.8	13.0	16.0	0.10		1.77	
white ash	0.8	0.7%	0.5	18.0	32.0	0.10		1.67	
shagbark hickory	0.8	0.7%	0.9	13.0	16.0	0.05		0.88	

STAND 7

ACRES 14.0 **12 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	107.5	178.8	10.5	28.0	3.94	14.86
Sampling Error	13.5%	26.7%			21.4%	35.2%
Probable Lower Limit	93.0	131.0			3.10	9.63
Probable Upper Limit	122.0	226.6			4.78	20.10

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	107.5		178.8	10.5	28.0	3.94	14.86	55.19	208.11
red maple	51.7	48.1%	104.4	9.5	31.9	0.92	10.52	12.92	147.31
white oak	16.7	15.5%	8.1	19.4	15.2	1.10	0.10	15.45	1.33
bitternut hickory	12.5	11.6%	21.5	10.3	28.3	0.38	1.98	5.27	27.76
bigtooth aspen	7.5	7.0%	8.3	12.9	37.3	0.56	0.88	7.90	12.35
northern red oak	5.8	5.4%	2.3	21.8	26.3	0.63		8.84	
American elm	3.3	3.1%	8.2	8.7	26.0		0.69		9.62
black cherry	3.3	3.1%	4.1	12.2	34.0	0.10	0.64	1.43	8.94
shagbark hickory	2.5	2.3%	13.1	5.9	10.7	0.05		0.73	
sugar maple	1.7	1.6%	1.3	15.5	20.0	0.13		1.84	
bur oak	0.8	0.8%	0.5	18.0	16.0	0.06		0.82	
butternut	0.8	0.8%	6.1	5.0	8.0				
apple spp.	0.8	0.8%	1.1	12.0	8.0		0.06		0.80

STAND 8

ACRES 3.0 **3 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	113.3	104.0	14.1	18.5	6.98	4.12
Sampling Error	113.6%	118.7%			145.6%	130.8%
Probable Lower Limit						
Probable Upper Limit	242.1	227.4			17.15	9.50

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	113.3		104.0	14.1	18.5	6.98	4.12	20.94	12.35
northern red oak	66.7	58.8%	31.3	19.7	18.8	5.44		16.33	
white oak	23.3	20.6%	36.3	10.9	20.6	0.90	2.15	2.69	6.44
red maple	10.0	8.8%	19.4	9.7	13.3	0.50	0.34	1.49	1.02
apple spp.	3.3	2.9%	6.1	10.0	8.0		0.24		0.72
shagbark hickory	3.3	2.9%	4.2	12.0	24.0		0.60		1.80
bitternut hickory	3.3	2.9%	1.5	20.0	8.0	0.15		0.44	
paper birch	3.3	2.9%	5.1	11.0	32.0		0.79		2.37

STAND 9

ACRES 15.0 **11 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	87.3	267.2	7.7	21.4	1.77	11.14
Sampling Error	25.2%	39.1%			45.8%	39.6%
Probable Lower Limit	65.3	162.7			0.96	6.73
Probable Upper Limit	109.3	371.7			2.59	15.56

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	87.3		267.2	7.7	21.4	1.77	11.14	26.60	167.17
bitternut hickory	43.6	50.0%	136.8	7.6	26.2	0.43	7.50	6.41	112.52
shagbark hickory	22.7	26.0%	51.4	9.0	23.7	0.74	2.57	11.16	38.61
American elm	4.5	5.2%	24.0	5.9	12.8		0.29		4.36
boxelder	2.7	3.1%	20.0	5.0	8.0				
white ash	2.7	3.1%	7.2	8.4	24.0		0.52		7.83
bur oak	1.8	2.1%	0.5	27.0	20.0	0.17		2.50	
red maple	1.8	2.1%	1.5	14.9	28.0	0.12	0.16	1.73	2.45
apple spp.	1.8	2.1%	13.3	5.0	8.0				
sugar maple	0.9	1.0%	0.4	21.0	16.0	0.07		1.00	
white oak	0.9	1.0%	0.4	21.0	16.0	0.07		1.00	
northern red oak	0.9	1.0%	0.2	29.0	16.0	0.07		1.06	
eastern cottonwood	0.9	1.0%	0.3	23.0	32.0	0.12		1.75	
honeylocust spp.	0.9	1.0%	4.6	6.0	8.0		0.09		1.39
black cherry	0.9	1.0%	6.7	5.0	8.0				

STAND 10

ACRES 6.0 **4 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	172.5	243.1	11.4	41.2	10.89	36.97
Sampling Error	23.9%	29.0%			74.4%	81.5%
Probable Lower Limit	131.3	172.5			2.79	6.84
Probable Upper Limit	213.7	313.7			18.98	67.11

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	172.5		243.1	11.4	41.2	10.89	36.97	65.31	221.85
white pine	160.0	92.8%	175.3	12.9	51.3	10.89	35.59	65.31	213.55
black cherry	5.0	2.9%	25.5	6.0	20.0		0.63		3.77
black walnut	2.5	1.4%	18.3	5.0	8.0				
red pine	2.5	1.4%	5.7	9.0	40.0		0.76		4.53
American elm	2.5	1.4%	18.3	5.0	8.0				

STAND 11

ACRES 15.0 **12 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	64.2	200.7	7.7	17.1	0.80	6.61
Sampling Error	21.1%	43.3%			81.5%	28.9%
Probable Lower Limit	50.6	113.9			0.15	4.70
Probable Upper Limit	77.7	287.5			1.45	8.52

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	64.2		200.7	7.7	17.1	0.80	6.61	12.00	99.15
boxelder	29.2	45.4%	85.6	7.9	16.2		3.49		52.32
eastern cottonwood	15.8	24.7%	73.6	6.3	18.1	0.31	1.35	4.58	20.25
black walnut	6.7	10.4%	32.0	6.2	15.0		0.69		10.37
black willow	4.2	6.5%	1.7	21.0	19.2		0.57		8.62
white ash	1.7	2.6%	2.1	12.0	32.0		0.39		5.89
American elm	1.7	2.6%	2.3	11.6	20.0	0.08	0.11	1.23	1.70
black cherry	1.7	2.6%	1.3	15.5	32.0	0.18		2.76	
honeylocust spp.	1.7	2.6%	1.2	15.9	12.0	0.09		1.36	
bur oak	0.8	1.3%	0.3	24.0	16.0	0.06		0.94	
northern red oak	0.8	1.3%	0.6	16.0	24.0	0.08		1.14	

STAND 12

ACRES 2.0 **1 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE CORDS
Average	30.0	92.0	7.7	9.6	2.41
Sampling Error					
Probable Lower Limit					
Probable Upper Limit					

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME CORDS
	30.0		92.0	7.7	9.6	2.41	4.83
red pine	20.0	66.7%	18.7	14.0	16.0	2.41	4.83
eastern red cedar	10.0	33.3%	73.3	5.0	8.0		

STAND 14

ACRES 14.0 **4 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE
Average	2.5	18.3	5.0	8.0	
Sampling Error					
Probable Lower Limit					
Probable Upper Limit					

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE	TOTAL STAND VOLUME
	2.5		18.3	5.0	8.0		
black locust	2.5	100.0%	18.3	5.0	8.0		

STAND 15

ACRES 11.0 **7 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	10.0	15.2	11.0	8.6	0.23	0.35
Sampling Error	40.2%	95.1%			150.0%	100.0%
Probable Lower Limit	10.5	1.3				0.00
Probable Upper Limit	24.5	51.8			0.58	0.70

SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	10.0		15.2	11.0	8.6	0.23	0.35	2.54	3.83
black walnut	2.9	28.6%	1.0	22.5	8.0	0.13		1.40	
apple spp.	2.9	28.6%	2.5	14.6	8.0		0.18		2.02
northern red oak	1.4	14.3%	0.7	20.0	16.0	0.10		1.14	
black willow	1.4	14.3%	0.5	22.0	16.0		0.16		1.81
boxelder	1.4	14.3%	10.5	5.0	8.0				

STAND 16

ACRES 4.0 **3 PTS**

STATISTICAL ANALYSIS

Confidence Interval: 90	BA	TPA	DBH	MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS
Average	80.0	199.3	8.6	19.8	1.42	9.03
Sampling Error	42.1%	92.7%			225.7%	60.7%
Probable Lower Limit	46.3	14.5				3.55
Probable Upper Limit	113.7	384.1			4.62	14.51

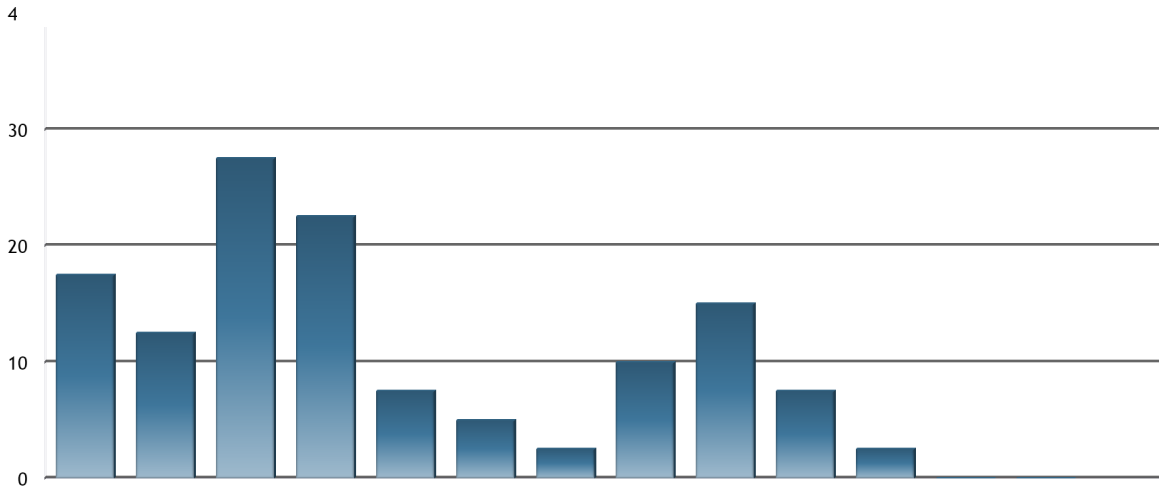
SPECIES COMPOSITION

	BA		TPA	AVG DBH	AVG MHT	VOLUME PER ACRE MBF	VOLUME PER ACRE CORDS	TOTAL STAND VOLUME MBF	TOTAL STAND VOLUME CORDS
	80.0		199.3	8.6	19.8	1.42	9.03	5.68	36.13
black locust	46.7	58.3%	145.6	7.7	20.0	0.30	5.62	1.18	22.48
American elm	10.0	12.5%	23.6	8.8	13.3		1.16		4.63
boxelder	6.7	8.3%	12.2	10.0	12.0		0.67		2.67
black walnut	6.7	8.3%	11.2	10.5	32.0		1.59		6.35
bigtooth aspen	6.7	8.3%	4.3	16.9	40.0	0.90		3.59	
black willow	3.3	4.2%	2.4	16.0	16.0	0.23		0.91	

STAND 1

ACRES 5.0 **4 PTS**

BASAL AREA (ft2)
BY DBH

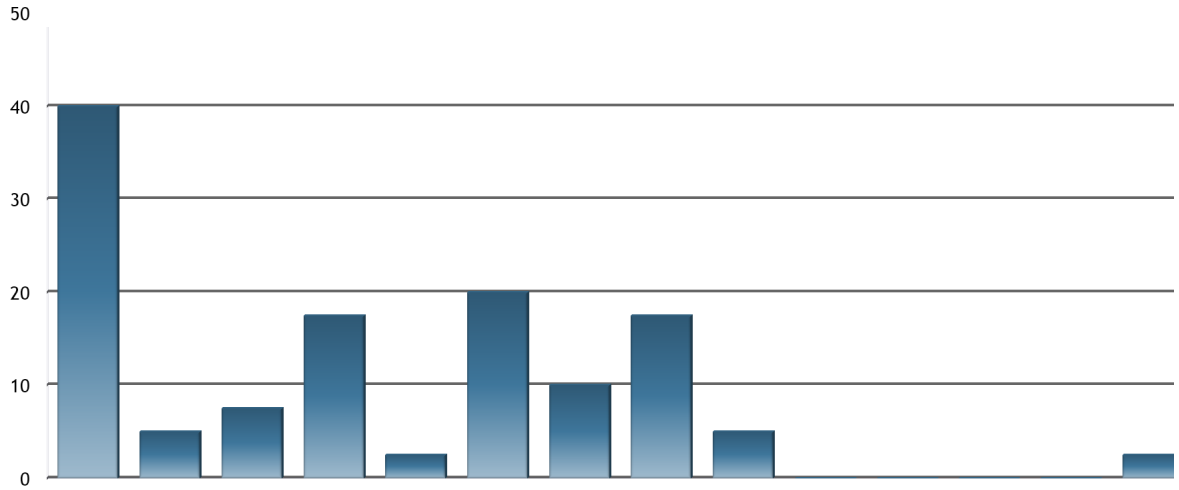


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
red pine	55.0		12.5	12.5	22.5	5.0	2.5								
white pine	40.0						2.5	2.5	10.0	15.0	7.5	2.5			
boxelder	20.0	12.5		7.5											
black cherry	12.5	5.0		7.5											
black walnut	2.5					2.5									
TOTAL	**130.0**	**17.5**	**12.5**	**27.5**	**22.5**	**7.5**	**5.0**	**2.5**	**10.0**	**15.0**	**7.5**	**2.5**			

STAND 2

ACRES 5.0 **4 PTS**

BASAL AREA (ft2)
BY DBH

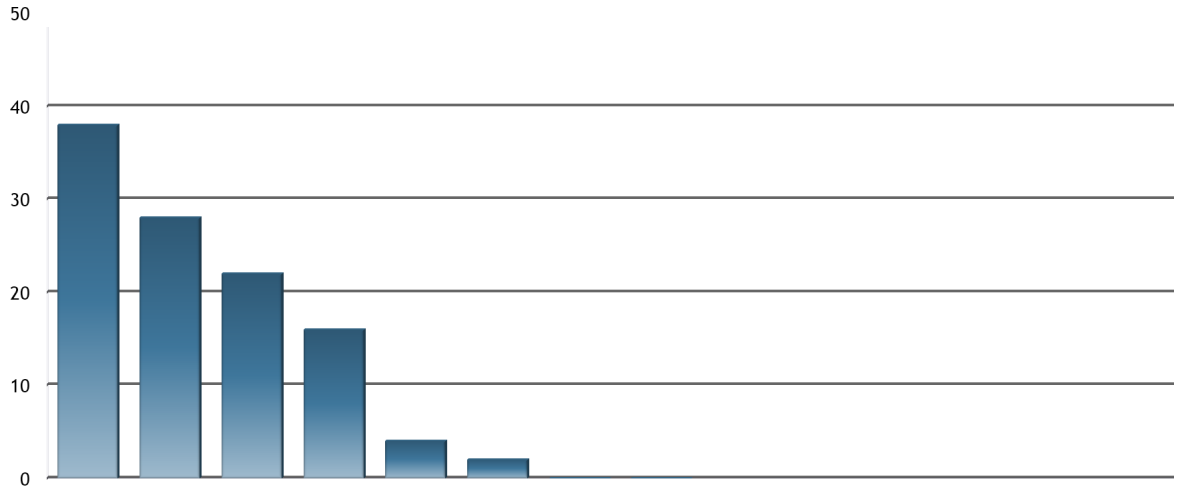


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black locust	52.5	10.0		2.5	10.0	2.5	10.0	5.0	10.0	2.5					
red maple	32.5	15.0	5.0	5.0	2.5		2.5	2.5							
white oak	17.5	2.5					7.5	2.5	2.5	2.5					
northern red oak	7.5				5.0				2.5						
white ash	5.0	5.0													
bitternut hickory	5.0	5.0													
shagbark hickory	2.5								2.5						
bur oak	2.5														2.5
American elm	2.5	2.5													
TOTAL	**127.5**	**40.0**	**5.0**	**7.5**	**17.5**	**2.5**	**20.0**	**10.0**	**17.5**	**5.0**					**2.5**

STAND 4

ACRES 7.0 **5 PTS**

BASAL AREA (ft2)
BY DBH

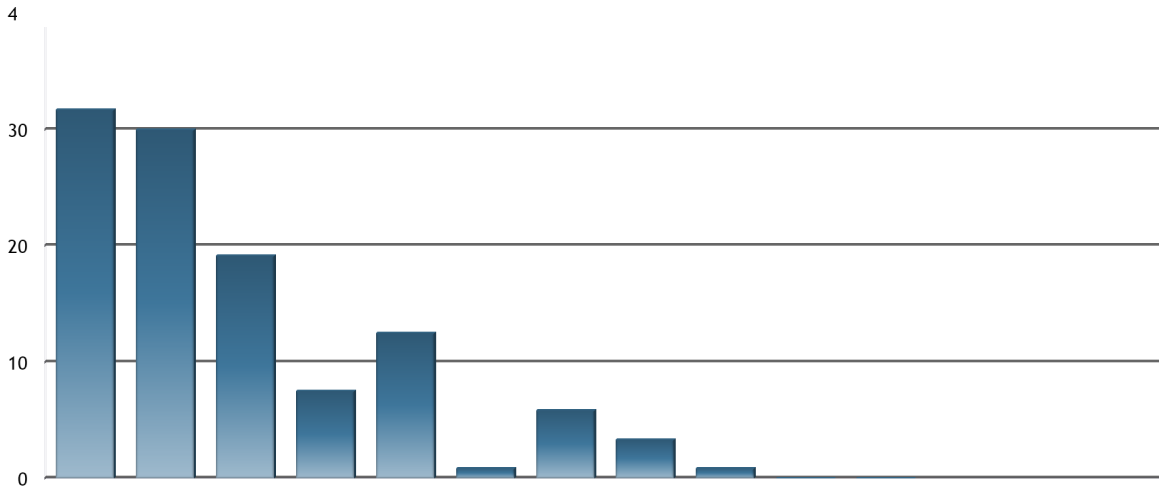


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black walnut	26.0		6.0	8.0	10.0	2.0									
bigtooth aspen	26.0	2.0	14.0	6.0	4.0										
bitternut hickory	20.0	14.0	4.0	2.0											
American elm	14.0	8.0		4.0		2.0									
red maple	10.0	2.0	4.0		2.0		2.0								
white ash	4.0	4.0													
shagbark hickory	4.0	4.0													
northern red oak	2.0			2.0											
black cherry	2.0	2.0													
American basswood	2.0	2.0													
TOTAL	**110.0**	**38.0**	**28.0**	**22.0**	**16.0**	**4.0**	**2.0**								

STAND 5

ACRES 17.0 **12 PTS**

BASAL AREA (ft2)
BY DBH

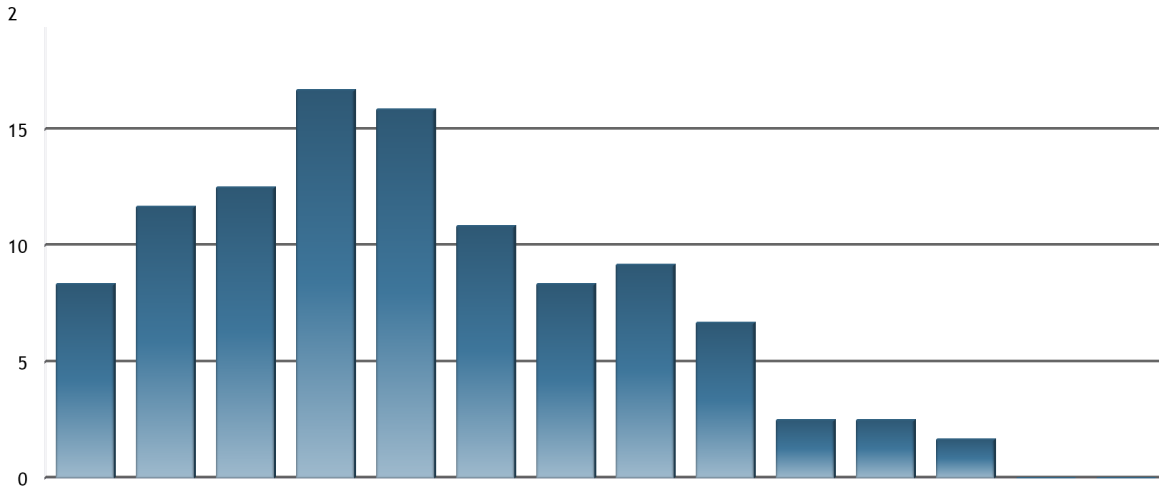


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
bigtooth aspen	35.8	5.8	14.2	8.3	4.2	3.3									
red maple	25.0	9.2	4.2	5.8	2.5	1.7		0.8	0.8						
bitternut hickory	21.7	12.5	5.8	3.3											
white oak	9.2					2.5	0.8	3.3	2.5						
black cherry	6.7	2.5	4.2												
American elm	5.8	1.7		0.8		2.5		0.8							
butternut	2.5		0.8	0.8	0.8										
northern red oak	1.7		0.8							0.8					
black walnut	1.7					1.7									
white ash	0.8							0.8							
shagbark hickory	0.8					0.8									
TOTAL	**111.7**	**31.7**	**30.0**	**19.2**	**7.5**	**12.5**	**0.8**	**5.8**	**3.3**	**0.8**					

STAND 7

ACRES 14.0 **12 PTS**

BASAL AREA (ft2) BY DBH

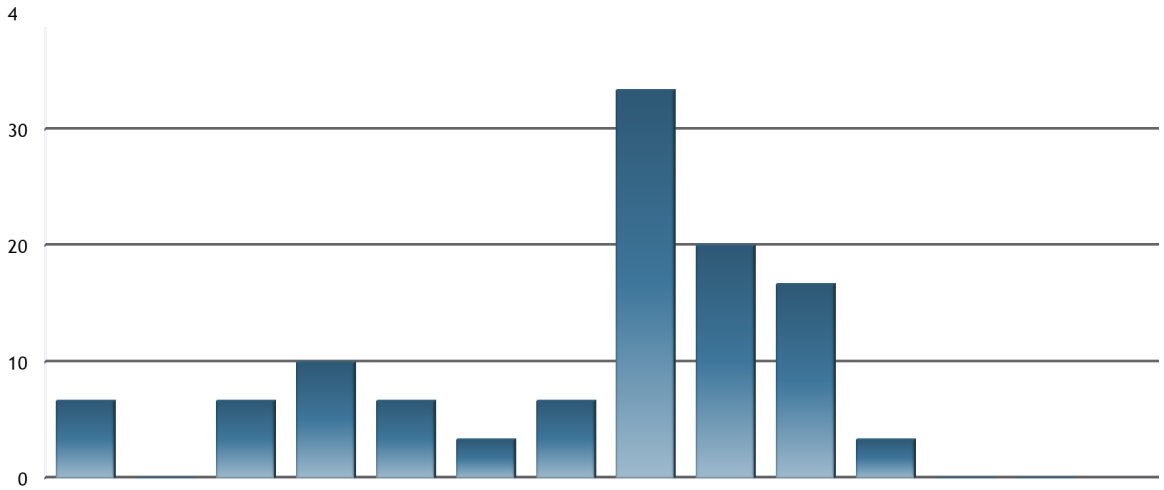


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
red maple	51.7	5.0	8.3	8.3	10.8	9.2	4.2	4.2	1.7						
white oak	16.7					1.7	1.7	1.7	1.7	4.2	1.7	2.5	1.7		
bitternut hickory	12.5	0.8	2.5		2.5	2.5	0.8	1.7	1.7						
bigtooth aspen	7.5			1.7	0.8	0.8	2.5		1.7						
northern red oak	5.8								1.7	2.5	0.8				0.8
black cherry	3.3			0.8	0.8	0.8			0.8						
American elm	3.3		0.8	1.7	0.8										
shagbark hickory	2.5	1.7				0.8									
sugar maple	1.7						1.7								
butternut	0.8	0.8													
bur oak	0.8							0.8							
apple spp.	0.8				0.8										
TOTAL	**107.5**	**8.3**	**11.7**	**12.5**	**16.7**	**15.8**	**10.8**	**8.3**	**9.2**	**6.7**	**2.5**	**2.5**	**1.7**		**0.8**

STAND 8

ACRES 3.0 **3 PTS**

BASAL AREA (ft2)
BY DBH

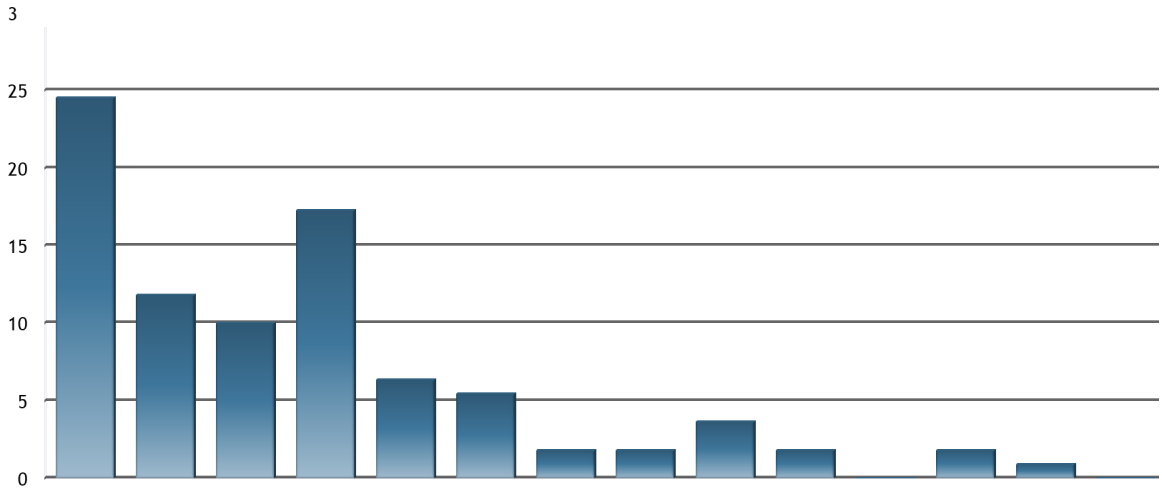


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
northern red oak	66.7					3.3	3.3	3.3	26.7	16.7	10.0	3.3			
white oak	23.3	3.3		3.3	3.3	3.3		3.3	3.3		3.3				
red maple	10.0	3.3								3.3	3.3				
shagbark hickory	3.3				3.3										
paper birch	3.3				3.3										
bitternut hickory	3.3								3.3						
apple spp.	3.3			3.3											
TOTAL	**113.3**	**6.7**		**6.7**	**10.0**	**6.7**	**3.3**	**6.7**	**33.3**	**20.0**	**16.7**	**3.3**			

STAND 9

ACRES 15.0 **11 PTS**

BASAL AREA (ft2)
BY DBH

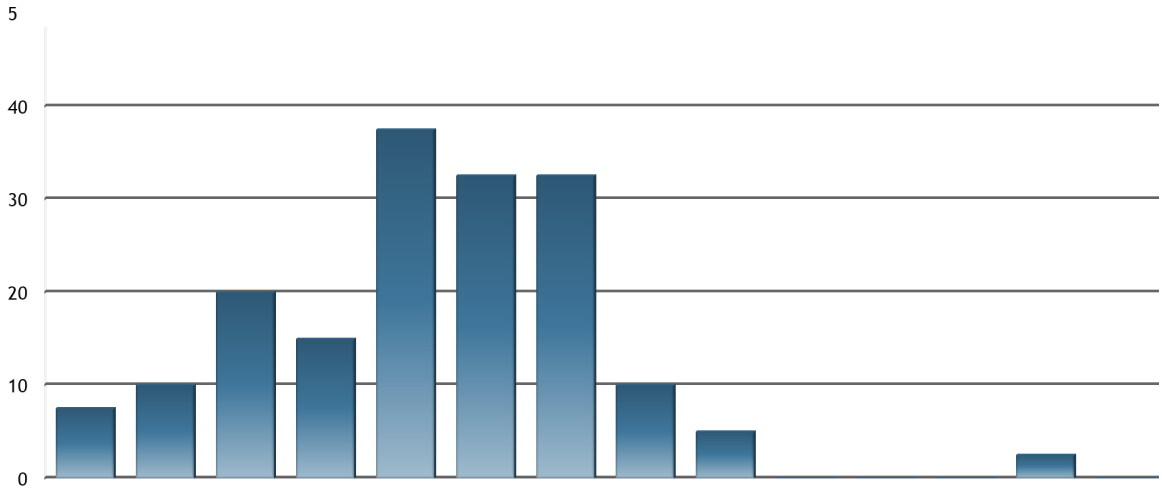


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
bitternut hickory	43.6	10.0	10.0	7.3	9.1	4.5	2.7								
shagbark hickory	22.7	4.5	0.9	2.7	4.5	1.8	2.7	1.8	1.8	0.9	0.9				
American elm	4.5	2.7	0.9		0.9										
white ash	2.7	0.9			1.8										
boxelder	2.7	2.7													
red maple	1.8				0.9					0.9					
bur oak	1.8												1.8		
apple spp.	1.8	1.8													
white oak	0.9									0.9					
sugar maple	0.9									0.9					
northern red oak	0.9													0.9	
honeylocust spp.	0.9	0.9													
eastern cottonwood	0.9										0.9				
black cherry	0.9	0.9													
TOTAL	**87.3**	**24.5**	**11.8**	**10.0**	**17.3**	**6.4**	**5.5**	**1.8**	**1.8**	**3.6**	**1.8**		**1.8**	**0.9**	

STAND 10

ACRES 6.0 **4 PTS**

BASAL AREA (ft2)
BY DBH

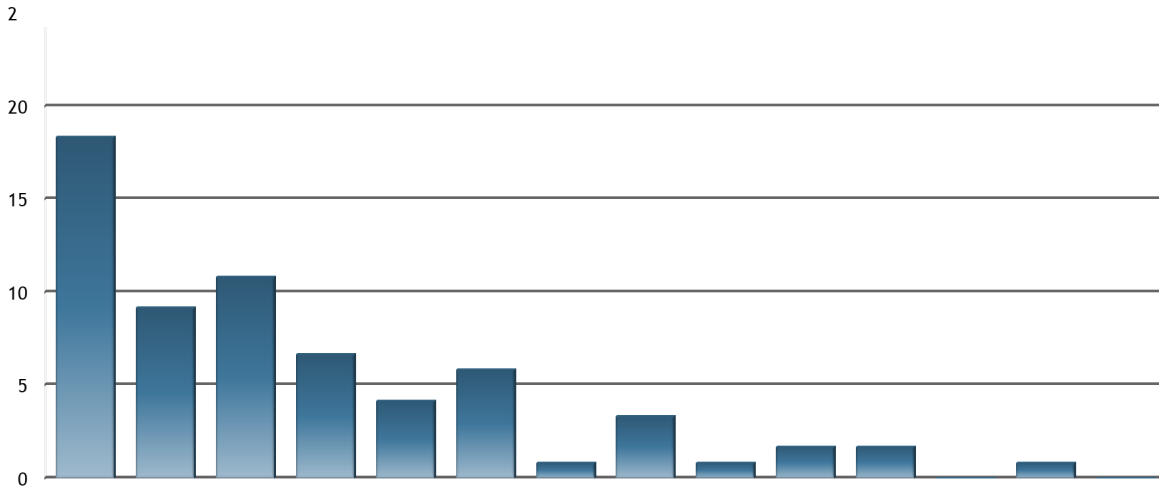


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
white pine	160.0		7.5	17.5	15.0	37.5	32.5	32.5	10.0	5.0				2.5	
black cherry	5.0	2.5	2.5												
red pine	2.5			2.5											
black walnut	2.5	2.5													
American elm	2.5	2.5													
TOTAL	**172.5**	**7.5**	**10.0**	**20.0**	**15.0**	**37.5**	**32.5**	**32.5**	**10.0**	**5.0**				**2.5**	

STAND 11

ACRES 15.0 **12 PTS**

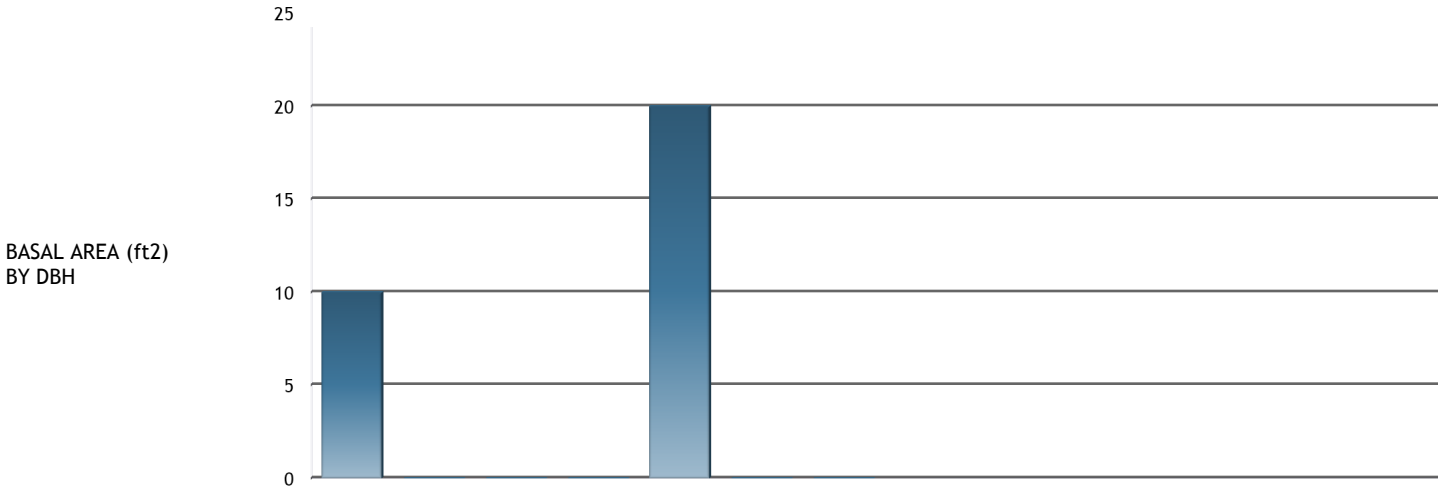
BASAL AREA (ft2)
BY DBH



	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
boxelder	29.2	6.7	4.2	7.5	4.2	3.3	3.3								
eastern cottonwood	15.8	8.3	3.3	1.7							0.8	1.7			
black walnut	6.7	3.3	1.7	0.8	0.8										
black willow	4.2							0.8	1.7	0.8				0.8	
white ash	1.7				1.7										
honeylocust spp.	1.7					0.8			0.8						
black cherry	1.7						1.7								
American elm	1.7			0.8					0.8						
northern red oak	0.8						0.8								
bur oak	0.8										0.8				
TOTAL	**64.2**	**18.3**	**9.2**	**10.8**	**6.7**	**4.2**	**5.8**	**0.8**	**3.3**	**0.8**	**1.7**	**1.7**		**0.8**	

STAND 12

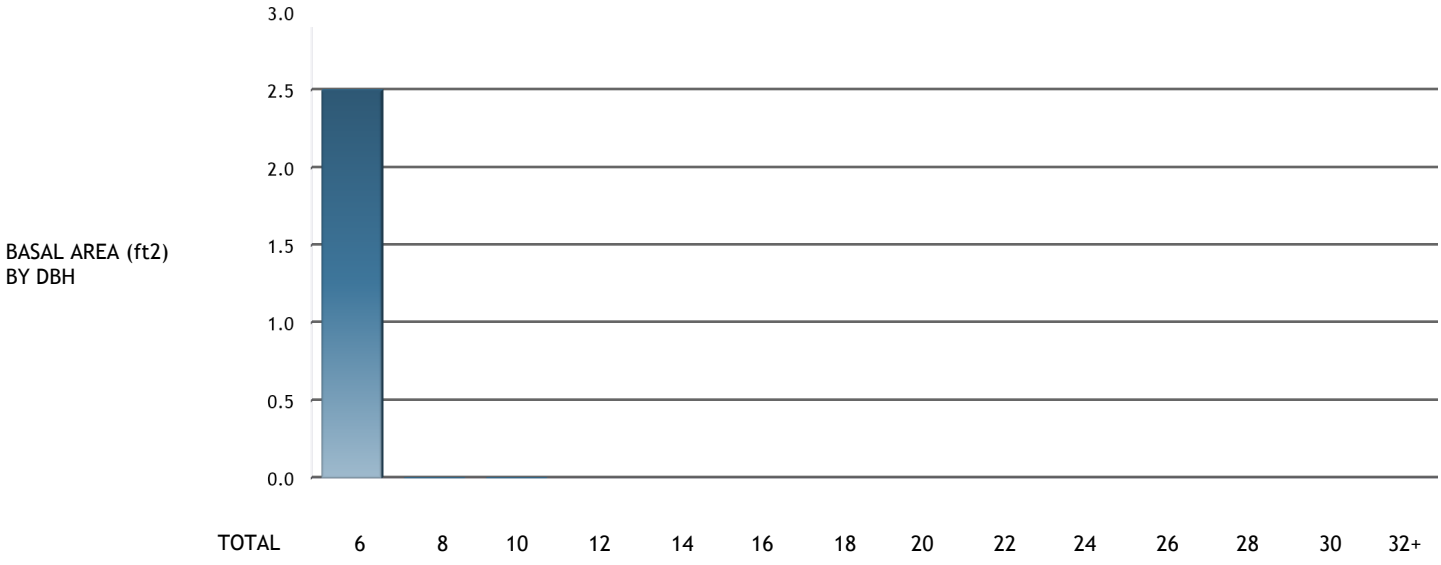
ACRES 2.0 **1 PTS**



	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
red pine	20.0					20.0									
eastern red cedar	10.0	10.0													
TOTAL	**30.0**	**10.0**				**20.0**									

STAND 14

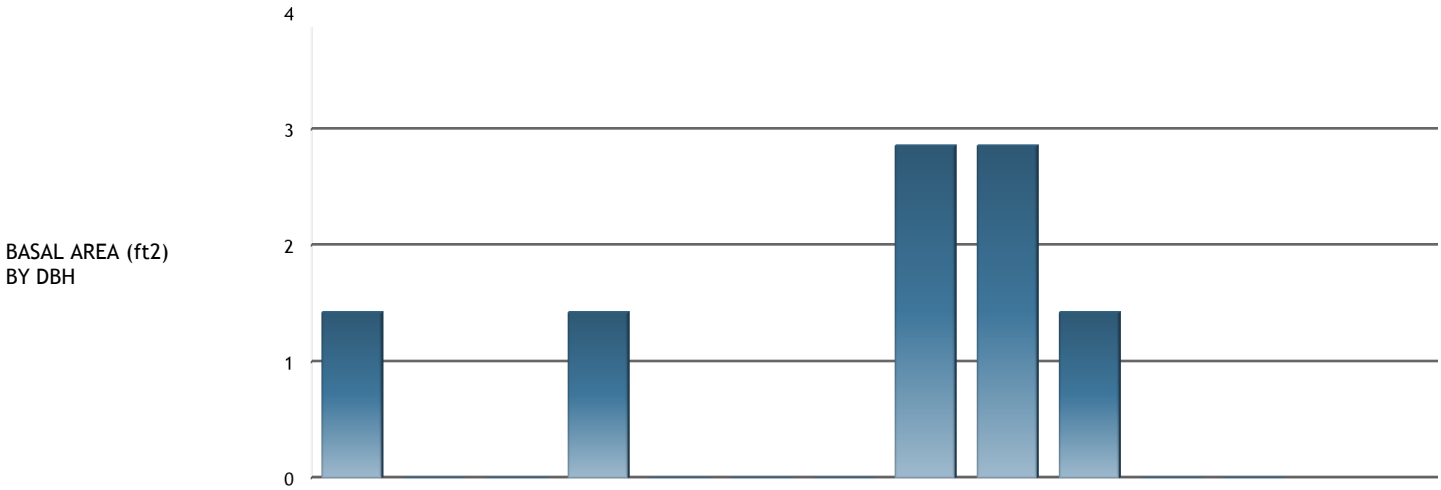
ACRES 14.0 **4 PTS**



	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black locust	2.5	2.5													
TOTAL	**2.5**	**2.5**													

STAND 15

ACRES 11.0 **7 PTS**

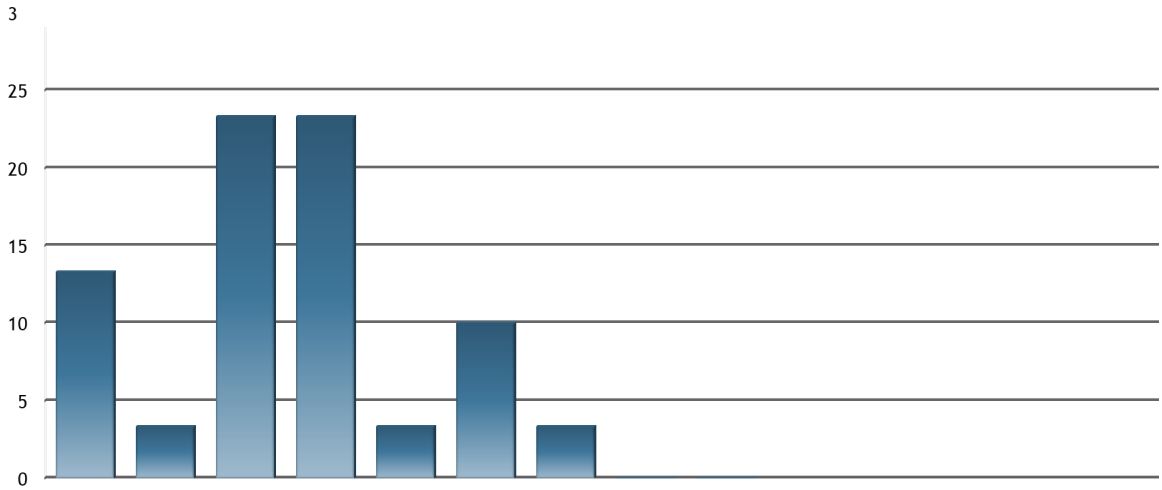


	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black walnut	2.9									1.4	1.4				
apple spp.	2.9				1.4				1.4						
northern red oak	1.4								1.4						
boxelder	1.4	1.4													
black willow	1.4									1.4					
TOTAL	**10.0**	**1.4**			**1.4**				**2.9**	**2.9**	**1.4**				

STAND 16

ACRES 4.0 **3 PTS**

BASAL AREA (ft2)
BY DBH



	TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black locust	46.7	13.3		10.0	16.7	3.3	3.3								
American elm	10.0		3.3	3.3	3.3										
boxelder	6.7			6.7											
black walnut	6.7			3.3	3.3										
bigtooth aspen	6.7						3.3	3.3							
black willow	3.3						3.3								
TOTAL	**80.0**	**13.3**	**3.3**	**23.3**	**23.3**	**3.3**	**10.0**	**3.3**							

TOTAL VOLUME by DBH

12/26/2022

STAND 1

ACRES 5.0 **4 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black cherry	VOL	9.8			8.6											
	TREES	240.2	155.3		84.9											
boxelder	VOL	6.3			5.0											
	TREES	509.9	430.4		79.5											
red pine	VOL	94.4		20.2	22.1	39.2	8.6	4.3								
	TREES	534.1		211.9	125.3	161.4	25.3	10.2								
white pine	VOL	4.2								4.2						
	TREES	6.3								6.3						
TOTAL	**VOL**	**114.8**		**20.2**	**35.7**	**39.2**	**8.6**	**4.3**		**4.2**						
	TREES	**1,290.5**	**585.7**	**211.9**	**289.7**	**161.4**	**25.3**	**10.2**		**6.3**						

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black walnut	VOL	0.8					0.8									
	TREES	11.7					11.7									
white pine	VOL	28.5						1.6	1.9	6.1	11.3	6.3	1.3			
	TREES	81.9						9.0	7.9	18.4	30.3	12.6	3.7			
TOTAL	**VOL**	**29.3**					**0.8**	**1.6**	**1.9**	**6.1**	**11.3**	**6.3**	**1.3**			
	TREES	**93.6**					**11.7**	**9.0**	**7.9**	**18.4**	**30.3**	**12.6**	**3.7**			

STAND 2

ACRES 5.0 **4 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	1.3														
	TREES	63.7	63.7													
bitternut hickory	VOL	1.3														
	TREES	155.3	155.3													
black locust	VOL	25.8			2.3	14.6	4.3									
	TREES	391.9	282.7		22.9	72.7	13.6									
northern red oak	VOL	5.9				5.9										
	TREES	37.9				37.9										
red maple	VOL	30.4		7.8	6.1	3.0		2.2								
	TREES	600.9	438.0	82.6	51.2	18.9		10.2								
white ash	VOL	2.5														
	TREES	127.3	127.3													
white oak	VOL	1.3														
	TREES	63.7	63.7													
TOTAL	**VOL**	**68.4**		**7.8**	**8.4**	**23.5**	**4.3**	**2.2**								
	TREES	**1,440.7**	**1,130.6**	**82.6**	**74.1**	**129.6**	**13.6**	**10.2**								

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black locust	VOL	15.1						5.1	2.6	6.5	0.9					
	TREES	81.8						35.8	15.9	25.4	4.7					
bur oak	VOL	0.6														0.6
	TREES	2.2														2.2
northern red oak	VOL	0.9								0.9						
	TREES	6.3								6.3						
red maple	VOL	1.2							1.2							
	TREES	7.1							7.1							
shagbark hickory	VOL	0.9								0.9						
	TREES	5.7								5.7						
white oak	VOL	5.8						2.8	1.5	0.9	0.6					
	TREES	45.6						28.1	7.1	5.7	4.7					

TOTAL VOLUME by DBH

12/26/2022

TOTAL	VOL	24.4	7.9	5.3	9.3	1.5	0.6
	TREES	148.8	63.9	30.0	43.2	9.5	2.2

TOTAL VOLUME by DBH

12/26/2022

STAND 4

ACRES 7.0 **5 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American	VOL	3.0														
	TREES	71.3	71.3													
American elm	VOL	15.2			4.5		4.1									
	TREES	389.1	316.6		57.4		15.2									
bigtooth aspen	VOL	54.3		30.3	14.2	9.8										
	TREES	545.5	102.7	305.3	95.1	42.4										
bitternut hickory	VOL	14.3		7.2	4.1											
	TREES	805.5	687.3	92.5	25.7											
black cherry	VOL	2.2														
	TREES	71.3	71.3													
black walnut	VOL	45.5		10.7	15.1	19.7										
	TREES	344.0		132.6	108.7	102.7										
northern red oak	VOL	4.2			4.2											
	TREES	31.7			31.7											
red maple	VOL	9.5		5.5		4.1										
	TREES	200.7	102.7	80.2		17.8										
shagbark hickory	VOL	2.2														
	TREES	174.0	174.0													
white ash	VOL	3.0														
	TREES	174.0	174.0													
TOTAL	**VOL**	**153.5**		**53.7**	**42.2**	**33.5**	**4.1**									
	TREES	**2,807.0**	**1,699.8**	**610.6**	**318.5**	**162.9**	**15.2**									

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black walnut	VOL	0.9					0.9									
	TREES	15.2					15.2									
red maple	VOL	1.0						1.0								
	TREES	10.0						10.0								
TOTAL	**VOL**	**1.8**					**0.9**	**1.0**								
	TREES	**25.2**					**15.2**	**10.0**								

TOTAL VOLUME by DBH

12/26/2022

STAND 5

ACRES 17.0 **12 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	12.4			1.0		9.9									
	TREES	243.9	176.0		26.0		41.9									
bigtooth aspen	VOL	163.6		75.6	50.4	24.7	9.8									
	TREES	1,984.0	695.5	851.4	302.4	103.9	30.7									
bitternut hickory	VOL	47.6		23.8	17.9											
	TREES	1,912.8	1,463.2	321.4	128.3											
black cherry	VOL	20.3		16.6												
	TREES	488.4	248.2	240.2												
butternut	VOL	6.5		2.1	2.6	1.8										
	TREES	97.0		53.0	26.0	18.0										
northern red oak	VOL	2.8		2.8												
	TREES	40.6		40.6												
red maple	VOL	65.5		16.3	24.3	8.5	4.9		4.0							
	TREES	1,560.9	1,047.6	215.3	212.3	64.4	13.3		8.0							
white oak	VOL	6.7					4.2			2.4						
	TREES	35.1					28.6			6.5						
TOTAL	**VOL**	**325.2**		**137.3**	**96.2**	**34.9**	**28.8**		**4.0**	**2.4**						
	TREES	**6,362.8**	**3,630.6**	**1,721.9**	**694.9**	**186.3**	**114.5**		**8.0**	**6.5**						

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	1.0							1.0							
	TREES	8.0							8.0							
bigtooth aspen	VOL	2.7					2.7									
	TREES	28.6					28.6									
black walnut	VOL	1.8					1.8									
	TREES	30.7					30.7									
northern red oak	VOL	1.8									1.8					
	TREES	5.4									5.4					
red maple	VOL	2.7					0.9			1.7						
	TREES	19.7					13.3			6.5						

TOTAL VOLUME by DBH

12/26/2022

shagbark hickory	VOL	0.9	0.9					
	TREES	15.4	15.4					
white ash	VOL	1.7			1.7			
	TREES	8.0			8.0			
white oak	VOL	9.6	0.9	1.3	5.0	2.4		
	TREES	72.5	13.3	11.5	34.0	13.7		
TOTAL	**VOL**	**22.0**	**7.1**	**1.3**	**7.7**	**4.1**	**1.8**	
	TREES	**188.4**	**101.2**	**11.5**	**50.0**	**20.2**	**5.4**	

STAND 7

ACRES 14.0 **12 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	9.6		1.8	5.1	2.8										
	TREES	114.1		43.7	52.8	17.7										
apple spp.	VOL	0.8				0.8										
	TREES	14.9				14.9										
bigtooth aspen	VOL	12.4			7.6	4.7										
	TREES	65.5			47.8	17.7										
bitternut hickory	VOL	27.8		10.3		9.6	4.0		2.0							
	TREES	251.5	59.4	120.7		53.0	10.9		7.4							
black cherry	VOL	8.9			4.1	1.5	3.4									
	TREES	51.7			21.4	17.7	12.7									
butternut	VOL															
	TREES	85.6	85.6													
red maple	VOL	147.3		27.9	33.4	50.2	23.0	2.0	3.4							
	TREES	1,346.7	408.8	385.4	229.0	215.7	85.1	9.5	13.2							
shagbark hickory	VOL															
	TREES	171.1	171.1													
white oak	VOL	1.3											1.3			
	TREES	3.2											3.2			
TOTAL	**VOL**	**208.1**		**40.0**	**50.3**	**69.5**	**30.4**	**2.0**	**5.4**				**1.3**			
	TREES	**2,104.2**	**724.9**	**549.8**	**351.0**	**336.6**	**108.7**	**9.5**	**20.6**				**3.2**			

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
bigtooth aspen	VOL	7.9					0.7	4.1		3.1						
	TREES	50.1					12.7	26.2		11.3						
bitternut hickory	VOL	5.3					1.7	1.1	0.5	2.0						
	TREES	49.8					23.6	8.4	6.6	11.3						
black cherry	VOL	1.4								1.4						
	TREES	5.3								5.3						
bur oak	VOL	0.8							0.8							
	TREES	6.6							6.6							

TOTAL VOLUME by DBH

12/26/2022

northern red oak	VOL	8.8				2.5	3.5	1.5			1.3
	TREES	31.5				11.9	14.1	3.7			1.9
red maple	VOL	12.9	3.5	3.9	3.3	2.2					
	TREES	115.0	45.4	36.9	21.4	11.3					
shagbark hickory	VOL	0.7	0.7								
	TREES	12.7	12.7								
sugar maple	VOL	1.8		1.8							
	TREES	17.9		17.9							
white oak	VOL	15.4	0.9	1.3	1.3	1.7	4.9	1.4	2.1	1.8	
	TREES	110.1	23.6	17.9	14.8	10.7	23.4	7.8	6.3	5.7	
TOTAL	**VOL**	**55.2**	**7.6**	**12.2**	**5.9**	**13.0**	**8.4**	**2.9**	**2.1**	**1.8**	**1.3**
	TREES	**399.0**	**117.9**	**107.2**	**49.4**	**61.7**	**37.5**	**11.5**	**6.3**	**5.7**	**1.9**

TOTAL VOLUME by DBH

12/26/2022

STAND 8

ACRES 3.0 **3 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
apple spp.	VOL	0.7			0.7											
	TREES	18.3			18.3											
paper birch	VOL	2.4				2.4										
	TREES	15.2				15.2										
red maple	VOL	1.0														
	TREES	50.9	50.9													
shagbark hickory	VOL	1.8				1.8										
	TREES	12.7				12.7										
white oak	VOL	6.4			1.3	2.4	1.8									
	TREES	95.3	50.9		18.3	15.2	10.8									
TOTAL	**VOL**	**12.3**			**2.0**	**6.5**	**1.8**									
	TREES	**192.4**	**101.9**		**36.7**	**43.0**	**10.8**									

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
bitternut hickory	VOL	0.4								0.4						
	TREES	4.6								4.6						
northern red oak	VOL	16.3					0.4	0.4	0.4	6.8	5.0	2.5	0.8			
	TREES	94.0					9.4	7.2	6.3	37.7	20.4	10.4	2.7			
red maple	VOL	1.5									0.7	0.7				
	TREES	7.3									3.8	3.5				
white oak	VOL	2.7							1.0	1.0		0.7				
	TREES	13.7							5.7	4.6		3.5				
TOTAL	**VOL**	**20.9**					**0.4**	**0.4**	**1.4**	**8.2**	**5.7**	**4.0**	**0.8**			
	TREES	**119.6**					**9.4**	**7.2**	**12.0**	**46.8**	**24.2**	**17.3**	**2.7**			

TOTAL VOLUME by DBH

12/26/2022

STAND 9

ACRES 15.0 **11 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	4.4		1.9		2.5										
	TREES	359.7	300.0	39.1		20.7										
apple spp.	VOL															
	TREES	200.0	200.0													
bitternut hickory	VOL	112.5		31.9	30.3	37.6		7.1								
	TREES	1,973.7	1,008.4	525.4	217.6	200.0		22.2								
black cherry	VOL															
	TREES	100.0	100.0													
boxelder	VOL															
	TREES	300.0	300.0													
honeylocust spp.	VOL	1.4														
	TREES	69.4	69.4													
red maple	VOL	2.5				2.5										
	TREES	17.4				17.4										
shagbark hickory	VOL	38.6		2.8	10.8	15.2	3.2	2.4								
	TREES	679.9	438.9	51.0	86.7	79.4	12.8	11.1								
white ash	VOL	7.8				5.7										
	TREES	107.5	69.4			38.0										
TOTAL	**VOL**	**167.2**		**36.6**	**41.0**	**63.4**	**3.2**	**9.4**								
	TREES	**3,807.6**	**2,486.3**	**615.5**	**304.3**	**355.4**	**12.8**	**33.3**								

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
bitternut hickory	VOL	6.4					5.2	1.2								
	TREES	77.6					67.9	9.8								
bur oak	VOL	2.5												2.5		
	TREES	6.9												6.9		
eastern	VOL	1.8										1.8				
	TREES	4.7										4.7				
northern red oak	VOL	1.1													1.1	
	TREES	3.0													3.0	

TOTAL VOLUME by DBH

12/26/2022

red maple	VOL	1.7						1.7				
	TREES	5.2						5.2				
shagbark hickory	VOL	11.2	0.8	0.5	2.2	2.6	2.0	1.7	1.4			
	TREES	91.6	17.4	14.8	19.5	16.4	13.2	5.7	4.7			
sugar maple	VOL	1.0						1.0				
	TREES	5.7						5.7				
white oak	VOL	1.0						1.0				
	TREES	5.7						5.7				
TOTAL	**VOL**	**26.6**	**0.8**	**5.7**	**3.4**	**2.6**	**2.0**	**5.4**	**3.1**	**2.5**	**1.1**	
	TREES	**200.3**	**17.4**	**82.6**	**29.3**	**16.4**	**13.2**	**22.2**	**9.5**	**6.9**	**3.0**	

TOTAL VOLUME by DBH

12/26/2022

STAND 10

ACRES 6.0 **4 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL															
	TREES	110.0	110.0													
black cherry	VOL	3.8		3.8												
	TREES	153.0	110.0	43.0												
black walnut	VOL															
	TREES	110.0	110.0													
red pine	VOL	4.5			4.5											
	TREES	34.0			34.0											
white pine	VOL	213.6		14.2	36.5	37.2	90.7	29.8	5.1							
	TREES	775.1		168.4	224.8	125.5	198.1	48.9	9.5							
TOTAL	**VOL**	**221.8**		**18.0**	**41.1**	**37.2**	**90.7**	**29.8**	**5.1**							
	TREES	**1,182.1**	**330.0**	**211.4**	**258.7**	**125.5**	**198.1**	**48.9**	**9.5**							

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
white pine	VOL	65.3					3.6	17.0	27.3	9.5	5.1				2.8	
	TREES	276.7					28.1	98.2	107.0	28.2	11.9				3.3	
TOTAL	**VOL**	**65.3**					**3.6**	**17.0**	**27.3**	**9.5**	**5.1**				**2.8**	
	TREES	**276.7**					**28.1**	**98.2**	**107.0**	**28.2**	**11.9**				**3.3**	

TOTAL VOLUME by DBH

12/26/2022

STAND 11

ACRES 15.0 **12 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	1.7			1.7											
	TREES	28.3			28.3											
black walnut	VOL	10.4		3.8	3.1	2.3										
	TREES	479.5	338.7	93.5	28.3	18.9										
black willow	VOL	8.6							0.8	4.3	2.1				1.4	
	TREES	26.0							7.1	11.5	4.7				2.7	
boxelder	VOL	52.3		9.0	16.8	9.2	7.5	5.9								
	TREES	1,284.3	677.4	201.0	222.4	91.7	52.4	39.5								
eastern	VOL	20.3		12.2	5.5											
	TREES	1,093.4	860.7	176.1	56.6											
white ash	VOL	5.9				5.9										
	TREES	31.8				31.8										
TOTAL	**VOL**	**99.2**		**25.0**	**27.0**	**17.3**	**7.5**	**5.9**	**0.8**	**4.3**	**2.1**				**1.4**	
	TREES	**2,943.3**	**1,876.8**	**470.6**	**335.6**	**142.5**	**52.4**	**39.5**	**7.1**	**11.5**	**4.7**				**2.7**	

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	1.2								1.2						
	TREES	5.7								5.7						
black cherry	VOL	2.8						2.8								
	TREES	19.1						19.1								
bur oak	VOL	0.9										0.9				
	TREES	4.0										4.0				
eastern	VOL	4.6										1.6	3.0			
	TREES	11.3										4.0	7.3			
honeylocust spp.	VOL	1.4					0.8			0.5						
	TREES	18.0					11.7			6.3						
northern red oak	VOL	1.1						1.1								
	TREES	9.0						9.0								
TOTAL	**VOL**	**12.0**					**0.8**	**3.9**		**1.8**		**2.6**	**3.0**			
	TREES	**67.2**					**11.7**	**28.1**		**12.1**		**8.0**	**7.3**			

TOTAL VOLUME by DBH

12/26/2022

STAND 12

ACRES 2.0 **1 PTS**

Pulp Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
eastern red cedar	VOL															
	TREES	146.7	146.7													
red pine	VOL	4.8					4.8									
	TREES	37.4					37.4									
TOTAL	**VOL**	**4.8**					**4.8**									
	TREES	**184.1**	**146.7**				**37.4**									

TOTAL VOLUME by DBH

12/26/2022

STAND 14

ACRES 14.0 **4 PTS**

Pulp Cords		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black locust	VOL															
	TREES	256.7	256.7													
TOTAL	**VOL**															
	TREES	**256.7**	**256.7**													

TOTAL VOLUME by DBH

12/26/2022

STAND 15

ACRES 11.0 **7 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
apple spp.	VOL	2.0				1.1				0.9						
	TREES	27.2				20.0				7.2						
black willow	VOL	1.8									1.8					
	TREES	6.0									6.0					
boxelder	VOL															
	TREES	115.2	115.2													
TOTAL	**VOL**	**3.8**				**1.1**				**0.9**	**1.8**					
	TREES	**148.4**	**115.2**			**20.0**				**7.2**	**6.0**					

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
black walnut	VOL	1.4									0.7	0.7				
	TREES	11.4									6.0	5.4				
northern red oak	VOL	1.1								1.1						
	TREES	7.2								7.2						
TOTAL	**VOL**	**2.5**								**1.1**	**0.7**	**0.7**				
	TREES	**18.6**								**7.2**	**6.0**	**5.4**				

TOTAL VOLUME by DBH

12/26/2022

STAND 16

ACRES 4.0 **3 PTS**

Pulp
Cords

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
American elm	VOL	4.6		1.3	1.7	1.7										
	TREES	94.5		49.9	24.4	20.2										
black locust	VOL	22.5			5.9	15.0	1.6									
	TREES	571.5	391.1		73.3	94.6	12.5									
black walnut	VOL	6.4			3.2	3.2										
	TREES	44.6			24.4	20.2										
boxelder	VOL	2.7			2.7											
	TREES	48.9			48.9											
TOTAL	**VOL**	**36.1**		**1.3**	**13.4**	**19.8**	**1.6**									
	TREES	**759.6**	**391.1**	**49.9**	**171.1**	**135.0**	**12.5**									

Sawlog
MBF

		TOTAL	6	8	10	12	14	16	18	20	22	24	26	28	30	32+
bigtooth aspen	VOL	3.6						1.7	1.8							
	TREES	17.1						9.5	7.5							
black locust	VOL	1.2						1.2								
	TREES	10.9						10.9								
black willow	VOL	0.9						0.9								
	TREES	9.5						9.5								
TOTAL	**VOL**	**5.7**						**3.8**	**1.8**							
	TREES	**37.5**						**30.0**	**7.5**							

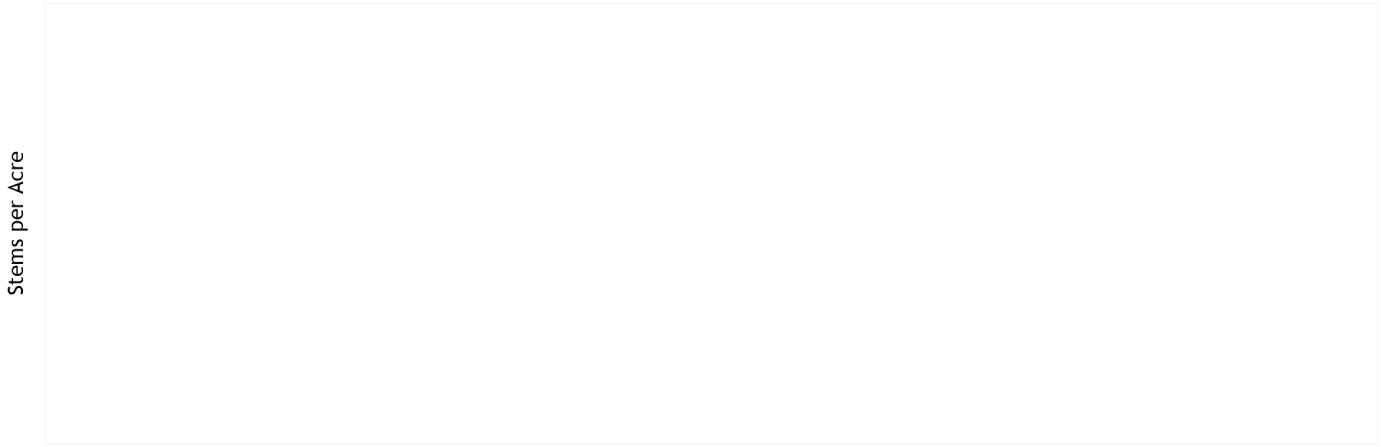
REGENERATION PER ACRE

12/26/2022

STAND 1

ACRES 5.0 4 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



		Saplings				
TOTAL	Seedlings	<1	1	2	3	4

STEMS PER ACRE

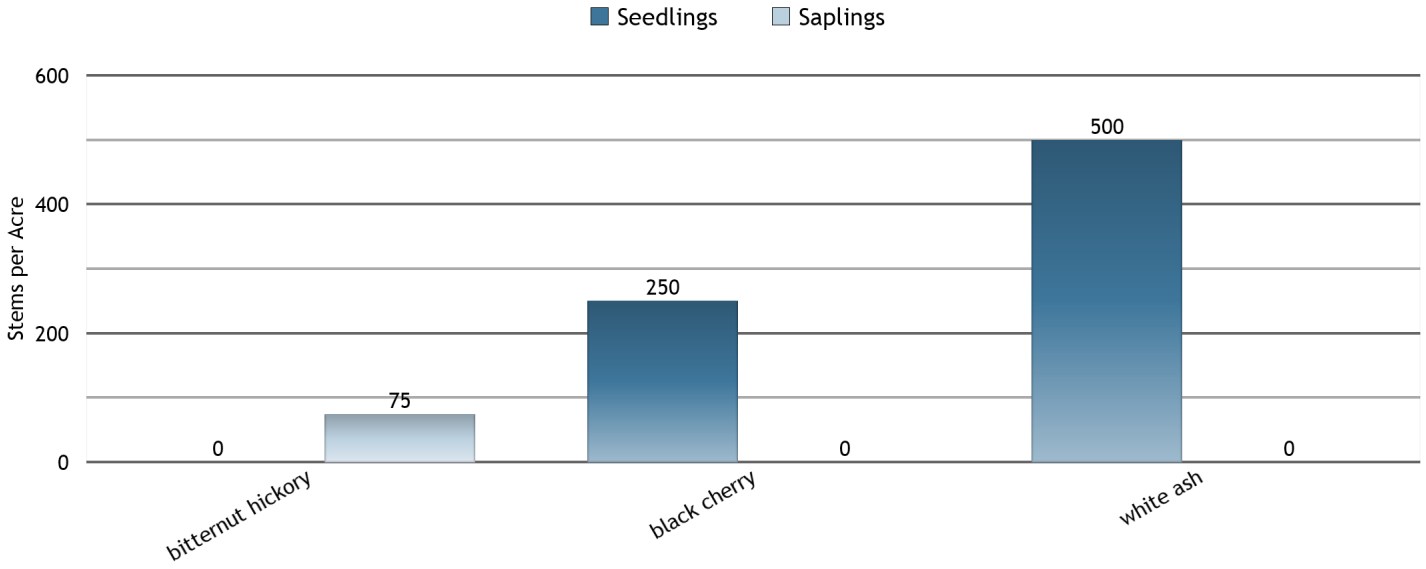
REGENERATION PER ACRE

12/26/2022

STAND 2

ACRES 5.0 4 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings <1	1	2	3	4
bitternut hickory	75				75		
black cherry	250	250					
white ash	500	500					
STEMS PER ACRE	**825**	**750**			**75**		

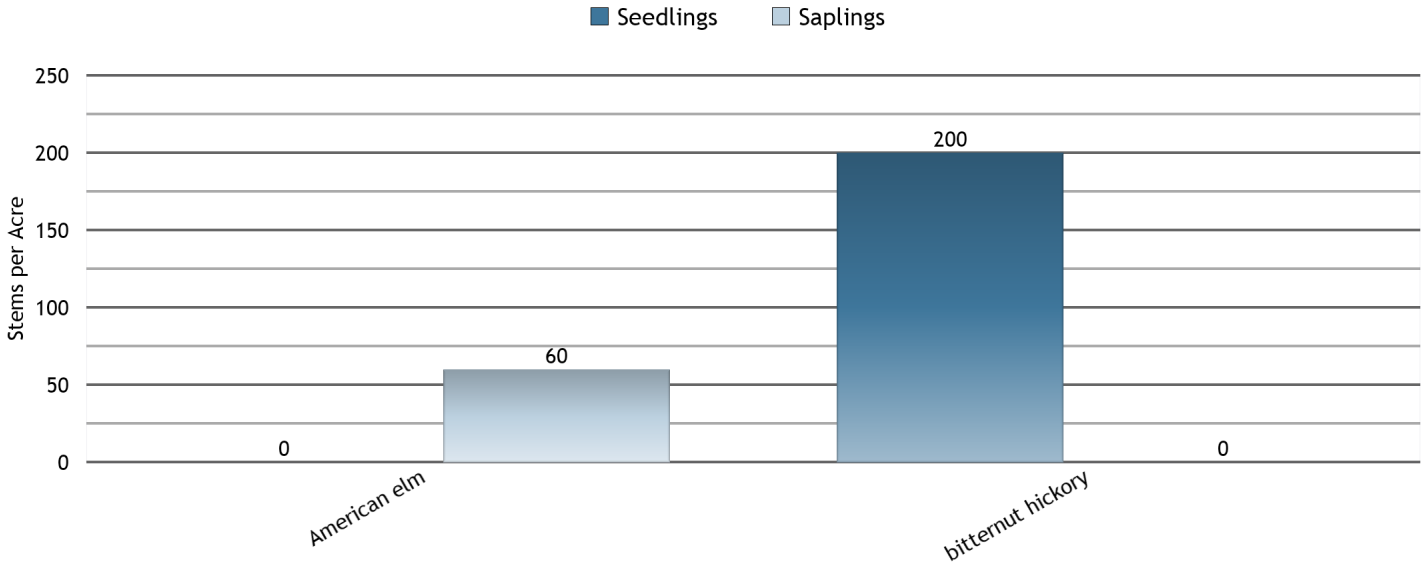
REGENERATION PER ACRE

12/26/2022

STAND 4

ACRES 7.0 5 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings <1	1	2	3	4
American elm	60					60	
bitternut hickory	200	200					
STEMS PER ACRE	**260**	**200**				**60**	

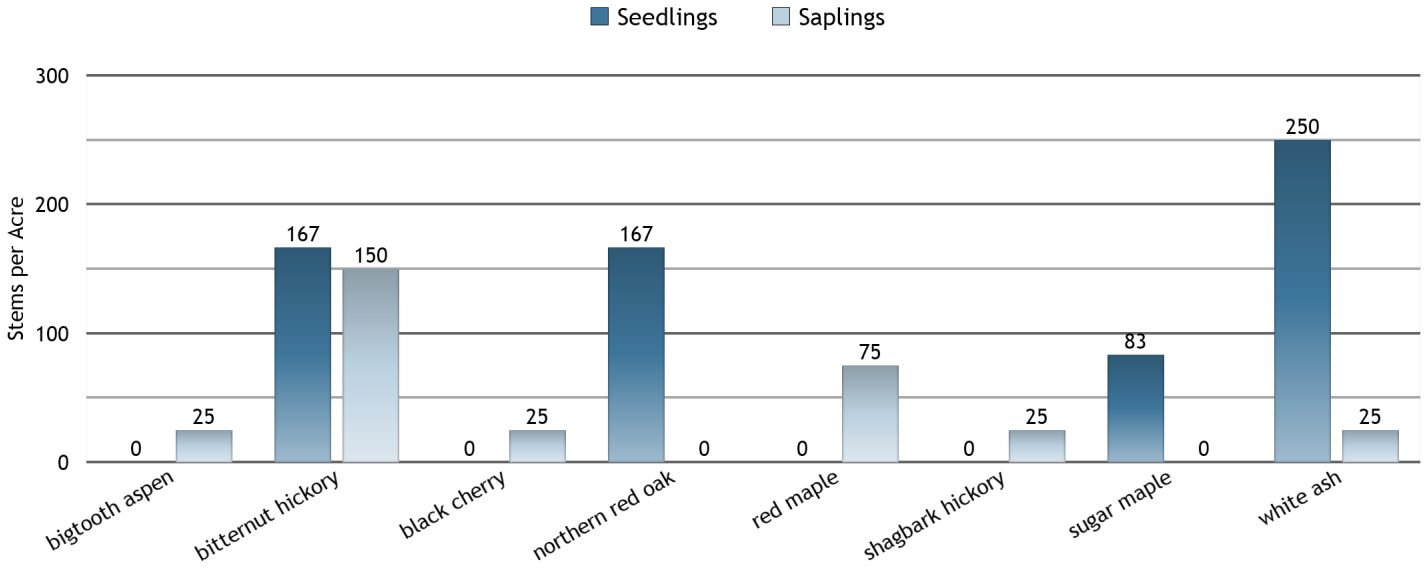
REGENERATION PER ACRE

12/26/2022

STAND 5

ACRES 17.0 12 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings <1	Saplings 1	Saplings 2	Saplings 3	Saplings 4
bigtooth aspen	25						25
bitternut hickory	317	167		25	125		
black cherry	25						25
northern red oak	167	167					
red maple	75					25	50
shagbark hickory	25				25		
sugar maple	83	83					
white ash	275	250	25				
STEMS PER ACRE	**992**	**667**	**25**	**25**	**150**	**25**	**100**

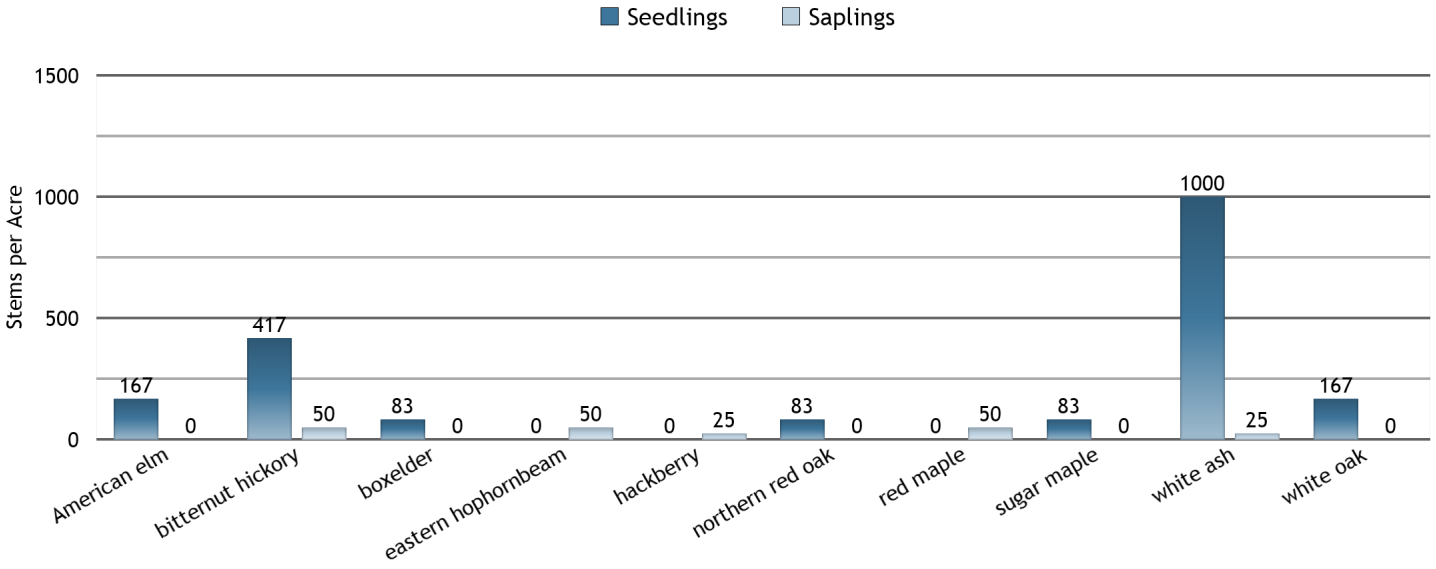
REGENERATION PER ACRE

12/26/2022

STAND 7

ACRES 14.0 12 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings <1	Saplings 1	Saplings 2	Saplings 3	Saplings 4
American elm	167	167					
bitternut hickory	467	417		25		25	
boxelder	83	83					
eastern hophornbeam	50		50				
hackberry	25				25		
northern red oak	83	83					
red maple	50			50			
sugar maple	83	83					
white ash	1,025	1,000	25				
white oak	167	167					
STEMS PER ACRE	**2,200**	**2,000**	**75**	**75**	**25**	**25**	

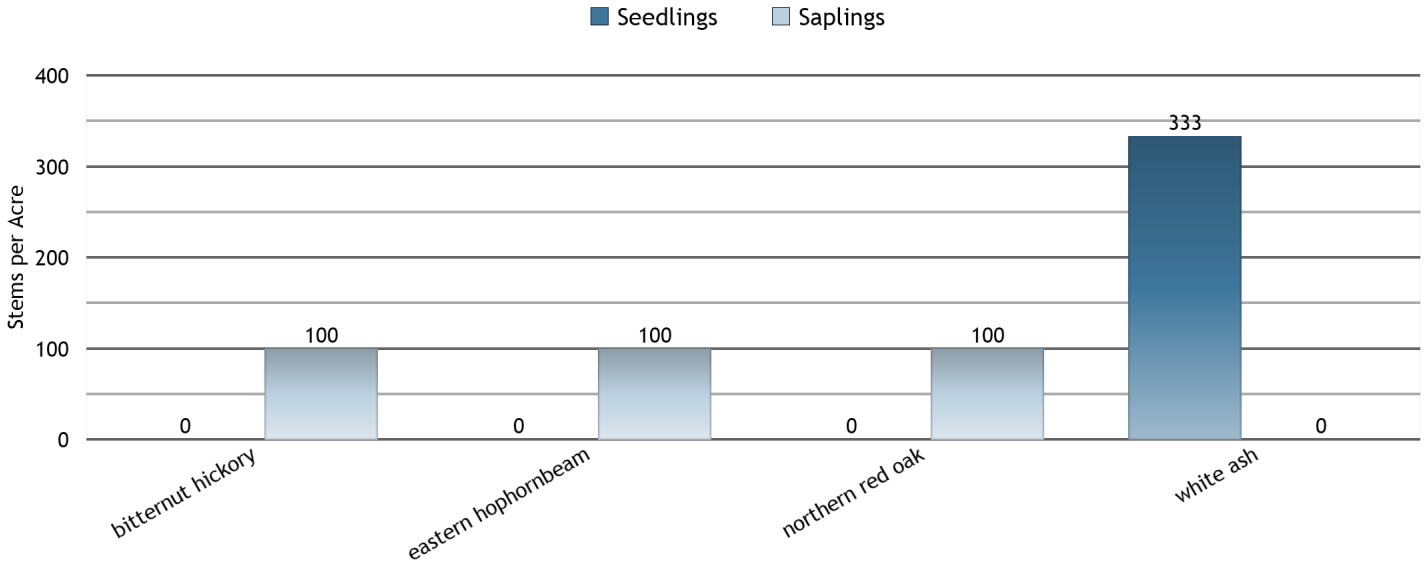
REGENERATION PER ACRE

12/26/2022

STAND 8

ACRES 3.0 3 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings <1	1	2	3	4
bitternut hickory	100		100				
eastern hophornbeam	100						100
northern red oak	100					100	
white ash	333	333					
STEMS PER ACRE	**633**	**333**	**100**			**100**	**100**

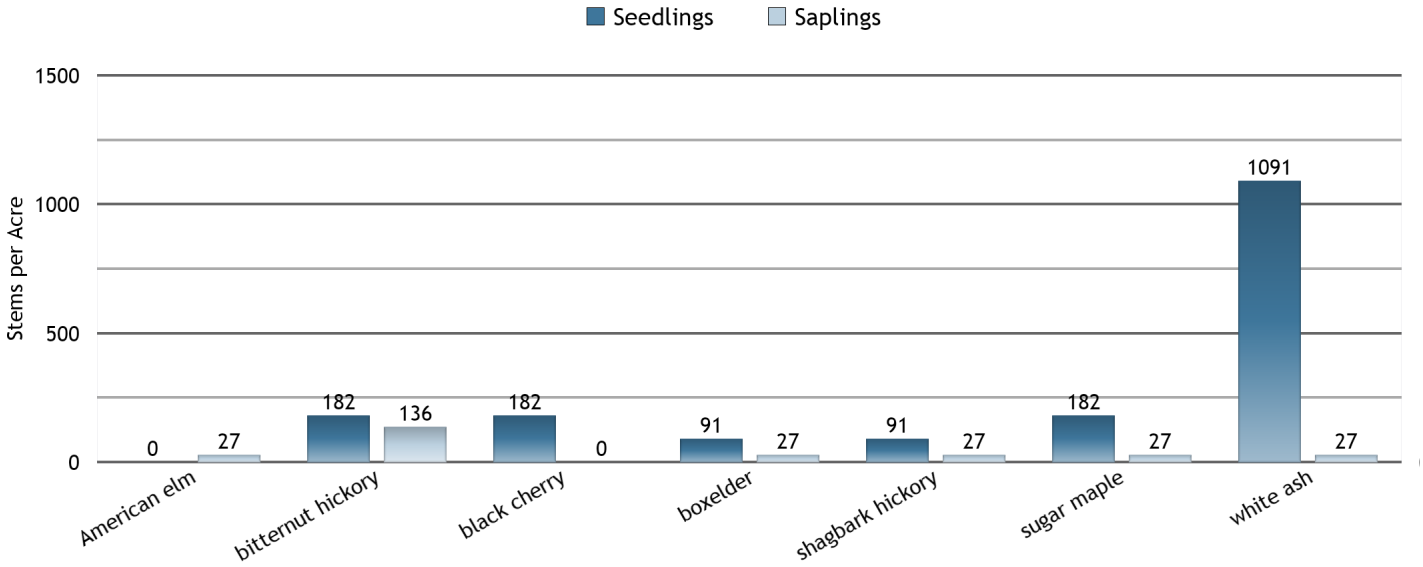
REGENERATION PER ACRE

12/26/2022

STAND 9

ACRES 15.0 11 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings <1	Saplings 1	Saplings 2	Saplings 3	Saplings 4
American elm	27				27		
bitternut hickory	318	182	27	55	27	27	
black cherry	182	182					
boxelder	118	91		27			
shagbark hickory	118	91	27				
sugar maple	209	182	27				
white ash	1,118	1,091			27		
STEMS PER ACRE	**2,091**	**1,818**	**82**	**82**	**82**	**27**	

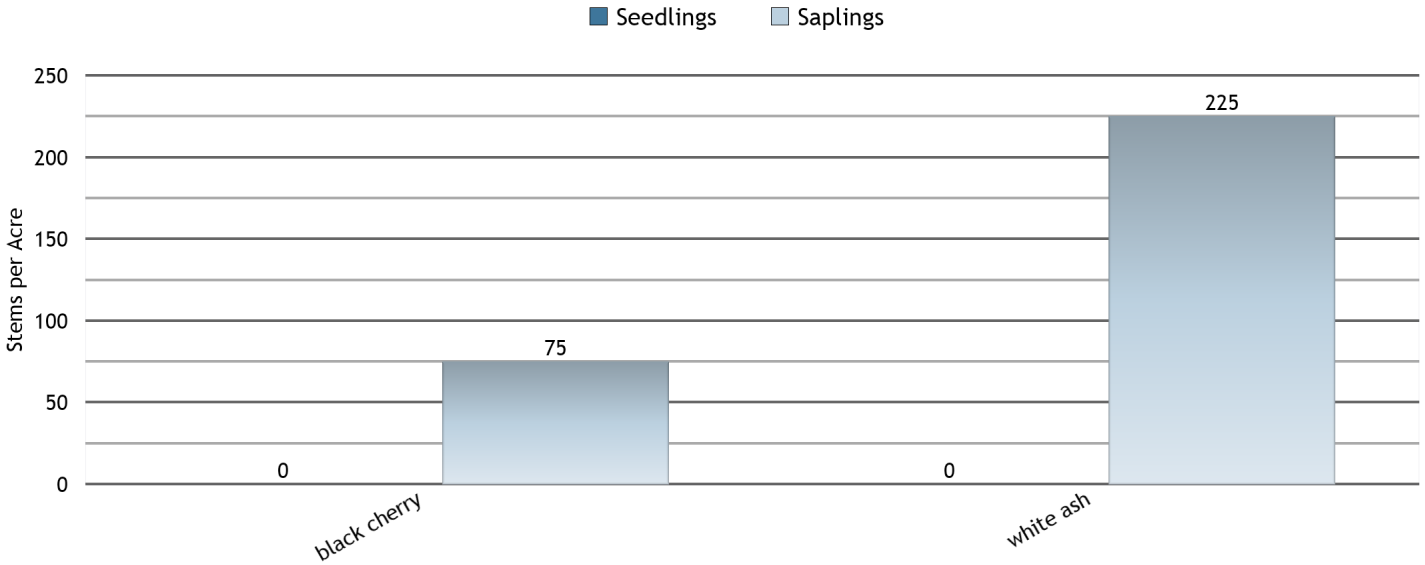
REGENERATION PER ACRE

12/26/2022

STAND 10

ACRES 6.0 4 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings				
			<1	1	2	3	4
black cherry	75				75		
white ash	225		150		75		
STEMS PER ACRE	**300**		**150**		**150**		

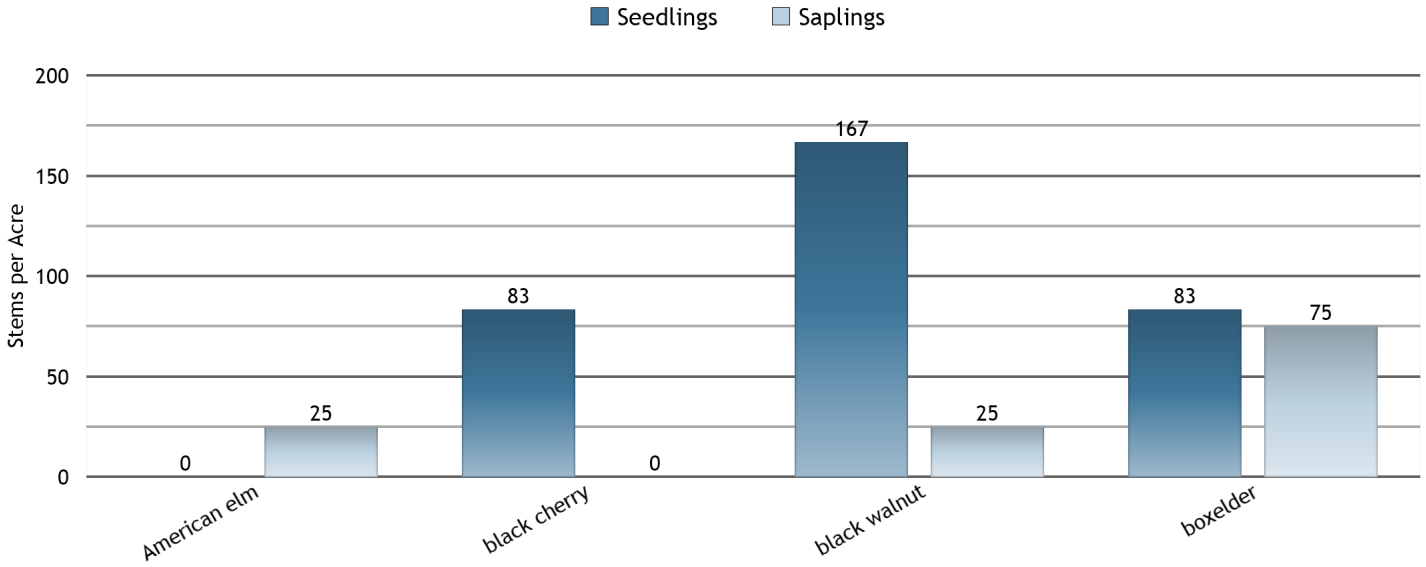
REGENERATION PER ACRE

12/26/2022

STAND 11

ACRES 15.0 12 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



			Saplings				
	TOTAL	**Seedlings**	**<1**	**1**	**2**	**3**	**4**
American elm	25						25
black cherry	83	83					
black walnut	192	167			25		
boxelder	158	83	25		25	25	
STEMS PER ACRE	**458**	**333**	**25**		**50**	**25**	**25**

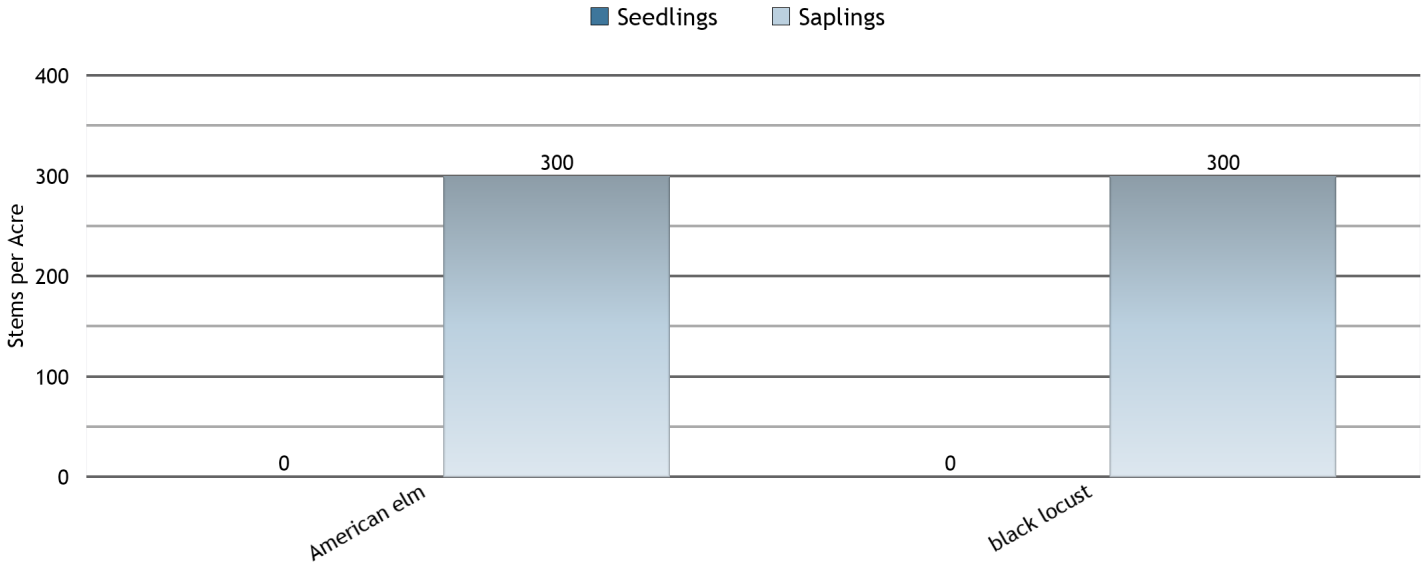
REGENERATION PER ACRE

12/26/2022

STAND 12

ACRES 2.0 1 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings				
			<1	1	2	3	4
American elm	300		300				
black locust	300		300				
STEMS PER ACRE	**600**		**600**				

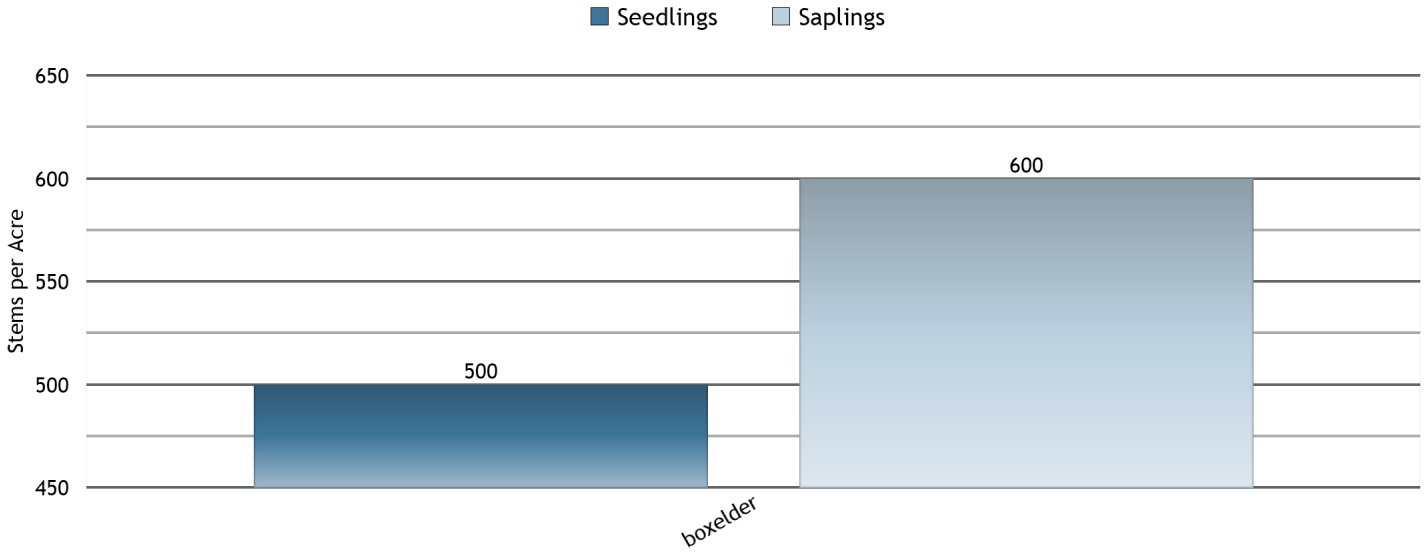
REGENERATION PER ACRE

12/26/2022

STAND 13

ACRES 3.0 2 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings				
			<1	1	2	3	4
boxelder	1,100	500	450	150			
STEMS PER ACRE	**1,100**	**500**	**450**	**150**			

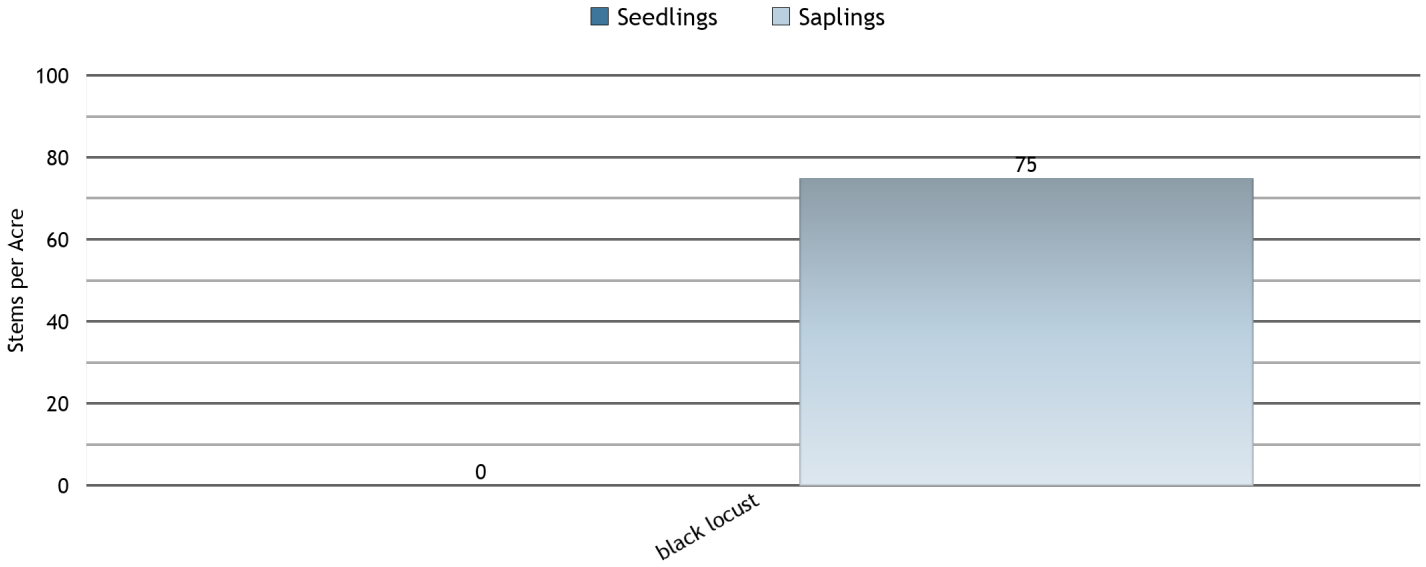
REGENERATION PER ACRE

12/26/2022

STAND 14

ACRES 14.0 4 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings				
			<1	1	2	3	4
black locust	75				75		
STEMS PER ACRE	**75**				**75**		

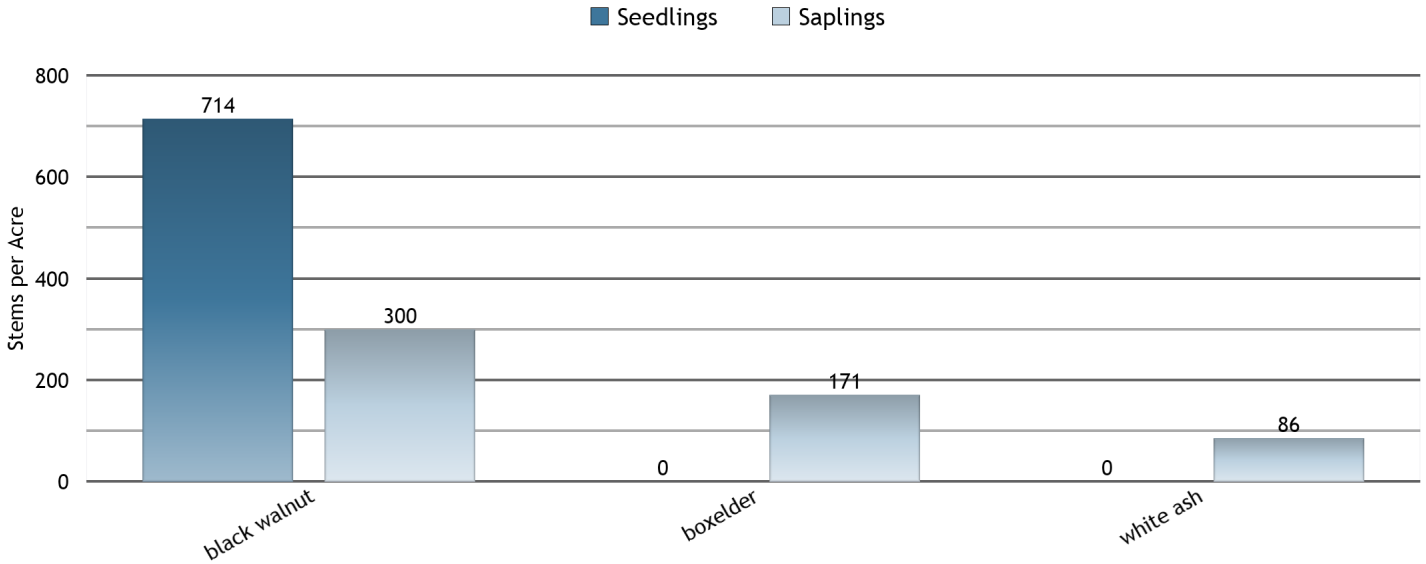
REGENERATION PER ACRE

12/26/2022

STAND 15

ACRES 11.0 7 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings				
			<1	1	2	3	4
black walnut	1,014	714	171	43	86		
boxelder	171		86			86	
white ash	86			43	43		
STEMS PER ACRE	**1,271**	**714**	**257**	**86**	**129**	**86**	

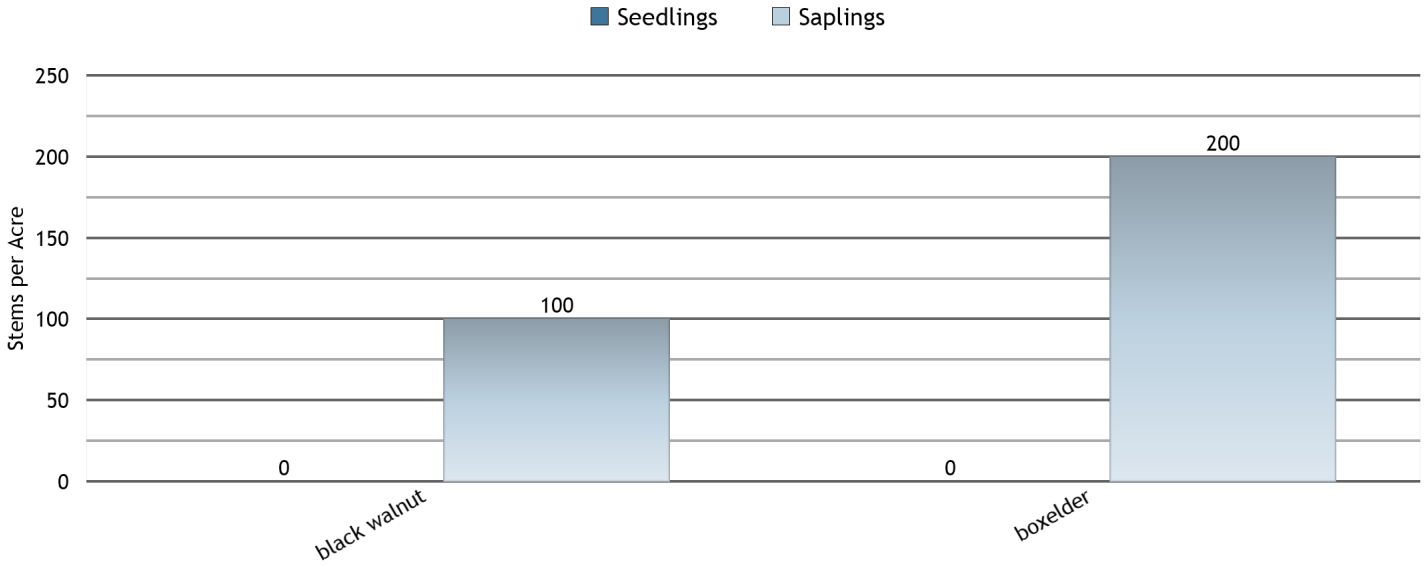
REGENERATION PER ACRE

12/26/2022

STAND 16

ACRES 4.0 3 PTS

Sampling Method: Fixed Area Plots
Seedling Plot Size (sf): 44
Sapling Plot Size (sf): 145



	TOTAL	Seedlings	Saplings				
			<1	1	2	3	4
black walnut	100				100		
boxelder	200		100		100		
STEMS PER ACRE	**300**		**100**		**200**		

United States Department of Agriculture

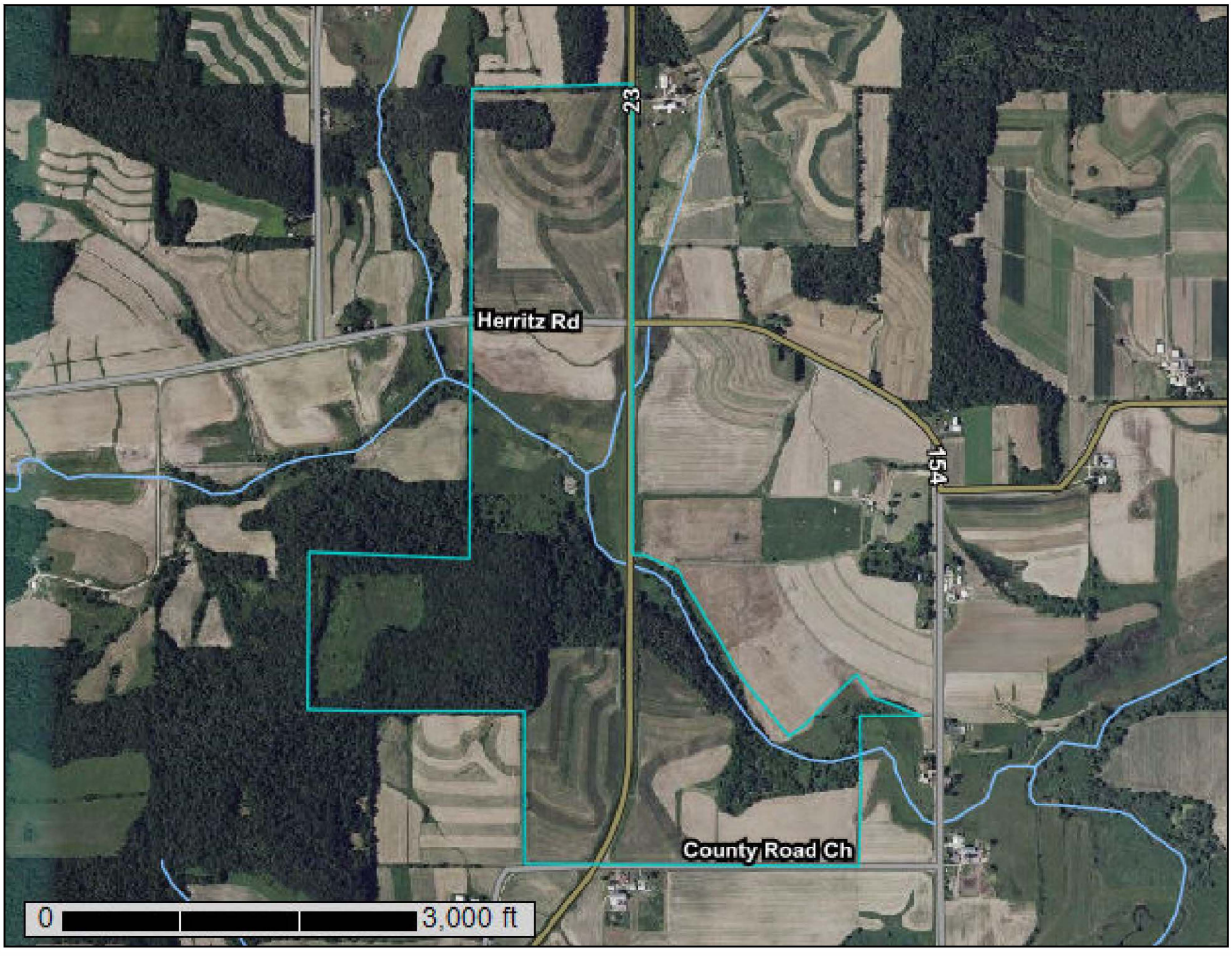
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Sauk County, Wisconsin

Sauk County Land Resources and Environment Soils Report(Forested Lands)



January 12, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

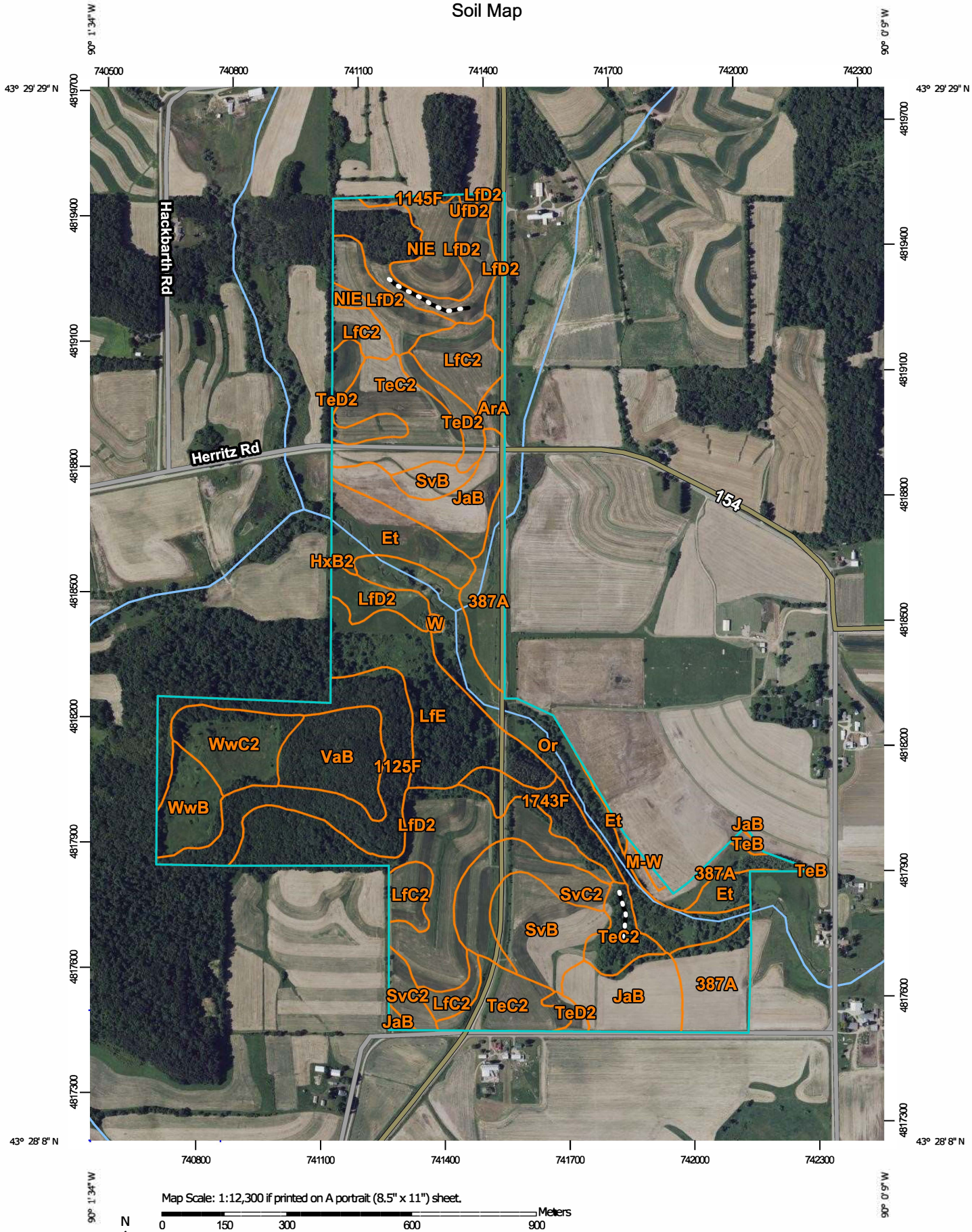
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sauk County, Wisconsin
Survey Area Data: Version 21, Sep 6, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 13, 2020—Aug 16, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
387A	Curran silt loam, 0 to 3 percent slopes, rarely flooded	22.0	7.0%
1125F	Dorerton, very stony-Elbaville complex, 30 to 60 percent slopes	23.6	7.5%
1145F	Gaphill-Rockbluff complex, 30 to 60 percent slopes	0.1	0.0%
1743F	Council-Elevasil-Norden complex, 20 to 45 percent slopes, rocky	6.7	2.1%
ArA	Arenzville silt loam, 0 to 3 percent slopes, occasionally flooded	1.6	0.5%
Et	Ettrick silt loam, 0 to 2 percent slopes, frequently flooded	13.6	4.3%
HxB2	Hixton silt loam, 2 to 6 percent slopes, moderately eroded	0.0	0.0%
JaB	Jackson silt loam, 1 to 6 percent slopes	21.7	6.9%
LfC2	La Farge silt loam, 6 to 12 percent slopes, eroded	16.6	5.3%
LfD2	La Farge silt loam, 12 to 20 percent slopes, eroded	53.4	17.0%
LfE	La Farge silt loam, 20 to 30 percent slopes	22.8	7.3%
M-W	Miscellaneous water	0.4	0.1%
NlE	Norden loam, 20 to 30 percent slopes	14.1	4.5%
Or	Orion silt loam, 0 to 3 percent slopes, occasionally flooded	23.3	7.4%
SvB	Seaton silt loam, driftless valley, 2 to 6 percent slopes	15.1	4.8%
SvC2	Seaton silt loam, driftless valley, 6 to 12 percent slopes, moderately eroded	13.5	4.3%
TeB	Tell silt loam, 2 to 6 percent slopes	0.6	0.2%
TeC2	Tell silt loam, 6 to 12 percent slopes, eroded	25.8	8.2%
TeD2	Tell silt loam, 12 to 20 percent slopes, eroded	8.9	2.8%
UfD2	Urne fine sandy loam, 12 to 20 percent slopes, eroded	0.4	0.1%
VaB	Valton silt loam, 2 to 6 percent slopes, moderately eroded	11.9	3.8%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
W	Water	0.4	0.1%
WwB	Wildale silt loam, 2 to 6 percent slopes	7.4	2.3%
WwC2	Wildale channery silt loam, 6 to 12 percent slopes, moderately eroded	10.7	3.4%
Totals for Area of Interest		**314.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Sauk County, Wisconsin

387A—Curran silt loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: 2ysbz
Elevation: 560 to 1,740 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Curran, rarely flooded, and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Curran, Rarely Flooded

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium over siliceous sandy alluvium

Typical profile

Ap - 0 to 9 inches: silt loam
BE,Btg1 - 9 to 45 inches: silt loam
Btg2 - 45 to 53 inches: silt loam
2C - 53 to 79 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: NoneRare
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F105XY008WI - Moist Loamy-Clayey Lowland
Forage suitability group: High AWC, high water table (G089XY007WI)
Other vegetative classification: High AWC, high water table (G089XY007WI)
Hydric soil rating: No

Minor Components

Ettrick, shallow

Percent of map unit: 5 percent

Landform: Drainageways on terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F105XY003WI - Wet Loamy-Clayey Floodplain
Other vegetative classification: Unnamed (G105XY010WI), Not Assigned (wet mineral soils) (Nmin)
Hydric soil rating: Yes

Jackson

Percent of map unit: 4 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI), Acer rubrum-Circaea (ArCi)
Hydric soil rating: No

1125F—Dorerton, very stony-Elbaville complex, 30 to 60 percent slopes

Map Unit Setting

National map unit symbol: 2v3f0
Elevation: 800 to 1,400 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Dorerton, very stony, and similar soils: 60 percent
Elbaville and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dorerton, Very Stony

Setting

Landform: Valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mantle of mixed loess and loamy slope alluvium over skeletal materail from fragmental loamy colluvium derived from dolomite

Typical profile

A - 0 to 3 inches: loam

E - 3 to 10 inches: loam
BE - 10 to 15 inches: loam
Bt1 - 15 to 18 inches: loam
2Bt2 - 18 to 30 inches: very flaggy clay loam
2C - 30 to 79 inches: very flaggy loamy sand

Properties and qualities

Slope: 30 to 60 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F105XY013WI - Loamy-Silty Upland
Hydric soil rating: No

Description of Elbaville

Setting

Landform: Valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loess over clayey rountree sediments colluvium over loamy sketetal material colluvium derived from dolomite

Typical profile

A - 0 to 5 inches: silt loam
E - 5 to 11 inches: silt loam
B/E - 11 to 17 inches: silt loam
Bt1 - 17 to 21 inches: silt loam
2Bt2 - 21 to 26 inches: silty clay
3Bt3 - 26 to 37 inches: very flaggy silty clay loam
3C - 37 to 79 inches: extremely flaggy sandy loam

Properties and qualities

Slope: 30 to 45 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F105XY013WI - Loamy-Silty Upland
Hydric soil rating: No

Minor Components

Churchtown

Percent of map unit: 6 percent
Landform: Valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Hydric soil rating: No

Rockbluff

Percent of map unit: 3 percent
Landform: Valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY019WI - Dry Upland
Hydric soil rating: No

Brodale

Percent of map unit: 3 percent
Landform: Valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R105XY021WI - Limestone Colluvium Bluff Prairie
Hydric soil rating: No

Dorerton, nonstony

Percent of map unit: 3 percent
Landform: Valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Hydric soil rating: No

1145F—Gaphill-Rockbluff complex, 30 to 60 percent slopes

Map Unit Setting

National map unit symbol: 1lmyr
Elevation: 800 to 1,400 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Gaphill and similar soils: 50 percent
Rockbluff and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gaphill

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy colluvium over sandy residuum weathered from sandstone

Typical profile

Oe,A - 0 to 5 inches: sandy loam
E - 5 to 11 inches: sandy loam
Bt - 11 to 32 inches: sandy loam
2BC - 32 to 50 inches: sand
2C - 50 to 56 inches: sand
2Cr - 56 to 80 inches: weathered bedrock

Properties and qualities

Slope: 30 to 60 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A

Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained with limitations (G105XY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)
Hydric soil rating: No

Description of Rockbluff

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy colluvium over sandy residuum weathered from sandstone

Typical profile

Oe,A - 0 to 4 inches: loamy sand
E - 4 to 9 inches: loamy sand
Bw - 9 to 35 inches: sand
C - 35 to 52 inches: sand
Cr - 52 to 80 inches: weathered bedrock

Properties and qualities

Slope: 30 to 60 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: F105XY019WI - Dry Upland
Forage suitability group: Low AWC, adequately drained with limitations (G105XY003WI)
Other vegetative classification: Low AWC, adequately drained with limitations (G105XY003WI)
Hydric soil rating: No

Minor Components

Gaphill, very stony

Percent of map unit: 8 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)

Hydric soil rating: No

Brownchurch

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Footslope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)
Hydric soil rating: No

Dorerton, very stony

Percent of map unit: 2 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)
Hydric soil rating: No

Rock outcrop, sandstone

Percent of map unit: 2 percent
Landform: Hills
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

1743F—Council-Elevasil-Norden complex, 20 to 45 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2yt3g
Elevation: 560 to 1,740 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Council and similar soils: 31 percent
Elevasil and similar soils: 29 percent
Norden and similar soils: 27 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Council

Setting

Landform: Valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy colluvium derived from sedimentary rock

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 4 inches: sandy loam
Bt - 4 to 32 inches: loam
BC - 32 to 79 inches: silt loam

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: High AWC, adequately drained with limitations (G105XY009WI)
Other vegetative classification: High AWC, adequately drained with limitations (G105XY009WI), Acer rubrum-Circaea (ArCi)
Hydric soil rating: No

Description of Elevasil

Setting

Landform: Rock pediments, valley sides
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy slope alluvium derived from sandstone and siltstone over sandy residuum weathered from sandstone

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: sandy loam
Bt - 3 to 27 inches: sandy loam
2BC - 27 to 31 inches: loamy sand

2C - 31 to 39 inches: sand
2Cr - 39 to 79 inches: bedrock

Properties and qualities

Slope: 30 to 45 percent
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained with limitations (G105XY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI), Pinus/Vaccinium-Cornus (PVCr)
Hydric soil rating: No

Description of Norden

Setting

Landform: Knolls
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Loess over loamy residuum weathered from glauconitic sandstone

Typical profile

A - 0 to 8 inches: silt loam
Bt - 8 to 20 inches: silt loam
2Bt - 20 to 37 inches: fine sandy loam
2Cr - 37 to 79 inches: bedrock

Properties and qualities

Slope: 30 to 45 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained with limitations (G105XY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI), Acer-Tilia-Desmodium-Prunus (ATiDe(Pr))
Hydric soil rating: No

Minor Components

Seaton, driftless valley

Percent of map unit: 5 percent
Landform: Knolls
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained with limitations (G105XY009WI), Acer-Tilia-Caulophyllum (ATiCa)
Hydric soil rating: No

Urne

Percent of map unit: 4 percent
Landform: Valley sides
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI), Acer rubrum/Desmodium=(Vaccinium) (ArDe-V)
Hydric soil rating: No

Boone

Percent of map unit: 3 percent
Landform: Valley sides
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F105XY019WI - Dry Upland
Other vegetative classification: Low AWC, adequately drained with limitations (G105XY003WI), Pinus/Vaccinium-Gaylussacia (PVGy)
Hydric soil rating: No

Rock outcrop, sandstone

Percent of map unit: 1 percent
Landform: Valley sides
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Free face
Down-slope shape: Convex
Across-slope shape: Linear

Hydric soil rating: No

ArA—Arenzville silt loam, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2wtqs
Elevation: 560 to 1,740 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Arenzville, occasionally flooded, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arenzville, Occasionally Flooded

Setting

Landform: Flood plains, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

A - 0 to 10 inches: silt loam
C - 10 to 25 inches: stratified silt loam
Ab - 25 to 40 inches: silt loam
C' - 40 to 79 inches: stratified silt loam to very fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B
Ecological site: F108XC529IA - Loamy Floodplain Forest
Forage suitability group: High AWC, adequately drained (G105XY008WI)
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Minor Components

Orion, occassionally flooded
Percent of map unit: 3 percent
Landform: Drainageways, flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F108XC529IA - Loamy Floodplain Forest
Other vegetative classification: High AWC, high water table (G105XY007WI)
Hydric soil rating: No

Ettrick, frequently flooded
Percent of map unit: 2 percent
Landform: Depressions on flood plains
Landform position (three-dimensional): Dip
Microfeatures of landform position: Swales
Down-slope shape: Concave, linear
Across-slope shape: Linear
Ecological site: R104XY018IA - Wet Floodplain Sedge Meadow
Other vegetative classification: High AWC, high water table (G105XY007WI)
Hydric soil rating: Yes

Et—Ettrick silt loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting
National map unit symbol: 2wtqy
Elevation: 560 to 1,740 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition
Ettrick, frequently flooded, and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ettrick, Frequently Flooded

Setting
Landform: Depressions on flood plains

Landform position (three-dimensional): Dip
Microfeatures of landform position: Swales
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap,A - 0 to 16 inches: silt loam
Bg - 16 to 35 inches: silt loam
Cg - 35 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 13.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: C/D
Ecological site: F105XY003WI - Wet Loamy-Clayey Floodplain
Forage suitability group: High AWC, high water table (G105XY007WI)
Other vegetative classification: High AWC, high water table (G105XY007WI)
Hydric soil rating: Yes

Minor Components

Palms, frequently flooded

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F105XY001WI - Mucky Swamp
Other vegetative classification: Unnamed (G105XY010WI)
Hydric soil rating: Yes

Orion, occassionally flooded

Percent of map unit: 4 percent
Landform: Drainageways, flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY008WI - Moist Loamy-Clayey Lowland
Other vegetative classification: High AWC, high water table (G105XY007WI)
Hydric soil rating: No

HxB2—Hixton silt loam, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2ysc4
Elevation: 560 to 1,740 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hixton and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hixton

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy slope alluvium over sandy residuum weathered from sandstone

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 28 inches: silt loam
2Bt - 28 to 32 inches: fine sandy loam
3C - 32 to 39 inches: sand
3Cr - 39 to 79 inches: bedrock

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 22 to 62 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F089XY019WI - Loamy Bedrock Uplands

Forage suitability group: Mod AWC, adequately drained (G105XY005WI)
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI), Acer rubrum/Circaea=(Phryma) (ArCi-Ph)
Hydric soil rating: No

Minor Components

Elevasil

Percent of map unit: 6 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F089XY019WI - Loamy Bedrock Uplands
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI), Pinus/Vaccinium-Cornus (PVCr)
Hydric soil rating: No

Merit

Percent of map unit: 2 percent
Landform: Pediments
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F089XY020WI - Loamy Uplands
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI), Acer rubrum/Desmodium=(Vaccinium) (ArDe-V)
Hydric soil rating: No

Hixton, thin solum

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI), Acer rubrum/Desmodium=(Vaccinium) (ArDe-V)
Hydric soil rating: No

JaB—Jackson silt loam, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2xply
Elevation: 560 to 1,740 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F

Frost-free period: 120 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Jackson and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Jackson

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty alluvium over stratified siliceous sandy alluvium derived from sandstone

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 50 inches: silt loam
2C - 50 to 79 inches: sand

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F089XY020WI - Loamy Uplands
Forage suitability group: High AWC, adequately drained (G105XY008WI)
Other vegetative classification: High AWC, adequately drained (G105XY008WI), Acer rubrum-Circaea (ArCi)
Hydric soil rating: No

Minor Components

Merit, moderately eroded

Percent of map unit: 5 percent
Landform: Terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F089XY020WI - Loamy Uplands
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)

Hydric soil rating: No

Bertrand, moderately eroded

Percent of map unit: 5 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI), Acer rubrum-Circaea (ArCi)
Hydric soil rating: No

LfC2—La Farge silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: g6bq
Elevation: 800 to 1,400 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

La farge and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of La Farge

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy residuum weathered from glauconitic sandstone

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 27 inches: silt loam
H3 - 27 to 33 inches: fine sandy loam
2Cr - 33 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 24 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained (G105XY005WI)
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI)
Hydric soil rating: No

LfD2—La Farge silt loam, 12 to 20 percent slopes, eroded

Map Unit Setting
National map unit symbol: g6br
Elevation: 800 to 1,400 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition
La farge and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of La Farge

Setting
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy residuum weathered from glauconitic sandstone

Typical profile
H1 - 0 to 12 inches: silt loam
H2 - 12 to 27 inches: silt loam
H3 - 27 to 33 inches: fine sandy loam
2Cr - 33 to 60 inches: unweathered bedrock

Properties and qualities
Slope: 12 to 20 percent
Depth to restrictive feature: 24 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained with limitations (G105XY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)
Hydric soil rating: No

LfE—La Farge silt loam, 20 to 30 percent slopes

Map Unit Setting

National map unit symbol: g6bs
Elevation: 800 to 1,400 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

La farge and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of La Farge

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy residuum weathered from glauconitic sandstone

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 27 inches: silt loam
H3 - 27 to 33 inches: fine sandy loam
2Cr - 33 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: 24 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained with limitations (G105XY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)
Hydric soil rating: No

M-W—Miscellaneous water

Map Unit Setting

National map unit symbol: mh15
Elevation: 670 to 1,100 feet
Mean annual precipitation: 28 to 33 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Water, miscellaneous: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water, Miscellaneous

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydric soil rating: Unranked

NIE—Norden loam, 20 to 30 percent slopes

Map Unit Setting

National map unit symbol: g6c3
Elevation: 740 to 1,250 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Norden and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Norden

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy residuum weathered from sandstone

Typical profile

H1 - 0 to 3 inches: loam
H2 - 3 to 7 inches: loam
H3 - 7 to 28 inches: loam
2Cr - 28 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F105XY012WI - Shallow Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained with limitations (G105XY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)
Hydric soil rating: No

Or—Orion silt loam, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2wtqv
Elevation: 560 to 1,740 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Orion, occasionally flooded, and similar soils: 91 percent
Minor components: 9 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orion, Occasionally Flooded

Setting

Landform: Drainageways, flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap - 0 to 8 inches: silt loam
C - 8 to 32 inches: silt loam
Ab - 32 to 39 inches: silt loam
Cg - 39 to 79 inches: stratified silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F108XC529IA - Loamy Floodplain Forest
Forage suitability group: High AWC, high water table (G105XY007WI)
Other vegetative classification: High AWC, high water table (G105XY007WI)
Hydric soil rating: No

Minor Components

Arenzville, occassionally flooded

Percent of map unit: 5 percent
Landform: Flood plains, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F108XC529IA - Loamy Floodplain Forest
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Ettrick, frequently flooded

Percent of map unit: 3 percent
Landform: Depressions on flood plains
Landform position (three-dimensional): Dip
Microfeatures of landform position: Swales

Down-slope shape: Concave, linear
Across-slope shape: Linear
Ecological site: R104XY018IA - Wet Floodplain Sedge Meadow
Other vegetative classification: High AWC, high water table (G105XY007WI)
Hydric soil rating: Yes

Bearpen, rarely flooded

Percent of map unit: 1 percent
Landform: Flood plains
Landform position (three-dimensional): Rise, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY003WI - Wet Loamy-Clayey Floodplain
Other vegetative classification: High AWC, high water table (G105XY007WI)
Hydric soil rating: No

SvB—Seaton silt loam, driftless valley, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2v3f2
Elevation: 800 to 1,400 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Seaton, driftless valley, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Seaton, Driftless Valley

Setting

Landform: Knolls
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 9 inches: silt loam
BE - 9 to 15 inches: silt loam
Bt1 - 15 to 21 inches: silt loam
Bt2 - 21 to 27 inches: silt loam
Bt3 - 27 to 34 inches: silt loam
Bt4 - 34 to 44 inches: silt loam
BC - 44 to 70 inches: silt loam
C - 70 to 79 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: High AWC, adequately drained (G105XY008WI)
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Minor Components

Council

Percent of map unit: 2 percent
Landform: Knolls
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Barremills

Percent of map unit: 1 percent
Landform: Knolls
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R105XY011WI - Mollic Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Greenridge

Percent of map unit: 1 percent
Landform: Knolls
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Lambeau

Percent of map unit: 1 percent
Landform: Knolls
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

SvC2—Seaton silt loam, driftless valley, 6 to 12 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2v3fl
Elevation: 800 to 1,400 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Seaton, driftless valley, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Seaton, Driftless Valley

Setting

Landform: Knolls
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 9 inches: silt loam
BE - 9 to 15 inches: silt loam
Bt1 - 15 to 21 inches: silt loam
Bt2 - 21 to 27 inches: silt loam
Bt3 - 27 to 34 inches: silt loam
Bt4 - 34 to 44 inches: silt loam
BC - 44 to 70 inches: silt loam
C - 70 to 79 inches: silt loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: High AWC, adequately drained (G105XY008WI)
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Minor Components

Greenridge

Percent of map unit: 2 percent
Landform: Knolls
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Council

Percent of map unit: 2 percent
Landform: Knolls
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Lambeau

Percent of map unit: 1 percent
Landform: Knolls
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

TeB—Tell silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: g6d6
Elevation: 670 to 1,950 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Tell and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tell

Setting

Landform: Stream terraces, outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium over sandy outwash

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 30 inches: silt loam
H3 - 30 to 34 inches: loam
H4 - 34 to 60 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: High AWC, adequately drained (G105XY008WI)
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

TeC2—Tell silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: g6d7
Elevation: 670 to 1,950 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Tell and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tell

Setting

Landform: Stream terraces, outwash plains
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium over sandy outwash

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 30 inches: silt loam
H3 - 30 to 34 inches: loam
H4 - 34 to 60 inches: sand

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: High AWC, adequately drained (G105XY008WI)
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

TeD2—Tell silt loam, 12 to 20 percent slopes, eroded

Map Unit Setting

National map unit symbol: g6d8
Elevation: 670 to 1,950 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Tell and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tell

Setting

Landform: Stream terraces, outwash plains
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium over sandy outwash

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 30 inches: silt loam
H3 - 30 to 34 inches: loam
H4 - 34 to 60 inches: sand

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: High AWC, adequately drained with limitations (G105XY009WI)
Other vegetative classification: High AWC, adequately drained with limitations (G105XY009WI)
Hydric soil rating: No

UfD2—Urne fine sandy loam, 12 to 20 percent slopes, eroded

Map Unit Setting

National map unit symbol: g6dg
Elevation: 800 to 1,200 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Urne and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urne

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy residuum weathered from sandstone

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 27 inches: very fine sandy loam
2Cr - 27 to 60 inches: weathered bedrock

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F105XY017WI - Shallow Dry Upland
Forage suitability group: Mod AWC, adequately drained with limitations (G105XY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G105XY006WI)
Hydric soil rating: No

VaB—Valton silt loam, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2v3fz
Elevation: 800 to 1,300 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Valton and similar soils: 96 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valton

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over clayey pedisediment derived from dolomite

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 14 inches: silt loam
Bt2 - 14 to 30 inches: silt loam
2Bt3 - 30 to 38 inches: silty clay
2Bt4 - 38 to 48 inches: silty clay
2Bt5 - 48 to 55 inches: clay
2Bt6 - 55 to 79 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C

Ecological site: F105XY013WI - Loamy-Silty Upland
Forage suitability group: Mod AWC, adequately drained (G105XY005WI)
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI)
Hydric soil rating: No

Minor Components

Brinkman

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI)
Hydric soil rating: No

Wildale

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F105XY016WI - Clayey Upland
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI)
Hydric soil rating: No

Reedsburg

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F105XY008WI - Moist Loamy-Clayey Lowland
Other vegetative classification: Mod AWC, high water table (G105XY004WI)
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: g6dn
Elevation: 660 to 980 feet
Mean annual precipitation: 30 to 34 inches
Mean annual air temperature: 39 to 43 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified

Other vegetative classification: Not Assigned (water) (Nwat)

Hydric soil rating: Unranked

WwB—Wildale silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: g6dq

Elevation: 1,070 to 1,260 feet

Mean annual precipitation: 31 to 39 inches

Mean annual air temperature: 41 to 50 degrees F

Frost-free period: 120 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Wildale and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wildale

Setting

Landform: Hills

Landform position (two-dimensional): Summit

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loess over clayey pedisediment

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 9 inches: silt loam

H3 - 9 to 60 inches: clay

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F105XY016WI - Clayey Upland
Forage suitability group: Mod AWC, adequately drained (G105XY005WI)
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI)
Hydric soil rating: No

WwC2—Wildale channery silt loam, 6 to 12 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2yvbk
Elevation: 800 to 1,300 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 120 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Wildale, channery, and similar soils: 86 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wildale, Channery

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over clayey pedisediment derived from dolomite

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bt1 - 9 to 15 inches: channery silty clay loam
2Bt2 - 15 to 21 inches: clay
2Bt3 - 21 to 30 inches: clay
2Bt4 - 30 to 41 inches: clay
2Bt5 - 41 to 52 inches: clay
2Bt6 - 52 to 61 inches: cobbly clay
2Bt7 - 61 to 79 inches: cobbly clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 12 to 15 inches to abrupt textural change
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F105XY016WI - Clayey Upland
Forage suitability group: Mod AWC, adequately drained (G105XY005WI)
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI), Acer-Tilia-Desmodium (ATiDe)
Hydric soil rating: No

Minor Components

Wildale

Percent of map unit: 9 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY016WI - Clayey Upland
Other vegetative classification: Low AWC, adequately drained (G105XY002WI), Acer-Tilia-Desmodium (ATiDe)
Hydric soil rating: No

Mickle, clayey substratum

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R105XY011WI - Mollic Loamy-Silty Upland
Other vegetative classification: High AWC, adequately drained (G105XY008WI), Acer-Tilia-Caulophyllum (ATiCa)
Hydric soil rating: No

Valton

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F105XY013WI - Loamy-Silty Upland
Other vegetative classification: Mod AWC, adequately drained (G105XY005WI), Acer-Tilia-Sanguinaria (ATiSa)
Hydric soil rating: No

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