Connecticut
Department of Energy &
Environmental Protection

**Field Visit to the Town of Ridgefield's Laurelwood/Great Pond Park in Ridgefield CT**
**Post Visit Report**

**Present Parties:** Tony Market (Conservation Commissioner) and David Beers (Western District Service Forester) on 5/30/2024 from 11-2

**Stewardship Objectives**

1. Maintain properties in an ecologically sound manner
2. Maintain properties for the recreational benefit of the town

## PROPERTY OVERVIEW

The property has some road frontage on Laurel Lane at the North End. At the south end is the parking lot for the Great Pond beach. The shape is rectangular in a north-south orientation. While it is easily accessed from the road, there are some wetlands that limit interior access. Multi-family housing and commercial development along the Route 7 corridor abut the property to the west. Residential development, with a few blocks of forest abut the property to the east . No protected open space abuts the property. This is a mostly developed landscape, with a few small blocks of forest.

This forest is part of a small core forest block having less than 250 acres of contiguous forest. Core forests are large tracts of unbroken forest that provide a much more stable home for plant and animal species, thereby protecting biodiversity. They are forested areas surrounded by more forested areas.

The CT DEEP Natural Diversity Database (NDDB) does have occurrences of threatened or endangered species on or near this property. Maps showing wetland soils, along with the NDDB area, is attached to this report. The NDDB area is in the northern corner of the property. There are no farmland soils. The land north of the fiber optic line is within the watershed for the Saugatuck Reservoir drinking water supply. This property is in the Norwalk River watershed.

In the attached 1934 air photo, the property was forested. This property was likely pastured over 100 years ago.

In addition to the 61 acres of forest described below, are 4 acres of developed recreational facilities (Martin Park) and 16 acres of pond. There are blazed trails throughout the property.

Please see the attached appendix for more information about the history of your forest, the future of your forest and some general recommendations. An appendix of Latin names for the tree and shrub species is also attached.

## Tree Cover

Most Common
Red Oak
Chestnut Oak
White Oak
Black Birch

Common
Scarlet Oak
Black Oak
Sugar Maple
Red Maple
Hickory
Hemlock
Tulip Poplar
Beech

Uncommon
Yellow Birch
Aspen
Sassafras

This forest has a diverse mix of tree species and sizes growing on site conditions that vary with slope position and soil type. The forest is mature, with full canopy closure. There is no canopy midstory to speak of. There are 6 acres of forested wetlands within this forest. The upper slopes have more oak and hickory, with the ridgetops having chestnut oak. The lower wetter slopes have more maple, birch and poplar.

**Understory**
There are a few maple, hickory, beech, American chestnut and black birch saplings. There are also some striped maple, maple-leaf viburnum and witch hazel shrubs, with some areas of sweet pepperbush and spicebush shrubs in the wetter lowlands. The dry hilltops have lowbush blueberry and huckleberry shrubs. The rockier sites have a few thick patches of mountain laurel shrubs. In spots, a remarkable number of oak seedlings cover the ground. It was a good acorn year.

**Ground Cover**
A good thick healthy leaf litter covers the ground. A good amount of woody material is throughout the forest floor.

**Forest Health**
It looks like beech leaf disease has severely infected the beech trees. This is a microscopic nematode from Asia that has recently begun to spread throughout the state, and it is still unclear the long-term prognosis for infected beech trees. The emerald ash borer has killed the ash trees within the past 10 years.

The lack of canopy structural diversity makes this forest less resilient to future disturbances (weather, climate, pests). On the other hand, the good tree and shrub species diversity makes it more resilient. The large deer herd in Connecticut makes growing certain preferred browse of deer, like oak and hickory seedlings, difficult.

There are a few patches of exotic invasive barberry shrubs and multi-flora rose shrubs along the clearing for the fiber optic line. Please see the appendix for more information about exotic invasives and their control.

**Wildlife Habitat**
The many mature oak and hickory trees in your forest are a great wildlife habitat asset, especially the acorns and nuts they produce. Having a diversity of habitat types (forest, water, wetlands) intimately mixed, like you have, is always a good thing. Your forest is lacking in vertical structural diversity in the canopy. It is providing adequate food, water, shelter, cover and space for much of the wildlife in the area. Please see the appendix for more information about wildlife habitat.

**Carbon and Climate Resilience**
This mature forest is storing a large amount of carbon while actively sequestering more. Any forest products you produce will help mitigate climate change. There are some recommendations below to make forest more resilient and adaptive to climate change. There is more information about forest carbon and the forest's ecological services in the appendix.

**Forest Vegetation Recommendations**
None

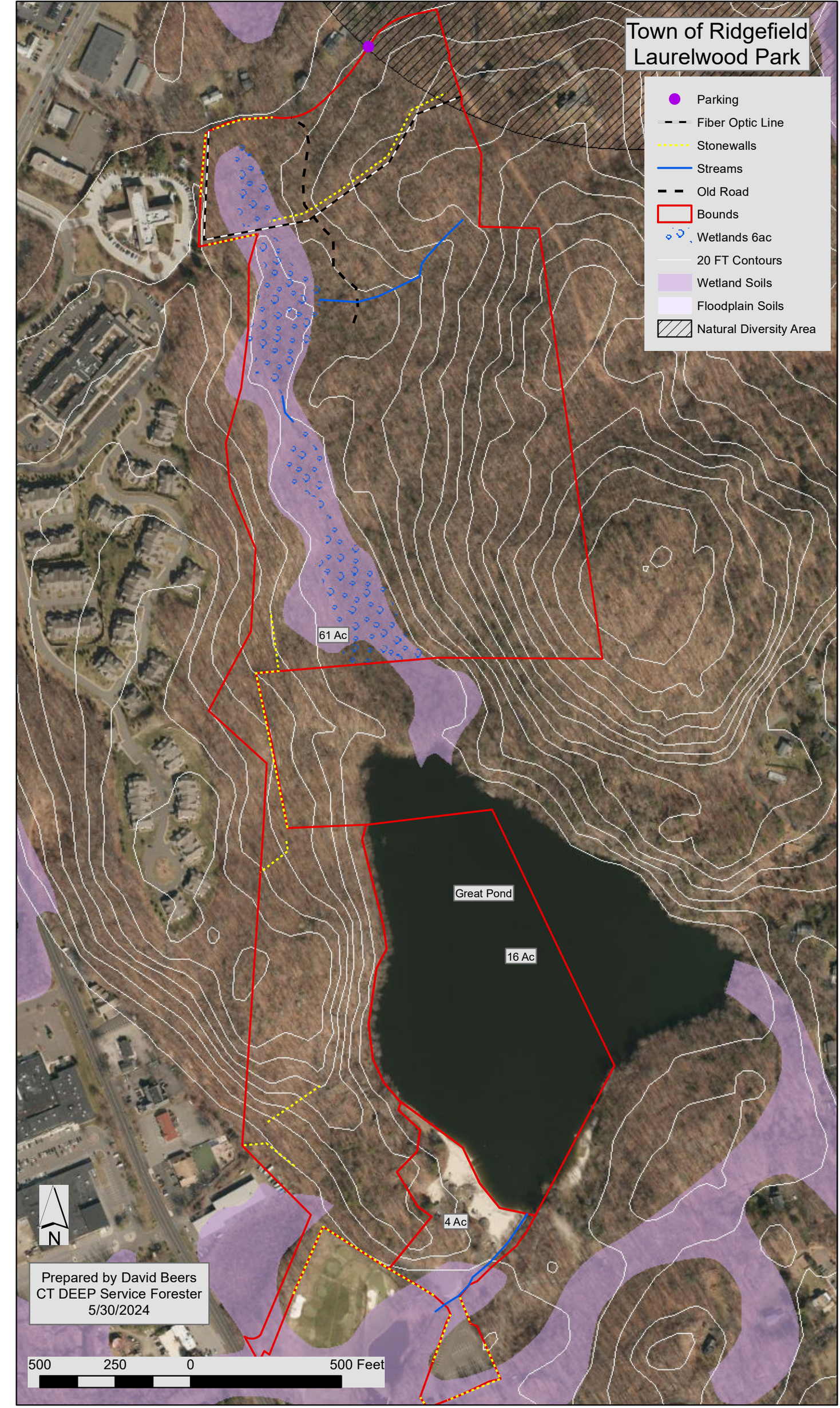
## CONCLUSION

**Here are some possibilities for your forest:**

- Contact NRCS and/or a private forester about doing a forest stewardship plan
- An annual property inspection that includes property boundaries
- Properly locate and mark your property boundaries
- Enjoy your forest!

Please consider hiring a forester to help you implement any of the recommendations in this report. I highly recommend you contact the Climate Smart Land Stewardship Grant Program - Connecticut Land Conservation Council (ctconservation.org). Ricky Bentley is the coordinator: rbentley@ctconservation.org. There might be funding for projects on your land trust property available. There might be cost-share monies through the Natural Resource Conservation Service (NRCS). Please contact Todd Bobowick at **475-355-3864**. Please feel free to share this report.


Town of Ridgefield
Laurelwood Park
Parking
Fiber Optic Line
Stonewalls
Streams
Old Road
Bounds
Wetlands 6ac
20 FT Contours
61 Ac
Great Pond
16 Ac
4 Ac
N
Prepared by David Beers
CT DEEP Service Forester
5/30/2024
500
250
0
500 Feet


Town of Ridgefield
Laurelwood Park
Parking
Fiber Optic Line
Stonewalls
Streams
Old Road
Bounds
Wetlands 6ac
20 FT Contours
Wetland Soils
Floodplain Soils
Natural Diversity Area
61 Ac
Great Pond
16 Ac
4 Ac
N
Prepared by David Beers
CT DEEP Service Forester
5/30/2024
500
250
0
500 Feet


Town of Ridgefield
Laurelwood Park
61 Ac
Great Pond
16 Ac
4 Ac
N
Prepared by David Beers
CT DEEP Service Forester
5/30/2024
1934 Air Photo
500 250 0 500 Feet


Town of Ridgefield
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Old Road
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## APPENDIX

### FOREST HISTORY

Between eighteenth century colonial settlement and the mid-nineteenth century, most of western Connecticut was cleared for farming, with only a few small patches of forest remaining by the mid-nineteenth century. Only 25% of Connecticut was forested then. Under these conditions, the biggest animal left in the woods was a muskrat. Turkeys, deer, bobcat, beaver, and bear were either rare or entirely gone. Most of the land was used for livestock pasture, with only the best soils used for hay or tilled crops. Imagine a very open agrarian landscape.

It was during this farming period that the stonewalls were built to keep livestock out of crops and the neighbor's property. Most of these walls were topped off with piled wood and stumps to make them taller. Stonewalls were also a depository for rocks removed from cultivated land. A stonewall with many fist-sized rocks means that one side of that wall had tilled crops, where the winter freeze of bare ground would push rocks to the surface. After barbed wire became widely available in 1875, many of these walls were supplemented with wire. Barbed wire was used to corral cows and goats, but not sheep (barbs did not hurt the sheep). Sheep pasture used smooth-wired rectangular page fencing.

Most of the western CT hill farms were abandoned between the mid-nineteenth century and early twentieth century. The farmers either moved west for better farming soils or headed to the cities for industrial work. Immediately after this farm abandonment, the forest began to take over again. Much of the young forestlands were then cut down to make charcoal that was used in metal blast furnaces and by blacksmiths.

For charcoal making, small young trees were cut into 4' lengths and carried by hand to make a circular pile about 30' wide and 10' high. A ditch was dug around the circumference of the pile and the soil from the ditch covered the pile to limit the amount of oxygen in the smoldering pile. Once the low-oxygen burn was completed in two weeks, the almost pure carbon charcoal was removed for transport to market. Charcoal produces the hot fire needed for metal working.

While this charcoal making process had occurred since settlement, it came to a crescendo between 1880 and 1920. At that time, much of the landscape was cut multiple times, with patches of smoke rising from active charcoal mounds across the hills. By about 1925, less expensive coal ended charcoal making and the forest once again began growing back. The repetitive cutting of young trees for charcoal encouraged the proliferation of oak trees. Of all the tree species, oak responded best to the repetitive cutting. This, along with frequent wildfires, helped give rise to the oak dominated forest we see today.

The 1934 map is attached. Please keep in mind that you need to mentally adjust the map because the map scale projection does not exactly match what we use today. To see what ancestral homeland existed on your property before settlement, please visit Native-Land.ca, and type in your address.

### FOREST FUTURE

Active forest management can nudge a forest in different directions by manipulating which trees continue to grow and how much the forest floor is exposed to sunlight by creating canopy openings of different sizes and shapes. For example, we can nudge the future forest towards oak by leaving oaks to grow and produce acorns, creating canopy openings of sufficient size to bring in the sunlight young oaks need to grow, and hunting the deer that like to eat young oak trees. Without these manipulations, and without significant natural disturbances (wind, ice, pests); the forest will gradually transition to shade tolerant trees that are not eaten by deer (hemlock, beech, black birch and red maple).

## GENERAL RECOMMENDATIONS

### Forest Protection

For more long-term protection, a conservation easement could be donated to a local land trust on part of the property to prevent development in perpetuity. The value of the easement might be income tax deductible over many years and there may also be estate tax benefits. Please contact your local land trusts for more information using this link: Find A Land Trust - Connecticut Land Conservation Council (ctconservation.org). Please contact NRCS about HFRP (Healthy Forest Reserve Program) for funding of a conservation easement using this link: NRCS Accepting Applications for HFRP Program | Natural Resources Conservation Service (usda.gov).

### Diversity

A healthy forest has a large diversity of native plant species, particularly trees, that supports a diverse array of fungi and wildlife (animals, insects, microbes). A healthy forest also has multiple layers of native vegetation to maximize biodiversity and structural complexity. This means having trees of different ages, diameters, and heights. A healthy forest has both standing dead trees (snags) and dead downed wood as important habitat elements and to hold moisture during droughts. A healthy forest is resilient because it is better able to handle diseases, pests, and extreme weather events. Increasing species and structural diversity of this forest provides multiple pathways of recovery from disturbance.

As part of improving forest landscape diversity, you might want to consider establishing some patches of young forest. With over 89 birds, mammals and reptiles that need young forest habitat, young forest is nature's pantry for wildlife due to its abundance of insects and berries. It also provides our mature-woodland wildlife with important food and cover at critical times of the year. Ideally, 5-10% of our landscape should be young forest. Unfortunately, our landscape rarely has this much young forest because we prevent such forest forming naturally via fires and floods, but we can mimic natural disturbances with well-planned forest stewardship activities to create patches of young forest.

### Invasives/vines

Invasive species are typically from another part of the world and when established here they have no native enemies to hold their population in check. When left uncontrolled, they spread into natural landscapes and replace what would grow there naturally, including tree regeneration and other native understory vegetation. Native understory growth has many more native insects and arthropods that wildlife needs to forage on. Exotic invasive understory growth can provide better habitat for ticks and associated pathogens while greatly reducing biodiversity.

Control methods include mechanical and chemical methods. In a shady forest, cutting a vine is enough to kill it. Invasive shrubs are not so easy. Pulling the invasives out by the roots can be effective, but extremely difficult and labor intensive. Yearly cutting back of the aboveground stems, during the growing season, will keep the invasives under control, and perhaps kill them after a few years. The most effective control method is to apply an herbicide to the green foliage, and to cut the larger invasive shrubs and treat stumps with a herbicide to prevent resprouting.

Buckthorn Blaster herbicide applicator for vine and invasive shrub eradication

### Lawns and fields

The fields provide an opportunity to help pollinators and native insects. Insects and pollinators (bees, butterflies, moths, beetles, flies, wasps, hummingbirds), along with the many birds that depend on them, are in severe decline. By delaying annual mowing until after the first hard frost in October and before the beginning of plant growth in the spring, you will allow pollinators to use your fields for food and habitat during the growing season. Another habitat management strategy is to mow one-third to one-half each year on a rotational schedule. This allows some insects to overwinter in the uncut plant stalks and provide birds with much-needed winter food. For this reason, late winter mowing is best. Please keep in mind that healthy meadows store more than double the carbon of a mowed lawn.

There are also many opportunities to create pollinator-friendly habitat/food by adding native plantings, allowing areas of lawn to go natural, and leaving leaves and needles to cover the ground in these areas. Insects will overwinter in leaf litter and uncut plant stalks. Birds will pick through the winter leaves for insects. For more information please visit: Pollinator Pathway (pollinator-pathway.org)

**Boundaries**

Boundaries need to be well marked to protect the property from trespass and encroachment. Painted blazes are typically used to mark property boundaries. A blaze is a hand-sized shallow scrape in the bark. This scrape will last for decades and does not harm the tree if done properly. When painted, this blaze is quite visible and long lasting. Trees within arm's length of the boundaries are blazed, with the blazes facing the boundary line. Use only paint marks, without blazes, on the neighbor's side of the line. The blazes should be given a new coat of paint at least every 10 years. Custom signs can also be hung about every 100 feet. Understory vegetation and debris can be cleared from boundary lines such that the lines can be easily traversed for inspection. Please consider hiring a forester to locate and mark property boundaries.

**Wildlife**

Your forest, and the State of Connecticut in general, is lucky to have a significant and diverse component of mature oak trees (mature trees have reached maximum height). Oak trees are considered a wildlife keystone species because of the large amount and diversity of life they support – more than any other tree. Acorns, especially white oak acorns, provide the most nutritious plant-based protein for almost 90 species of wildlife. Oaks overwhelmingly host the most species of moth and butterfly caterpillars (over 500), which in turn anchor a biodiverse food web. Oak forests have more bird abundance and diversity compared to other forest types. Oaks also produce the thickest, most ecologically beneficial, and longest lasting leaf litter; that has the most abundant and diverse soil biology. This top-of-the-line leaf litter can keep out invasive exotic stilt grass and jumping worms. It also purifies and holds the most water. For these reasons, it is important to preserve and encourage oak growth and health in your forest.

Parts of this forest have legacy trees, also known as old field trees or wolf trees. These trees were growing in open pasture, as a source of shade for livestock before the current forest started growing. They are much older than the surrounding forest. Because they used to be open grown, they have large spreading crowns and large branches low on the trunk. When the pastures were abandoned, they became a significant seed source for the present forest. These large old trees are structurally complex, with many cavities, hollows, fat branches, and thick, rough bark. They are also prolific seed producers, including acorns and nuts. This structural complexity and prolific seed production attracts an enormous number and diversity of insects, birds, and mammals. Underground, the old trees are also the hub and source of the complex fungal soil mycorrhizal growth that all trees depend on for water and nutrients. To make them healthier and more vigorous, such legacy trees could be protected and perhaps even given more sunlight by cutting some of the surrounding trees. These agrarian vestiges have become the ecological hubs in your forest. They are also great source of future large snags and large dead downed wood.

**Ecological Services**

Forests remove carbon dioxide from the atmosphere (called sequestration), create oxygen, and remove many pollutants from the air and water. Forests absorb heavy rains and release that water to streams and underground aquifers during droughts. Your forest contributes to these valuable services with carbon stored in the below-ground roots/soil and in the above ground vegetation, dead wood, and fallen leaves. These services are enhanced by having a diverse mix of native tree species of different sizes and varied arrangements. Sustainable, scientifically based forest management to remove forest products and promote young forests or regeneration of desired species has no long-term negative effect on your forest's ability to provide these vital ecological services. When trees are young and growing fast, they sequester carbon at high rates and once they are large (over 18" diameter, and often older) they store the most carbon. Whether you choose to actively manage your forest or not, your forest does a great service to our planet's health just by being a healthy forest.

Forests store carbon in different pools, and the amount of carbon in these pools changes over time. The pools are the live aboveground (trees, shrubs and other plants), live belowground (roots and fungi), deadwood (standing dead trees [snags] and downed logs, litter (leaves, needles and small branches) and soil organic matter. Sequestration is the process by which forests remove carbon dioxide from the atmosphere, primarily via tree photosynthesis. A younger forest (10-60 years old) stores relatively little carbon, but it is likely at or near its peak sequestration rate. An older more mature forest (60+ years old) stores more carbon, with a gradually slowing sequestration rate. A mix of sequestration and storage found in multi-aged forests create a resilient carbon profile. Please keep in mind that using and harvesting local wood is an important part of climate mitigation and an important tool to improve the resiliency of our forests to climate change.

**Mapping**

Attached to this report is a geo-referenced map that the landowner can use with mapping apps. This map shows the landowner where they are on the property. The landowner can also record tracks and waypoints on the property. To get map layers and to view maps, please visit CT ECO Home (cteco.uconn.edu). To get soil maps, and associated soil descriptions, please visit Web Soil Survey - Home (usda.gov) and follow the instructions on the first page of this website. For instruction, please visit Tutorials | Center for Land Use Education and Research (uconn.edu).

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## APPENDIX OF LATIN NAMES

### TREES

| | | | |
|---|---|---|---|
| Red Oak | Quercus rubra | Eastern Hemlock | Tsuga canadensis |
| Tulip Poplar | Lirodendron tulipifera | Quaking Aspen | Populus tremulodes |
| Red Maple | Acer rubrum | Black Gum | Nyssa sylvatica |
| Black Birch | Betula lenta | Yellow Birch | Betula alleghaniensis |
| White Oak | Quercus alba | Chestnut Oak | Quercus montana |
| Hickory | Carya Sp. | Black Cherry | Prunus serotina |
| Black Oak | Quercus velutina | White Pine | Pinus strobus |
| Scarlet Oak | Quercus coccinea | Sassafras | Sassafras albidum |
| American Beech | Fagus grandifolia | Paper Birch | Betula papyrifera |
| Sugar Maple | Acer saccharum | White Ash | Fraxinaus americana |
| Sycamore | Platanus occidentalis | Eastern Red Cedar | Juniperus virginiana |
| Black Locust | Robinia pseudoacacia | Basswood | Tilia americana |
| Cottonwood | Populus deltoides | Gray Birch | Betula populifolia |
| Slippery Elm | Ulmus rubra | Pin Cherry | Prunus pensylvanica |

### NATIVE UNDERSTORY

| | | | |
|---|---|---|---|
| Ironwood | Ostrya virginiana | Spicebush | Lindera benzoin |
| Musclewood | Carpinus caroliniana | Witch Hazel | Hamamelis virginiana |
| Serviceberry | Amelanchier Sp | Mountain Laurel | Kalmia latifolia |
| Lowbush blueberry | Vaccinium angustifolium | Huckleberry | Gaylussacia baccata |
| Highbush Blueberry | Vaccinium corymbosum | Sweet Pepperbush | Clethra alnifolia |
| Striped Maple | Acer pensylvanicum | Holly | Smilax |
| Hobblebush | Viburnum lantanoides | Greenbrier | Ilex |

### EXOTIC INVASIVES

| | | | |
|---|---|---|---|
| Barberry | Berberis Sp. | Burning Bush | Euonymus alatus |
| Multi-flora Rose | Rosa multiflora | Bittersweet | Celastrus orbiculatus |
| Privet | Ligustrum Sp | Honeysuckle | Lonicera Sp |
| Russian Olive | Elaeagnus angustifolia | Tree-of-Heaven | Ailanthus altissima |