Crowley Oaks
Project Design Document

Table of Contents

INSTRUCTIONS

Project Operators must complete and submit this Project Design Document (PDD) to request credits. City Forest Credits (CFC) then reviews this PDD as part of the validation process along with all other required project documents. An approved third-party verifier then conducts verification.

The Protocol Requirements below are a list of eligibility requirements for informational purposes which are also found in the CFC Tree Preservation Protocol Version 11.40, dated February 7, 2022.

Project Operators will enter data and supporting attachments starting on page 6 under Project Overview where you find "[Enter text here]" as thoroughly as possible and provide numbered attachments for maps and other documentation (ex: 1 – Regional Map).

PROTOCOL REQUIREMENTS

Project Operator (Section 1.1)
Identify a Project Operator for the project. This is the entity or governmental body who takes responsibility for the project for the 40-year duration.

Project Duration and Project Implementation Agreement (Section 1.2, 2.2)
Project Operator must commit to a 40-year duration and sign a Project Implementation Agreement. This is a 40-year agreement between the Project Operator and City Forest Credits (the "Registry") for an urban forest carbon project.

Location Eligibility (Section 1.3)
Projects must be located in or along the boundary of at least one of the following criteria:

A. "Urban Area" per Census Bureau maps; see https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-urban-areas.html
B. The boundary of any incorporated city or town created under the law of its state;
C. The boundary of any unincorporated city, town, or unincorporated urban area created or designated under the law of its state;
D. The boundary of any regional metropolitan planning agency or council established by legislative action or public charter. Examples include the Metropolitan Area Planning Council in Boston, the Chicago Municipal Planning Agency, the Capital Area Council of Governments (CAPCOG) in the Austin area, and the Southeastern Michigan Council of Governments (SEMCOG)
E. The boundary of land owned, designated, and used by a municipal or quasi-municipal entity for source water or watershed protection. Examples include Seattle City Light South Fork Tolt River Municipal Watershed (8,399 acres owned and managed by the City and closed to public access);
F. A transportation, power transmission, or utility right of way, provided the right of way begins, ends, or passes through some portion of A through D.

Ownership or Right to Receive Credits Eligibility (Section 1.5)
Project Operator must demonstrate ownership of property and eligibility to receive potential credits by meeting one of the following:

A. Own the land and potential credits upon which the Project trees are located; or

B. Own an easement or equivalent property interest for a public right of way within which Project trees are located and accept ownership of those Project trees by assuming responsibility for maintenance and liability for them; or

C. Have a written and signed agreement from the landowner, granting ownership to the Project Operator of any credits for carbon storage, other greenhouse gas benefits, and other co-benefits delivered by Project trees on that landowner's land. If the Project Area is on private property, the agreements in this sub-section must be recorded in the public records in the county where the property is located. The recordation requirement can be satisfied if the agreements specified in this sub-section are contained in a recorded easement, covenant, or deed restriction on the property.

Demonstrate Tree Preservation (Section 4.1)
The Project Operator must show that the trees in the Project Area are preserved from removal by a recorded easement, covenant, or deed restriction (referred to hereafter as "Recorded Encumbrance") with a term of at least 40 years. This action is referred to as the "Preservation Commitment." This Recorded Encumbrance must be recorded not later than 12 months after Registry approval of the Project's Application.

Demonstrate Threat of Loss (Section 4.2, 4.3, and 4.4):
The Project Operator must show that prior to the Preservation Commitment:

- Project trees were not preserved from removal through a Recorded Encumbrance or other prohibitions on their removal,
- The Project Area was:
    - In a land use designation that allowed for at least one non-forest use. Non-forest uses include industrial, commercial, transportation, residential, agricultural, or resource other than forest, as well as non-forest park, recreation, or open space uses.
    - Is not in an overlay zone that prohibits all development. Examples include critical areas or wetland designations.
- The Project Area met one of the following conditions:
    - Surrounded on at least 30% of its perimeter by non-forest, developed or improved uses, or
    - Sold, conveyed, or had assessed value within three years of preservation for greater than $8,000 average price per acre for the bare land, or
    - Would have a fair market value after conversion to a non-forested "highest and best use" greater than the fair market value after preservation in subsection 4.1, as stated in a "highest and best use" study from a state certified general real estate appraiser in good standing

Additionality (Section 6)
Additionality is ensured through the following:

- Prior to the start of the project, the trees in the project area are not protected via easement or recorded encumbrance or in a protected zoning status that preserves the trees.
- The zoning in the project area must currently allow for a non-forest use
- The trees in the project area face a threat or risk of removal or conversion out of forest

- The Project Operator records in the public land records an easement, covenant, or deed restriction specifically protecting the trees for the project duration of 40 years or 100 years (40 or 100 years depending on the protocol version)

Quantification for Credits (Section 11)

The full Protocol describes the following steps for carbon stock and soil carbon quantification in detail:

1. Stored carbon stock present in Project Area (Section 11.1)
   Estimate the biomass stock present and adjust for uncertainty to calculate the "Accounting Stock". This can be done using the US Forest Service General Technical Report NE-343 tables, on-site inventory of some live trees with i-Tree methods and tools, or an on-site forest inventory

2. Areas expected to remain in trees after potential development (Section 11.2)
   Calculate the fraction of the Accounting Stock that likely would be emitted as a result of development, to calculate "Avoided Biomass Emissions"

3. Claiming additional credit for growth (Section 11.3)
   The Project Operator may elect to also account for ongoing growth of trees within the Project Area after Project Commencement

4. Quantification of soil carbon (Section 11.4)
   Calculate "Avoided Soil Carbon Emissions" caused by conversion of soils to impervious surfaces in the Project Area

5. Deduction for displaced development (Section 11.5)
   Apply the deductions in Section 11.5 and Appendix B to Biomass and Soil Carbon calculations to adjust for development and emissions that would be displaced by the preservation of the Project Area (leakage deductions). This will reduce the creditable tonnes of Avoided Biomass Emissions and Avoided Soil Carbon Emissions to adjust for displaced development

6. Quantify Co-Benefits (Section 11.6)
   The Project Operator will calculate co-benefits separately from CO_2(e). The Registry will supply a spreadsheet template based on their climate zone, and will provide values for rainfall interception, reductions of air compounds, and energy savings.

Social Impacts (Section 12)

The Project Operator will describe how the Project impacts contribute towards achievement of the global UN Sustainable Development Goals (SDGs). The Registry will supply a template to evaluate how the Project aligns with the SDGs.

Attestation of No Net Harm and No Double Counting (Section 5)

The Project Operator will sign an attestation that no project shall cause net harm and no project shall seek credits on trees, properties, or projects that have already received credits.

Validation and Verification by Third-Party Verifiers (Section 13 and 14)

Project compliance and quantification must be verified by a third-party Validation and Verification Body approved by the Registry.

Issuance of Credits to Project Operator (Section 7)
Ex-post credits are issued after the biomass is protected via a recorded encumbrance protecting the trees. Issuance is phased or staged over one and five years at the equivalent of 50 aces of crediting per year. This staged issuance reflects the likely staging of development over time if the project area were to have been developed.

After validation and verification, the Registry issues credits to the Project Operator based on the Project Area size:

- 50 acres or less: all credits are issued after validation and verification
- Greater than 50 but less than 200 acres: credits are issued in the equivalent of 50 acres per year
- Greater than 200 acres: credits are issued in equal amounts over five years

Credits for Reversal Pool Account (Section 7.3):
The Registry will issue 90% of Project credits earned and requested and will hold 10% in the Registry's Reversal Pool Account.

Understand Reversals (Section 9)
If the Project Area loses credited carbon stock, the Project Operator must return or compensate for those credits if the tree loss is due to intentional acts or gross negligence of Project Operator. If tree loss is due to fire, pests, or other acts of god (i.e., not due to the Project Operator's intentional acts or gross negligence), the Registry covers the reversed credits from its Reversal Pool Account of credits held back from all projects.

Monitoring and Reporting (Section 8)
The Project Operator must submit a report every three years for the project duration. The reports must be accompanied by some form of telemetry or imaging that captures tree canopy, such as Google Earth, aerial imagery, or LiDAR. The reports must estimate any loss of stored carbon stock or soil disturbance in the Project Area.

PROJECT OVERVIEW

Project Name: Crowley Oaks
Project Number: *033*
Project Type: Preservation Project (under the Tree Preservation Protocol – version 11.40, dated February 7, 2022)
Project Start Date: November 7, 2022
Project Location: Alden Township, McHenry County, Illinois

Project Operator Name: The Land Conservancy of McHenry County
Project Operator Contact Information: Lisa Haderlein, lhaderlein@conservemc.org
4622 Dean Street, PO Box 352
Woodstock, IL 60098
815-337-9502 x103

Project Description:
Describe overall project goals as summarized in application (2 paragraphs)
The Land Conservancy (TLC) of McHenry County preserved 45-acre known as Crowley Oaks (the "Project) in Alden Township in McHenry County, IL. Crowley Oaks is part of a larger 83.5 acre Conservation Area that includes old-growth oak-hickory woodland. Many bur oak (*Quercus macrocarpa*) white oak (*Quercus alba*) and red oak (*Quercus rubra*) trees on this property pre-date European settlement of the region. In addition, there are younger white oak *(Quercus alba),* and shagbark hickory (*Carya ovata)* growing throughout, which is a good sign of regeneration. TLC has just started to restore the property to remove invasive trees and shrubs from around the oaks. The site is contiguous with nearly 200 additional acres of old-growth oak woods. The long-term goal for the area is to preserve and restore the entire oak woodland complex for the benefit of woodland birds like Ovenbird, Scarlet tanager and others. The property is zoned for agricultural use, and surrounding land use is a combination of farmland and large-lot residential development.

Crowley Oaks is located in a headwaters area of Piscasaw Creek, one of the few cold-water creeks remaining in Northeastern Illinois. Seasonal creeks meander across the property during the spring and fall but become a trickle in the summer during dry weather. The property adjoins nearly 200 acres of old-growth, privately-owned oak-hickory woodland. The Crowley Oaks property protection and restoration will provide a habitat anchor for a number of bird species that are considered species of concern due to woodland habitat loss and fragmentation, including the aforementioned Ovenbird and Scarlet tanager which have been identified on the property. In addition to the oak woodland, the Crowley site includes a 30-acre pine plantation that will be converted to oak savanna eventually, but in the meantime will provide a great opportunity for hiking in the summer and cross-country skiing in the winter.

LOCATION OF PROJECT AREA (Section 1.3 and 1.4)

Project Area Location
Describe where the Project Area is located and how it meets the location criteria.

The project is located in Alden Township, in McHenry County, Illinois. McHenry County is within the Chicago Metropolitan Agency for Planning's service area.

This project meets the following eligibility requirement:

D. The boundary of any regional metropolitan planning agency or council established by legislative action or public charter.

Project Area Parcels
List of parcel(s) in the Project Area.

Jurisdiction / Location	Parcel Number	Description / Notes
Alden Township, McHenry County	02-20-300-015	Project area included in part of parcel – 45 acres
		Total 45 acres

Project Area Maps
Provide maps of the Project Area with geospatial location vector data in 1) pdf form and 2) any file type that can be imported and read by Google Earth Pro (example KML, KMZ, or Shapefile format). Maps should include relevant urban or town boundaries, legend, and defined Project Area.

Geospatial location (boundaries) of Project Area
Filename: 1 Crowley Oaks Project Area.kmz

Regional-scale map of Project Area
Filename: 2 Crowley Oaks Regional Map

Detailed map of Project Area
Filename: 3 Crowley Oaks Project Area Map

OWNERSHIP OR ELIGIBILITY TO RECEIVE POTENTIAL CREDITS (Section 1.5)

Project Operator must demonstrate ownership of potential credits or eligibility to receive potential credits. If the Project Operator is not the same as the landowner of the Project Area, provide

agreement(s) between Project Operator and landowner authorizing Project Operator to execute this project.

Name of landowner of Project Area and explanation:
The Land Conservancy of McHenry County is the landowner for the Project Area. The property was acquired August 17, 2020.

Filename: 4 Crowley Recorded Deed.pdf

PRESERVATION COMMITMENT (Section 4.1)

Describe the Preservation Commitment terms and provide a complete copy of the recorded document. If Project Area does not have the same boundaries as Preservation Commitment, please state the reasons why.

Preservation Term (years applicable): The Project Area will be protected for 40 years by The Land Conservancy of McHenry County.

Preservation Commitment explanation: The Land Conservancy of McHenry County executed a Declaration of Development Restrictions on November 7, 2022 which protects the forest in the Project Area for 40-years. As included in the Declaration of Development Restrictions, the declarants preserve the trees on the property for a period of no less than 40 years. It prohibits cutting down, destroying, or removing trees located on the Property, except as necessary to control or prevent hazard, disease or fire or to improve forest health. Recreational, non-motor-use trails have negligible or de minimis impacts on biomass and carbon stock are permissible.

Filename: 5 Crowley Oaks Preservation Commitment

Date signed and date recorded: signed November 7, 2022
Recorded November 10, 2022

DEMONSTRATION OF THREAT OF LOSS (Section 4.2, 4.3, and 4.4)

Describe the Project Area land use designation that allows for at least one non-forest use. Describe any overlay zones such as critical areas and their protection buffers, legal encumbrances, and any other pre-existing tree/forest restrictions that may have hindered removal of the Project Trees (in the pre-Preservation Commitment condition). Provide supporting evidence.

Land use designation(s): A-1 Agriculture District zoning in McHenry County which allows for one home to be built per 40 acres. Additionally, property is adjacent to land annexed and zoned for residential development in the City of Harvard.

Filename:6 Crowley Oaks County Zoning Map, 7 Crowley Oaks Zoning Information

Overlay zones or other restrictions: None

Threat of loss (Section 4.4 A, B, or C):
Describe which of the three conditions the Project Area meets and provide supporting evidence such as maps, sale or assessed value documentation, or appraisal information.

The Project meets criteria 4.4 A, which is adjacent to non-forest, developed or improved uses on more than 30% of the perimeter. 37% of the Project Area is bordered by farmland and 10.6% is residential totaling 47.6% of the perimeter is adjacent to a developed or improved use.

Filename: 8 Crowley Oaks border calculation

ATTESTATION OF NO DOUBLE COUNTING OF CREDITS AND NO NET HARM (Section 5)

Complete and attach the following attestation: Attestation of No Double Counting of Credits and Attestation of No Net Harm. Provide any additional notes as relevant.

The Land Conservancy of McHenry County signed the Attestation of No Double Counting of Credits and No Net Harm.

Filename(s): 9 Crowley Oaks Attestation of No Double Counting and No Net Harm.pdf

ADDITIONALITY (Section 6)

Additionality is demonstrated by carbon projects in several ways, as described in the City Forest Credits Standard Section 4.9.1 and Tree Preservation Protocol.

Project Operator demonstrates that additionality was met through the following:

- Prior to the start of the project, the trees in the project area are not protected via easement or recorded encumbrance or in a protected zoning status that preserves the trees
    - See Demonstration of Threat of Loss section above
- The zoning in the project area must currently allow for a non-forest use
    - See Demonstration of Threat of Loss section above
- The trees in the project area face some threat risk of removal or conversion out of forest
    - See Demonstration of Threat of Loss section above
- The Project Operator records in the public land records an easement, covenant, or deed restriction specifically protecting the trees for the project duration of 40 years or 100 years (40 or 100 years depending on the protocol version)
    - See Preservation Commitment section above

Taken together, the above elements allow crediting only for unprotected trees, at risk of removal, which are then protected by a project action of preservation, providing additional avoided GHG emissions.

Additionality is embedded also in the quantification methodology. Projects cannot receive credits for trees that would have remained had development occurred, nor can they receive soil carbon credits for soil that would have been undisturbed had development occurred.

The Land Conservancy of McHenry County has signed an Attestation of Additionality.

Filename: 10 Crowley Oaks Attestation of Additionality

CARBON QUANTIFICATION DOCUMENTATION (Section 11)

Follow detailed instructions in the Protocol for conducting quantification and use the Carbon Quantification Spreadsheet to show calculations. Ensure that your requested credit issuance schedule (issuance dates) is accurate and complete in the spreadsheet. Project Operators should describe and appropriately reflect in their carbon quantification any and all planned future activities that may affect the percent canopy or carbon stocking in any way.

Summary numbers from Carbon Quantification Spreadsheet

Project Area (acres)	**45**
Does carbon quantification use stratification (yes or no)	**No**
Accounting Stock (tCO_2e)	**7,042**
On-site avoided biomass emissions (tCO_2e)	**6,338**
On-site avoided soil carbon emissions (tCO_2e)	**4,860**
Deduction for displaced biomass emissions (tCO_2e)	**1,160**
Deduction for displaced soil emissions (tCO_2e)	**1,473**
Credits from avoided biomass emissions (tCO_2e)	**5,178**
Credits from avoided soil emissions (tCO_2e)	**3,387**
Total credits from avoided biomass and soil emissions (tCO_2e)	**8,566**
Credits attributed to the project (tCO_2e), excluding future growth	**8,566**
Contribution to Registry Reversal Pool Account	**857**
Total credits to be issued to the Project Operator (tCO_2e) *(excluding future growth)*	**7,709**

GHG Assertion:
Project Operator asserts that the Project results in GHG emissions mitigation of 7,709 tons CO_2e issued to the project.

Approach to quantifying carbon
Describe general approach you used to quantify carbon (e.g. US Forest Service General Technical Report NE-343 Tables, inventory, other). Provide documentation.

Davey Resource Group (DRG) provided on-site plot-sample inventory work to determine the carbon stock. DRG conducted a sample forest assessment adhering to the standards set in CFC Tree Preservation Protocol Section 11.1.B. The sample established 33 sample plots sized at 1/10th-acre. Within every plot, each live tree was inventoried that was at least 5" in diameter at 4.5' above the ground, where the height above the ground is measured on the uphill side of the tree. Species, diameter, and overall tree condition were recorded for each tree. Davey Resource Group utilized i-Tree Eco to input the sample plot data to determine the carbon storage. The CFC Carbon Calculator was used for quantification for subsequent steps 11.2, 11.4, and 11.5.

Filename: 11 Crowley Oaks Carbon Quantification Calculator, 12 Crowley Oaks Plot Locations Map, 13 Crowley Oaks Raw Data, 14 Crowley Oaks i-Tree Eco

Accounting Stock Measurement Method (11.1)
Describe quantification, including which method used to assess canopy cover (e.g. i-Tree, inventory, other), forest type, and data sources.

DRG completed a sample inventory using randomized 1/10th- acre plots, following section 11.1.B in the CFC Tree Preservation Protocol. DRG used i-Tree Eco to determine the accounting stock and used a standard error of 7%.

Carbon quantification is based on the sample plots. The metric tons of Carbon is 2,067.95. The standard error is 147.31.

Biomass tC/ac = (metric tons of carbon – standard error)/project area acres = (2067.95 – 147.31)/45 = 42.68 (cell B11 on attachment 11)

Filename: 15 Crowley Oaks Carbon Biomass

Stratification
If stratification is used, maps of strata and stratum definitions. If not used, list not applicable.

The Project Area was treated as one stand, thus DRG did not use stratification

Stand Maps
Describe the methods used to determine forest stands (e.g. GIS) and documentation.

The Project Area was treated as one stand and DRG used on-site quantification method 11.1.B to quantify the carbon stock.

Forest Age
Provide historical imagery or other materials to support forest age documentation. Describe the method(s) used:

An on-site inventory was completed, so no documentation of forest age is necessary for carbon quantification for this project.

Forest Composition
Describe forest composition and explanation of method(s) used.

The three most common species are Black cherry (31.0 percent), Pin oak (18.7 percent), and American elm (12.1 percent). DRG completed a sample inventory using randomized 1/10th- acre plots, following section 11.1.B in the CFC Tree Preservation Protocol.

Filename: *16 Crowley Oaks Forest Composition*

Canopy Cover
Provide i-Tree Canopy report that shows estimated percentage of tree cover. Explanation of method(s) used:

An on-site inventory was completed, so no documentation of canopy cover is necessary for carbon quantification for this project. However, an i-Tree Canopy report was completed to quantify the co-benefits and the total canopy cover is 100%.

Filename: *17 Crowley Oaks i-Tree Canopy Report*

Area Expected to Remain in Trees after Potential Development (11.2)
Describe how you determined the area expected to remain in trees after potential development (fraction at risk) and explanation of method(s) used:

Crowley Oaks is zoned as Agriculture. Section 11.2 in CFC's Tree Preservation Protocol allows for 90% of the Accounting Stock on the Project Area is the "Avoided Biomass Emissions" on agricultural lands.

Filename: *6 Crowley Oaks Zoning Map*

Quantification of Soil Carbon - Existing Impervious Area and Impervious Limits (11.4)
The Project may claim avoidance of emissions from soil carbon caused by conversion of soils to impervious surfaces. Describe applicable zoning and development rules, existing impervious area and maximum fraction impervious cover.

Crowley Oaks is zoned as Agriculture and the applicable zoning and development rules do not limit impervious area. Section 11.4 in CFC's Tree Preservation Protocol allows for 90% of the Project Area in agricultural zoning (where annual crops and plowing are common practices in that region) to be eligible for conversion to impervious surface.

Filename: *6 Crowley Oaks Zoning Map*

Future Planned Project Activities
Describe any future project activities that may affect the percent canopy or carbon stocking in any way.

The property will be used solely for habitat and open space uses like hiking, hunting, snowshoeing, etc.

CO-BENEFITS QUANTIFICATION DOCUMENTATION (Section 11.6)

Summarize co-benefit quantification and provide supporting documentation. CFC will provide a Co-Benefits Quantification spreadsheet to Project Operators for calculating rainfall interception, reduction of certain air compounds, and energy savings.

Ecosystem Services	***Resource Units***	***Value***
Rainfall Interception (m3/yr)	12,172.9	$87,156.20
Air Quality (t/yr)	0.5095	$767.10
Cooling – Electricity (kWh/yr)	95,825	$7,273.08
Heating – Natural Gas (kBtu/yr)	1,791,752	$17,442.30
Grand Total ($/yr)		**$112,638.68**

Filename: *18 Crowley Oaks CoBenefit Calculator*

SOCIAL IMPACTS (Section 12)

Project Operators shall use the Carbon Project Social Impact template to evaluate the UN Sustainable Development Goals (SDGs) to determine how a Project provides social impacts that contribute towards achievement of the global goals. CFC will provide the template. Summarize the three to five main SDGs from this Project.

The project will protect a 45-acre oak woodland that will continue to remove air pollution in the general area of the project. The property is surrounded by agricultural and large-lot residential development, and within 15 minutes of the City of Harvard, so is in an ideal location to serve the community. The population of Harvard is 50/50 white/Hispanic. Finally, the project includes work to restore and manage the oak woodland over the coming years to enhance habitat for a diversity of species including both pileated and red-headed woodpeckers, wild turkeys and a variety of migratory bird species that need open oak woodland habitat. Weekly volunteer events will continue for the foreseeable future, and efforts will be undertaken to connect Harvard residents with the site.

This project will protect trees to reduce or remove air pollutants and reduce stormwater runoff through effective restoration of the oak woodland habitat. Restoration will also improve soil health and enhance wildlife habitat for a diversity of species, especially birds such as pileated and red-headed woodpeckers, migratory bird species and wild turkeys.

Filename: *19 Crowley Oaks Social Impacts*

MONITORING AND REPORTING (Section 8)

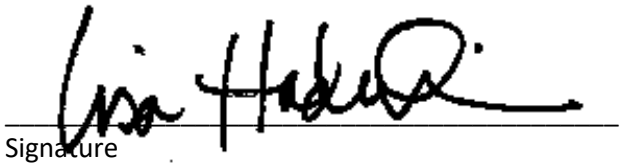
Throughout the Project Duration, the Project Operator must report on tree conditions across the Project Area. Monitoring reports are due every three years determined by the date of the verification report. For example, if the verification report is dated January 1, 2021, the first report will be due by January 1, 2024 and every three years thereafter for the duration of the project.

Describe your monitoring plans. If Project Operator plans to claim credits for future growth, describe methods that will be used to quantify future growth.

The Land Conservancy of McHenry County, as a Nationally Accredited Land Trust, has a requirement to monitor every property it owns or holds an easement on every year. The Project Area described herein will be included in that monitoring program. The Land Conservancy of McHenry County will submit triennial monitoring reports for the project duration as specified in the protocol.

PROJECT OPERATOR SIGNATURE

Signed on September 2 in 2022, by Lisa Haderlein, for The Land Conservancy of McHenry County.



Signature

__Lisa Haderlein_____
Printed Name

_815-337-9502 x103_____
Phone

_lhaderlein@conservemc.org_____
Email

ATTACHMENTS

List the number and name of attachments

1 – Crowley Oaks Project Area.kmz
2 – Crowley Oaks Regional Map
3 – Crowley Oaks Project Area Map
4 – Crowley Oaks Recorded Deed
5 – Crowley Oaks Preservation Commitment
6 – Crowley Oaks Zoning Map
7 – Crowley Oaks Zoning Information
8 – Crowley Oaks boarder calculations
9 – Crowley Oaks No Double Counting and No Net Harm
10 – Crowley Oaks Attestation of Additionality
11 – Crowley Oaks Carbon Quantification Calculator
12 – Crowley Oaks Plot Location Map
13 – Crowley Oaks Raw Data
14 – Crowley Oaks i-Tree Eco
15 – Crowley Oaks Carbon Biomass
16 – Crowley Oaks Forest Composition
17 – Crowley Oaks i-Tree Canopy Report
18 – Crowley Oaks CoBenefit Calculator
19 – Crowley Oaks Social Impacts

Attachments

Deed

Project Area Map

Regional Area Map

Preservation Commitment

Zoning Maps

Zoning Description(s)

Threat of Loss Demonstration

Attestation of No Double Counting and No Net Harm

Attestation of Additionality

Carbon Quantification Tool

Tree Inventory

Tree Characteristics Chart(s)

iTree Canopy Report

Cobenefit Calculator

Social Impacts

Deed

2021SA 02-20-300-002/-011/-014

McHENRY COUNTY
SUPERVISOR OF ASSESSMENTS OFFICE
MAPPING SECTION
ADMINISTRATION BUILDING – SUITE 106
2200 N SEMINARY AVE
WOODSTOCK, IL 60098
(815)-334-4290

Robert H. Ross, ASA
Chief County Assessment Officer

Carol Saunders, CIAO-I
Chief Deputy

The Parcel Identification Number (PIN) is used to identify your property for real estate tax purposes. As such, it identifies a unique legal description. If, for any reason, that legal description changes, (i.e.: sale of, or subdivision of, part of the property) the PIN is retired and new numbers are created to identify the new property boundaries.

Attached are Parcel Identification Numbers which have changed.

The parcel number(s) being retired (parent parcels) are followed by the new parcel numbers created (child parcels). The new numbers will become effective for tax **assessment year 2021, payable in 2022, contingent upon the 2020 tax bill, payble in 2021.**

Retired Parent Parcel(s):

02-20-300-002			
02-20-300-011			
02-20-300-014			

Created Child Parcels(s)

02-20-300-015			

Reason for Change: OWNERS REQUEST Type of Change: COMBINATION

Document Number(s): N/A Date(s) of Document(s): 3/10/2021

Map Page(s): 02-20-3 Taxes:

NOTES:

DEVNET File Update: Input Operator:

Map Tech: DLF Date of PIN(s) Changes: 4/8/2021

Job No. 01 Year Effective: 2021SA

McHenry County Supervisor of Assessments
Mapping Section

DOC: OWNERS REQUEST
DATE: 3/10/2021

TAX
IN_1_
OUT_3_

Retired Parcel Numbers:	Tax Code	Prop Code	Acreage		PREV		
02-20-300-002	02002	0021	29.92				
02-20-300-011	02002	0021	57.16				
02-20-300-014	02002	0021	0.49				
Parcels To Be Created:							
Parcel Number:	Tax Code	Prop Code	Acreage		PREV		
02-20-300-015	02002	0000	87.57				
SITE ADDRESS	CROWLEY RD						
	HARVARD, IL 60033						
				OWNERSHIP:			
DEED TO:	LAND CONSERVANCY OF MCH CO			DOC # :	2020R0031890 & 2020R0031889		
MAILING ADDRESS:	PO BOX 352			DOC TYPE:	HEIRS DEED		
	WOODSTOCK IL 60098			DOC DATE:	8/17/2020		
				MEMO:			
LEGAL DESCRIPTION:	PT W1/2 SW1/4 & PT E1/2 SW1/4						
Parcel Number:	Tax Code	Prop Code	Acreage		PREV		
SITE ADDRESS							
				OWNERSHIP:			
DEED TO:				DOC # :			
MAILING ADDRESS:				DOC TYPE:			
				DOC DATE:			
				MEMO:			
LEGAL DESCRIPTION:							

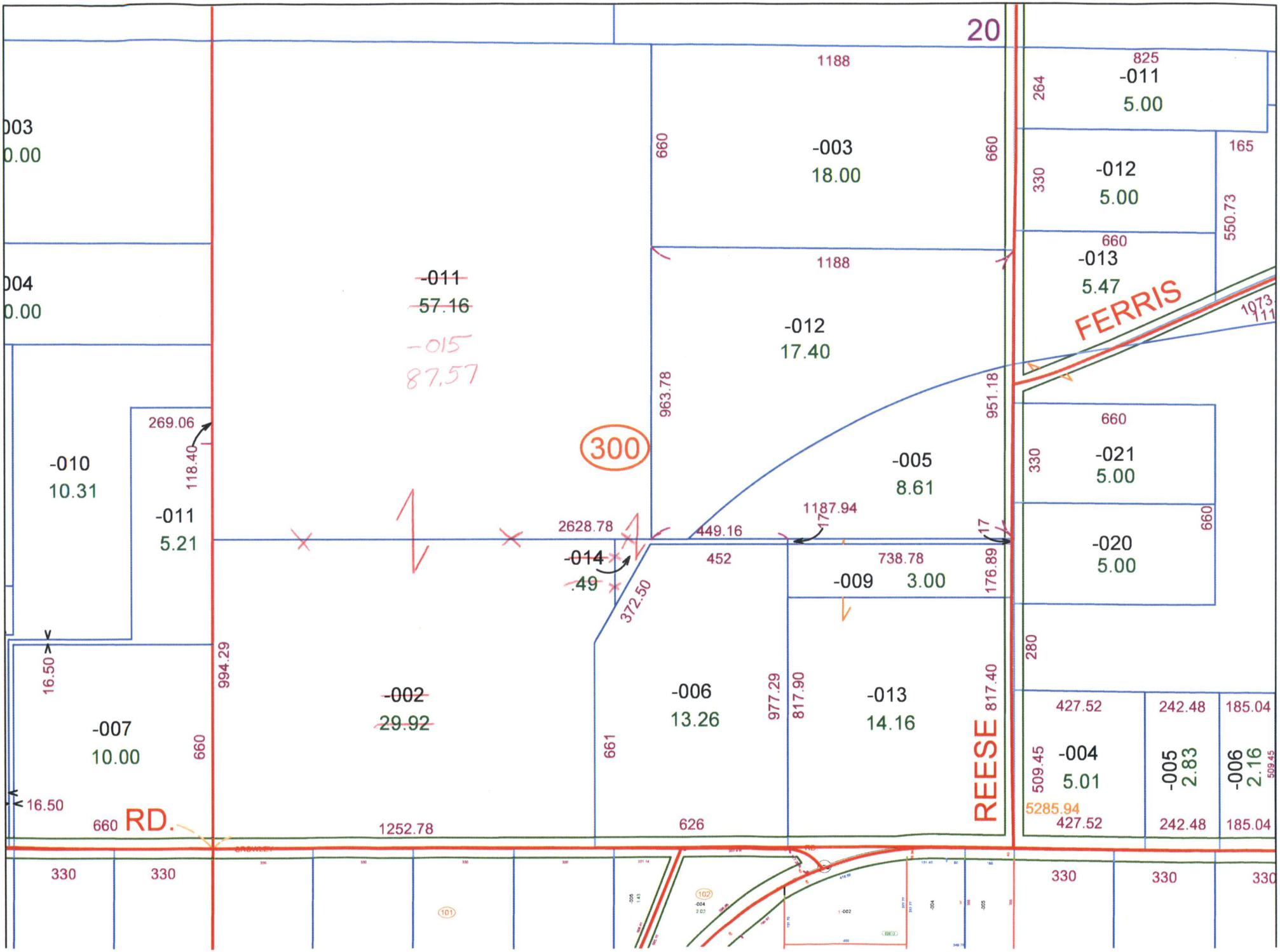
MAP TECH: DLF

YEAR 2021SA

JOB NO.: 01

SCALE: 1:400

02-20-3 BEFORE



2020P0004009

19St 039691CL

TRUSTEE'S WARRANTY DEED

Illinois Statutory

JOSEPH J. TIRIO
RECORDER-MCHENRY COUNTY, IL
2020R0031889
08/17/2020 09:03:53 AM PAGES: 4
EXEMPTION:

RHSPS HOUSING FEE	9.00
GIS FEE	24.00
RECORDING FEE	14.00
STAMP FEE-STATE	409.50
STAMP FEE-COUNTY	204.75
AUTOMATION FEE	8.00

Mail To:
The Land Conservancy of
McHenry County
P. O. Box 352
Woodstock, IL 60098

Name & Address of Taxpayer:
The Land Conservancy of McHenry County
P.O. Box 352
Woodstock, IL 60098

The GRANTORS, GEORGE E. BECKWITH and MARCIA L. BECKWITH, Rockton, Winnebago County, Illinois, as Co-Trustees of the George E. and Marcia L. Beckwith Family Trust dated May 4, 2016, for and in consideration of the sum of TEN and NO/100 DOLLARS, and other good and valuable considerations in hand paid, CONVEY and WARRANT to The Land Conservancy of McHenry County, P. O. Box 352, Woodstock, McHenry County, Illinois, an undivided 50% interest in the following described real estate situated in the County of McHenry, State of Illinois, to wit:

SEE ATTACHED LEGAL

SUBJECT to the general real estate taxes not yet due and payable, covenants, conditions and restrictions of record, and building lines and easements, if any, provided they do not interfere with the current use and enjoyment of the real estate,

This property is vacant land to which the Homestead Exemption laws do not apply.

This deed is executed pursuant to and in the exercise of the power and authority granted to and vested in said trustees by the terms of said deed or deed in trust delivered in pursuance of the trust agreement above mentioned.

Permanent Index Number(s) Parts of 02-300-011, 02-20-300-002 and 02-20-300-010

Property Address: Vacant land, 83.536 acres the southern boundary of which faces Crowley Rd, unincorporated McHenry County, Illinois.—no address.
Alden Township

Dated this 5 day of June 2020

George E. Beckwith (Seal)
George E. Beckwith as
co-trustee and individually

Marcia L. Beckwith as
co-trustee and individually

STATE OF ILLINOIS)
) SS.
COUNTY OF McHENRY)

I, the undersigned, a Notary Public in and for said County in the State aforesaid, DO HEREBY CERTIFY that **GEORGE E. BECKWITH and MARCIA L. BECKWITH**, personally known to me to be the same persons whose names are subscribed to the foregoing instrument; that they appeared before me this day in person, and acknowledged that they signed, sealed and delivered the said instrument as their free and voluntary act, for the uses and purposes therein set forth, there being no right of homestead to be waived.

Given under my hand and notarial seal this 5 day of June, 2020

Mary L. Bottcher
Notary Public

OFFICIAL SEAL
MARY L BOTTCHER
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES MAY. 31, 2023

NAME and ADDRESS OF PREPARER:

William Elman
ELMAN and EHARDT, LTD.
100 S. Ayer Street, Unit E,
Harvard, IL 60033
PHONE: 815-943-4051

LEGAL DESCRIPTION

Vacant land - - 83.536 acres, the southern boundary of which faces Crowley Rod, unincorporated McHenry County, Illinois

Part of the Southwest Quarter of Section 20, Township 46 North, Range 6, East of the Third Principal Meridian, being described as follows: Beginning at the Southwest corner of said Southwest Quarter; thence North 00 degrees 08 minutes 27 seconds West along the West line of said Southwest Quarter, 2,633.42 feet to the Northwest corner thereof; thence South 89 degrees 27 minutes 39 seconds East along the North line of said Southwest Quarter, 1,446.67 feet to a line 1188.00 feet West of and parallel with the East line of the said Southwest Quarter (as measured along the said North line); thence South 00 degrees 01 minutes 22 seconds East along said parallel line 1,623.78 feet to a line 994.29 feet North of and parallel with the South line of said Southwest Quarter; thence North 89 degrees 55 minutes 53 seconds East along said parallel line 449.16 feet to the Northwest corner of the lands described in Document No. 2000R0043607; thence South 00 degrees 38 minutes 36 seconds West along the West line of said lands, 17.00 feet to the Northeast corner of the lands described in Document No. 2018R0023182; thence; South 89 degrees 55 minutes 53 seconds West along the North line thereof, 451.80 feet; thence South 31 degrees 47 minutes 39 seconds West along the Northwesterly line thereof, 372.50 feet; thence South 00 degrees 57 minutes 40 seconds East along the West line thereof, 661.00 feet to the South line of said Southwest Quarter; thence South 89 degrees 55 minutes 53 seconds West along said South line, 1,252.78 feet to the Place of Beginning, in McHenry County, Illinois.

Walk-In:
McHenry County
Administration Building
667 Ware Road, Room 109
Woodstock, IL 60098

Mail:
McHenry County
Government Center
2200 N. Seminary Avenue
Woodstock, IL 60098

JOSEPH J. TIRIO
McHenry County Recorder

www.mchenryrecorder.org

Main Phone:
815.334.4110

Copy Orders:
815.334.4128

Fax:
815.334.0276

PLAT ACT AFFIDAVIT OF METES AND BOUNDS

STATE OF ILLINOIS)ss
COUNTY OF MCHENRY)

George E. Beckwith, being duly sworn on oath, states that affiant resides at 4349 Jennel Drive, Rockton, IL 61072. And further states that: (please check the appropriate box)

A. [X] That the attached deed is not in violation of 765 ILCS 205/1 (a), in that the sale or exchange is of an entire tract of land not being a part of a larger tract of land; or

B. [ ] That the attached deed is not in violation of 765 ILCS 205/1 (b) for one of the following reasons: (please circle the appropriate number)

1. The division or subdivision of land into parcels or tracts of 5.0 acres or more in size which does not involve any new streets or easements of access;
2. The division of lots or blocks of less than one (1) acre in any recorded subdivision which does not involve any new streets or easements of access;
3. The sale or exchange of parcels of land between owners of adjoining and contiguous land;
4. The conveyance of parcels of land or interests therein for use as a right of way for railroads or other public utility facilities and other pipe lines which does not involve any new streets or easements of access;
5. The conveyance of land owned by a railroad or other public utility which does not involve any new streets or easements of access;
6. The conveyance of land for highway or other public purposes or grants or conveyances relating to the dedication of land for public use or instruments relating to the vacation of land impressed with a public use;
7. Conveyances made to correct descriptions in prior conveyances;
8. The sale or exchange of parcels or tracts of land following the division into no more than two (2) parts of a particular parcel or tract of land existing on July 17, 1959 and not involving any new streets or easements of access;
9. The sale of a single lot of less than 5.0 acres from a larger tract when a survey is made by an Illinois Registered Land Surveyor; provided, that this exemption shall not apply to the sale of any subsequent lots from the same larger tract of land, as determined by the dimensions and configuration of the larger tract on October 1, 1973, and provided also that this exemption does not invalidate any local requirements applicable to the subdivision of land;
10. The preparation of a plat for wind energy devices under Section 10-620 of the Property Tax Code.

AFFIANT further states that he makes this affidavit for the purpose of inducing the County Recorder of McHenry County, Illinois to accept the attached deed for recording.

SUBSCRIBED AND SWORN TO BEFORE ME
This 5 day of June, 2020.

Mary L. Bottcher
Signature of Notary Public

George E. Beckwith
Signature of Affiant

OFFICIAL SEAL
MARY L BOTTCHER
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES MAY. 31, 2023

19st 0391691 2/3

WARRANTY DEED

Illinois Statutory

JOSEPH J. TIRIO
RECORDER-MCHENRY COUNTY, IL
2020R0031890
08/17/2020 09:03:54 AM PAGES: 9
EXEMPTION: E

RHSPS HOUSING FEE	9.00
GIS FEE	24.00
RECORDING FEE	14.00
AUTOMATION FEE	8.00

Mail To:
The Land Conservancy of
McHenry County
P. O. Box 352
Woodstock, IL 60098

Name & Address of Taxpayer:
The Land Conservancy of McHenry Cnty
P.O. Box 352
Woodstock, IL 60098

The GRANTORS, LINDA SUSAN HUFFMAN, single, of Dekalb, Dekalb County, Illinois as an heir of Leah Dawn Sommer and personal representative of the Estate of Leah Dawn Sommer, (Letters of Office attached), and the following additional heirs of Leah Dawn Sommer; Lorene Marie Mockridge, single, Surprise, Maricopa County, Arizona; Martin Edward Way, married, Antioch, Contra Costa County, California, and Lisa Anne Conro, single, Genoa, Dekalb County, Illinois for and in consideration of the sum of TEN and NO/100 DOLLARS, and other good and valuable consideration in hand paid, CONVEY and WARRANT to The Land Convervancy of McHenry County, P. O. Box 352, Woodstock, McHenry County, Illinois, an undivided 50% interest in the following described real estate situated in the County of McHenry, State of Illinois, to wit:

SEE ATTACHED LEGAL

SUBJECT to the general real estate taxes not yet due and payable, covenants, conditions and restrictions of record, and building lines and easements, if any, provided they do not interfere with the current use and enjoyment of the real estate,

This property is vacant land in which neither any grantor nor a spouse of grantor has a homestead interest.

Permanent Index Number(s) Parts of 02-20-300-011, 02-20-300-002 and 02-20-300-010

Property Address: Vacant land 83.536, the southern boundary of which faces Crowley Rd, unincorporated McHenry County, Illinois ---no address
Alden Twnship

Dated this 4 day of MARCH 2020

NAME and ADDRESS OF PREPARER:

William Elman
ELMAN and EHARDT, LTD.
100 S. Ayer Street, Unit E,
Harvard, IL 60033
PHONE: 815-943-4051

McHENRY COUNTY – ILLINOIS TRANSFER STAMP
EXEMPT UNDER PROVISIONS OF PARAGRAPH
Parce SECTION 4, REAL ESTATE
TRANSFER ACT
DATE
William Elman, atty for
Buyer, Seller or Representative Seller

LINDA SUSAN HUFFMAN

STATE OF ILLINOIS)
) SS.
COUNTY OF DEKALB)

I, the undersigned, a Notary Public in and for said County in the State aforesaid, DO HEREBY CERTIFY that LINDA SUSAN HUFFMAN, personally known to me to be the same person whose name is subscribed to the foregoing instrument; that she appeared before me this day in person, and acknowledged that she signed, sealed and delivered the said instrument as her free and voluntary act, for the uses and purposes therein set forth, there being no right of right of homestead requiring a waiver.

Given under my hand and notarial seal this 4 day of March, 2020

Notary Public

"OFFICIAL SEAL"
KERRY M. WILLIAMS
Notary Public, State of Illinois
My Commission Expires 11-25-2023

CLERK OF THE
SUPERIOR COURT
FILED
S. TAVARES, DEP

19 OCT 11 AM 12:55

Carrie J. Kulesh, #007700
CARRIE J. KULESH, P.C.
19082 R.H. Johnson Blvd., Suite B
Sun City West, AZ 85375
(623) 815-7488
Attorney for Personal Representative

CERTIFIED COPY

SUPERIOR COURT OF ARIZONA, MARICOPA COUNTY

In the Matter of the Estate of LEAH DAWN SOMMER, Deceased.	NO. PB2019-070271 **LETTERS OF PERSONAL REPRESENTATIVE**

LINDA SUSAN HUFFMAN is hereby appointed as Personal Representative of the Estate of LEAH DAWN SOMMER, to serve without restriction.

WITNESS: OCT 10 2019, 2019.

Clerk of the Superior Court

JEFF FINE, CLERK

By _____
Deputy Clerk

S. Tavares
Deputy Clerk

SEAL OF THE SUPERIOR COURT OF THE STATE OF ARIZONA IN AND FOR THE COUNTY OF MARICOPA
CLERK OF THE SUPERIOR COURT

LORENE MARIE MOCKRIDGE

STATE OF ARIZONA)
) SS.
COUNTY OF MARICOPA)

I, the undersigned, a Notary Public in and for said County in the State aforesaid, DO HEREBY CERTIFY that LORENE MARIE MOCKRIDGE, personally known to me to be the same person whose name is subscribed to the foregoing instrument; that she appeared before me this day in person, and acknowledged that she signed, sealed and delivered the said instrument as her free and voluntary act, for the uses and purposes therein set forth, there being no right of homestead requiring a waiver.

Given under my hand and notarial seal this 25th day of February, 2020

Notary Public

My commission exspires on June 15, 2020

RICKY BALDWIN
Notary Public - Arizona
Maricopa County
My Comm. Expires Jun 15, 2020

MARTIN EDWARD WAY

STATE OF CALIFORNIA)
) SS.
COUNTY OF CONTRA COSTA)

I, the undersigned, a Notary Public in and for said County in the State aforesaid, DO HEREBY CERTIFY that MARTIN EDWARD WAY, personally known to me to be the same person whose name is subscribed to the foregoing instrument; that he appeared before me this day in person, and acknowledged that he signed, sealed and delivered the said instrument as his free and voluntary act, for the uses and purposes therein set forth, there being no right of homestead requiring a waiver.

Given under my hand and notarial seal this ____ day of_____, 2020

_____
Notary Public

My commission expires on_____

* Please See attached.

CALIFORNIA ACKNOWLEDGMENT CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Contra Costa }

On 3/2/2020 (Date) before me, Preeti Saini Notary Public (Here Insert Name and Title of the Officer),

personally appeared Martin Edward Way (Name(s) of Signer(s))

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

PREETI SAINI
COMM. #2208727
Notary Public - California
Contra Costa County
My Comm. Expires Aug. 4, 2021

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Preeti Saini
Signature of Notary Public

Place Notary Seal and/or Stamp Above

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Warranty Deed

Document Date: 3/2/2020 Number of Pages:

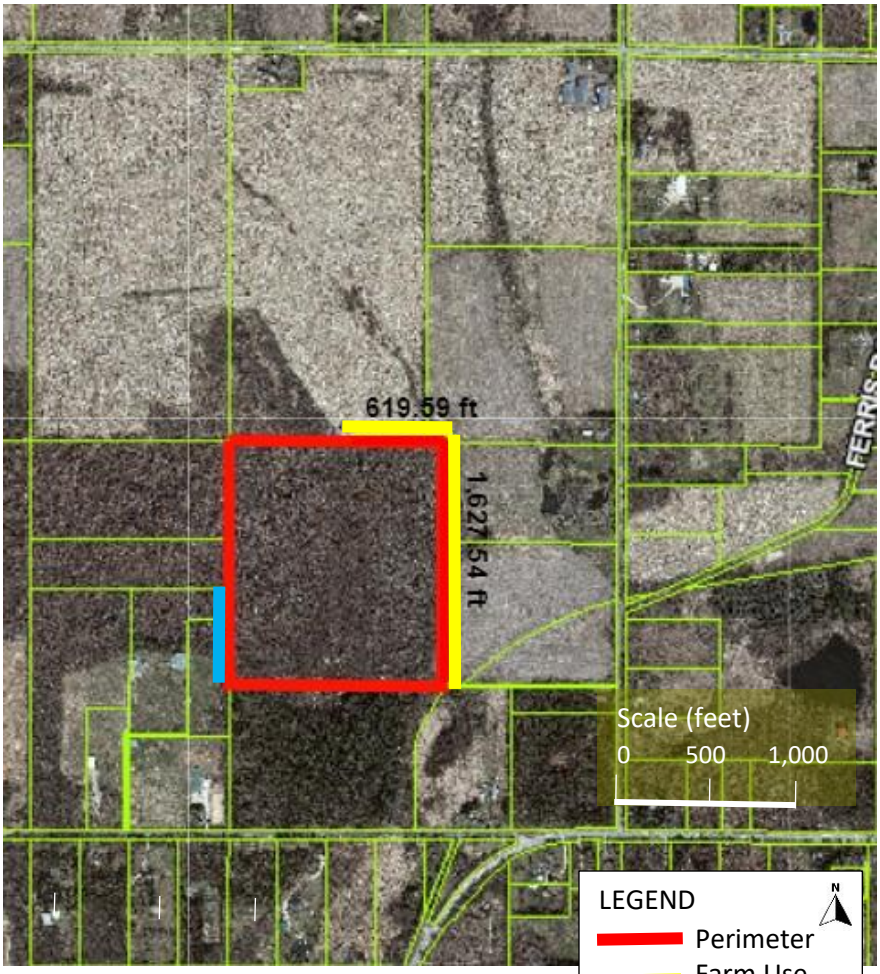
Signer(s) Other Than Named Above:

Capacity(ies) Claimed by Signer(s)

Signer's Name:	Signer's Name:
☐ Corporate Officer – Title(s):	☐ Corporate Officer – Title(s):
☐ Partner – ☐ Limited ☐ General	☐ Partner – ☐ Limited ☐ General
☐ Individual ☐ Attorney In Fact	☐ Individual ☐ Attorney In Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other:	☐ Other:
Signer is Representing:	Signer is Representing:

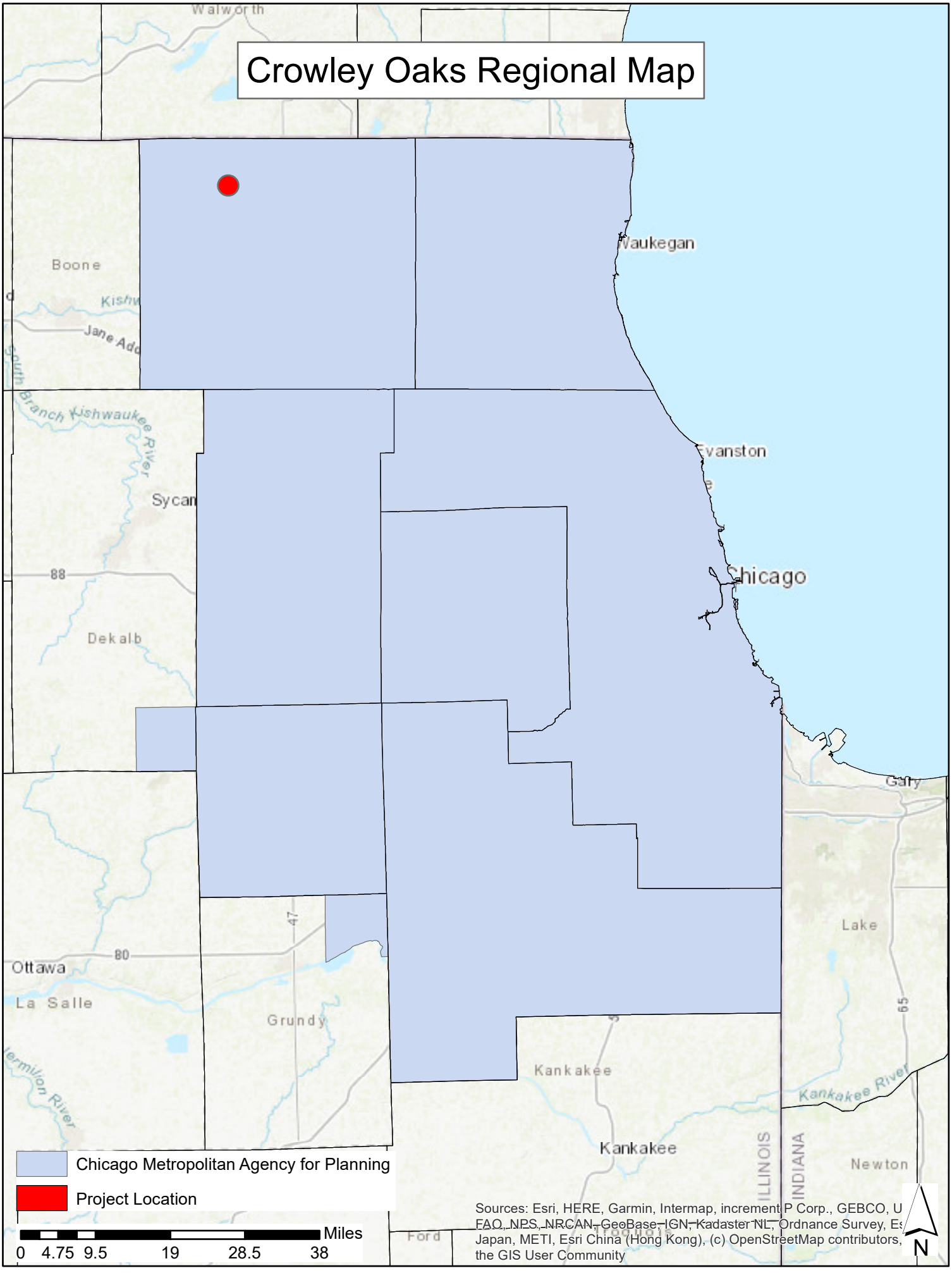
Project Area Map

Crowley Oaks Project Area Map



Perimeter calculation	Feet	Percent of total
Total Project Perimeter	6,014.5’	100%
Farm Use perimeter	2,229.8’	37%
Residential Use perimeter	635.5’	10.6%

Regional Area Map


Crowley Oaks Regional Map
Walworth
Boone
Waukegan
Evanston
Chicago
Sycamore
Dekalb
88
Ottawa
La Salle
Grundy
80
47
Lake
65
Kankakee
Kankakee River
Kankakee
Newton
Gary
ILLINOIS
INDIANA
Ford
Chicago Metropolitan Agency for Planning
Project Location
Miles
0 4.75 9.5 19 28.5 38
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, U
FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Es
Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors,
the GIS User Community
N

Preservation Commitment

8039790 0
Tx:40292447

JOSEPH J. TIRIO
CLERK AND RECORDER
MCHENRY COUNTY, IL
2022R0038127
11/10/2022 09:22:56 AM PAGES: 6
RECORDING FEE 31.00
GIS FEE 24.00
AUTOMATION FEE 8.00

MAIL TO:

Lisa Haderlein
~~The Land Conservancy~~
of McHenry Co
PO Box 352
Woodstock IL 60098

COVER SHEET

Attached by

Joseph J. Tirio

McHenry County Recorder

for the purpose of affixing Recording information

prepared by
Lisa Haderlein
The Land Conservancy
of McHenry Co
PO Box 352
Woodstock IL 60098

THIS DECLARATION OF DEVELOPMENT RESTRICTIONS ("DECLARATION") is made this 7th day of November, 2022, by The Land Conservancy of McHenry County, (an Illinois not-for-profit corporation) having an address at P.O. Box 352, Woodstock, Illinois 60098 ("Declarant") for the purpose of clarifying the development restrictions on a portion of the property at 19000 Crowley Road, Harvard in McHenry County, Illinois.

RECITALS

A. Declarant is the owner of certain property in McHenry County, State of Illinois, known as Crowley Oaks, and more particularly described in EXHIBIT A attached hereto and incorporated by reference. Subject shall be referred to as the "Property" hereafter.

B. Declarant purchased the property from George Beckwith and the Estate of Leah Sommer in August 2020.

C. Declarant is a publicly supported, tax-exempt, non-profit organization, qualified under Section 501(c)(3) and 170 (h) of the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder (the "Code") whose primary purpose is the preservation, protection, or enhancement of land in its natural, scenic, forested, and/or open space condition.

D. Declarant recognizes the value of the Property's mature woodland as a climate asset. The trees on the Property store CO2, reduce stormwater runoff, improve air quality, and improve human health by providing cleaner air and a place for recreation, exercise and the public health benefits of exposure to nature. Clearing of the trees for other uses, such a parking lots, playfields, or other uses would seriously impair the climate value of the property.

E. Declarant is an active participant within the City Forest Credits efforts to develop a forest carbon program with The Morton Arboretum – Chicago Region Trees Initiative, whereby declarant will preserve forested stands and earn carbon credits for those preserved trees. Declarant has established a project with the non-profit carbon registry, City Forest Credits, which has developed carbon protocols and issues credits for qualifying tree-preservation and tree-planting projects in urban areas.

F. Declarant intends for this Declaration to preserve the trees on the Property for a period of 40 years from the date of this Declaration. It understands that this Declaration will bar the clearing or removing of trees for parking lots, picnic shelters, playfields, visitor centers, or any reason other than forest health, hazard, disease, fire, and small, non-motorized recreational trails.

DECLARATION

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Declarant, as owner of the Property, hereby declares, grants, imposes, conveys, establishes and accepts the following development restrictions and covenants which shall run with the land and be binding upon all owners of the Property:

1. Removal of Trees. Declarant shall not cut down, destroy, or remove trees located on the Property, except as necessary to control or prevent hazard, disease or fire or to improve forest health. Recreational, non-motor-use trails that include equestrian uses, and have negligible or de

minimis impacts on biomass and carbon stock and are permissible, and keeping such areas free of trees is permissible as well.

GENERAL PROVISIONS

2. Run with the land. The covenants and restrictions declared, granted, conveyed and established under this Declaration shall run with the land and inure to the benefit of, and be binding upon, Declarant and its heirs, beneficiaries, successors and assigns, and all future owners of the Property for the forty year interval described above.

3. Term and modification. The covenants and restrictions declared, granted, conveyed and established under this Declaration shall remain in effect as long as it is needed to satisfy the requirements of any applicable carbon protocol under which carbon credits may be issued for the carbon preserved in the trees on the Property, but in no event more than 40 years from the date of this Agreement.

4. Governing law and venue. The terms and provisions of this Declaration shall be governed, construed, and enforced in accordance with the laws of the State of Illinois. Venue for any lawsuit arising out of this Declaration shall be exclusively in McHenry County, Illinois.

5. Severability. In case any one or more of the provisions contained in this Declaration shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Declaration, but this Declaration shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

Dated this 7th Day of November, 2022

The Land Conservancy of McHenry County, McHenry County, Illinois

By: _____

Name: David J Hall
Title: President, The Land Conservancy of McHenry County Board of Directors

Attest: _____

Name: Stephen Wenzel
Title: Secretary, The Land Conservancy of McHenry County Board of Directors

ACKNOWLEDGMENT

STATE OF ILLINOIS)

)

COUNTY OF MCHENRY)

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that DAVID J HALL, personally known to me to be the President of THE LAND CONSERVANCY OF MCHENRY COUNTY, a not for profit a corporation of the State of Illinois, and personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that as such President he signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal this 4th day of November 2022

OFFICIAL SEAL
DEBORAH ANDERSON
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:06/01/23

Deborah Anderson

Notary Public

My commission expires:

6/1/23

STATE OF ILLINOIS)

)

COUNTY OF MCHENRY)

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that STEPHEN WENZEL, personally known to me to be the Secretary of THE LAND CONSERVANCY OF MCHENRY COUNTY, a not for profit a corporation of the State of Illinois, and personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that as such Secretary he signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal this 7th day of November 2022

Deborah Anderson

Notary Public

OFFICIAL SEAL
DEBORAH ANDERSON
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:06/01/23

My commission expires:

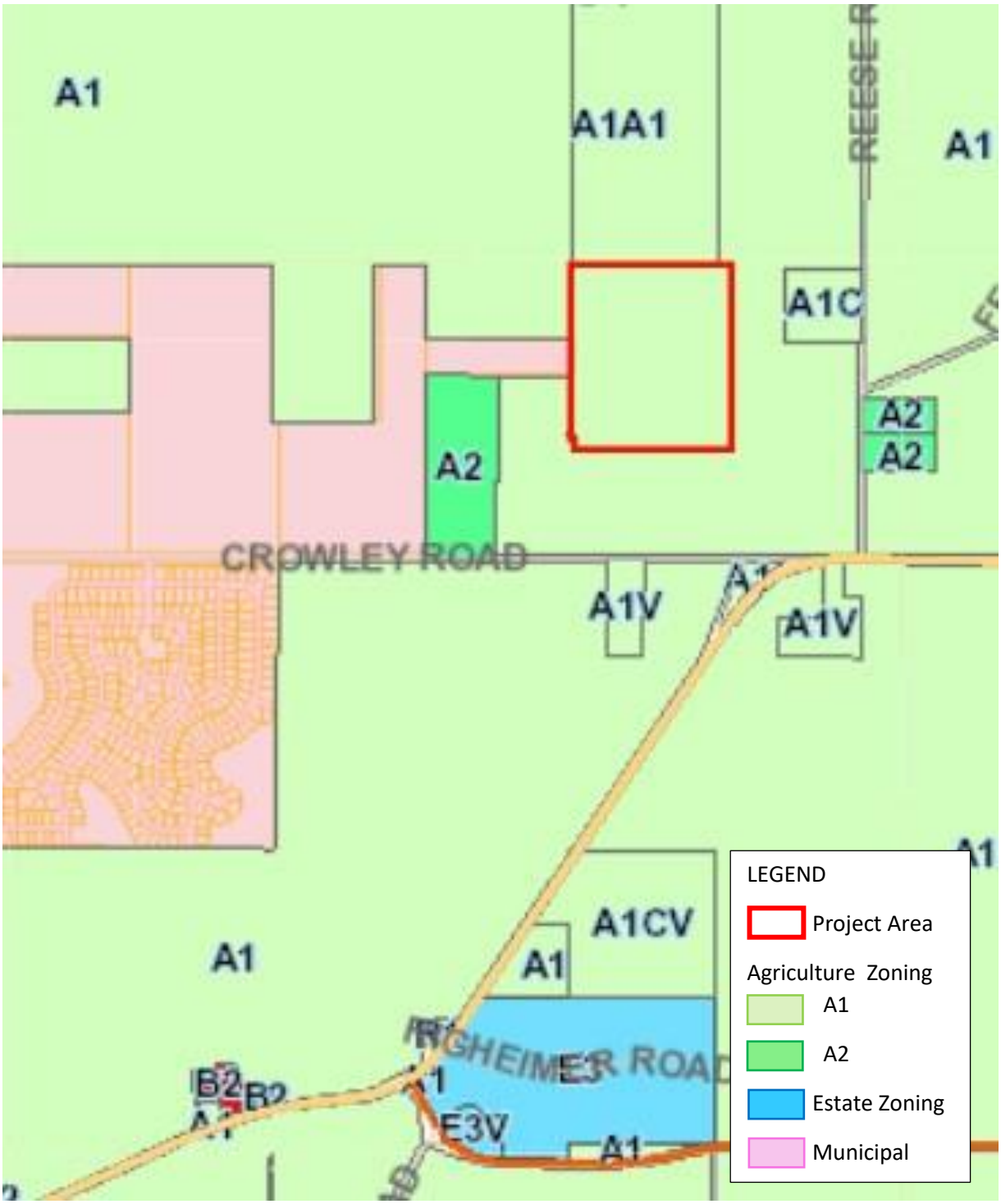
6/1/23

EXHIBIT A

PART OF THE SOUTHWEST QUARTER OF SECTION 20, TOWNSHIP 46 NORTH, RANGE 6, EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING DESCRIBED AS FOLLOWS: STARTING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER; THENCE NORTH 00 DEGREES 08 MINUTES 27 SECONDS WEST ALONG THE WEST LINE OF SAID SOUTHWEST QUARTER, 2633.42 FEET TO THE NORTHWEST CORNER THEREOF TO THE PLACE OF BEGINNING; THENCE SOUTH 89 DEGREES 27 MINUTES 39 SECONDS EAST ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER, 1446.67 FEET TO A LINE 1188.00 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE SAID SOUTHWEST QUARTER (AS MEASURED ALONG THE SAID NORTH LINE; THENCE SOUTH 00 DEGREES 01 MINUTES 22 SECONDS EAST TO A LINE 994.29 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID SOUTHWEST QUARTER; THENCE WEST 1447.33 FEET TO THE WEST LINE OF SAID SOUTHWEST QUARTER THENCE NORTH 00 DEGREES 08 MINUTES 27 SECONDS WEST ALONG THE WEST LINE OFSAID SOUTHWEST QUARTER 1623.63 FEET TO THE PLACE OF BEGINNING, IN MCHENRY COUNTY, ILLINOIS.

Zoning Maps

Crowley Oaks Zoning Map



Scale (feet)
0 500 1,000

N

Zoning Description(s)

CHAPTER 16.36: AGRICULTURAL ZONING DISTRICTS

Section

§ 16.36.010 ZONING DISTRICTS PURPOSE STATEMENTS.

A. *Agricultural Zoning Districts.* Properties in agricultural zoning districts are located in areas where land is used for commercial agricultural production. Owners, residents, and other users of property in or adjoining these districts may be subjected to inconvenience, discomfort, and the possibility of injury to property and health arising from normal and accepted agricultural practices and operations, including but not limited to noise, odors, dust, the operation of machinery of any kind, including aircraft, the storage and disposal of manure, the application of fertilizers, soil amendments, herbicides, and pesticides. Therefore, owners, occupants, and users of property within and adjacent to these areas should be prepared to accept such inconveniences, discomfort, and possibility of injury from normal agricultural operations, and are hereby put on official notice that the Illinois “Right to Farm Law” (Farm Nuisance Suit Act 740 ILCS 70/) may bar them from obtaining a legal judgement against such normal agricultural operations.

1. *Purpose of A-1 Agriculture District.* The intent of the A-1 Agriculture District is to permit agricultural purposes and activities. Residences are allowed on large agricultural parcels within the County. The standards of the A-1 District promote the continuation of farming and protect agricultural land uses from the encroachment of incompatible uses.

2. *Purpose of A-2 Agriculture District.* The intent of the A-2 Agriculture District is to permit individual single-family residences within agricultural portions of the County. All residences within this district must be compatible with surrounding agricultural operations, and must maintain, preserve, and enhance agricultural activities. Any zoning map amendments to the A-2 District must meet the standards of § 16.36.020 (A-2 District Rezoning Standards).

B. *Residential Zoning Districts.*

1. *Purpose of the E-5 Estate District.* The intent of the E-5 Estate District is to accommodate single-family residences on a minimum of five (5) acres that, due to topography and location, are well suited for single-family use. The E-5 District is intended to be located in close proximity to municipalities or historic town centers where infrastructure and services are readily accessible, to encourage the compact and contiguous development policy of the *2030 Plan*, and shall take into consideration the densities of the adjacent municipality.

2. *Purpose of the E-3 Estate District*. The intent of the E-3 Estate District is to accommodate single-family residences on a minimum of three (3) acres that, due to topography and location, are well suited for single-family use. The E-3 District is intended to be located in close proximity to municipalities or historic town centers where infrastructure and services are readily accessible, to encourage the compact and contiguous development policy of the *2030 Plan*, and shall take into consideration the densities of the adjacent municipality.

3. *Purpose of the E-2 Estate District.* The intent of the E-2 Estate District is to accommodate single-family residences on a minimum of two (2) acres that, due to topography and location, are well suited for single-family use. The E-2 District is intended to be located in close proximity to municipalities or historic town centers where infrastructure and services are readily accessible, to encourage the compact and contiguous development policy of the *2030 Plan*, and shall take into consideration the densities of the adjacent municipality.

4. *Purpose of the E-1 Estate District*. The intent of the E-1 Estate District is to accommodate single-family residences on a minimum of one (1) acre that, due to topography and location, are well suited for single-family use. The E-1 District is intended to be located in close proximity to municipalities or historic town centers where infrastructure and services are readily accessible, to encourage the compact and contiguous development policy of the *2030 Plan*, and shall take into consideration the densities of the adjacent municipality.

5. *Purpose of the R-1 Single-Family Residential District*. The intent of the R-1 Single-Family Residential District is to accommodate a single-family residential use on lots a minimum of one-half (½) acre in size. The R-1 District is for areas of higher residential density, located in close proximity to municipalities or historic town centers where services are available and more accessible.

6. *Purpose of the R-2 Two-Family Residential District.* The intent of the R-2 Two-Family Residential District is to accommodate both single-family and two-family residential uses on lots a minimum of one (1) acre in size. The R-2 District is for areas of higher residential density, located in close proximity to municipalities or historic town centers where services are available and more accessible.

7. *Purpose of the R-3 Multifamily Residential District.* The intent of the R-3 Multifamily Residential District is to provide for multifamily residential use in areas where central utilities, facilities, and services exist. The R-3 District is for areas of higher residential density, located in close proximity to municipalities or historic town centers where services are available and more accessible.

C. *Commercial Districts.*

1. *Purpose of the B-1 Neighborhood Business District.* The intent of the B-1 Neighborhood Business District is to provide access to commercial uses for adjacent residential areas, satisfying the basic shopping or service needs of residents. Dwellings are permitted above or behind ground-floor commercial uses to allow for a mixed-use environment.

2. *Purpose of the B-2 Neighborhood Business District.* The intent of the B-2 Neighborhood Business District is to provide access to commercial uses for adjacent residential areas, satisfying the basic shopping or service needs of residents, and to accommodate businesses

that serve alcoholic beverages for consumption on-site, as well as package liquor sale. Dwellings are permitted above or behind ground-floor commercial uses to allow for a mixed-use environment.

3. *Purpose of the B-3 General Business District*. The intent of the B-3 General Business District is to accommodate commercial uses that cater to the needs of the population from the larger region. The B-3 District allows more intense non-residential uses, which are often larger in scale and typically generate truck traffic. Dwellings are permitted above or behind ground-floor commercial uses to allow for a mixed-use environment.

D. *Office and Industrial Districts*.

1. *Purpose of the O Office/Research District.* The intent of the O Office/Research District is to accommodate office and research facilities and other related non-manufacturing activities in a campus-like environment. The O District is generally located near or adjacent to municipalities. Dwellings are permitted above or behind ground-floor office uses to allow for a mixed-use environment.

2. *Purpose of the I-1 Light Industrial District.* The purpose of the I-1 Light Industrial District is to provide for a wide variety of light manufacturing, fabricating, processing, research, wholesale distributing, and warehousing uses. Light industrial uses are enclosed low-intensity, non-nuisance light fabrication, and assembly-type manufacturing, as well as research facilities with little to no outside impacts. The industrial zoning districts are generally located away from residential development and near transportation facilities and municipalities. Dwellings are permitted above or behind ground-floor light industrial uses to allow for a mixed-use environment, typically for caretaker residences.

3. *Purpose of the I-2 Heavy Industrial District.* The purpose of the I-2 Heavy Industrial District is to provide for a wide variety of general manufacturing, fabricating, processing, wholesale distributing, and warehousing uses. General industrial uses include fabrication, warehousing, and assembly-type manufacturing, as well as office and research facilities, which may result in some moderate external effects such as smoke, noise, glare, or vibration, and typically include outdoor storage and related outdoor activities. The industrial zoning districts are generally located away from residential development and near transportation facilities and municipalities.

(Ord. O-201410-10-035, passed 10-14-2014; Ord. O-201601-ZBA-006, passed 1-19-2016; Ord. O-201603-ZBA-010, passed 3-17-2016, § 9.1; Ord. O-201803-ZBA-10-08, passed 3-19-2018; Ord. O-201808-10-033, passed 8-21-2018)

§ 16.36.020 A-2 DISTRICT REZONING STANDARDS.

In addition to meeting the standards for a map amendment in § 16.20.010 (Zoning Map and Text Amendment), all rezonings to the A-2 District must meet the following additional requirements:

A. Only property in the A-1 District is eligible for rezoning to the A-2 District.

B. The subject property shall have an existing lawfully constructed residential dwelling on the property. Mobile homes, agricultural trailers, and agriculture employee housing do not qualify under this standard.

C. The zoning petition shall be restricted to a single existing or proposed parcel.

D. The subject property shall meet one (1) of the following three (3) relevant exemptions from the Plat Act (765 ILCS 205/ *et seq*.) as amended. In the event that the Plat Act is amended, the provisions of the Illinois Compiled Statutes shall control.

1. The division or subdivision of land into parcels or tracts of five (5) acres or more in size which does not involve any new streets or easements of access.

2. The sale or exchange of parcels or tracts of land following the division into no more than two (2) parts of a particular parcel or tract of land existing on July 17, 1959 and not involving any new streets or easements of access.

3. The sale of a single lot of less than five (5) acres from a larger tract when a survey is made by an Illinois Registered Land Surveyor, provided that this exemption shall not apply to the sale of any subsequent lots from the same larger tract of land, as determined by the dimensions and configuration of the larger tract on October 1, 1973, and provided also that this exemption does not invalidate any local requirements applicable to the subdivision of land.

(Ord. O-201410-10-035, passed 10-14-2014; Ord. O-201601-ZBA-006, passed 1-19-2016; Ord. O-201603-ZBA-010, passed 3-17-2016, § 9.2; Ord. O-201803-ZBA-10-08, passed 3-19-2018; Ord. O-201808-10-033, passed 8-21-2018)

§ 16.36.030 ZONING DISTRICT USES.

A. Table 16.32-1: Zoning District Uses lists permitted, conditional, and temporary uses for the zoning districts of this Ordinance.

B. Development in these districts must meet McHenry County Department of Health requirements for septic suitable soils or other wastewater disposal systems approved by the Department of Health.

C. As a condition of approval of a building permit for a new residential structure for any lot or parcel of land not subdivided, a developer is required to comply with the requirements of § 16.76.100 (School Donation Requirements) as if the lot or parcel were subdivided.

(Ord. O-201410-10-035, passed 10-14-2014; Ord. O-201601-ZBA-006, passed 1-19-2016; Ord. O-201603-ZBA-010, passed 3-17-2016, § 9.3; Ord. O-201803-ZBA-10-08, passed 3-19-2018; Ord. O-201808-10-033, passed 8-21-2018)

§ 16.36.040 BULK AND SETBACK REGULATIONS.

Publisher's Note: This Section has been **AMENDED** by new legislation (Ord. O-202208-ZBA-031, passed 8-16-2022). The text of the amendment will be incorporated below when the amending legislation is codified.

A. Table 16.36-1 : Zoning Districts Bulk and Setback Regulations establishes bulk and setback regulations for zoning districts. Development is also subject to the standards of § 16.60.010 (General Development Standards).

TABLE 16.36-1: ZONING DISTRICTS BULK AND SETBACK REGULATIONS

	Minimum Lot Area			Minimum Lot Frontage[1]	Maximum Building Height		Maximum Building Coverage	Max. Impervious Surface[2]	Minimum Street Setback[3, 4]	Minimum Interior Side Setback[4,6]	Minimum Rear Setback[6]	Flag- or Land-Locked Lot/Parcel Perimeter Setback[5,6]	
	Agriculture	Residence	All Other		Agriculture	All Other							
A-1	None	40ac	1ac	330'	None	35'	None	None	30' from ROW or 65' from the centerlin e if no dedicate d right- of-way exists or as allowed by §16.60. C.1.a.	30'	30'	30'	A-1
A-2	None	1ac		Lots up to 2ac: 150' Lots 2-3ac: 175' Lots 3-5ac: 250' Lots 5+ac: 330'			Lots up to 2ac: 30% Lots 2-3ac: 20% Lots 3-5ac: 15% Lots 5+ac: 10%			20'	20'		A-2
E-5	5ac			330'	35'		10%	50%		30'	30'	30'	E-5
E-3	3ac			250'			15%			20'			E-3
E-2	2ac			175'			20%						E-2
E-1	1ac			150'			35%				20'	20'	E-1
R-1	0.5ac			100'	35'		30%	50%	30' from ROW or as allowed by § 16.60.C.1.a.	10'	10'	20'	R-1
R-2	1ac			150'							20'		R-2
R-3	2ac + 0.25 ac for each du above 4			175'	38'			60%					R-3
B-1	0.5ac			100'	35'		35%	65%	30'	10'	20'	20'	B-1
B-2	1ac			150'									B-2
B-3	1ac			150'									B-3
O	0.5ac			100'	40'		35%	65%	30'	When abutting agricultural or residential zoning districts: 30' All other: 10'	All other: 20'	All other: 20'	O

TABLE 16.36-1: ZONING DISTRICTS BULK AND SETBACK REGULATIONS

I-1	1ac	150'	40'	40%	70%	30'	When abutting any non- industrial zoning district (excluding O): 75'			I-1
							All other: 10'	All other: 20'	All other: 20'	
I-2							When abutting any non- industrial zoning district (excluding O): 100'			I-2
							All other: 10'	All other: 20'	All other: 20'	

1 Lots located on cul-de-sacs may have a lot frontage of not less than 50% of the district standard or 75-feet, whichever is greater.

2 Additional restrictions on impervious surface coverage apply in the SARA and Class III Overlay Districts.

3 The minimum street setback shall be at least ninety (90) feet from the centerline of a Regional Transportation Corridor as identified in Appendix D.

4 Refer to §16.80.050D. for reduced setbacks for nonconforming lots.

5 For a flag or a land-locked lot or parcel, the setback is measured from the main building site, excluding the narrow corridor access strip or any access easement.

6 Increased side, rear, and flag-lot/parcel perimeter setbacks when abutting certain districts applies to both principal and accessory structures.

(Ord. O-201410-10-035, passed 10-14-2014; Ord. O-201601-ZBA-006, passed 1-19-2016; Ord. O-201603-ZBA-010, passed 3-17-2016, § 9.4; Ord. O-201803-ZBA-10-08, passed 3-19-2018; Ord. O-201808-10-033, passed 8-21-2018)

§ 16.36.050 GENERAL STANDARDS OF APPLICABILITY.

A. *Accessory Structures and Uses.* See § 16.56.050 (Accessory Structure and Use Standards) for permissions and standards for accessory structures and uses.

B. *Permitted Encroachments.* See Chapter 16.60 (Site Development Standards) for permissions and standards for encroachments into required yards.

C. *Off-Street Parking and Loading.* See Chapter 16.64 (Off-Street Parking and Loading) for off-street parking and loading requirements and standards.

D. *Landscape.* See Chapter 16.60 (Site Development Standards) for landscape requirements and standards.

E. *Signs.* See Chapter 16.72 (Signs) for sign permissions and standards.

F. *Sewage Disposal.* See the McHenry County Public Health Ordinance.

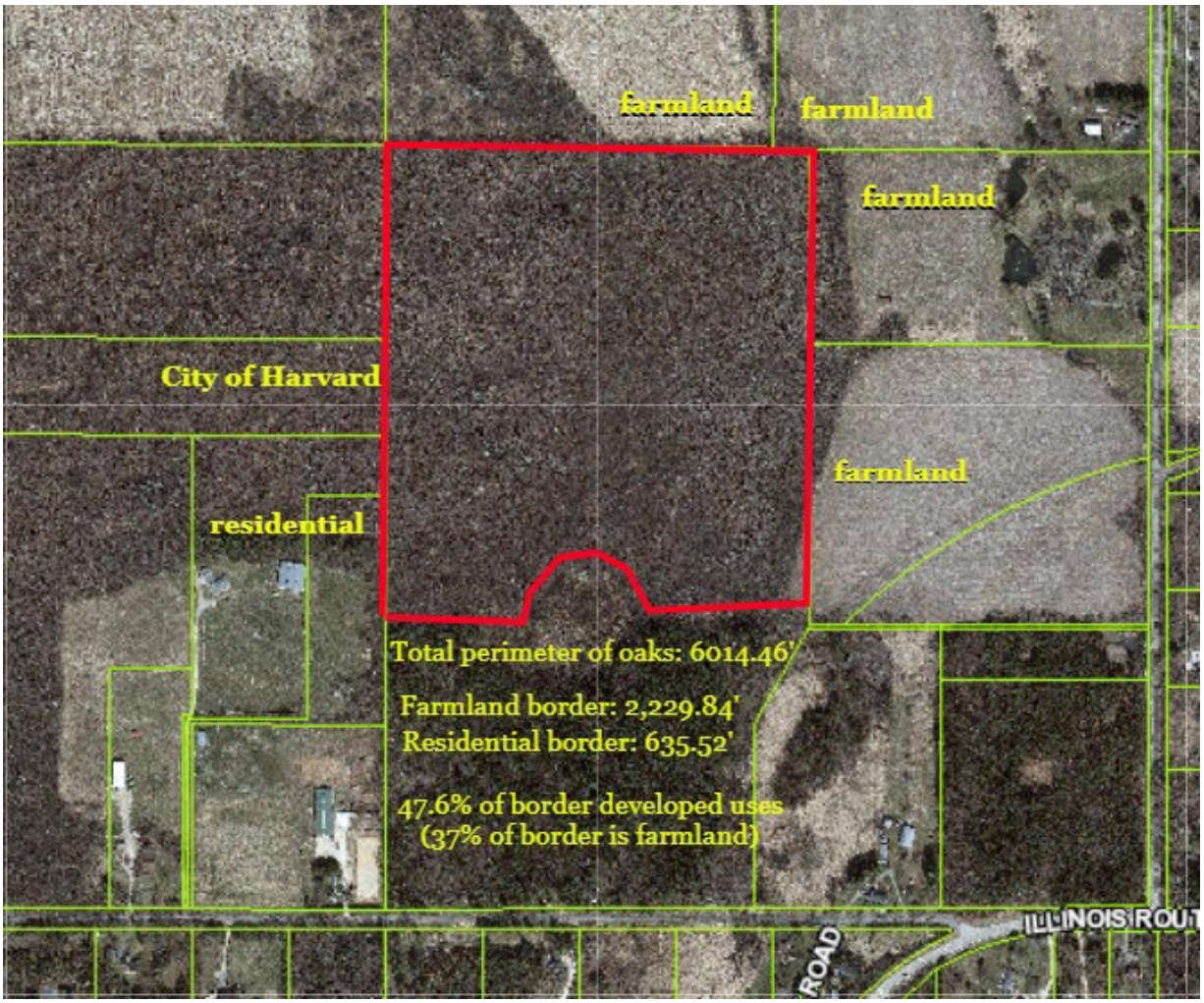
G. *Water Supply.* See the McHenry County Public Health Ordinance.

H. *Stormwater Management.* See McHenry County Stormwater Management Ordinance.

I. *Access Management.* See McHenry County Access Control and Right-of-Way Management Ordinance.

(Ord. O-201410-10-035, passed 10-14-2014; Ord. O-201601-ZBA-006, passed 1-19-2016; Ord. O-201603-ZBA-010, passed 3-17-2016, § 9.5; Ord. O-201803-ZBA-10-08, passed 3-19-2018; Ord. O-201808-10-033, passed 8-21-2018)

Threat of Loss Demonstration


farmland
farmland
farmland
City of Harvard
farmland
residential
Total perimeter of oaks: 6014.46'
Farmland border: 2,229.84'
Residential border: 635.52'
47.6% of border developed uses
(37% of border is farmland)
ILLINOIS ROUT
ROAD

Attestation of No Double Counting and No Net Harm

Crowley Oaks
Attestation of No Double Counting of Credits & No Net Harm

I am the Executive Director of The Land Conservancy of McHenry County and make this attestation regarding the no double counting of credits and no net harm from this tree preservation project, Crowley Oaks.

1. Project Description

The Project that is the subject of this attestation is described more fully in both our Application and our Project Design Document (PDD), both of which are incorporated into this attestation.

2. No Double Counting by Applying for Credits from another Registry

The Land Conservancy of McHenry County has not and will not seek credits for CO_2 for the project trees or for this project from any other organization or registry issuing credits for CO_2 storage.

3. No Double Counting by Seeking Credits for the Same Trees or Same CO_2 Storage

The Land Conservancy of McHenry County has not and will not apply for a project including the same trees as this project nor will it seek credits for CO_2 storage for the project trees or for this project in any other project or more than once.

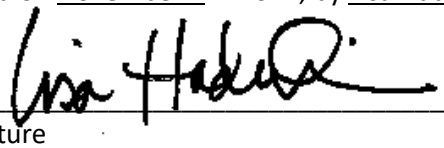
4. No Net Harm

The trees preserved in this project will produce many benefits, as described in our Application and PDD. Like almost all urban trees, the project trees are preserved for the benefits they deliver to people, communities, and the environment in a metropolitan area.

The project trees will produce many benefits and will not cause net harm. Specifically, they will not:

- Displace native or indigenous populations
- Deprive any communities of food sources
- Degrade a landscape or cause environmental damage

Signed on November 4 in 2022, by Lisa Haderlein, for The Land Conservancy of McHenry County.



Signature

815-337-9502 x103

Phone

lhaderlein@conservemc.org

Email

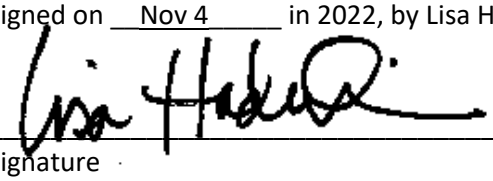
Attestation of Additionality

Crowley Oaks
Attestation of Additionality

I am the Executive Director of the Land Conservancy of McHenry County and make this attestation regarding additionality from this tree preservation project, Crowley Oaks.

- Project Description
    - The Project that is the subject of this attestation is described more fully in our Application and our Project Design Document (PDD), both of which are incorporated into this attestation.
- Prior to the start of the project, the trees in the project area were not protected via easement or recorded encumbrance or in a protected zoning status that preserves the trees
- The zoning in the project area currently allows for a non-forest use
- The trees in the project area face a threat or risk of removal or conversion out of forest
- The Land Conservancy of McHenry County recorded in the public land records an easement, covenant, or deed restriction specifically protecting the trees for the project duration of 40 years
- Additionality is also embedded in the quantification methodology that our project followed. Projects cannot receive, and our project will not receive, credits for trees that would have remained had development occurred, nor can they receive soil carbon credits for soil that would have been undisturbed had development occurred. Our project also had to apply a discount to credited carbon for potential displaced development due to the project.
- Project Implementation Agreement for Project Duration
    - The Land Conservancy of McHenry County signed a Project Implementation Agreement with City Forest Credits for 40 years.

Signed on Nov 4 in 2022, by Lisa Haderlein for The Land Conservancy of McHenry County.



Signature

Lisa Haderlein
Printed Name

815-337-9502 x103
Phone

lhaderlein@conservemc.org
Email

Carbon Quantification Tool

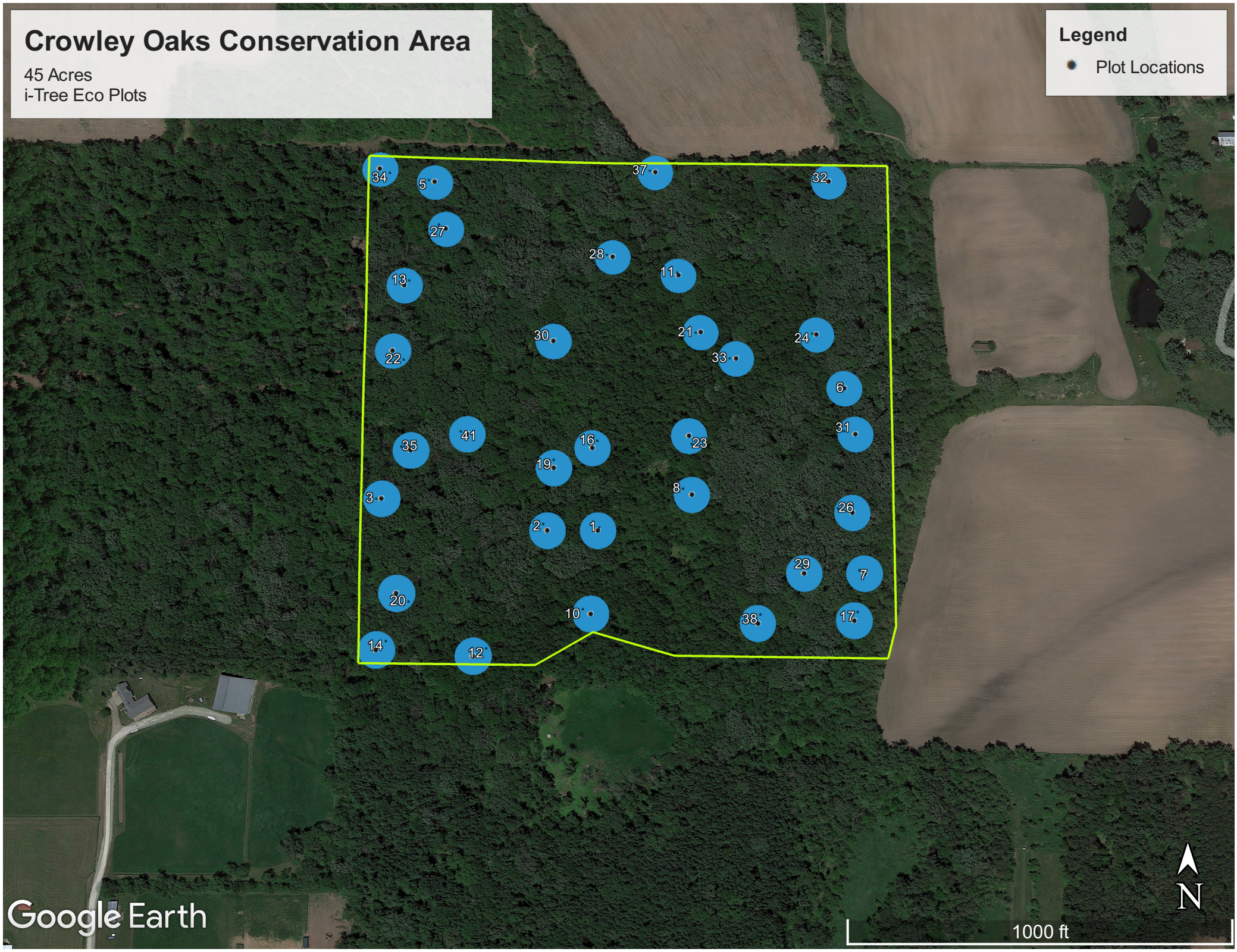
City Forest Credits - Preservation Protocol Carbon Quantification Calculator

Project Operator The Land Conservancy of McHenry County
Project Name Crowley Oaks
Project Location McHenry County
Date 1/27/2023

Carbon Quantification Summary		**Protocol Section**	**Supplemental information/notes**
45	Total Project Area Acres		include project area for all parcels enrolled in carbon project
42.68	Biomass tC/ac	11.1.B	A complete inventory was performed on all trees within the project area that had a diameter at breast height of 5 inches or more, corresponding to method 11.1.B , include i-Tree eco results
156.49	Biomass tCO2e/ac	11.1.B	
7,042	Accounting Stock, tCO2e	11.1.B	
90%	Fraction at risk of tree removal	11.2	Based on zoning - see 11.2 in preservation protocol
6,338	Avoided Biomass Emissions, tCO2e	11.2	
90%	Avoided impervious surface, percent	11.4	Based on zoning - see 11.4 in preservation protocol
41	Avoided impervious surface, acres	11.4	
4,860	Avoided Soil Carbon Emissions, tCO2e	11.4	
18.3%	Displacement	11.5	Fraction of avoided development that cannot be served by development or re-development of existing non-treed properties within the urban area
1,160	Displaced Biomass Emissions, tCO2e		
1,473	Displaced Soil Emissions		Assumes that redevelopment causes increase in impervious surface on redeveloped parcels
5,178	Credits from Avoided Biomass Emissions, tCO2e		
3,387	Credits from Avoided Soil Emissions, tCO2e		
8,566	Total Credits attributed to the project, tCO2e		
857	Registry Reversal Pool Account (10%), tCO2e		
7,709	**Total credits issued to the project, tCO2e**		
171	**Total credits issued to the project, tCO2e/acre**		

Year	Credits Issued This Year	Credits Issued
1	7,709	7,709
2	-	7,709
3	-	7,709
4	-	7,709
5	-	7,709

Tree Inventory


Crowley Oaks Conservation Area
45 Acres
i-Tree Eco Plots
Legend
Plot Locations
34
5
37
32
27
28
11
13
30
21
24
22
33
6
31
41
35
16
23
19
3
8
26
2
1
29
7
20
10
38
17
14
12
N
1000 ft
Google Earth

Plot	ID	Survey Date	Species	Land Use	DBH 1 (in)	DBH 1: Height (ft)	DBH 1: Measured?	DBH 2 (in)	DBH 2: Height (ft)	DBH 2: Measured?	DBH 3 (in)	DBH 3: Height (ft)	DBH 3: Measured?	DBH 4 (in)	DBH 4: Height (ft)	DBH 4: Measured?	DBH 5 (in)	DBH 5: Height (ft)	DBH 5: Measured?	Crown: Condition	
1	1	11/3/2022	Pin oak (Quercus palustris)	Forest	13.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
1	2	11/3/2022	Bitternut hickory (Carya cordiformis)	Forest	7.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
1	3	11/3/2022	Black cherry (Prunus serotina)	Forest	10.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
1	4	11/3/2022	American elm (Ulmus americana)	Forest	13.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
1	5	11/3/2022	Northern red oak (Quercus rubra)	Forest	8.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
1	6	11/3/2022	Pin oak (Quercus palustris)	Forest	10.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
1	7	11/3/2022	Black cherry (Prunus serotina)	Forest	7.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
1	8	11/3/2022	Pin oak (Quercus palustris)	Forest	7.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
1	9	11/3/2022	Black cherry (Prunus serotina)	Forest	5.9	4.5	TRUE	4.7	4.5	TRUE			TRUE			TRUE			TRUE	45% - 50%	
1	10	11/3/2022	Pin oak (Quercus palustris)	Forest	8.6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
1	11	11/3/2022	Black cherry (Prunus serotina)	Forest	6.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
1	12	11/3/2022	Black cherry (Prunus serotina)	Forest	9.6	3.5	TRUE			TRUE			TRUE			TRUE			TRUE	15% - 20%	
1	13	11/3/2022	Pin oak (Quercus palustris)	Forest	15.8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
1	14	11/3/2022	Black cherry (Prunus serotina)	Forest	6.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
1	15	11/3/2022	apple spp (Malus)	Forest	6.6	4.5	TRUE	6.4	4.5	TRUE			TRUE			TRUE			TRUE	10% - 15%	
1	16	11/3/2022	Pin oak (Quercus palustris)	Forest	16.8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
1	17	11/3/2022	Black cherry (Prunus serotina)	Forest	8.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	15% - 20%	
1	18	11/3/2022	Black cherry (Prunus serotina)	Forest	8.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
1	19	11/3/2022	Black cherry (Prunus serotina)	Forest	5.8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	20% - 25%	
1	20	11/3/2022	Bitternut hickory (Carya cordiformis)	Forest	7.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	95% - 99%	
2	1	11/3/2022	Bur oak (Quercus macrocarpa)	Forest	28.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
2	2	11/3/2022	Bur oak (Quercus macrocarpa)	Forest	23.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	45% - 50%	
2	3	11/3/2022	Black cherry (Prunus serotina)	Forest	8.8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
2	4	11/3/2022	Black cherry (Prunus serotina)	Forest	6.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
2	5	11/3/2022	Black cherry (Prunus serotina)	Forest	5.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	45% - 50%	
2	6	11/3/2022	Black cherry (Prunus serotina)	Forest	5.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
2	7	11/3/2022	Black cherry (Prunus serotina)	Forest	9.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
2	8	11/3/2022	Pin oak (Quercus palustris)	Forest	12.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
3	1	11/3/2022	American elm (Ulmus americana)	Forest	6.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	85% - 90%	
3	2	11/3/2022	White oak (Quercus alba)	Forest	19.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
3	3	11/3/2022	American elm (Ulmus americana)	Forest	5.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
3	4	11/3/2022	White oak (Quercus alba)	Forest	17.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
3	5	11/3/2022	White oak (Quercus alba)	Forest	26.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
3	6	11/3/2022	American elm (Ulmus americana)	Forest	14	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
3	7	11/3/2022	American elm (Ulmus americana)	Forest	6.8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
3	8	11/3/2022	American elm (Ulmus americana)	Forest	10.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
3	9	11/3/2022	American elm (Ulmus americana)	Forest	6.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	40% - 45%	
5	1	11/3/2022	White oak (Quercus alba)	Forest	22	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
5	2	11/3/2022	White oak (Quercus alba)	Forest	21.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
5	3	11/3/2022	White oak (Quercus alba)	Forest	21.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
5	4	11/3/2022	American elm (Ulmus americana)	Forest	7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
5	5	11/3/2022	American elm (Ulmus americana)	Forest	10.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
5	6	11/3/2022	White oak (Quercus alba)	Forest	18.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
5	7	11/3/2022	White oak (Quercus alba)	Forest	23.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
5	8	11/3/2022	American elm (Ulmus americana)	Forest	6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
5	9	11/3/2022	Green ash (Fraxinus pennsylvanica)	Forest	12.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
5	10	11/3/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
5	11	11/3/2022	American elm (Ulmus americana)	Forest	5.8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
5	12	11/3/2022	White mulberry (Morus alba)	Forest	7.2	4.5	TRUE	4.9	4.5	TRUE			TRUE			TRUE			TRUE	35% - 40%	
5	13	11/3/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
5	14	11/3/2022	Black cherry (Prunus serotina)	Forest	8.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
5	15	11/3/2022	American elm (Ulmus americana)	Forest	9.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
6	1	11/3/2022	Black cherry (Prunus serotina)	Forest	8.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
6	2	11/3/2022	Shagbark hickory (Carya ovata)	Forest	6.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
6	3	11/3/2022	Shagbark hickory (Carya ovata)	Forest	5.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	95% - 99%	
6	4	11/3/2022	Shagbark hickory (Carya ovata)	Forest	6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
6	5	11/3/2022	Black cherry (Prunus serotina)	Forest	8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	45% - 50%	
6	6	11/3/2022	Shagbark hickory (Carya ovata)	Forest	5.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
6	7	11/3/2022	Shagbark hickory (Carya ovata)	Forest	7.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
6	8	11/3/2022	Black cherry (Prunus serotina)	Forest	8.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
6	9	11/3/2022	Black cherry (Prunus serotina)	Forest	16	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
6	10	11/3/2022	Black cherry (Prunus serotina)	Forest	7.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	15% - 20%	
6	11	11/3/2022	Shagbark hickory (Carya ovata)	Forest	8.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
6	12	11/3/2022	Black cherry (Prunus serotina)	Forest	5.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
6	13	11/3/2022	Pin oak (Quercus palustris)	Forest	9.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
6	14	11/3/2022	Shagbark hickory (Carya ovata)	Forest	5.6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	85% - 90%	
6	15	11/3/2022	Black cherry (Prunus serotina)	Forest	11.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
6	16	11/3/2022	Pin oak (Quercus palustris)	Forest	15.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
6	17	11/3/2022	Pin oak (Quercus palustris)	Forest	15	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
6	18	11/3/2022	Shagbark hickory (Carya ovata)	Forest	8.8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
7	1	11/3/2022	Pin oak (Quercus palustris)	Forest	23	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
7	2	11/3/2022	Black walnut (Juglans nigra)	Forest	14.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
7	3	11/3/2022	Boxelder (Acer negundo)	Forest	12	4.5	TRUE	10.6	4.5	TRUE			TRUE			TRUE			TRUE	55% - 60%	
7	4	11/3/2022	Boxelder (Acer negundo)	Forest	19.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
7	5	11/3/2022	Black cherry (Prunus serotina)	Forest	14.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
8	1	11/3/2022	Black cherry (Prunus serotina)	Forest	6.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
8	2	11/3/2022	Black cherry (Prunus serotina)	Forest	13	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
8	3	11/3/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	40% - 45%	
8	4	11/3/2022	Shagbark hickory (Carya ovata)	Forest	7.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	95% - 99%	
8	5	11/3/2022	Black cherry (Prunus serotina)	Forest	9.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
8	6	11/3/2022	Black cherry (Prunus serotina)	Forest	11.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
8	7	11/3/2022	Pin oak (Quercus palustris)	Forest	10.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
8	8	11/3/2022	Pin oak (Quercus palustris)	Forest	18.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
8	9	11/3/2022	Black cherry (Prunus serotina)	Forest	5.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
8	10	11/3/2022	White oak (Quercus alba)	Forest	6.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
8	11	11/3/2022	Pin oak (Quercus palustris)	Forest	13.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
10	1	11/3/2022	Black cherry (Prunus serotina)	Forest	7.6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
10	2	11/3/2022	Black cherry (Prunus serotina)	Forest	7.9	4	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
10	3	11/3/2022	Shagbark hickory (Carya ovata)	Forest	10.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
10	4	11/3/2022	Black cherry (Prunus serotina)	Forest	12.6	4	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
10	5	11/3/2022	Black cherry (Prunus serotina)	Forest	7.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
10	6	11/3/2022	Pin oak (Quercus palustris)	Forest	14.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
10	7	11/3/2022	apple spp (Malus)	Forest	5	4	TRUE			TRUE			TRUE			TRUE			TRUE	45% - 50%	
10	8	11/3/2022	Black cherry (Prunus serotina)	Forest	11.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
10	9	11/3/2022	Bur oak (Quercus macrocarpa)	Forest	7.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
11	1	11/3/2022	Pin oak (Quercus palustris)	Forest	18.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
11	2	11/3/2022	Black cherry (Prunus serotina)	Forest	7.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
11	3	11/3/2022	Black cherry (Prunus serotina)	Forest	8.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	20% - 25%	
11	4	11/3/2022	Pin oak (Quercus palustris)	Forest	12.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
11	5	11/3/2022	Black cherry (Prunus serotina)	Forest	9.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	55% - 60%	
11	6	11/3/2022	Bitternut hickory (Carya cordiformis)	Forest	5.6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
11	7	11/3/2022	Northern red oak (Quercus rubra)	Forest	17.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	80% - 85%	
11	8	11/3/2022	Northern red oak (Quercus rubra)	Forest	15	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	60% - 65%	
11	9	11/3/2022	American elm (Ulmus americana)	Forest	5.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
11	10	11/3/2022	Pin oak (Quercus palustris)	Forest	13.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
11	11	11/3/2022	Pin oak (Quercus palustris)	Forest	9.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	45% - 50%	
11	12	11/3/2022	Black cherry (Prunus serotina)	Forest	8.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
11	13	11/3/2022	Pin oak (Quercus palustris)	Forest	7.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
11	14	11/3/2022	Pin oak (Quercus palustris)	Forest	17.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
11	15	11/3/2022	Black cherry (Prunus serotina)	Forest	8.8	4.5	TRUE	5.8	4.5	TRUE			TRUE			TRUE			TRUE	45% - 50%	
11	16	11/3/2022	Boxelder (Acer negundo)	Forest	8	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
11	17	11/3/2022	Silver maple (Acer saccharinum)	Forest	18.8	3.5	TRUE			TRUE			TRUE			TRUE			TRUE	80% - 85%	
11	18	11/3/2022	Black cherry (Prunus serotina)	Forest	6.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	40% - 45%	
12	1	11/3/2022	White oak (Quercus alba)	Forest	32.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
12	2	11/3/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
12	3	11/3/2022	Green ash (Fraxinus pennsylvanica)	Forest	9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
12	4	11/3/2022	Black cherry (Prunus serotina)	Forest	9.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
12	5	11/3/2022	Pin oak (Quercus palustris)	Forest	11.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
12	6	11/3/2022	Pin oak (Quercus palustris)	Forest	9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
12	7	11/3/2022	Pin oak (Quercus palustris)	Forest	9.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
12	8	11/3/2022	Pin oak (Quercus palustris)	Forest	6.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
12	9	11/3/2022	Pin oak (Quercus palustris)	Forest	9.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
12	10	11/3/2022	Pin oak (Quercus palustris)	Forest	6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
12	11	11/3/2022	Black cherry (Prunus serotina)	Forest	6.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
12	12	11/3/2022	Pin oak (Quercus palustris)	Forest	10.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	80% - 85%	
12	13	11/3/2022	Pin oak (Quercus palustris)	Forest	12.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
12	14	11/3/2022	Pin oak (Quercus palustris)	Forest	12.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	80% - 85%	
12	15	11/3/2022	Pin oak (Quercus palustris)	Forest	19.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
12	16	11/3/2022	Pin oak (Quercus palustris)	Forest	6.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
12	17	11/3/2022	Black cherry (Prunus serotina)	Forest	7.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
12	18	11/3/2022	Black cherry (Prunus serotina)	Forest	10.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
13	1	11/3/2022	American elm (Ulmus americana)	Forest	8.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
13	2	11/3/2022	Pond pine (Pinus serotina)	Forest	10.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
13	3	11/3/2022	American elm (Ulmus americana)	Forest	13.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
13	4	11/3/2022	American elm (Ulmus americana)	Forest	6.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
13	5	11/3/2022	American elm (Ulmus americana)	Forest	7.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
13	6	11/3/2022	American elm (Ulmus americana)	Forest	9.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
13	7	11/3/2022	American elm (Ulmus americana)	Forest	6.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
14	1	11/3/2022	White oak (Quercus alba)	Forest	26.9	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
14	2	11/3/2022	White oak (Quercus alba)	Forest	22.1	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
14	3	11/3/2022	Boxelder (Acer negundo)	Forest	7.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	40% - 45%	
14	4	11/3/2022	Boxelder (Acer negundo)	Forest	12.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	50% - 55%	
14	5	11/3/2022	White oak (Quercus alba)	Forest	8.7	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
14	6	11/3/2022	Boxelder (Acer negundo)	Forest	10.4	4.5	TRUE	11.5	4.5	TRUE	9.6	4.5	TRUE	15.1	4.5	TRUE	10.9	4.5	TRUE	60% - 65%	
16	1	11/4/2022	Shagbark hickory (Carya ovata)	Forest	5.2	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
16	2	11/4/2022	Pin oak (Quercus palustris)	Forest	9.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	75% - 80%	
16	3	11/4/2022	Black cherry (Prunus serotina)	Forest	12.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	70% - 75%	
16	4	11/4/2022	Pin oak (Quercus palustris)	Forest	11.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	
16	5	11/4/2022	Shagbark hickory (Carya ovata)	Forest	5.5	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	95% - 99%	
16	6	11/4/2022	Green ash (Fraxinus pennsylvanica)	Forest	15.3	4.5	TRUE			TRUE			TRUE			TRUE			TRUE		0%
16	7	11/4/2022	Shagbark hickory (Carya ovata)	Forest	6.4	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	90% - 95%	
16	8	11/4/2022	Black cherry (Prunus serotina)	Forest	5.6	4.5	TRUE			TRUE			TRUE			TRUE			TRUE	65% - 70%	

16	9	11/4/2022	Pin oak (Quercus palustris)	Forest	10.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
16	10	11/4/2022	Black cherry (Prunus serotina)	Forest	10.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
16	11	11/4/2022	Shagbark hickory (Carya ovata)	Forest	5.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
16	12	11/4/2022	Shagbark hickory (Carya ovata)	Forest	6.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
16	13	11/4/2022	Black cherry (Prunus serotina)	Forest	5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	5% - 10%	
16	14	11/4/2022	Shagbark hickory (Carya ovata)	Forest	5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
16	15	11/4/2022	Shagbark hickory (Carya ovata)	Forest	9.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	90% - 95%	
16	16	11/4/2022	Black cherry (Prunus serotina)	Forest	7.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	20% - 25%	
16	17	11/4/2022	Pin oak (Quercus palustris)	Forest	21.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
16	18	11/4/2022	Black cherry (Prunus serotina)	Forest	9.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	20% - 25%	
16	19	11/4/2022	Pin oak (Quercus palustris)	Forest	5.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
16	20	11/4/2022	Shagbark hickory (Carya ovata)	Forest	10.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
16	21	11/4/2022	Pin oak (Quercus palustris)	Forest	13.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
16	22	11/4/2022	Shagbark hickory (Carya ovata)	Forest	6.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	90% - 95%	
16	23	11/4/2022	Pin oak (Quercus palustris)	Forest	8.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
16	24	11/4/2022	Pin oak (Quercus palustris)	Forest	15.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
16	25	11/4/2022	Black cherry (Prunus serotina)	Forest	5.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	20% - 25%	
17	1	11/4/2022	apple spp (Malus)	Forest	9.5	4.5	TRUE	8.7	4.5	TRUE			TRUE	TRUE	TRUE		0%
17	2	11/4/2022	Black cherry (Prunus serotina)	Forest	13.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
17	3	11/4/2022	Black cherry (Prunus serotina)	Forest	25.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
17	4	11/4/2022	Black walnut (Juglans nigra)	Forest	6.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	90% - 95%	
17	5	11/4/2022	Black cherry (Prunus serotina)	Forest	11.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
17	6	11/4/2022	Boxelder (Acer negundo)	Forest	7.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	10% - 15%	
17	7	11/4/2022	apple spp (Malus)	Forest	6.4	3	TRUE			TRUE			TRUE	TRUE	TRUE		0%
17	8	11/4/2022	White mulberry (Morus alba)	Forest	18.7	3	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
17	9	11/4/2022	Boxelder (Acer negundo)	Forest	17.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
17	10	11/4/2022	Black cherry (Prunus serotina)	Forest	17.4	2	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
19	1	11/4/2022	Shagbark hickory (Carya ovata)	Forest	7.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
19	2	11/4/2022	Quaking aspen (Populus tremuloides)	Forest	14.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
19	3	11/4/2022	Shagbark hickory (Carya ovata)	Forest	5.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	90% - 95%	
19	4	11/4/2022	Shagbark hickory (Carya ovata)	Forest	7.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
19	5	11/4/2022	Black cherry (Prunus serotina)	Forest	5.4	4.5	TRUE	4.4	4.5	TRUE			TRUE	TRUE	TRUE		0%
19	6	11/4/2022	Black cherry (Prunus serotina)	Forest	9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
19	7	11/4/2022	Shagbark hickory (Carya ovata)	Forest	5.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
19	8	11/4/2022	Shagbark hickory (Carya ovata)	Forest	5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
19	9	11/4/2022	Shagbark hickory (Carya ovata)	Forest	6.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
19	10	11/4/2022	Black cherry (Prunus serotina)	Forest	5.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
19	11	11/4/2022	Pin oak (Quercus palustris)	Forest	17.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
19	12	11/4/2022	Shagbark hickory (Carya ovata)	Forest	9.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
19	13	11/4/2022	Black cherry (Prunus serotina)	Forest	7.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
19	14	11/4/2022	Shagbark hickory (Carya ovata)	Forest	6.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
19	15	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	28	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
19	16	11/4/2022	Pin oak (Quercus palustris)	Forest	9.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
20	1	11/4/2022	American elm (Ulmus americana)	Forest	7.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
20	2	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	24	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	20% - 25%	
20	3	11/4/2022	White oak (Quercus alba)	Forest	25.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
20	4	11/4/2022	American elm (Ulmus americana)	Forest	5.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
20	5	11/4/2022	White oak (Quercus alba)	Forest	29.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
21	1	11/4/2022	apple spp (Malus)	Forest	5.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	25% - 30%	
21	2	11/4/2022	Black cherry (Prunus serotina)	Forest	5.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	25% - 30%	
21	3	11/4/2022	Pin oak (Quercus palustris)	Forest	12.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
21	4	11/4/2022	Pin oak (Quercus palustris)	Forest	10.7	4.5	TRUE	11.3	4.5	TRUE			TRUE	TRUE	TRUE	85% - 90%	
21	5	11/4/2022	Pin oak (Quercus palustris)	Forest	15.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
21	6	11/4/2022	Black cherry (Prunus serotina)	Forest	5.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
21	7	11/4/2022	Pin oak (Quercus palustris)	Forest	5.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
21	8	11/4/2022	Pin oak (Quercus palustris)	Forest	11.4	4.5	TRUE	12.1	4.5	TRUE			TRUE	TRUE	TRUE	85% - 90%	
21	9	11/4/2022	Pin oak (Quercus palustris)	Forest	7.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
21	10	11/4/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
21	11	11/4/2022	Black cherry (Prunus serotina)	Forest	9	4.5	TRUE	2.5	4.5	TRUE	5.5	4.5	TRUE	TRUE	TRUE	70% - 75%	
21	12	11/4/2022	Black cherry (Prunus serotina)	Forest	5.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
21	13	11/4/2022	American elm (Ulmus americana)	Forest	6.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
21	14	11/4/2022	Black cherry (Prunus serotina)	Forest	5.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
21	15	11/4/2022	Black cherry (Prunus serotina)	Forest	7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
21	16	11/4/2022	Pin oak (Quercus palustris)	Forest	20.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
21	17	11/4/2022	apple spp (Malus)	Forest	5.1	4.5	TRUE	5.3	4.5	TRUE			TRUE	TRUE	TRUE	70% - 75%	
21	18	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	10	3	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
21	19	11/4/2022	Black cherry (Prunus serotina)	Forest	9.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
21	20	11/4/2022	Pin oak (Quercus palustris)	Forest	17.6	4.5	TRUE	7.6	4.5	TRUE			TRUE	TRUE	TRUE	75% - 80%	
21	21	11/4/2022	Black cherry (Prunus serotina)	Forest	6.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
22	1	11/4/2022	American elm (Ulmus americana)	Forest	10.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
22	2	11/4/2022	American elm (Ulmus americana)	Forest	5.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
22	3	11/4/2022	White oak (Quercus alba)	Forest	32.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
22	4	11/4/2022	White oak (Quercus alba)	Forest	20.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
22	5	11/4/2022	American elm (Ulmus americana)	Forest	9.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
22	6	11/4/2022	American elm (Ulmus americana)	Forest	5.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
22	7	11/4/2022	Green ash (Fraxinus pennsylvanica)	Forest	13.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
22	8	11/4/2022	American elm (Ulmus americana)	Forest	5.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
22	9	11/4/2022	American elm (Ulmus americana)	Forest	7.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
22	10	11/4/2022	Green ash (Fraxinus pennsylvanica)	Forest	15.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
23	1	11/4/2022	Pin oak (Quercus palustris)	Forest	13.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
23	2	11/4/2022	Black cherry (Prunus serotina)	Forest	8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
23	3	11/4/2022	Pin oak (Quercus palustris)	Forest	13.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
23	4	11/4/2022	Pin oak (Quercus palustris)	Forest	10.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
23	5	11/4/2022	Pin oak (Quercus palustris)	Forest	5.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
23	6	11/4/2022	Black cherry (Prunus serotina)	Forest	6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
23	7	11/4/2022	Black cherry (Prunus serotina)	Forest	6.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
23	8	11/4/2022	Black cherry (Prunus serotina)	Forest	5.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
23	9	11/4/2022	Black cherry (Prunus serotina)	Forest	7.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
23	10	11/4/2022	Pin oak (Quercus palustris)	Forest	11	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
23	11	11/4/2022	Pin oak (Quercus palustris)	Forest	19.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
23	12	11/4/2022	Black cherry (Prunus serotina)	Forest	6.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
23	13	11/4/2022	Black cherry (Prunus serotina)	Forest	6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
23	14	11/4/2022	Pin oak (Quercus palustris)	Forest	10.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	85% - 90%	
23	15	11/4/2022	Black cherry (Prunus serotina)	Forest	9.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
23	16	11/4/2022	Black cherry (Prunus serotina)	Forest	5.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	45% - 50%	
23	17	11/4/2022	Black cherry (Prunus serotina)	Forest	10.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
23	18	11/4/2022	apple spp (Malus)	Forest	9	3	TRUE	5.3	3	TRUE			TRUE	TRUE	TRUE	50% - 55%	
23	19	11/4/2022	Pin oak (Quercus palustris)	Forest	14.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
23	20	11/4/2022	Black cherry (Prunus serotina)	Forest	7.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
23	21	11/4/2022	apple spp (Malus)	Forest	6.3	4.5	TRUE	3.7	4.5	TRUE			TRUE	TRUE	TRUE	40% - 45%	
23	22	11/4/2022	Black cherry (Prunus serotina)	Forest	8.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
24	1	11/4/2022	Black cherry (Prunus serotina)	Forest	11.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
24	2	11/4/2022	Pin oak (Quercus palustris)	Forest	11.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
24	3	11/4/2022	Black cherry (Prunus serotina)	Forest	11.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
24	4	11/4/2022	Pin oak (Quercus palustris)	Forest	13.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
24	5	11/4/2022	Pin oak (Quercus palustris)	Forest	15.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
24	6	11/4/2022	Black cherry (Prunus serotina)	Forest	8.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
24	7	11/4/2022	Black cherry (Prunus serotina)	Forest	6.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	50% - 55%	
24	8	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	24.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
24	9	11/4/2022	Black cherry (Prunus serotina)	Forest	5.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
24	10	11/4/2022	Black cherry (Prunus serotina)	Forest	8.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
24	11	11/4/2022	Black cherry (Prunus serotina)	Forest	9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
24	12	11/4/2022	Black cherry (Prunus serotina)	Forest	9.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
24	13	11/4/2022	Black cherry (Prunus serotina)	Forest	7.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
24	14	11/4/2022	Black cherry (Prunus serotina)	Forest	11.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
24	15	11/4/2022	Black cherry (Prunus serotina)	Forest	9.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
24	16	11/4/2022	Black cherry (Prunus serotina)	Forest	13.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
24	17	11/4/2022	Black cherry (Prunus serotina)	Forest	13.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
24	18	11/4/2022	Black cherry (Prunus serotina)	Forest	5.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	25% - 30%	
24	19	11/4/2022	Shagbark hickory (Carya ovata)	Forest	9.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
24	20	11/4/2022	Pin oak (Quercus palustris)	Forest	6.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
24	21	11/4/2022	Shagbark hickory (Carya ovata)	Forest	8.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
26	1	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	17.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	25% - 30%	
26	2	11/4/2022	Black cherry (Prunus serotina)	Forest	6.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE		0%
26	3	11/4/2022	Black cherry (Prunus serotina)	Forest	17.6	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
26	4	11/4/2022	Black cherry (Prunus serotina)	Forest	9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
26	5	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	24.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
26	6	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	18.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
26	7	11/4/2022	Boxelder (Acer negundo)	Forest	5.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
26	8	11/4/2022	Black cherry (Prunus serotina)	Forest	10.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
26	9	11/4/2022	American elm (Ulmus americana)	Forest	9.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	80% - 85%	
26	10	11/4/2022	Black cherry (Prunus serotina)	Forest	11.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
26	11	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	29.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
26	12	11/4/2022	Black cherry (Prunus serotina)	Forest	9.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
26	13	11/4/2022	Black cherry (Prunus serotina)	Forest	7.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
26	14	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	23.8	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
26	15	11/4/2022	Black cherry (Prunus serotina)	Forest	9.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
26	16	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	25.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
26	17	11/4/2022	Black cherry (Prunus serotina)	Forest	7.7	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
26	18	11/4/2022	Bur oak (Quercus macrocarpa)	Forest	22.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
27	1	11/7/2022	American elm (Ulmus americana)	Forest	6.1	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
27	2	11/7/2022	American elm (Ulmus americana)	Forest	9.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	65% - 70%	
27	3	11/7/2022	American elm (Ulmus americana)	Forest	7.9	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
27	4	11/7/2022	White oak (Quercus alba)	Forest	21.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
27	5	11/7/2022	American elm (Ulmus americana)	Forest	7.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	55% - 60%	
27	6	11/7/2022	American elm (Ulmus americana)	Forest	5.5	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	60% - 65%	
27	7	11/7/2022	American elm (Ulmus americana)	Forest	7.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
27	8	11/7/2022	American elm (Ulmus americana)	Forest	5.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
27	9	11/7/2022	American elm (Ulmus americana)	Forest	8.3	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	75% - 80%	
27	10	11/7/2022	American elm (Ulmus americana)	Forest	8.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	
27	11	11/7/2022	Bitternut hickory (Carya cordiformis)	Forest	5.4	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	95% - 99%	
27	12	11/7/2022	Black walnut (Juglans nigra)	Forest	11.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	90% - 95%	
27	13	11/7/2022	American elm (Ulmus americana)	Forest	7.2	4.5	TRUE			TRUE			TRUE	TRUE	TRUE	70% - 75%	

27	14	11/7/2022	American elm (Ulmus americana)	Forest	6.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	60% - 65%	
28	1	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	2	11/7/2022	Pin oak (Quercus palustris)	Forest	16.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
28	3	11/7/2022	Black cherry (Prunus serotina)	Forest	12.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
28	4	11/7/2022	Black cherry (Prunus serotina)	Forest	10.3	4.5	TRUE	6.2	4.5	TRUE		3.9	4.5	TRUE		TRUE	TRUE	TRUE	30% - 35%	
28	5	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	6	11/7/2022	Pin oak (Quercus palustris)	Forest	11.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
28	7	11/7/2022	Pin oak (Quercus palustris)	Forest	7.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	85% - 90%	
28	8	11/7/2022	apple spp (Malus)	Forest	5.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	60% - 65%	
28	9	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	10	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	11	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	10% - 15%	
28	12	11/7/2022	Shagbark hickory (Carya ovata)	Forest	5.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	95% - 99%	
28	13	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	14	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	15	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	16	11/7/2022	Black cherry (Prunus serotina)	Forest	12.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
28	17	11/7/2022	Pin oak (Quercus palustris)	Forest	5.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
28	18	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	12.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	19	11/7/2022	Pin oak (Quercus palustris)	Forest	11.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
28	20	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	5.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
28	21	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	8.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
29	1	11/7/2022	Bur oak (Quercus macrocarpa)	Forest	23.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	80% - 85%	
29	2	11/7/2022	Bur oak (Quercus macrocarpa)	Forest	27.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
29	3	11/7/2022	Boxelder (Acer negundo)	Forest	5.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
29	4	11/7/2022	Black cherry (Prunus serotina)	Forest	11.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
29	5	11/7/2022	Black cherry (Prunus serotina)	Forest	12.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
29	6	11/7/2022	Black cherry (Prunus serotina)	Forest	13.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
29	7	11/7/2022	Black cherry (Prunus serotina)	Forest	10.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
29	8	11/7/2022	hawthorn spp (Crataegus)	Forest	4.7	4.5	TRUE	2	4.5	TRUE				TRUE		TRUE	TRUE	TRUE	65% - 70%	
29	9	11/7/2022	Bur oak (Quercus macrocarpa)	Forest	23.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	30% - 35%	
29	10	11/7/2022	Black cherry (Prunus serotina)	Forest	7.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
29	11	11/7/2022	Black cherry (Prunus serotina)	Forest	16.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
30	1	11/7/2022	American elm (Ulmus americana)	Forest	6.3	4.5	TRUE	6.6	4.5	TRUE				TRUE		TRUE	TRUE	TRUE	75% - 80%	
30	2	11/7/2022	Shagbark hickory (Carya ovata)	Forest	5.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	95% - 99%	
30	3	11/7/2022	Pin oak (Quercus palustris)	Forest	12.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
30	4	11/7/2022	Shagbark hickory (Carya ovata)	Forest	5.7	4.4	TRUE				TRUE				TRUE		TRUE	TRUE	95% - 99%	
30	5	11/7/2022	Shagbark hickory (Carya ovata)	Forest	6.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	95% - 99%	
30	6	11/7/2022	Pin oak (Quercus palustris)	Forest	7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
30	7	11/7/2022	Pin oak (Quercus palustris)	Forest	7.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
30	8	11/7/2022	Pin oak (Quercus palustris)	Forest	10	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
30	9	11/7/2022	Pin oak (Quercus palustris)	Forest	12.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
30	10	11/7/2022	Shagbark hickory (Carya ovata)	Forest	5.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	95% - 99%	
30	11	11/7/2022	American elm (Ulmus americana)	Forest	5.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
30	12	11/7/2022	American elm (Ulmus americana)	Forest	6.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
30	13	11/7/2022	American elm (Ulmus americana)	Forest	8.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
30	14	11/7/2022	American elm (Ulmus americana)	Forest	6.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
30	15	11/7/2022	White oak (Quercus alba)	Forest	29.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
30	16	11/7/2022	American elm (Ulmus americana)	Forest	6.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
30	17	11/7/2022	Shagbark hickory (Carya ovata)	Forest	29.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	90% - 95%	
30	18	11/7/2022	American elm (Ulmus americana)	Forest	5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
30	19	11/7/2022	American elm (Ulmus americana)	Forest	5.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
30	20	11/7/2022	Pin oak (Quercus palustris)	Forest	11.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
31	1	11/7/2022	Black cherry (Prunus serotina)	Forest	7.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	25% - 30%	
31	2	11/7/2022	American elm (Ulmus americana)	Forest	10.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
31	3	11/7/2022	Bur oak (Quercus macrocarpa)	Forest	23.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	80% - 85%	
31	4	11/7/2022	Black cherry (Prunus serotina)	Forest	7.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	55% - 60%	
31	5	11/7/2022	White mulberry (Morus alba)	Forest	7.3	4.5	TRUE	5.5	4.5	TRUE				TRUE		TRUE	TRUE	TRUE	55% - 60%	
31	6	11/7/2022	Black cherry (Prunus serotina)	Forest	11.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
31	7	11/7/2022	hawthorn spp (Crataegus)	Forest	3.7	4.5	TRUE	3.1	4.5	TRUE				TRUE		TRUE	TRUE	TRUE	60% - 65%	
31	8	11/7/2022	Black cherry (Prunus serotina)	Forest	16.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
31	9	11/7/2022	Black cherry (Prunus serotina)	Forest	6.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	10% - 15%	
31	10	11/7/2022	Black cherry (Prunus serotina)	Forest	12.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
31	11	11/7/2022	White oak (Quercus alba)	Forest	24.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
31	12	11/7/2022	White oak (Quercus alba)	Forest	13.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
32	1	11/7/2022	Bur oak (Quercus macrocarpa)	Forest	27	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
32	2	11/7/2022	Black cherry (Prunus serotina)	Forest	8.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
32	3	11/7/2022	Black cherry (Prunus serotina)	Forest	19.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
32	4	11/7/2022	Black cherry (Prunus serotina)	Forest	6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
32	5	11/7/2022	Black cherry (Prunus serotina)	Forest	12.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
32	6	11/7/2022	hawthorn spp (Crataegus)	Forest	4.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
32	7	11/7/2022	Silver maple (Acer saccharinum)	Forest	20	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	80% - 85%	
32	8	11/7/2022	Black cherry (Prunus serotina)	Forest	5.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
32	9	11/7/2022	Black cherry (Prunus serotina)	Forest	5.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
32	10	11/7/2022	Black cherry (Prunus serotina)	Forest	11.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
32	11	11/7/2022	Black cherry (Prunus serotina)	Forest	6.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
32	12	11/7/2022	Black cherry (Prunus serotina)	Forest	10	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	60% - 65%	
32	13	11/7/2022	Bur oak (Quercus macrocarpa)	Forest	25.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	35% - 40%	
32	14	11/7/2022	Black cherry (Prunus serotina)	Forest	11.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
32	15	11/7/2022	Black cherry (Prunus serotina)	Forest	6.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
32	16	11/7/2022	Black cherry (Prunus serotina)	Forest	6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
32	17	11/7/2022	Black cherry (Prunus serotina)	Forest	5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
32	18	11/7/2022	Black cherry (Prunus serotina)	Forest	9.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	60% - 65%	
33	1	11/7/2022	Black cherry (Prunus serotina)	Forest	9.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
33	2	11/7/2022	Pin oak (Quercus palustris)	Forest	6.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
33	3	11/7/2022	Black cherry (Prunus serotina)	Forest	12.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
33	4	11/7/2022	Pin oak (Quercus palustris)	Forest	10.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
33	5	11/7/2022	Pin oak (Quercus palustris)	Forest	16.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
33	6	11/7/2022	Pin oak (Quercus palustris)	Forest	8.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	30% - 35%	
33	7	11/7/2022	Pin oak (Quercus palustris)	Forest	10.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
33	8	11/7/2022	Pin oak (Quercus palustris)	Forest	13.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
33	9	11/7/2022	Pin oak (Quercus palustris)	Forest	9.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
33	10	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	25% - 30%	
33	11	11/7/2022	Black cherry (Prunus serotina)	Forest	13	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
33	12	11/7/2022	Shagbark hickory (Carya ovata)	Forest	8.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	90% - 95%	
33	13	11/7/2022	Pin oak (Quercus palustris)	Forest	7.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
33	14	11/7/2022	Pin oak (Quercus palustris)	Forest	6.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
33	15	11/7/2022	Pin oak (Quercus palustris)	Forest	9.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
33	16	11/7/2022	Black cherry (Prunus serotina)	Forest	6.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	40% - 45%	
33	17	11/7/2022	Pin oak (Quercus palustris)	Forest	14	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
33	18	11/7/2022	apple spp (Malus)	Forest	7	4.5	TRUE	5.9	4.5	TRUE				TRUE		TRUE	TRUE	TRUE	5% - 10%	
33	19	11/7/2022	Shagbark hickory (Carya ovata)	Forest	8.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	95% - 99%	
33	20	11/7/2022	Eastern red cedar (Juniperus virginiana)	Forest	3.6	4.5	TRUE	4.4	4.5	TRUE				TRUE		TRUE	TRUE	TRUE		0%
33	21	11/7/2022	Black cherry (Prunus serotina)	Forest	12.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
33	22	11/7/2022	Black cherry (Prunus serotina)	Forest	15.2	3	TRUE				TRUE				TRUE		TRUE	TRUE	60% - 65%	
34	1	11/7/2022	Black cherry (Prunus serotina)	Forest	12.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
34	2	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
34	3	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
34	4	11/7/2022	American elm (Ulmus americana)	Forest	5.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
34	5	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	7.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
34	6	11/7/2022	White oak (Quercus alba)	Forest	30.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	55% - 60%	
34	7	11/7/2022	American elm (Ulmus americana)	Forest	8.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
34	8	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	8.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
34	9	11/7/2022	American elm (Ulmus americana)	Forest	7.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	85% - 90%	
34	10	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
34	11	11/7/2022	American elm (Ulmus americana)	Forest	7.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
34	12	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	5.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
34	13	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	12.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
35	1	11/7/2022	American elm (Ulmus americana)	Forest	8.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
35	2	11/7/2022	White oak (Quercus alba)	Forest	29.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
35	3	11/7/2022	American elm (Ulmus americana)	Forest	8.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
35	4	11/7/2022	American elm (Ulmus americana)	Forest	6.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	60% - 65%	
35	5	11/7/2022	American elm (Ulmus americana)	Forest	9.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
35	6	11/7/2022	White oak (Quercus alba)	Forest	24.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
35	7	11/7/2022	White oak (Quercus alba)	Forest	15.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
35	8	11/7/2022	American elm (Ulmus americana)	Forest	7.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
35	9	11/7/2022	American elm (Ulmus americana)	Forest	8.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
35	10	11/7/2022	White oak (Quercus alba)	Forest	17.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	60% - 65%	
35	11	11/7/2022	White oak (Quercus alba)	Forest	21.8	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
35	12	11/7/2022	American elm (Ulmus americana)	Forest	6.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE		0%
35	13	11/7/2022	White oak (Quercus alba)	Forest	17.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	80% - 85%	
35	14	11/7/2022	American elm (Ulmus americana)	Forest	6.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	80% - 85%	
35	15	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	6.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	30% - 35%	
37	1	11/7/2022	American elm (Ulmus americana)	Forest	14.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	80% - 85%	
37	2	11/7/2022	American elm (Ulmus americana)	Forest	12.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
37	3	11/7/2022	Pin oak (Quercus palustris)	Forest	25.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
37	4	11/7/2022	apple spp (Malus)	Forest	10.7	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
37	5	11/7/2022	Black cherry (Prunus serotina)	Forest	14.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
37	6	11/7/2022	Black cherry (Prunus serotina)	Forest	14.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	50% - 55%	
37	7	11/7/2022	Black cherry (Prunus serotina)	Forest	10.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
37	8	11/7/2022	Black cherry (Prunus serotina)	Forest	13.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	55% - 60%	
37	9	11/7/2022	Black cherry (Prunus serotina)	Forest	8.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
37	10	11/7/2022	Black cherry (Prunus serotina)	Forest	7.6	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
37	11	11/7/2022	Black cherry (Prunus serotina)	Forest	14.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	20% - 25%	
37	12	11/7/2022	Green ash (Fraxinus pennsylvanica)	Forest	5.2	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	45% - 50%	
38	1	11/7/2022	Pin oak (Quercus palustris)	Forest	9.9	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
38	2	11/7/2022	Pin oak (Quercus palustris)	Forest	16.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
38	3	11/7/2022	Pin oak (Quercus palustris)	Forest	16.1	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	75% - 80%	
38	4	11/7/2022	Black cherry (Prunus serotina)	Forest	13.3	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
38	5	11/7/2022	Pin oak (Quercus palustris)	Forest	11	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	70% - 75%	
38	6	11/7/2022	Pin oak (Quercus palustris)	Forest	9.5	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
38	7	11/7/2022	Black cherry (Prunus serotina)	Forest	6.4	4.5	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	
38	8	11/7/2022	Black cherry (Prunus serotina)	Forest	16.7	3	TRUE				TRUE				TRUE		TRUE	TRUE	65% - 70%	

38	9	11/7/2022	Black cherry (Prunus serotina)	Forest	16.2	2	TRUE			TRUE			TRUE		TRUE	TRUE	65% - 70%	
38	10	11/7/2022	apple spp (Malus)	Forest	3.6	4.5	TRUE	3	4.5	TRUE	2.9	4.5	TRUE		TRUE	TRUE	55% - 60%	
38	11	11/7/2022	Black cherry (Prunus serotina)	Forest	9.9	4.5	TRUE	6.8	4.5	TRUE	6.2	4.5	TRUE		TRUE	TRUE	55% - 60%	
38	12	11/7/2022	Black cherry (Prunus serotina)	Forest	15.2	3	TRUE			TRUE			TRUE		TRUE	TRUE	55% - 60%	
38	13	11/7/2022	Black cherry (Prunus serotina)	Forest	5.7	4.5	TRUE			TRUE			TRUE		TRUE	TRUE	65% - 70%	
38	14	11/7/2022	Boxelder (Acer negundo)	Forest	5.9	4.5	TRUE			TRUE			TRUE		TRUE	TRUE	55% - 60%	
41	1	11/7/2022	White oak (Quercus alba)	Forest	26.6	4.5	TRUE			TRUE			TRUE		TRUE	TRUE	70% - 75%	
41	2	11/7/2022	American elm (Ulmus americana)	Forest	8.6	4.5	TRUE	5.2	4.5	TRUE			TRUE		TRUE	TRUE	70% - 75%	
41	3	11/7/2022	apple spp (Malus)	Forest	5	4.5	TRUE			TRUE			TRUE		TRUE	TRUE		0%
41	4	11/7/2022	American elm (Ulmus americana)	Forest	5.5	4.5	TRUE			TRUE			TRUE		TRUE	TRUE	85% - 90%	
41	5	11/7/2022	American elm (Ulmus americana)	Forest	8.2	4.5	TRUE			TRUE			TRUE		TRUE	TRUE	45% - 50%	
41	6	11/7/2022	American elm (Ulmus americana)	Forest	13.2	4.5	TRUE			TRUE			TRUE		TRUE	TRUE	65% - 70%	
41	7	11/7/2022	American elm (Ulmus americana)	Forest	11.2	4.5	TRUE			TRUE			TRUE		TRUE	TRUE	70% - 75%	

ID	Stratum	Date	Crew	Size (ac)	Stake	% Tree	% Measured	Complete?
1	Wooded	11/3/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
2	Wooded	11/3/2022	NP	0.1	FALSE	95% - 99%	100	TRUE
3	Wooded	11/3/2022	NP	0.1	FALSE	95% - 99%	100	TRUE
5	Wooded	11/3/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
6	Wooded	11/3/2022	NP	0.1	FALSE	95% - 99%	100	TRUE
7	Wooded	11/3/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
8	Wooded	11/3/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
10	Wooded	11/3/2022	NP	0.1	FALSE	50% - 55%	100	TRUE
11	Wooded	11/3/2022	NP	0.1	FALSE	95% - 99%	100	TRUE
12	Wooded	11/3/2022	NP	0.1	FALSE	70% - 75%	100	TRUE
13	Wooded	11/3/2022	NP	0.1	FALSE	45% - 50%	100	TRUE
14	Wooded	11/3/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
16	Wooded	11/4/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
17	Wooded	11/4/2022	NP	0.1	FALSE	65% - 70%	100	TRUE
19	Wooded	11/4/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
20	Wooded	11/4/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
21	Wooded	11/4/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
22	Wooded	11/4/2022	NP	0.1	FALSE	75% - 80%	100	TRUE
23	Wooded	11/4/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
24	Wooded	11/4/2022	NP	0.1	FALSE	80% - 85%	100	TRUE
26	Wooded	11/4/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
27	Wooded	11/7/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
28	Wooded	11/7/2022	NP	0.1	FALSE	75% - 80%	100	TRUE
29	Wooded	11/7/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
30	Wooded	11/7/2022	NP	0.1	FALSE	95% - 99%	100	TRUE
31	Wooded	11/7/2022	NP	0.1	FALSE	90% - 95%	100	TRUE
32	Wooded	11/7/2022	NP	0.1	FALSE	80% - 85%	100	TRUE
33	Wooded	11/7/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
34	Wooded	11/7/2022	NP	0.1	FALSE	60% - 65%	100	TRUE
35	Wooded	11/7/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
36	Wooded			0.1	FALSE	-- Not Entered --	100	FALSE
37	Wooded	11/7/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
38	Wooded	11/7/2022	NP	0.1	FALSE	85% - 90%	100	TRUE
41	Wooded	11/7/2022	NP	0.1	FALSE	95% - 99%	100	TRUE

42	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
43	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
44	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
45	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
46	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
47	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
48	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
49	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE
50	Wooded	0.1	FALSE	-- Not Entered --	100	FALSE

Plot	Land Use	% of Plot
1	Forest	100
2	Forest	100
3	Forest	100
5	Forest	100
6	Forest	100
7	Forest	100
8	Forest	100
10	Forest	100
11	Forest	100
12	Forest	100
13	Forest	100
14	Forest	100
16	Forest	100
17	Forest	100
19	Forest	100
20	Forest	100
21	Forest	100
22	Forest	100
23	Forest	100
24	Forest	100
26	Forest	100
27	Forest	100
28	Forest	100
29	Forest	100
30	Forest	100
31	Forest	100
32	Forest	100
33	Forest	100
34	Forest	100
35	Forest	100
36		
37	Forest	100
38	Forest	100
41	Forest	100

Carbon Biomass

Location: Harvard, McHenry, Illinois, United States of America
Project: Crowley Oaks, Series: Crowley Oaks, Year: 2022
Generated: 1/27/2023

Stratum	Species	Trees		Carbon Stora	
		Number	SE	(metric ton)	SE
Wooded	Boxelder	150	±55	51.51	±28.04
	Silver maple	27	±18	20.47	±13.75
	Bitternut hickory	55	±31	2.36	±1.61
	Shagbark hickory	505	±190	51.08	±25.67
	hawthorn spp	41	±22	1.16	±0.63
	Green ash	423	±171	38.91	±14.11
	Black walnut	41	±22	5.68	±3.71
	Eastern red cedar	14	±13	0.56	±0.54
	apple spp	177	±50	20.76	±7.34
	White mulberry	41	±22	8.84	±6.48
	Pond pine	14	±13	1.91	±1.84
	Quaking aspen	14	±13	4.03	±3.88
	Black cherry	2,059	±312	428.03	±72.20
	White oak	395	±113	562.24	±145.94
	Bur oak	273	±103	358.22	±139.60
	Pin oak	1,227	±263	416.98	±81.69
	Northern red oak	41	±29	16.65	±14.60
	American elm	927	±229	78.56	±18.04
	Total	**6,423**	**±426**	**2,067.95**	**±147.31**

Biomass tC/acre calculation: Davey Resource Group conducted a sample forest assessment adhering to the standards set in CFC Tree Preservation Protocol Section 11.1.B. The sample established 33 sample plots sized at 1/10th-acre. Within every plot, each live tree at least 5” in diameter at 4.5’ above the ground where the height above the ground is measured on the uphill side of the tree was inventoried. Species, diameter, and overall tree condition were recorded for each tree. Davey Resource Group utilized i-Tree Eco to input the sample plot data to determine the carbon storage.

Carbon quantification is based on the sample plots. The metric tons of Carbon is 2,067.95. The standard error is 147.31

Biomass tC/ac = (metric tons of carbon – standard error)/project area acres

(2,067.95 – 147.31)/45 = 42.68 (cell B11 on attachment 11)

Tree Characteristics Chart(s)

I. Tree Characteristics of the Urban Forest

The urban forest of Crowley Oaks has an estimated 6,312 trees with a tree cover of 100.0 percent. The three most common species are Black cherry (31.0 percent), Pin oak (18.7 percent), and American elm (12.1 percent).

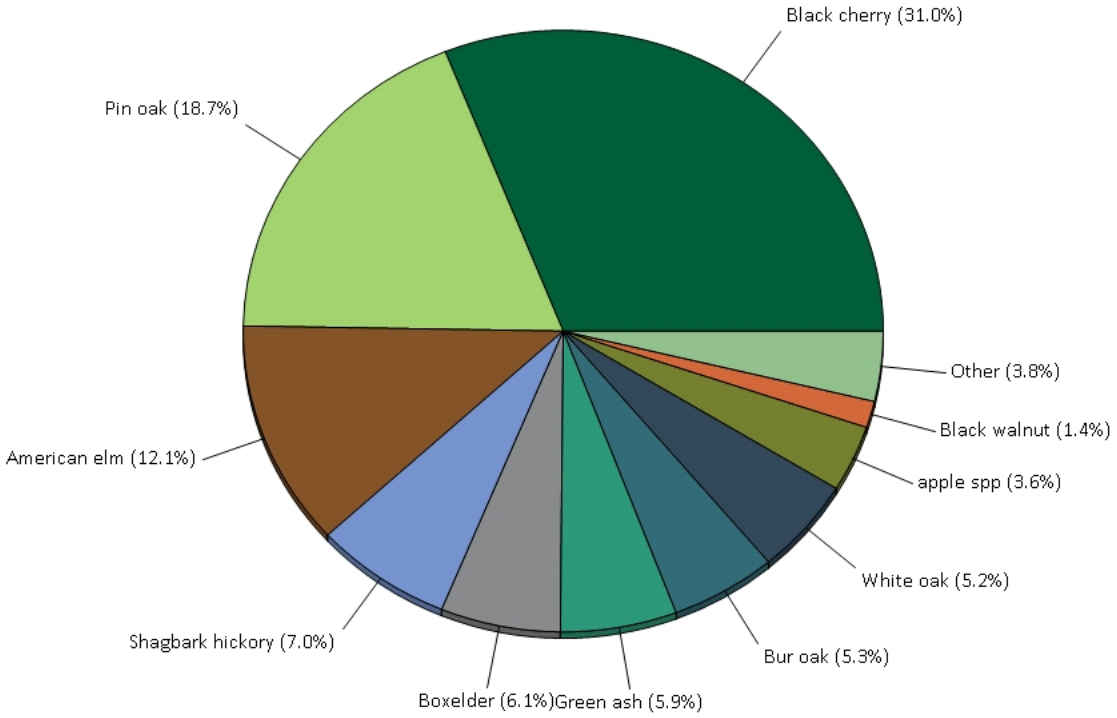


Figure 1. Tree species composition in CrowleyOaks

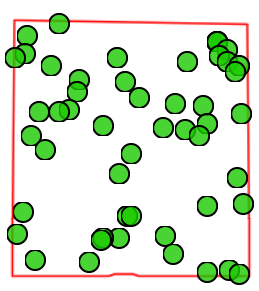
The overall tree density in Crowley Oaks is 347 trees/hectare.

iTree Canopy Report

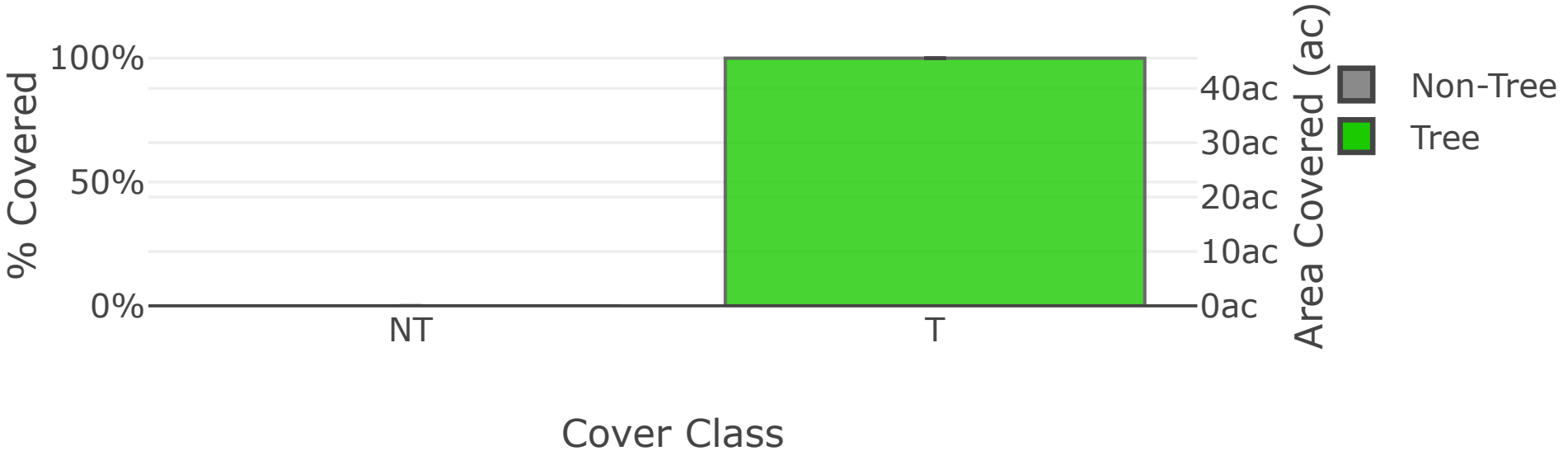
i-Tree Canopy

Cover Assessment and Tree Benefits Report

Estimated using random sampling statistics on 11/15/2022



Land Cover



Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (ac) ± SE
NT	Non-Tree	All other surfaces	0	0.00 ± 0.00	0.00 ± 0.00
T	Tree	Tree, non-shrub	51	100.00 ± 0.00	45.53 ± 0.00
Total			**51**	**100.00**	**45.53**

Tree Benefit Estimates: Carbon (English units)

Description	Carbon (T)	±SE	CO_2 Equiv. (T)	±SE	Value (USD)	±SE
Sequestered annually in trees	57.48	±0.00	210.76	±0.00	$9,803	±0
Stored in trees (Note: this benefit is not an annual rate)	1,560.87	±0.00	5,723.18	±0.00	$266,207	±0

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Amount sequestered is based on 1.262 T of Carbon, or 4.629 T of CO_2, per ac/yr and rounded. Amount stored is based on 34.281 T of Carbon, or 125.697 T of CO_2, per ac and rounded. Value (USD) is based on $170.55/T of Carbon, or $46.51/T of CO_2 and rounded. (English units: T = tons (2,000 pounds), ac = acres)

Tree Benefit Estimates: Air Pollution (English units)

Abbr.	Description	Amount (lb)	±SE	Value (USD)	±SE
CO	Carbon Monoxide removed annually	40.77	±0.00	$8	±0
NO2	Nitrogen Dioxide removed annually	626.45	±0.00	$35	±0
O3	Ozone removed annually	1,740.74	±0.00	$399	±0
SO2	Sulfur Dioxide removed annually	70.05	±0.00	$2	±0
PM2.5	Particulate Matter less than 2.5 microns removed annually	82.29	±0.00	$807	±0
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	485.11	±0.00	$701	±0
Total		**3,045.41**	**±0.00**	**$1,953**	**±0**

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in lb/ac/yr @ $/lb/yr and rounded:
CO 0.895 @ $0.21 | NO2 13.759 @ $0.06 | O3 38.232 @ $0.23 | SO2 1.538 @ $0.02 | PM2.5 1.807 @ $9.81 | PM10* 10.654 @ $1.45 (English units: lb = pounds, ac = acres)

Tree Benefit Estimates: Hydrological (English units)

Abbr.	Benefit	Amount (Kgal)	±SE	Value (USD)	±SE
AVRO	Avoided Runoff	192.30	±0.00	$1,718	±0
E	Evaporation	2,471.30	±0.00	N/A	N/A
I	Interception	2,471.30	±0.00	N/A	N/A
T	Transpiration	5,450.21	±0.00	N/A	N/A
PE	Potential Evaporation	24,833.71	±0.00	N/A	N/A
PET	Potential Evapotranspiration	16,842.67	±0.00	N/A	N/A

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in Kgal/ac/yr @ $/Kgal/yr and rounded:
AVRO 4.223 @ $8.94 | E 54.277 @ N/A | I 54.277 @ N/A | T 119.702 @ N/A | PE 545.419 @ N/A | PET 369.913 @ N/A (English units: Kgal = thousands of gallons, ac = acres)

About i-Tree Canopy

The concept and prototype of this program were developed by David J. Nowak, Jeffery T. Walton, and Eric J. Greenfield (USDA Forest Service). The current version of this program was developed and adapted to i-Tree by David Ellingsworth, Mike Binkley, and Scott Maco (The Davey Tree Expert Company)

Limitations of i-Tree Canopy

The accuracy of the analysis depends upon the ability of the user to correctly classify each point into its correct class. As the number of points increase, the precision of the estimate will increase as the standard error of the estimate will decrease. If too few points are classified, the standard error will be too high to have any real certainty of the estimate.

Additional support provided by:

Use of this tool indicates acceptance of the EULA.

Cobenefit Calculator

Light yellow background denotes an input cell ->

Directions
1) Use i-Tree Canopy, or another tool, to estimate the amount of deciduous and coniferous tree cover area (acres) (Cell C20 and D20).
2) Use i-Tree Canopy, or another tool, to estimate the amount of non-tree cover area (acres) (Cell F20) in the project area.
3) In Cell G20 the total area of the project is calculated (acres). Prompt i-Tree Canopy to provide an estimate of the project area by clicking on the gear icon next to the upper right portion of the image and selecting "Report By Area."
4) Total Project Area, cell G17 should equal 100%.

Table 1. Tree Cover

	Deciduous Tree Cover	Coniferous Tree Cover	Total Tree Cover	Non-Tree	Total Project Area
Percent (%)	100%	0%	100%	0%	100%
Area (sq miles)	0.070	0.000	0.070	0.000	0.07
Area (m2)	182,107	0	182,107	0	182,107
Area (acres)	45	0.00	45.00	0.00	45.00

Using the information you provide on tree canopy cover, the tool provides estimates of co-benefits in Resource Units and $ per year.

Table 2. Co-Benefits per year with current tree canopy cover.

Ecosystem Services	Resource Units Totals	Total $
Rain Interception (m3/yr)	12,172.9	$87,156.20
Air Quality (t/yr)		
O3	0.2323	$351.91
NOx	0.0388	$58.73
PM10	0.1189	$153.11
Net VOCs	0.1196	$203.36
Air Quality Total	0.5095	$767.10
Energy (kWh/yr & kBtu/yr)		
Cooling - Elec.	95,825	$7,273.08
Heating - Nat. Gas	1,791,752	$17,442.30
Energy Total ($/yr)		$24,715.38
Grand Total ($/yr)		$112,638.68

Social Impacts

City Forest Carbon Project
Social Impacts

UN Sustainable Development Goals

The 17 United Nations Sustainable Development Goals (SDGs) are an urgent call for action and global partnership among all countries, representing key benchmarks for creating a better world and environment for everyone. Well-designed and managed urban forests make significant contributions to the environmental sustainability, economic viability and livability of cities. They help mitigate climate change and natural disasters, reduce energy costs, poverty and malnutrition, and provide ecosystem services and public benefits. See more details in the CFC Carbon Project Social Impact Reference Guide.

Instructions

This template sets out all relevant SDGs and lists various urban forest project activities that fall within each SDG. Evaluate the SDGs to determine how your carbon project provides social impacts that may contribute towards achievement of the global goals. Check the box(es) that contain one of your project activities and describe in no fewer than two sentences how your project activities align with the corresponding SDG. On page 12, select the icon for three to five of the most relevant SDGs to your project and provide any additional information.

SDG 3 - Good Health and Well Being

Goal: Ensure healthy lives and promote well-being for all at all ages.

Examples of project activities include, but are not limited to:

- ☒ Plant or protect trees to reduce or remove air pollutants
- ☐ If planting trees, select trees for reduced pollen counts and irritant production
- ☐ Plant or protect trees to create shade, provide UV exposure protection, reduce extreme heat negative effects, and/or reduce temperatures to relieve urban heat effects
- ☒ Design project to buffer sounds, optimize biodiversity, or create nature experiences
- ☐ Locate project near vulnerable populations, such as children or elderly
- ☐ Locate project near high volume roads to screen pollutants
- ☒ Locate project near people to encourage recreation, provide new parks or green space, or otherwise promote an active lifestyle
- ☐ Locate project near schools, elderly facilities, or mental health services to promote nature-based wellness, attention restoration, or other mental well-being
- ☐ Locate project in area with conditions of project-defined high inequity to trees, such as at schools, affordable or subsidized housing, formerly redlined neighborhoods, areas with high property vacancy rates, or area with high proportion of renters
- ☐ Reduce stormwater runoff or improve infiltration rates
- ☐ Design project to reduce human exposure to specific pollutants or toxins
- ☐ Other

The project will protect a 45 acre oak woodland that will continue to remove air pollution in the general area of the project. The property is surrounded by agricultural and large-lot residential development, and within 15 minutes of the City of Harvard, so is in an ideal location to serve the community. The population of Harvard is 50/50 white/Hispanic. Finally, the project includes work to restore and manage the oak woodland over the coming years to enhance habitat for a diversity of species including both pileated and red-headed woodpeckers, wild turkeys and a variety of migratory bird species that need open oak woodland habitat. Weekly volunteer events will continue for the foreseeable future, and efforts will be undertaken to connect Harvard residents with the site.

SDG 6 - Clean Water and Sanitation

Goal: Ensure availability and sustainable management of water and sanitation for all

Examples of project activities include, but are not limited to:

- ☐ Research and assess environmental injustices related to water in project area
- ☐ Locate project near high-traffic roads or to otherwise improve, mitigate, or remediate toxic landscapes near water
- ☐ Protect or plant trees to improve historically or culturally important sites related to water that have been degraded and/or neglected
- ☐ Reduce stormwater by planting or protecting trees
- ☐ Plant forested buffers adjacent to streams, rivers, wetlands, or floodplains
- ☐ Prevent soil erosion by protect steep slopes
- ☒ Improve infiltration rates
- ☐ Improve, mitigate, or remediate toxic landscapes and human exposure to risk
- ☐ Drought resistance, such as selecting appropriate water-efficient trees for project climate zone
- ☐ Other

Restoration of the oak woodland will enhance water infiltration which will in turn reduce run-off and improve groundwater recharge in the area. The property is part of the headwaters of Piscasaw Creek, one of the highest-quality, cool-water streams in Northeastern Illinois. Improved stormwater infiltration at this site is important to preserving the integrity of the creek in perpetuity.

SDG 8 - Decent Work and Economic Growth

Goal: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Examples of project activities include, but are not limited to:

- ☐ Community participation in project implementation, including such things as providing access to financial resources for ongoing community-based care
- ☒ Emphasize local hiring and support small businesses
- ☒ Promote local economic opportunities through workforce training, career pathway development, or other employment
- ☐ Other

TLC will work with local contractors to restore the site, and will use restoration work as an opportunity to train summer interns in skills needed for a career in conservation and land restoration. TLC's paid summer internship program targets underserved local students who wish to explore a career in conservation.

SDG 10 - Reduced Inequalities

Goal: Reduce inequalities within and among countries

Examples of project activities include, but are not limited to:

- ☒ Provide connections and cohesion for social health, such as create or reinforce places that promote informal interactions, engage local residents and users in tree management, include symbolic or cultural elements, or other events
- ☐ Research, understand, and design to address understand historic and current sociocultural inequities, community health conditions, environmental injustices, or prior local greening efforts in community
- ☐ Locate project near vulnerable populations, such as children or elderly, to provide air quality improvements or buffer against extreme heat effects
- ☐ Locate project in high-density residential areas or where there is a lack of trees to improve access and promote an active lifestyle
- ☐ Locate project near schools, elderly facilities, or mental health services to promote nature-based wellness, attention restoration, or other mental well-being
- ☐ Locate project in area with conditions of project-defined high inequity to trees, such as at schools, affordable or subsidized housing, formerly redlined neighborhoods, areas with high property vacancy rates, or area with high proportion of renters
- ☐ Locate project near high-traffic roads or to otherwise improve, mitigate, or remediate toxic landscapes
- ☐ Protect or plant trees to improve historically or culturally important sites that have been degraded and/or neglected
- ☒ Community engagement in project design, including such things as engaging and respecting existing relationships and social networks, community cultural traditions, and public participation methods that are empowering and inclusive
- ☐ Community participation in project implementation, including such things as addressing and removing barriers to participation, promote ongoing community-based care and access to financial resources
- ☒ Emphasize local hiring and support small businesses
- ☐ Research and consider potential for gentrification and displacements
- ☒ Promote local economic opportunities through workforce training, career pathway development, or other employment
- ☐ Other

Signs will be provided in English and Spanish to reflect the 50% Latino/a population in the City of Harvard, and to make the site welcoming to all members of the community.

The site is included in TLC's Internship program which is focused on providing career training for underserved youth from the local area. Additionally, to support the heritage of hunting in the local area, while also providing opportunities to underserved communities, a Youth Turkey Hunt will be offered at the site each Spring.

SDG 11 - Sustainable Cities and Communities

Overall: Make cities inclusive, safe, resilient, and sustainable.

Examples of project activities include, but are not limited to:

- ☒ Plant or protect trees to reduce or remove air pollutants
- ☐ If planting trees, select trees for reduced pollen counts and irritant production
- ☐ Locate project near high volume roads to screen pollutants
- ☐ Locate project near vulnerable populations, such as children or elderly
- ☐ Plant or protect trees to create shade, provide UV exposure protection, reduce extreme heat negative effects, and/or reduce temperatures to relieve urban heat effects
- ☒ Locate project near people to encourage recreation, provide new parks or green space, or otherwise promote an active lifestyle
- ☐ Design project to improve wellness and mental health, such as planting trees to buffer sounds, optimize biodiversity, optimize views from buildings, or create nature experiences
- ☐ Locate project near schools, elderly facilities, or mental health services to promote nature-based wellness, attention restoration, or other mental well-being
- ☒ Provide connections and cohesion for social health, such as create or reinforce places that promote informal interactions, engage local residents and users in tree management, include symbolic or cultural elements, or other events
- ☐ Research, understand, and design to address understand historic and current sociocultural inequities, community health conditions, environmental injustices, or prior local greening efforts in community
- ☐ Locate project in area with conditions of project-defined high inequity to trees, such as at schools, affordable or subsidized housing, formerly redlined neighborhoods, areas with high property vacancy rates, or area with high proportion of renters
- ☐ Community engagement in project design, including such things as engaging and respecting existing relationships and social networks, community cultural traditions, and public participation methods that are empowering and inclusive
- ☐ Community participation in project implementation, including such things as addressing and removing barriers to participation, promote ongoing community-based care and access to financial resources
- ☐ Other

The project is located within 15 minutes of the City of Harvard, a community with a 50/50 white/Hispanic population. Through targeted outreach in English and Spanish, residents of the City – and surrounding area – will be engaged with restoration and recreation opportunities at the site.

SDG 12 - Responsible Production and Consumption

Goal: Ensure sustainable consumption and production patterns

Examples of project activities include, but are not limited to:

- ☐ Plant or protect trees to create shade or reduce temperatures to relieve urban heat effects
- ☐ Provide cooling benefits and energy savings by shading impervious surfaces such as streets or parking lots, or planting trees on south and west sides of buildings
- ☐ Other

[Enter text describing activities you checked above]

SDG 13 - Climate Action

Goal: Take urgent action to combat climate change and its impacts.

Examples of project activities include, but are not limited to:

- ☒ Plant or protect trees to reduce or remove air pollutants
- ☐ Plant or protect trees to create shade or reduce temperatures to relieve urban heat effects
- ☒ Promote community capacity for social and climate resilience by engaging local residents or users in tree management, or other events to connect people to the project
- ☐ Reflect cultural traditions and inclusive engagement for climate resilience
- ☒ Design project to improve soil health
- ☐ Provide cooling benefits and energy savings by shading impervious surfaces such as streets or parking lots, or planting trees on south and west sides of buildings
- ☒ Plant or protect trees to reduce stormwater runoff
- ☐ Select water-efficient trees for climate zone and drought resistance
- ☒ Create and/or enhance wildlife habitat
- ☐ Other

[Enter text describing activities you checked above]

This project will protect trees to reduce or remove air pollutants and reduce stormwater runoff through effective restoration of the oak woodland habitat. Restoration will also improve soil health and enhance wildlife habitat for a diversity of species, especially birds such as pileated and red-headed woodpeckers, migratory bird species and wild turkeys. The project will also promote community capacity for social and climate resilience by engaging local residents and volunteers in land management and educational programs about the importance of old-growth woodland preservation.

SDG 14 - Life Below Water

Goal: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Examples of project activities located in areas with marine ecosystems include, but are not limited to:

- ☐ Locate project near high-traffic roads or to otherwise improve, mitigate, or remediate toxic landscapes near water
- ☐ Plant or protect trees in project areas to reduce stormwater runoff
- ☐ Plant forested buffers adjacent to streams, rivers, wetlands, or floodplains
- ☐ Prevent soil erosion into by protecting steep slopes
- ☐ Improve infiltration rates
- ☐ Improve, mitigate, or remediate toxic landscapes and human exposure to risk
- ☐ Drought resistance, such as selecting appropriate water-efficient trees for project climate zone
- ☐ Enhance wildlife habitat, such as riparian habitat for fish, birds, and other animals
- ☐ Other

[Enter text describing activities you checked above]

SDG 15 - Life on Land

Goal: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Examples of project activities include, but are not limited to the following with increased functionality of green infrastructure:

- ☒ Plant or protect trees to reduce stormwater runoff
- ☐ Select water-efficient trees for climate zone and drought resistance
- ☒ Create and/or enhance wildlife habitat to improve local biodiversity
- ☐ Plant forested buffers adjacent to streams, rivers, wetlands, or floodplains
- ☐ Prevent soil erosion by protect steep slopes
- ☒ Improve infiltration rates
- ☐ Other

This project will protect trees to reduce stormwater runoff, enhance wildlife habitat to improve local biodiversity. Restoration of the oak woodland will enhance water infiltration which will in turn reduce run-off and improve groundwater recharge in the area.

SDG 17 - Partnerships for the Goals

Overall: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Examples of project activities include, but are not limited to:

- ☒ Promote community connections and capacity for social resilience by engaging local residents or users in tree management, or other events to connect people to the project
- ☐ Community engagement in project design, including such things as engaging and respecting existing relationships and social networks, community cultural traditions, and public participation methods that are empowering and inclusive
- ☐ Community participation in project implementation, including such things as addressing and removing barriers to participation, promote ongoing community-based care and access to financial resources
- ☐ Other

Signs will be in English and Spanish to serve the 20%+ Latino population in McHenry County and the 50%+ population in the nearby City of Harvard. The project will also promote community capacity for social and climate resilience by engaging local residents and volunteers in land management and educational programs about the importance of old-growth woodland preservation.

Summary of Project Social Impacts

The project will protect a 45 acre oak woodland that will continue to remove air pollution in the general area of the project. The property is surrounded by agricultural and large-lot residential development, and within 15 minutes of the City of Harvard, so is in an ideal location to serve the community. The population of Harvard is 50/50 white/Hispanic. Finally, the project includes work to restore and manage the oak woodland over the coming years to enhance habitat for a diversity of species including both pileated and red-headed woodpeckers, wild turkeys and a variety of migratory bird species that need open oak woodland habitat. Weekly volunteer events will continue for the foreseeable future, and efforts will be undertaken to connect Harvard residents with the site.

This project will protect trees to reduce or remove air pollutants and reduce stormwater runoff through effective restoration of the oak woodland habitat. Restoration will also improve soil health and enhance wildlife habitat for a diversity of species, especially birds such as pileated and red-headed woodpeckers, migratory bird species and wild turkeys. The project will also promote community capacity for social and climate resilience by engaging local residents and volunteers in land management and educational programs about the importance of old-growth woodland preservation.

Interpretive signs at the property will be provided in English and Spanish to reflect the 50% Latino/a population in the nearby City of Harvard, and to make the site welcoming to all members of the community. The property is included in TLC's Internship program which is focused on providing career training for underserved youth from the local area. Additionally, to support the heritage of hunting in the local area, while also providing opportunities to underserved communities, a Youth Turkey Hunt will be offered at the site each Spring.