



# Is the Sale of Voluntary Carbon Credits a Potential Source of Income for your Agency's Future?



Our Trees.  
Our Communities.  
Our Future.



## What to expect...

City Forest Credits and  
Chicago Region Forest Credits overview

### Case Study – Planting Project

Fox River Bluffs Forest Preserve Cropland  
Conversion

### Case Studies – Land Conservation

Fitzgerald Road  
Reservation Woods Acquisition Project  
Crowley Oaks

Why sell carbon credits?

Q&A



## Who is involved?

**City Forest Credits** is a nonprofit carbon registry that has established protocols for the development and implementation of urban forest carbon projects aimed at sequestering carbon and providing social impacts and ecosystem benefits in cities and towns. City Forest Credits issues carbon credits based on its protocols and tracks the issuance, transfer, and retirement of Carbon+ Credits in a secure database.

**The Chicago Region Trees Initiative** is a coalition of organizations led and coordinated by The Morton Arboretum, working together to improve the health of the urban forest. CRTI is partnering with City Forest Credits to facilitate a carbon credits program in the Chicago region that generates revenue from carbon credit sales to be put back into urban forestry projects, enabling landowners to expand the health of the urban forest and the quality of life for people in the communities where those projects take place.

**CRCP Partners (Local Project Operators)**, including landowners or tree-related organizations who plant trees or preserve forested areas, can enroll tree projects in the CRCP to earn carbon credits and generate a new source of revenue. The intention of the partnership is to enable a range of local projects to participate through the CRCP collective partners—creating a scale of efficiencies and impacts that will attract more projects and more buyers to purchase the credits.



## Where do we get more information about the program?

[ChicagoRTI.org/CarbonCredits](https://ChicagoRTI.org/CarbonCredits)

Zach Wirtz, Community Manager, Chicago Region Trees Initiative  
zwirtz@mortonarb.org



# About City Forest Credits

**Generating new carbon revenue and high-quality projects for greener, healthier, and more equitable cities**

- National 501(c)(3) nonprofit carbon registry
- Connect urban forest leaders to new source of funding
- Empower companies to invest in local climate action



# About Chicago Region Carbon Program

- Program of CRTI/Morton Arboretum, working with City Forest Credits
- Provide opportunities to earn carbon credits from tree planting and preservation
- Efficiently enroll planting and preservation projects into a region-wide carbon crediting program.

# Chicago Region Carbon Program (CRCP)



CRTI recruits local projects for CRCP

Local Project Implementers prepare application and project info

Local Project Implementers submit project docs

CFC reviews, obtains third-party verification, and issues credits

CRTI or others sell credits

# Project Eligibility



## Types (Planting v/s Preservation)

- I. Preservation – 10-acre minimum; zoning + threat from development
- II. Planting – 3 to 5-acre minimum

CRTI Initial Consultation

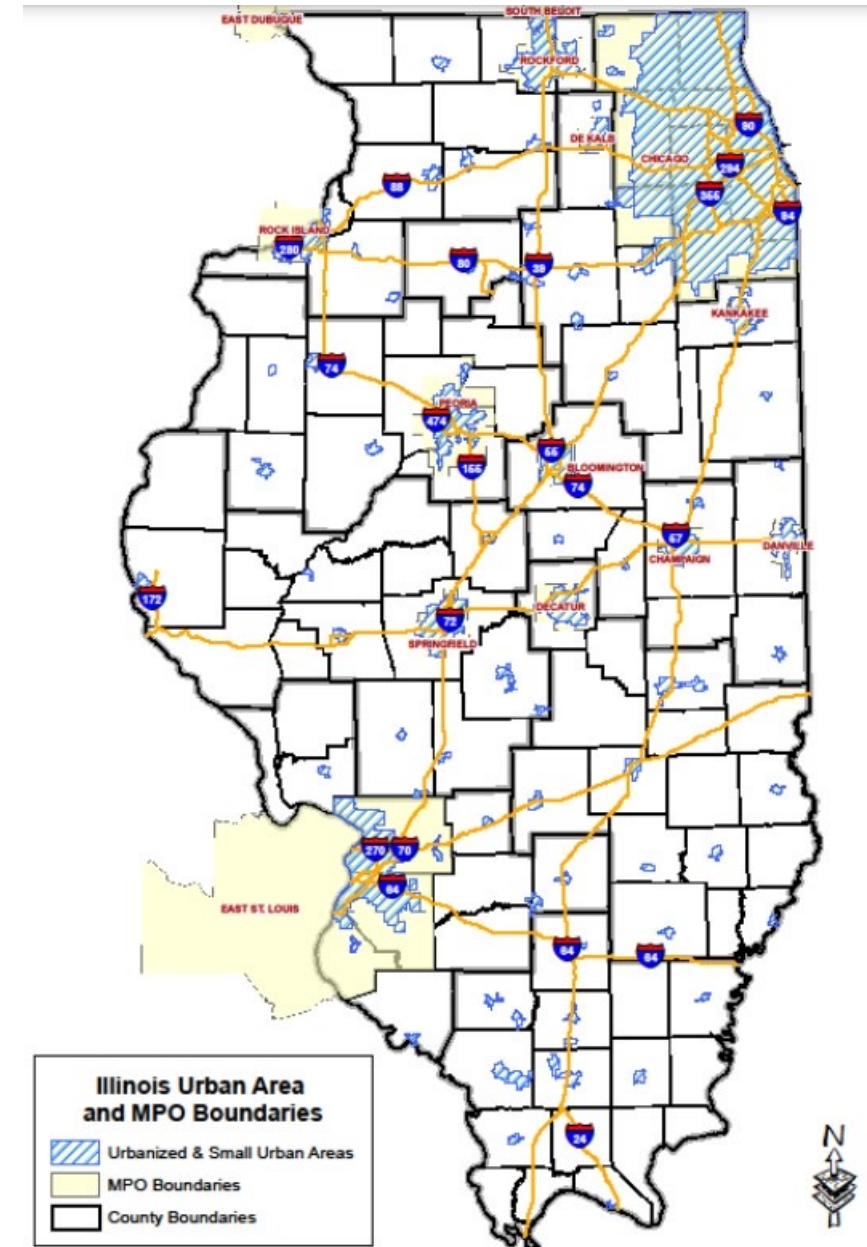
Application Submission to CFC or CRTI

Evaluation of Carbon Credits+™

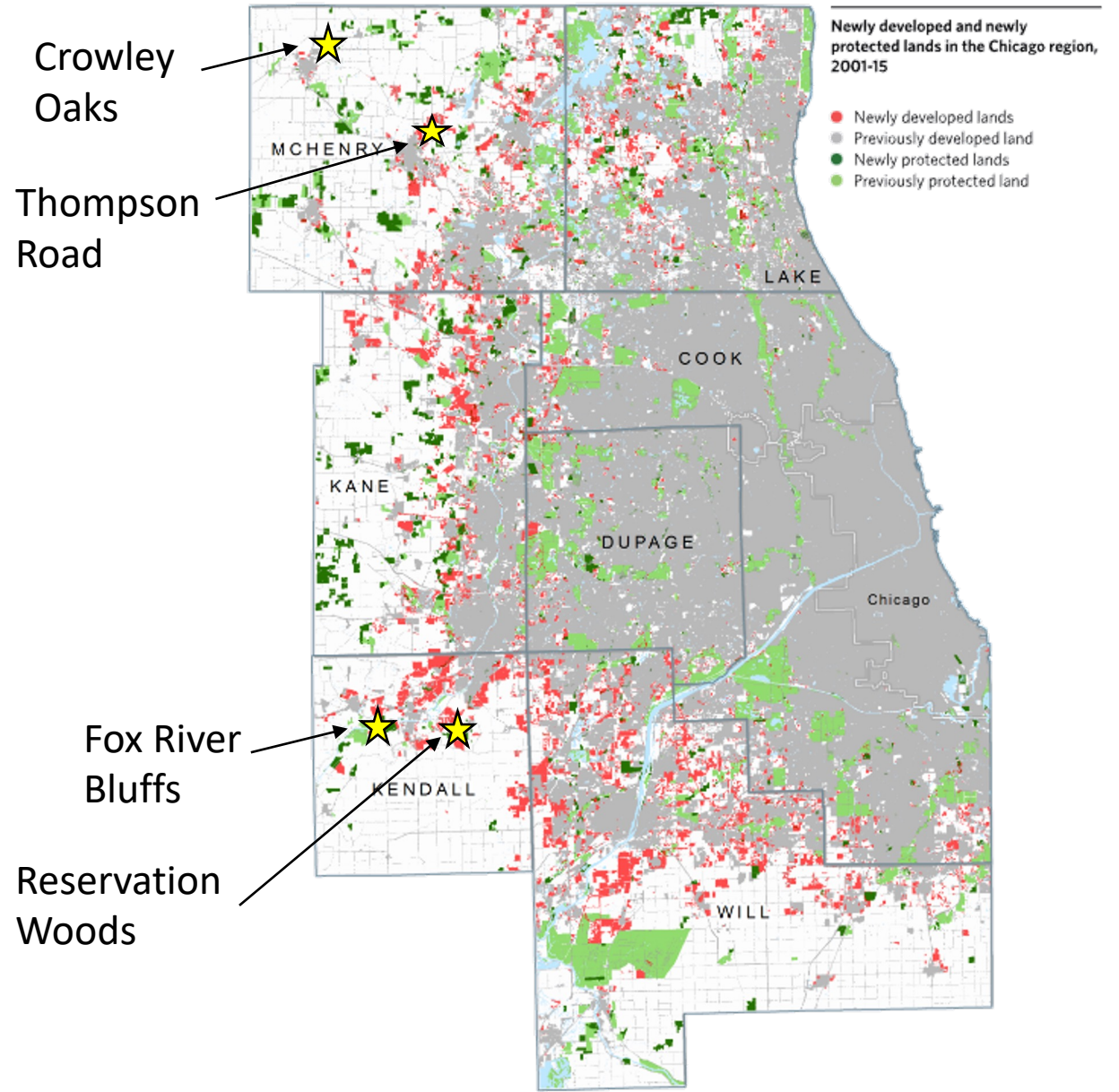
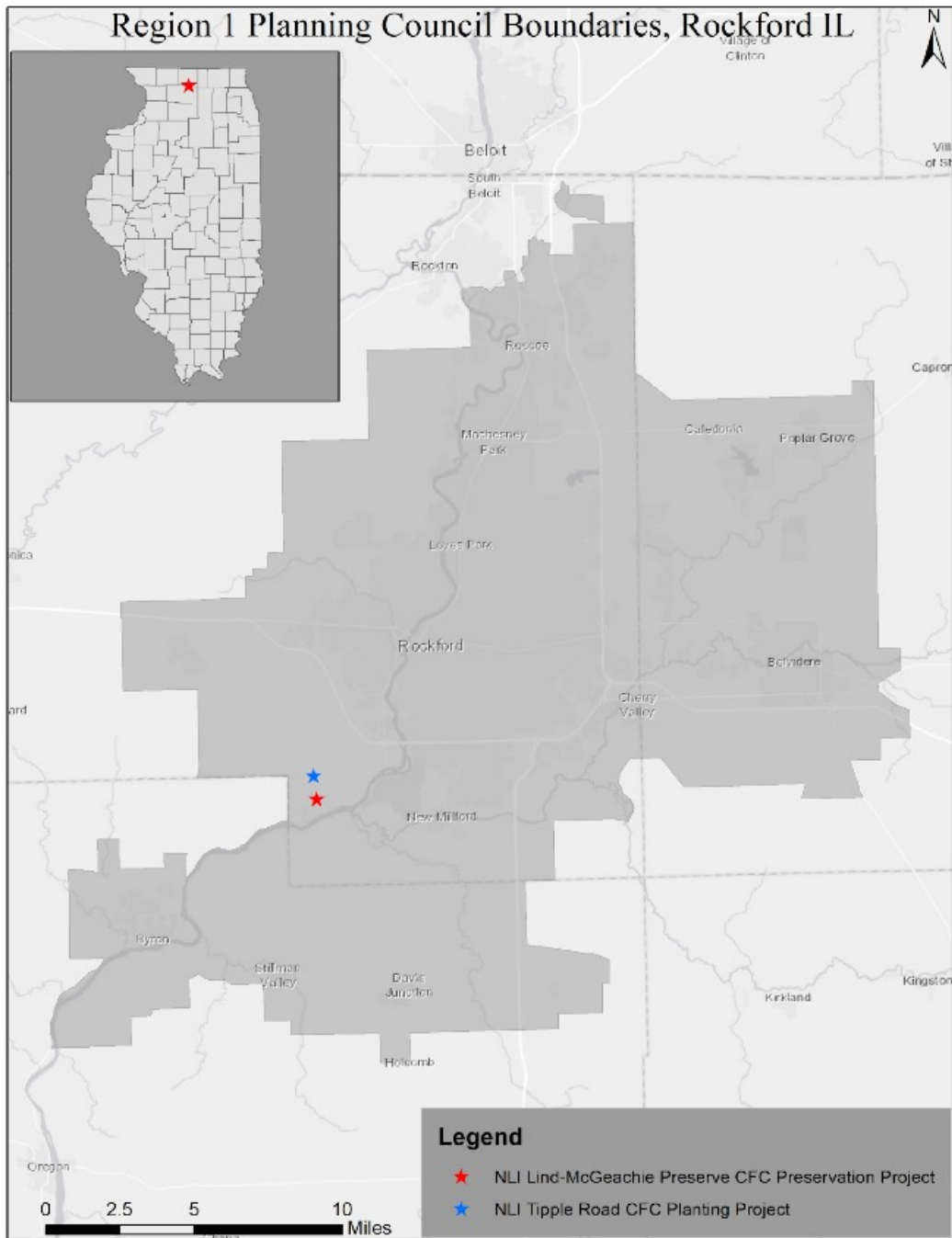
Completion of Third-Party Certification

# CFC Project Eligibility

- The project location must meet one of six qualifying criteria which include being located in or adjacent to a municipality or located in an Urban Area or a regional metro planning area such as CMAP and the Region 1 Planning Council around Rockford.
- Under threat of conversion to non-forest use, with at least 30% of surrounding land uses non-forest/developed uses that can include agricultural land
- Not yet protected
- Acquired within the last two 2 years



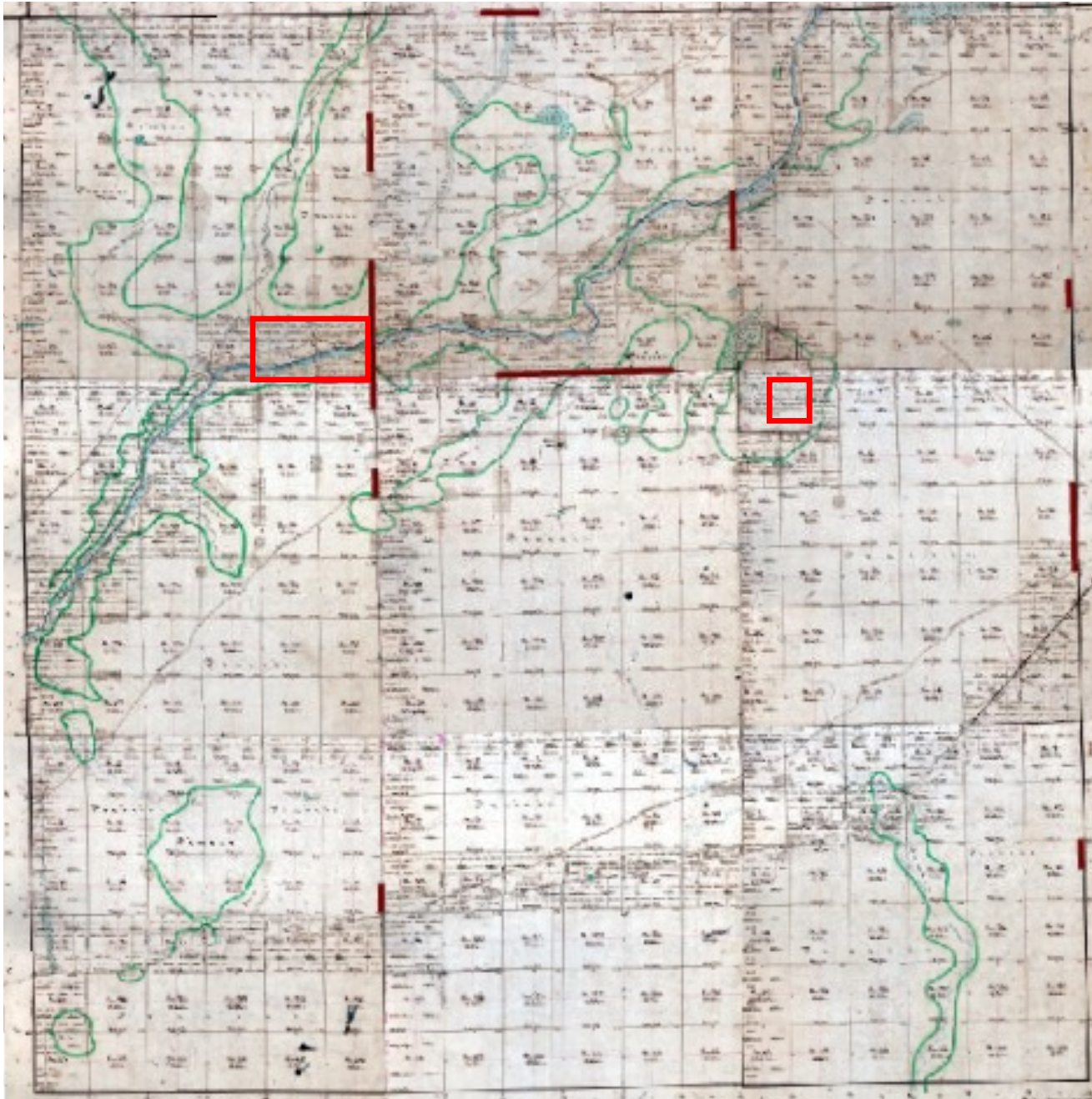




Chicago Metropolitan Agency for Planning

# 2022 CRCP Carbon Projects

Organization	Project Type	Project Name	Credit Total	Estimated Revenue @ \$34/credit
City of Highland Park	Planting	Urban Forest Rejuvenation	160 in 2023 1,604 over 26 years	\$5,440 (in 2023) %54,536 (lifetime)
Village of Mt. Prospect	Planting	Village of Mount Prospect Planting Project 2022	284 in 2023 2,845 over 26 years	\$9,656 (in 2023) \$96,730 (lifetime)
Land Conservancy of McHenry County	Preservation	Thompson Road Oak Woods	6,897	\$234,498
Land Conservancy of McHenry County	Preservation	Crowley Oaks Conservation Area	7,709	\$262,106
Kendall County Forest Preserve District	Preservation	Reservation Woods	2,082	\$70,788
Natural Land Institute	Preservation	Fitzgerald Road	3,230	\$109,820



## Case Study 1: Fox River Bluffs Cropland Conversion Project

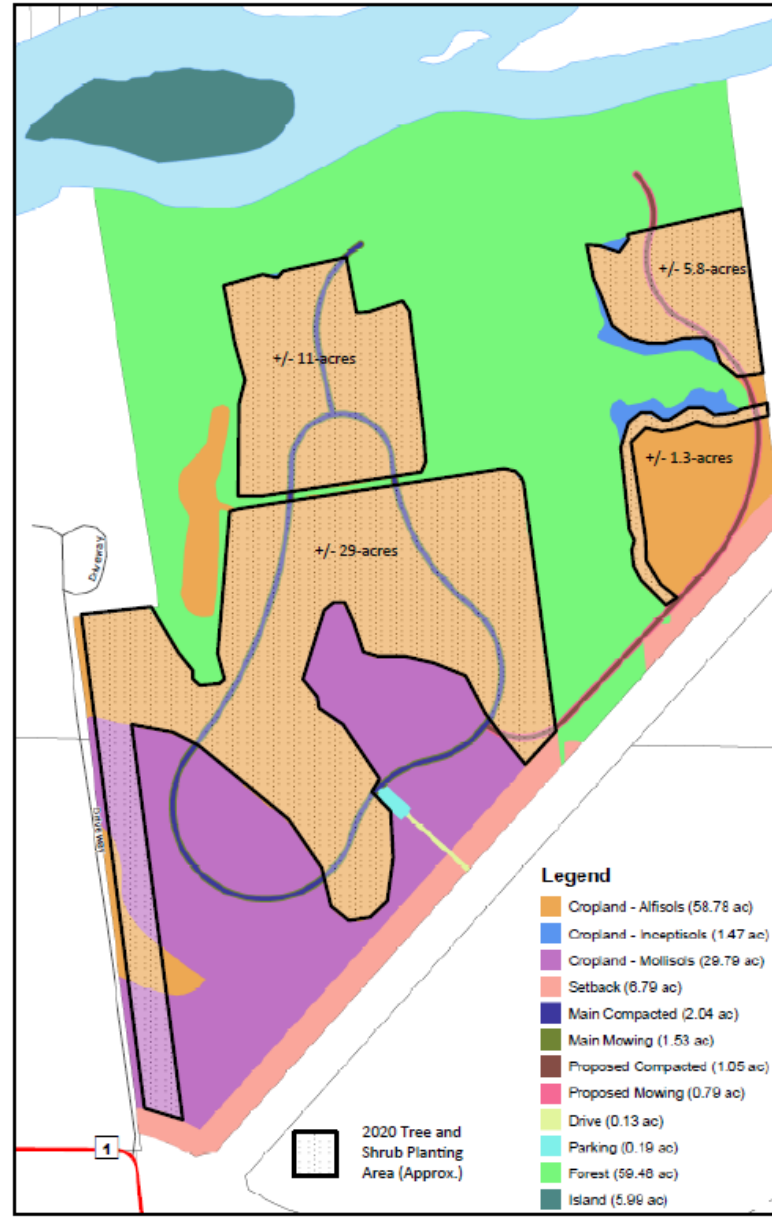
# Fox River Bluffs—2020 Cropland Conversion Project

## Tree and Shrub Planting Footprint and Soil Types Map

1939



2022

















Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271 www.dnr.illinois.gov

JB Pritzker, Governor Colleen Callahan, Director

SPECIES	# WANTED
Shagbark Hickory	5,000
Black Walnut	1,200
Bur Oak	6,500
Red Oak	6,500
Hazelnut	2,000
Elderberry	300
Pin Oak	1,500
Swamp White Oak	2,000
White Oak	2,000
Black Oak	3,000
American Plum	1,000
<b>TOTAL</b>	<b>31,000</b>

INVOICE  
Inv. #00255  
February 27, 2020

SOLD TO: Kendall County Forest Preserve District  
110 W Madison St  
Yorkville, IL 60560

SPECIES	# WANTED	PRICE/EACH	TOTAL
Shagbark Hickory	5,000	\$0.50/ea	\$ 2,500.00
Black Walnut	1,200	\$0.50/ea	\$ 600.00
Bur Oak	6,500	\$0.50/ea	\$ 3,250.00
Red Oak	6,500	\$0.50/ea	\$ 3,250.00
Hazelnut	2,000	\$0.35/ea	\$ 700.00
Elderberry	300	\$0.35/ea	\$ 105.00
Pin Oak	1,500	\$0.50/ea	\$ 750.00
Swamp White Oak	2,000	\$0.50/ea	\$ 1,000.00
White Oak	2,000	\$0.50/ea	\$ 1,000.00
Black Oak	3,000	\$0.50/ea	\$ 1,500.00
American Plum	1,000	\$0.35/ea	\$ 350.00
<b>TOTAL</b>	<b>31,000</b>		<b>\$ 15,005.00</b>

Please make checks payable to:  
Illinois Department of Natural Resources  
Please remit to:  
Mason State Nursery  
FEIN #37-1349602(6156701)  
17855 N. County Rd. 2400E, Topeka, IL 61567  
Thank you for your order!

**Table 1: Tree and shrub stock**

<b>Species</b>	<b># per Acre</b>	<b>Total over 40-Acres</b>
Bur Oak	135	5,417
Red Oak	135	5,417
Shagbark Hickory	104	4,167
Black Oak	63	2,500
White Oak	42	1,667
Swamp White Oak	42	1,667
Pin Oak	31	1,250
Black Walnut	25	1,000
American Plum	21	832
<b>TOTALS</b>	<b>598</b>	<b>23,917</b>







DECEMBER 14, 2020 | LUCY WEIHER

## Ecology Club brings awareness to prominent environmental issues







United States Department of Agriculture

Forest Service

Northeastern Research Station

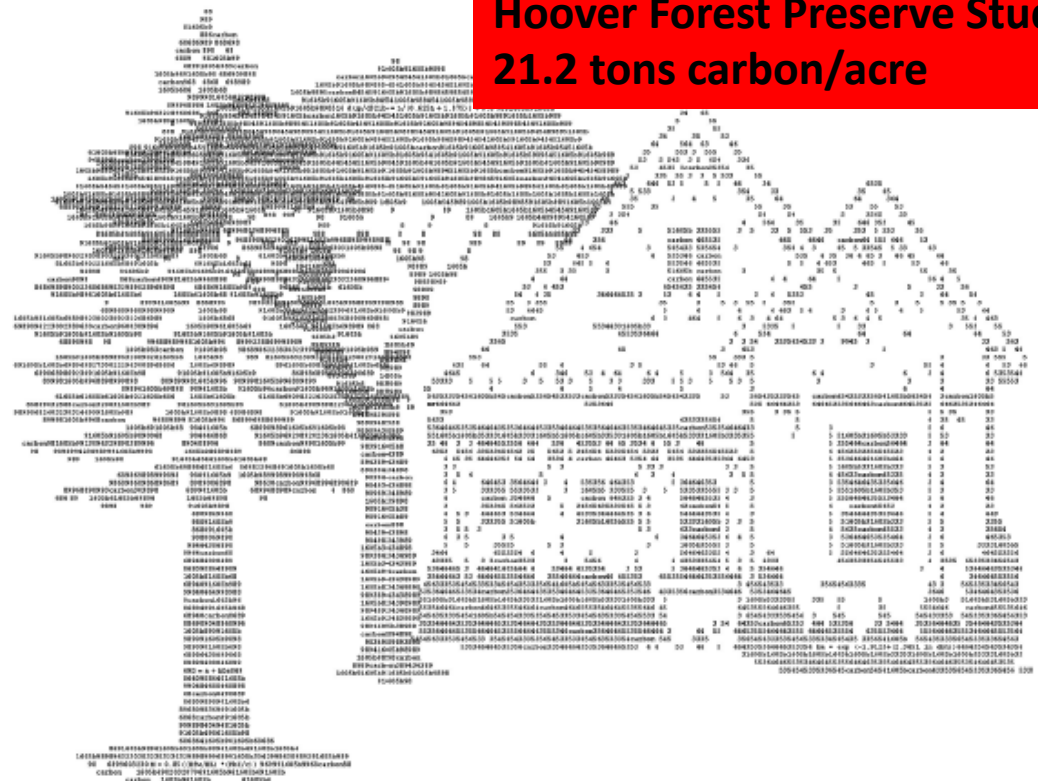
General Technical Report NE-343



# Methods for Calculating Forest Ecosystem and Harvested Carbon with Standard Estimates for Forest Types of the United States

James E. Smith  
Linda S. Heath  
Kenneth E. Skog  
Richard A. Birdsey

**Hoover Forest Preserve Study  
21.2 tons carbon/acre**



B10.— Regional estimates of timber volume and carbon stocks for oak-hickory stands with afforestation of land in the Northern Lake States

Age	Mean volume	Mean carbon density						
		Live tree	Standing dead tree	Under-story	Down dead wood	Forest floor	Soil organic	Total nonsoil
years	m <sup>3</sup> /hectare	tonnes carbon/hectare						
0	0.0	0.0	0.0	2.1	0.0	0.0	72.8	2.1
5	0.0	6.7	0.7	2.2	0.5	0.9	73.1	11.0
15	4.1	17.0	1.7	2.0	1.3	2.5	74.9	24.5
25	21.9	33.6	3.1	1.9	2.6	3.9	78.2	45.0
35	42.5	50.3	3.6	1.8	3.9	5.2	82.2	64.8
45	64.9	66.7	3.9	1.8	5.2	6.3	86.3	83.9
55	88.7	83.6	4.2	1.8	6.5	7.2	89.9	103.3
65	113.4	99.1	4.5	1.7	7.7	8.1	92.6	121.1
75	139.0	114.7	4.7	1.7	8.9	8.9	94.5	138.9
85	165.2	130.3	4.9	1.7	10.1	9.7	95.8	156.7
95	192.1	146.0	5.1	1.7	11.3	10.3	96.4	174.4
105	219.2	161.6	5.3	1.7	12.5	10.9	96.8	192.0
115	246.4	177.0	5.4	1.6	13.7	11.5	97.0	209.2
125	272.5	191.6	5.5	1.6	14.8	12.0	97.1	225.6
years	m <sup>3</sup> /acre	tonnes carbon/acre						
0	0	0.0	0.0	0.8	0.0	0.0	29.5	0.8
5	0	2.7	0.3	0.9	0.2	0.4	29.6	4.4
15	58	6.9	0.7	0.8	0.5	1.0	30.3	9.9
25	313	13.6	1.2	0.8	1.0	1.6	31.6	18.2
35	608	20.4	1.4	0.7	1.6	2.1	33.3	26.2
45	928	27.0	1.6	0.7	2.1	2.5	34.9	33.9
55	1,267	33.8	1.7	0.7	2.6	2.9	36.4	41.8
65	1,620	40.1	1.8	0.7	3.1	3.3	37.5	49.0
75	1,986	46.4	1.9	0.7	3.6	3.6	38.3	56.2
85	2,361	52.7	2.0	0.7	4.1	3.9	38.7	63.4
95	2,745	59.1	2.1	0.7	4.6	4.2	39.0	70.6
105	3,133	65.4	2.1	0.7	5.1	4.4	39.2	77.7
115	3,521	71.6	2.2	0.7	5.5	4.7	39.2	84.7
125	3,895	77.5	2.2	0.7	6.0	4.9	39.3	91.3



**Total Credits Issued to the Project, tCO2e:**

**5,076.80**

**Note: (GTR B-10 live tree biomass 46.5 tCO2e + 16.9 tCO2e non-soil) x 40 acres - 5% Buffer Pool**

**Credit Schedule**

*After Planting (10% of Credits)*

507.68

*After Year 3 (40% of Credits)*

2,030.72

*After Year 5 (30% of Credits)*

1,523.04

*Remaining Credits at Year 25*

1,015.36

**Credit Sub-total**

**5,076.80**

**Price Per Credit:**

**\$ 30.00**

133.60 tCO2e/ac (46.5 live tree above & below ground + 16.9 tCO2e non-s

5,344.00 Total Estimated Credits (133.6 tCO2e/ac X 40 acres)

267.20 Less 5% of Total

**5,076.80** Total Credits to be Issued to the Project

## Example Single Tree Planting Project

### Summary of Revenue and Expenses

	<i>Launch</i>	<i>After Planting</i>	<i>After Year 3</i>	<i>After Year 5</i>	<i>At Year 25</i>	<b>Total</b>
<b>Revenue</b>						
<i>After Planting (10% of Credits)</i>		\$ 15,230.40				\$ 15,230.40
<i>After Year 3 (40% of Credits)</i>			\$ 60,921.60			\$ 60,921.60
<i>After Year 5 (30% of Credits)</i>				\$ 45,691.20		\$ 45,691.20
<i>Remaining Credits at Year 25</i>					\$ 30,460.80	\$ 30,460.80
<b>Project Gross Revenue</b>	<b>\$ -</b>	<b>\$ 15,230.40</b>	<b>\$ 60,921.60</b>	<b>\$ 45,691.20</b>	<b>\$ 30,460.80</b>	<b>\$ 152,304.00</b>
<b>Expenses</b>						
<i>CFC Application Fee</i>	\$ 1,000.00					\$ 1,000.00
<i>CFC Credit Sales Fee (\$2/credit)</i>		\$ 1,015.36	\$ 4,061.44	\$ 3,046.08	\$ 2,030.72	\$ 10,153.60
<i>Third-Party Verification Fee</i>		\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00	\$ 1,000.00
<i>CFC Registry Account Fee</i>		\$ 500.00				\$ 500.00
<b>Total Expenses</b>	<b>\$ 1,000.00</b>	<b>\$ 1,765.36</b>	<b>\$ 4,311.44</b>	<b>\$ 3,296.08</b>	<b>\$ 2,280.72</b>	<b>\$ 12,653.60</b>
<b>Net Income (or loss)</b>	<b>\$ (1,000.00)</b>	<b>\$ 13,465.04</b>	<b>\$ 56,610.16</b>	<b>\$ 42,395.12</b>	<b>\$ 28,180.08</b>	<b>\$ 139,650.40</b>



ENVIRONMENT

## Two groups want to put focus on carbon credits from urban forests

October 4, 2022 · 4:11 PM ET

Heard on *All Things Considered*

BELLAMY PAILTHORP



FROM



**3-Minute Listen**

+ PLAYLIST



Carbon credits for urban forests by a Seattle nonprofit recently got some of the highest prices ever. The buyer hopes it's the start of a new marketplace that will fetch more from smaller projects.

**Transcript**

MARY LOUISE KELLY, HOST:

# City Forest Credits Case Study

*This project is part of the Chicago Region Carbon Program (CRCP)*

*supervised by the Chicago Region Trees Initiative.*

Prairie State Conservation Coalition

March, 2023

NATURAL  
LAND  
INSTITUTE  
Conserving Land  
in Northern Illinois



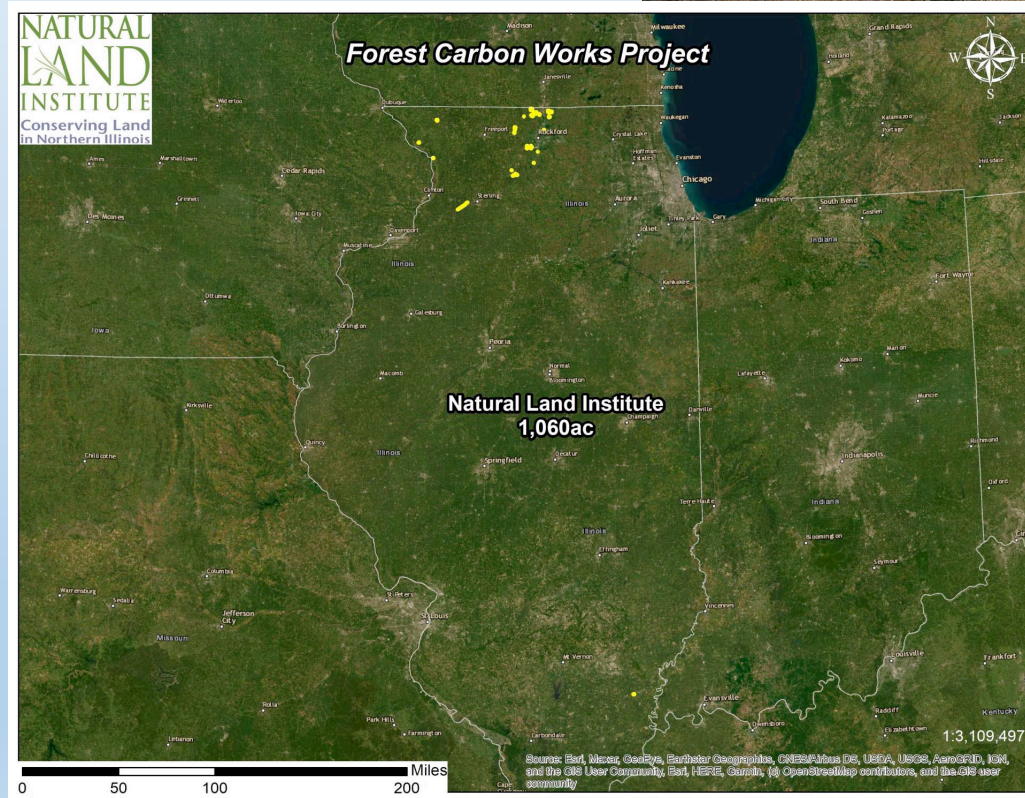
# Why is NLI pursuing carbon credits?

- NLI's board wanted to explore several funding options for creating a sustainable land stewardship fund
- Begin to create and grow a fund for land acquisition as grant funds are disappearing
- Provide a mechanism of financial incentives to private landowners who want conservation easements with a way to fund their restoration activities

## Other Benefits include:

- Social equity, health, urban heat, bird and pollinator, and other human and community benefits
- Quantifying ecosystem values in the form of stormwater reduction, improved air quality, and energy savings from cooling and heating impacts

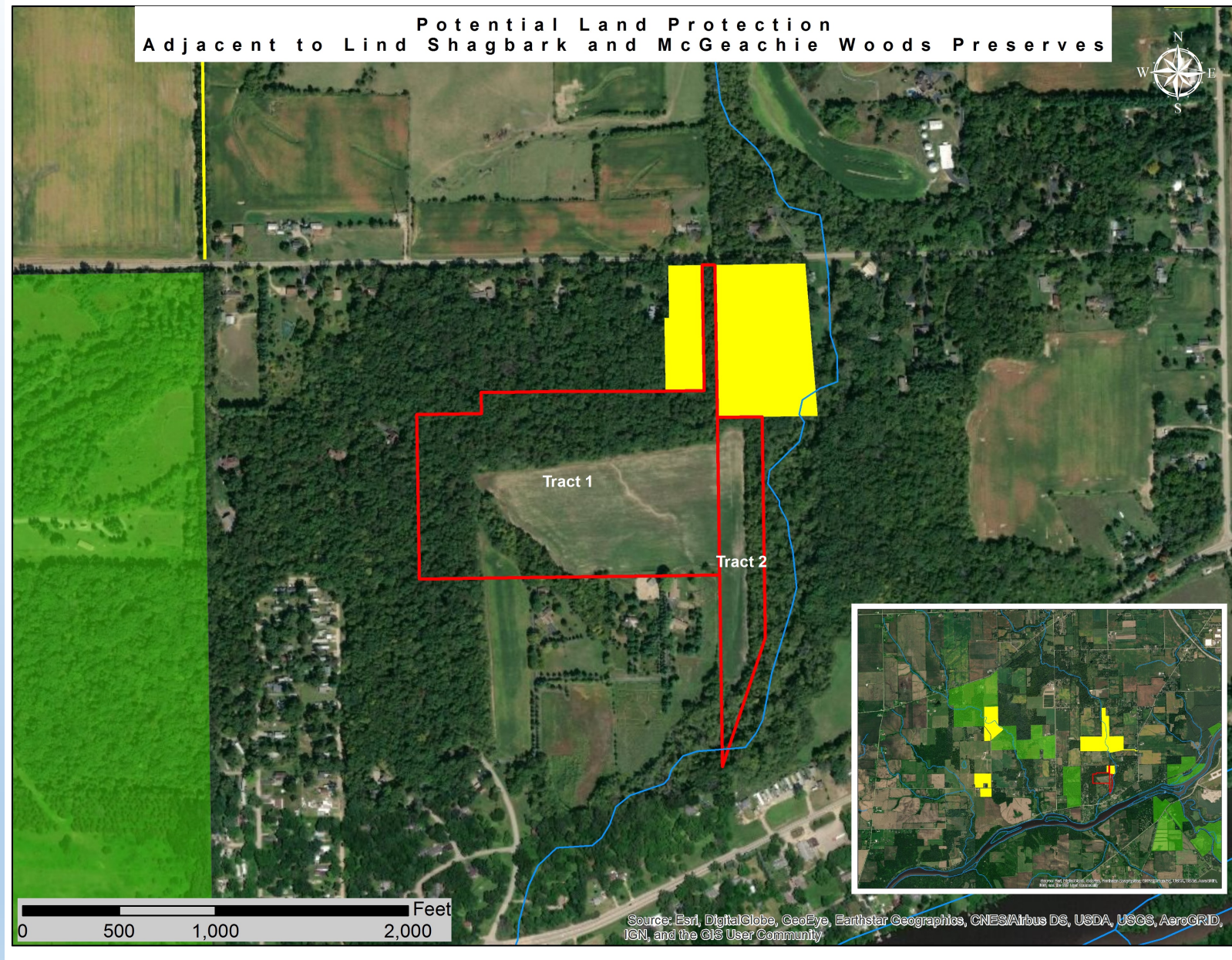
Fitzgerald Rd. is NLI's pilot project and we are also exploring other carbon credit programs that do not have the urban area requirement, such as Forest Carbon Works.



CFC is an independent non-profit carbon Registry.

# NLI Case Study: Fitzgerald Road Site City Forest Credits

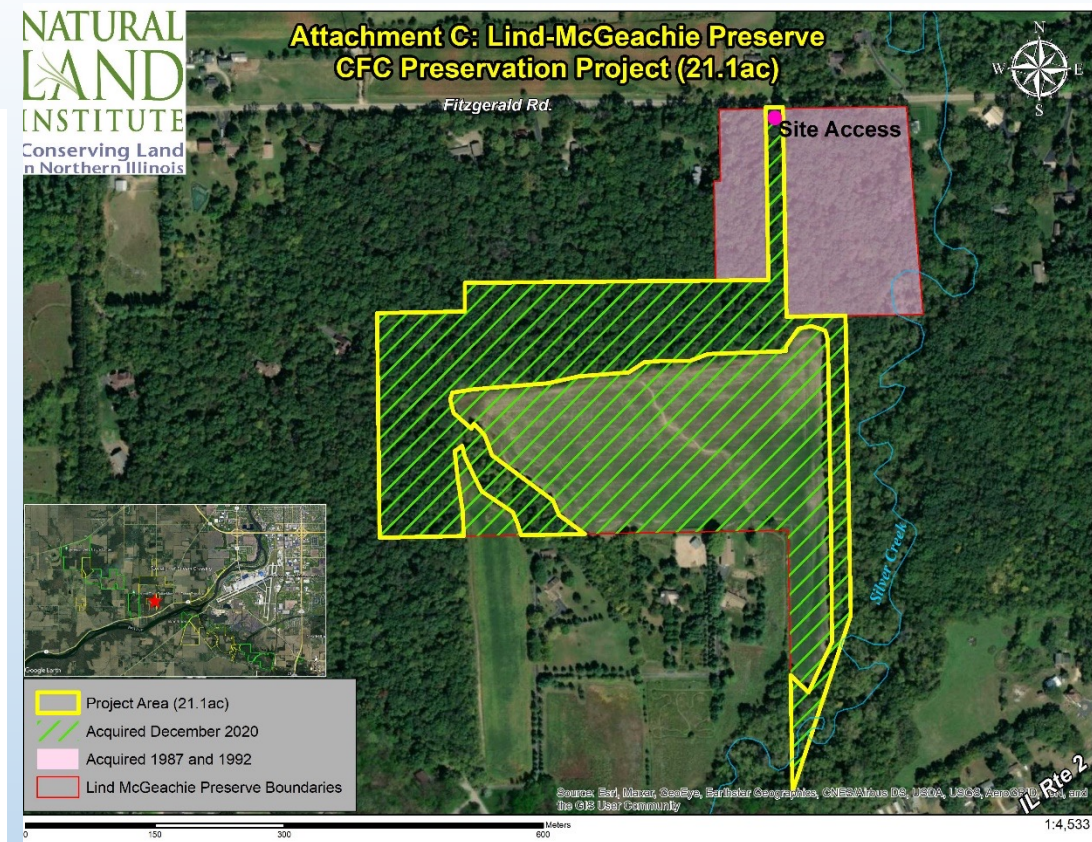
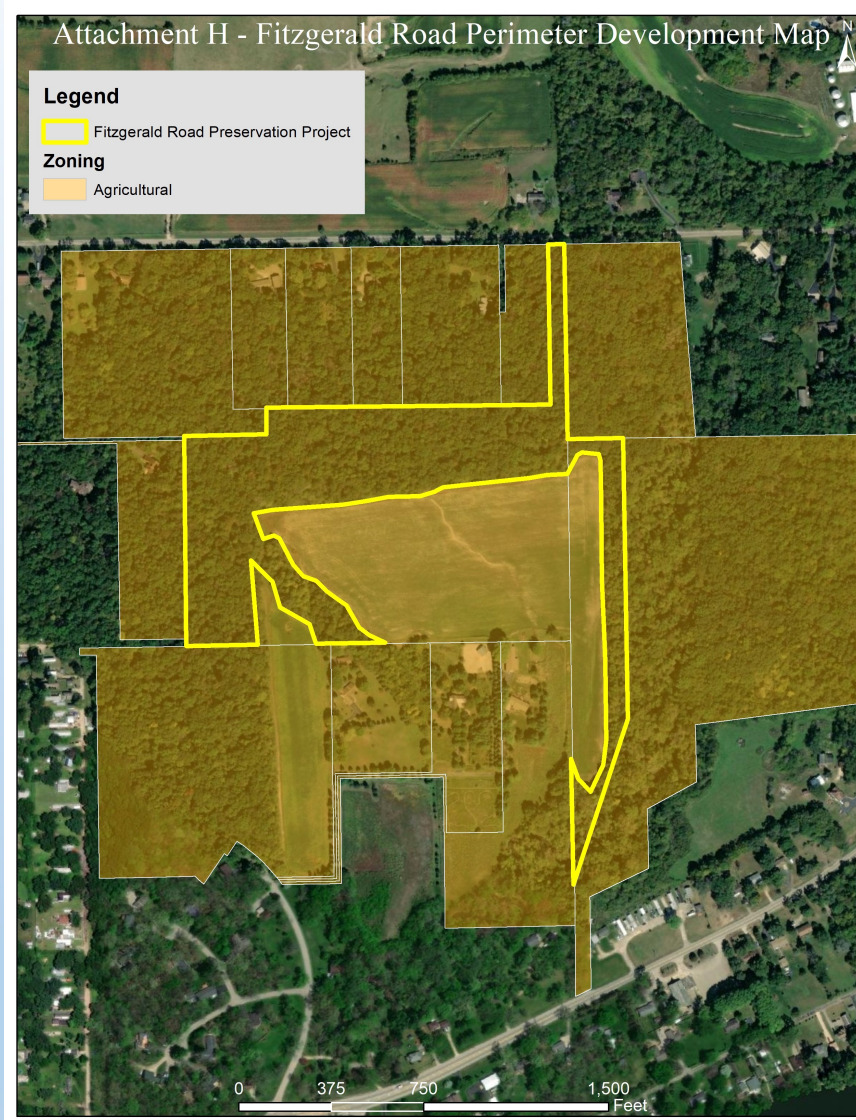
- Purchased the 42 acre Fitzgerald Road tracts in 2020
- Connected and expanded the Lind-McGeachie sites into one preserve
- Part of a complex of protected lands



# Project Site

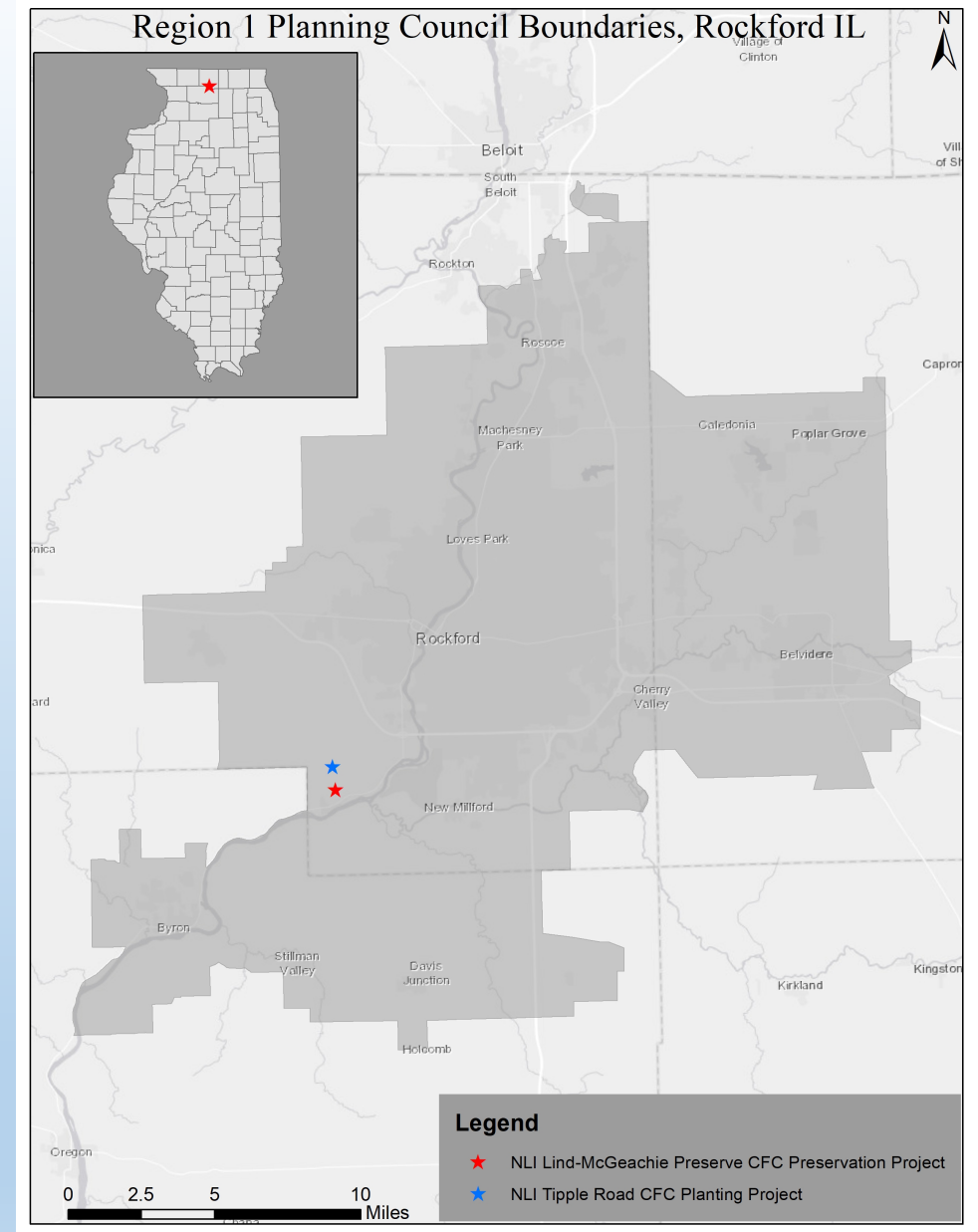
There are 9 acres of mature, ~150 year old trees in the northern portion, 7.85 acres of ~95 year old trees mainly in the western portion and 4.25 acres in the west and eastern portions of ~75 year old trees

Identified as “Critical/Sensitive Area” for “Priority Acquisition” in the 2015 Greenways Plan for Boone and Winnebago County



# CFC Project Eligibility

- Located in the Region 1 Planning Council (R1PC) of Rockford and surrounding area (Urban designation; 1 of 6 criteria to choose from)
- Under threat of agricultural and residential development
- Not yet protected
- Acquired within the last two 2 years





# Preparation of Application Documents

- About 40 hours of staff time plus map making by David Holman (Jill getting)

## City Forest Carbon Project Social Impacts



## Fitzgerald Road Preservation Project Project Design Document

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- Project Area: 21.1 forested, developable acres
- Forest: Oak Hickory, 91.4% canopy cover
  - The urban forest of Fitzgerald Road has an estimated 2,985 trees with a tree cover of 91 percent. The three most common species are Black cherry (22.6 percent), Shagbark hickory (19.2 percent), and American elm (18.5 percent).
- Zoning: Agricultural Priority 'AG'
- Carbon+ Credits (tons CO<sub>2</sub>(e)):
  - 3,589 credits attributed to project
  - 359 credits for Registry Reversal Pool
  - 3,230 credits issued to project

## Ecosystem Services

### Co-Benefit Estimates – Per Year

Ecosystem Services	Resource Units Totals	Total \$
Rainfall Interception (m <sup>3</sup> /yr)	5,220.8	\$37,380.32
Air Quality (t/yr)	0.2185	\$329.00
Cooling – Electricity (kWh/yr)	41,098	\$3,119.34
Heating – Natural Gas (kBtu/yr)	768,462	\$7,480.81
<b>Grand Total (\$/yr)</b>		<b>\$48,309.48</b>



# Board Approval

Total Credits Issued to the Project, tCO2e: 3,230

Total Additional Growth Credits (Year 20): 2,871

Total Additional Growth Credits (Year 40): 2,871

credit sales may be standardized and automated in the future so that this labor intensive, manual process is replaced by something easier and cheaper.

Pro Forma Income Statement - Preliminary Estimate					
<i>Assumptions: Year 1 sale at \$35 per credit; year 20 sale at \$75 per credit; year 40 sale at \$125 per credit</i>					
	Year 1	Year 20	Year 40	Total	
<b>Revenue</b>					
Year 1	\$109,820.00				\$109,820.00
Year 20		\$215,325.00			\$215,325.00
Year 40			\$358,875.00		\$358,875.00
<b>Project Gross Revenue</b>	<b>\$109,820.00</b>	<b>\$215,325.00</b>	<b>\$358,875.00</b>		<b>\$684,020.00</b>
<b>Expenses</b>					
CFC Application Fee	\$ 1,500.00				\$ 1,500.00
CFC Credit Issuance Fee	\$ 10,982.00	\$ 21,532.50	\$ 35,887.50		\$ 68,402.00
Validation and Verification Fee	\$ 3,000.00				\$ 3,000.00
CFC Registry Ledger Account Fee	\$ 1,000.00				\$ 1,000.00
Credit Sales Fee @ 6%	\$ 6,783.00	\$ 12,919.50	\$ 21,532.50		\$ 41,235.00
Project Operator Staff Time <i>(includes monitoring over time)</i>	\$ 2,134.00	\$ 10,000.00	\$ 10,000.00		\$ 22,134.00
<b>Total Expenses</b>	<b>\$ 25,399.00</b>	<b>\$ 44,452.00</b>	<b>\$ 67,420.00</b>		<b>\$ 137,271.00</b>
<b>Net Income (or loss)</b>	<b>\$ 84,421.00</b>	<b>\$170,873.00</b>	<b>\$291,455.00</b>		<b>\$ 546,749.00</b>

# Monitoring Requirements

- Due every 3 years at anniversary of the Third-Party Verification Report.
- Must include imaging. If imaging shows net tree loss of greater than 8% of canopy, CFC requires further investigation.
- This is a public document posted on the CFC Registry.



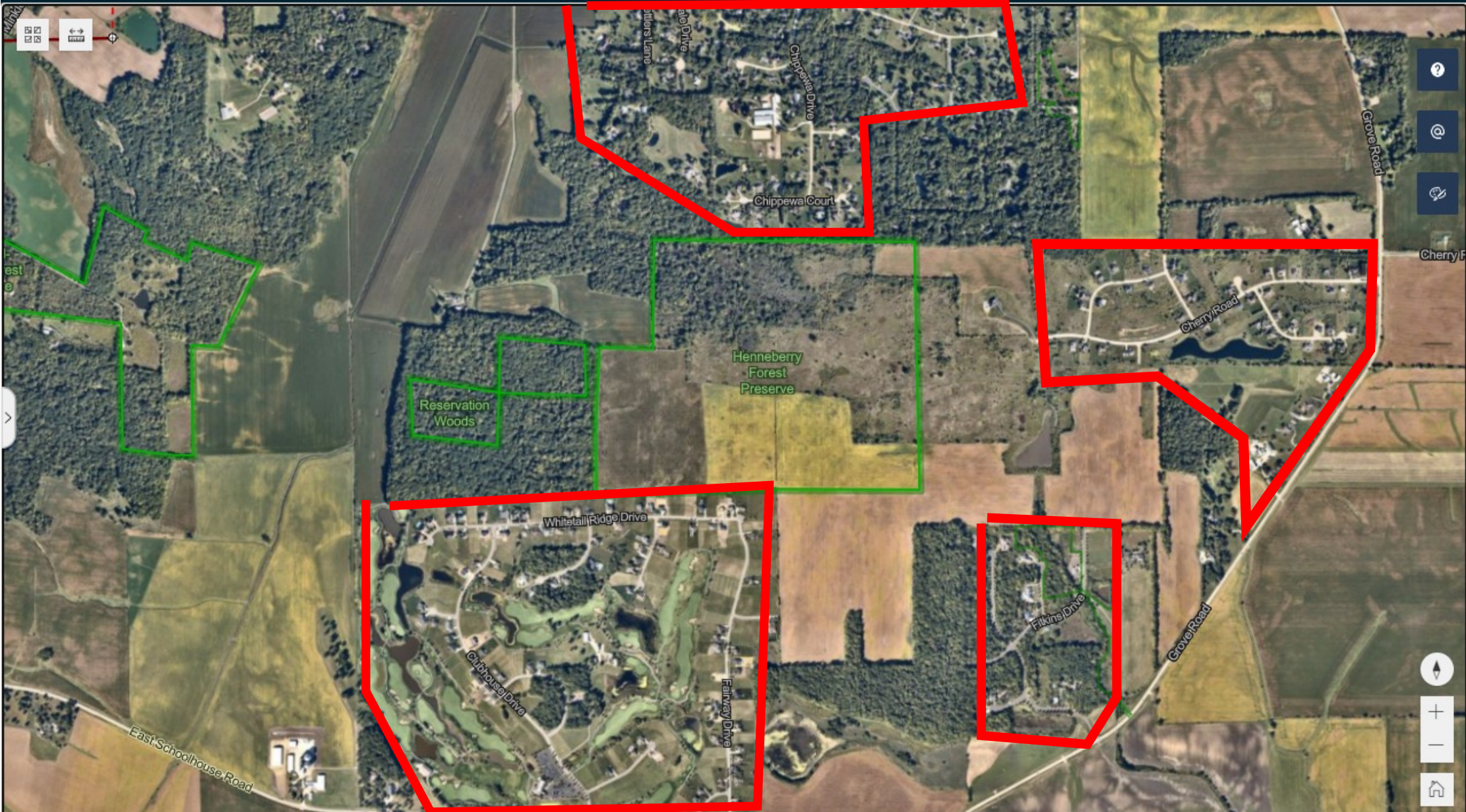


## Case Study 2: Reservation Woods Acquisition Project (10.0869-acres)





# Increasing Threats from Residential Development







Corporate Headquarters  
295 South Water Street  
Kent, OH 44240  
800-828-8312

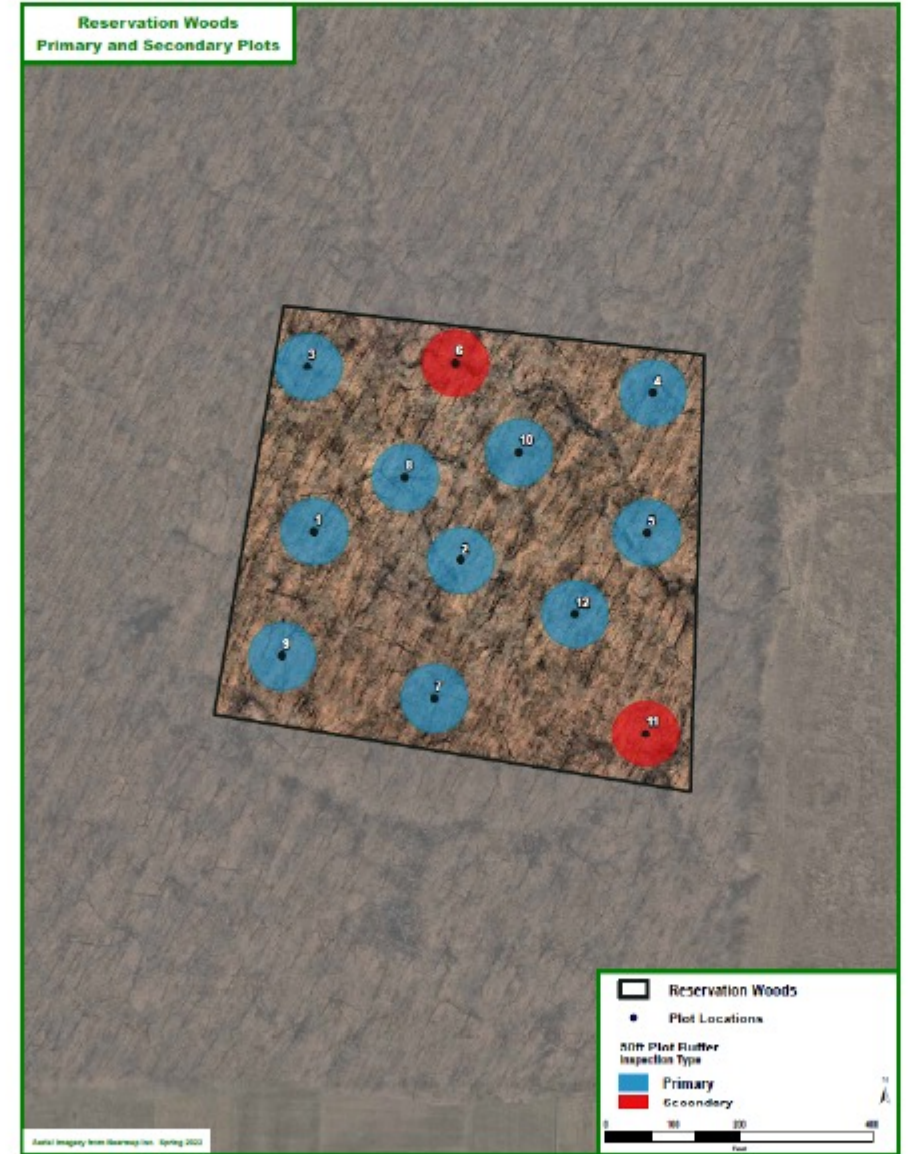
Local Office  
2727 IL 53  
Long Grove, IL 60047  
414-517-1695

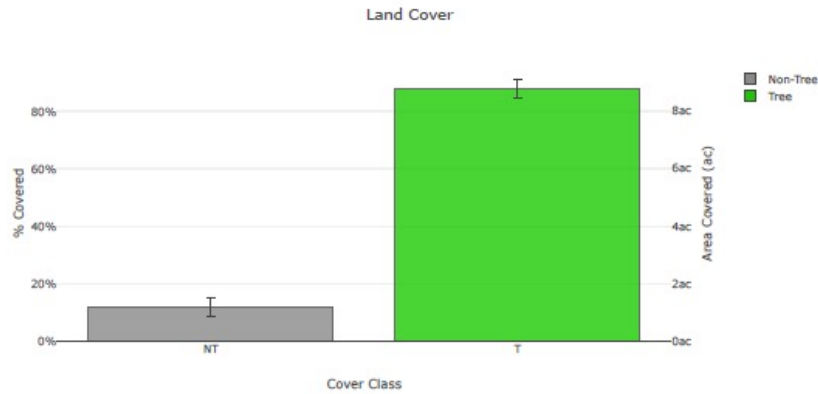
**Project Operator:** Kendall County Forest Preserve District  
**Project Name:** Reservation Woods  
**Project Location:** Kendall County, IL  
**Date:** 10/14/2022

Carbon Quantification Summary	Protocol Section	Supplemental information/notes
10.0869 Total Project Area Acres		Project area for all parcels enrolled in carbon project
57.16 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. Carbon stock taken from i-Tree Eco (664.52 ± 87.96 tC).
209.89 Biomass tCO2e/ac	11.1.B	
2,114 Accounting Stock, tCO2e	11.1.B	
90% Fraction at risk of tree removal	11.2	Based on zoning - see 11.2 in preservation protocol
1,903 Avoided Biomass Emissions, tCO2e	11.2	
90% Avoided impervious surface, percent	11.4	Based on zoning - see 11.4 in preservation protocol
9 Avoided impervious surface, acres	11.4	
1,089 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
348 Displaced Biomass Emissions, tCO2e		
330 Displaced Soil Emissions		Assumes that redevelopment causes increase in impervious surface on redeveloped parcels
1,554 Credits from Avoided Biomass Emissions, tCO2e		
759 Credits from Avoided Soil Emissions, tCO2e		
2,314 Total Credits attributed to the project, tCO2e		

Carbon Credit Calculation - CFC 11.1.B

## Attachment A Reservation Woods Plot Map





Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (ac) ± SE
NT	Non-Tree	All other surfaces	12	12.00 ± 3.25	1.20 ± 0.32
T	Tree	Tree, non-shrub	88	88.00 ± 3.25	8.78 ± 0.32
<b>Total</b>			<b>100</b>	<b>100.00</b>	<b>9.98</b>

Tree Benefit Estimates: Carbon (English units)

Description	Carbon (T)	±SE	CO <sub>2</sub> Equiv. (T)	±SE	Value (USD)	±SE
Sequestered annually in trees	11.09	±0.41	40.65	±1.50	\$1,891	±70
Stored in trees (Note: this benefit is not an annual rate)	301.06	±11.12	1,103.88	±40.76	\$51,346	±1,896

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<sub>2</sub>, per ac/yr and rounded. Amount stored is based on 34.281 T of Carbon, or 125.697 T of CO<sub>2</sub>, per ac and rounded. Value (USD) is based on \$170.55/T of Carbon, or \$46.51/T of CO<sub>2</sub> 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	7.86	±0.29	\$2	±0
NO2	Nitrogen Dioxide removed annually	120.83	±4.46	\$7	±0
O3	Ozone removed annually	335.75	±12.40	\$77	±3
SO2	Sulfur Dioxide removed annually	13.51	±0.50	\$0	±0
PM2.5	Particulate Matter less than 2.5 microns removed annually	15.87	±0.59	\$156	±6
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	93.57	±3.46	\$135	±5
<b>Total</b>		<b>587.40</b>	<b>±21.69</b>	<b>\$377</b>	<b>±14</b>

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	37.09	±1.37	\$331	±12
E	Evaporation	476.66	±17.60	N/A	N/A
I	Interception	476.66	±17.60	N/A	N/A
T	Transpiration	1,051.23	±38.82	N/A	N/A
PE	Potential Evaporation	4,789.90	±176.88	N/A	N/A
PET	Potential Evapotranspiration	3,248.60	±119.96	N/A	N/A

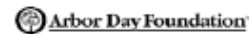
Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in Kgal/ac/yr @ \$/Kgal/yr and rounded:  
 AVRO 4.223 @ \$8.94 | E 54.277 @ N/A | I 54.277 @ N/A | T 119.702 @ 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, Jeffrey 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](#).



<b>REVENUES (EST.)</b>					
Carbon credits issued (pending)	2,082.00	<b>VERIFIED</b>			
Anticipated per credit sale price	<u>\$36.00</u>	Est. - Final TBD			
<b>Gross proceeds</b>	<b>\$74,952.00</b>				
<b>EXPENSES (EST.)</b>					
On-Site Quantification Cost (The Davey Group)	\$0.00	<i>\$3,395.00 offset by a grant from The Morton Arboretum</i>			
Credit Verification Fee (CFC Third-Party Consultant)	\$0.00	<i>\$3,000.00 offset (est.) by a grant from The Morton Arboretum</i>			
McPherson Law Fee (6%)	\$4,497.12				
CFC Credit Issuance Fee (10% of Gross Proceeds less McPherson Law Fee)	<u>\$7,045.49</u>				
<b>Total Expenses</b>	<b>\$11,542.61</b>				
<b>Net Proceeds to District (EST.)</b>	<b>\$63,409.39</b>				



DECLARATION OF DEVELOPMENT RESTRICTIONS

STATE OF ILLINOIS  
COUNTY OF KENDALL  
- FILED -

AUG 16 2022

Grantor: Kendall County Forest Preserve District – Kendall County, Illinois  
110 W. Madison Street Yorkville, IL 60560  
Grantee: Kendall County Forest Preserve District – Kendall County, Illinois  
110 W. Madison Street Yorkville, IL 60560

*Delmi Alliette* COUNTY CLERK  
KENDALL COUNTY

Legal Description:

Sub Lot 50 of Section 1, Township 36 North, Range 7 East of the third principal meridian according to the plat of known as Assessor's Plat of said section, recorded in the Recorder's Office of Kendall County, Illinois, in Plat Book 3, Page 58, situated in the Township of Kendall, Kendall County, Illinois.

AND

Sub Lot 51 of the Southeast Quarter of Section 1, Township 36 North, Range 7 East of the Third Principal Meridian, as shown in Plat Book 2 at Page 1, all in Kendall Township, Kendall County, Illinois.

Assessor's Tax Parcel Identification No(s): Lot 50 PIN# 05-01-400-004 AND Lot 51 PIN# 05-01-400-005

Reference No. of Related Documents: 202200002644 – Special Warranty Deed of Donation

THIS DECLARATION OF DEVELOPMENT RESTRICTIONS (the "DECLARATION") is made this 19<sup>TH</sup> day of July, 2022, by the Kendall County Forest Preserve District, an Illinois municipal government entity ("Declarant"), for the purpose of clarifying the development restrictions on property at Sub Lot 50 of Section 1, Township 36 North, Range 7 East and Sub Lot 51 of Section 1, Township 36 North, Range 7 East in Kendall County, Illinois.

RECITALS

A. Declarant is the owner of certain property in Kendall County, State of Illinois, addressed as the Reservation Woods Parcels (Jaross and Parish) more particularly described in EXHIBIT A attached hereto and incorporated by reference ("Subject Parcels Lot 50 and Lot 51"). Subject shall be referred to as the "Property" hereafter.

B. Declarant purchased the Property from The Conservation Foundation on January 26, 2022.

C. Declarant is a forest preserve district established in 1964 by voter referendum under the provisions of the Illinois Downstate Forest Preserve District Act (70 ILCS 805/).

D. Declarant recognizes the value of the Property's mature forest as a climate asset. The trees on the Property store CO<sub>2</sub>, reduce storm water runoff, improve air quality, provide energy savings from cooling and heating effects, 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 as parking lots, playfields or other uses would seriously impair the climate value of the Property.

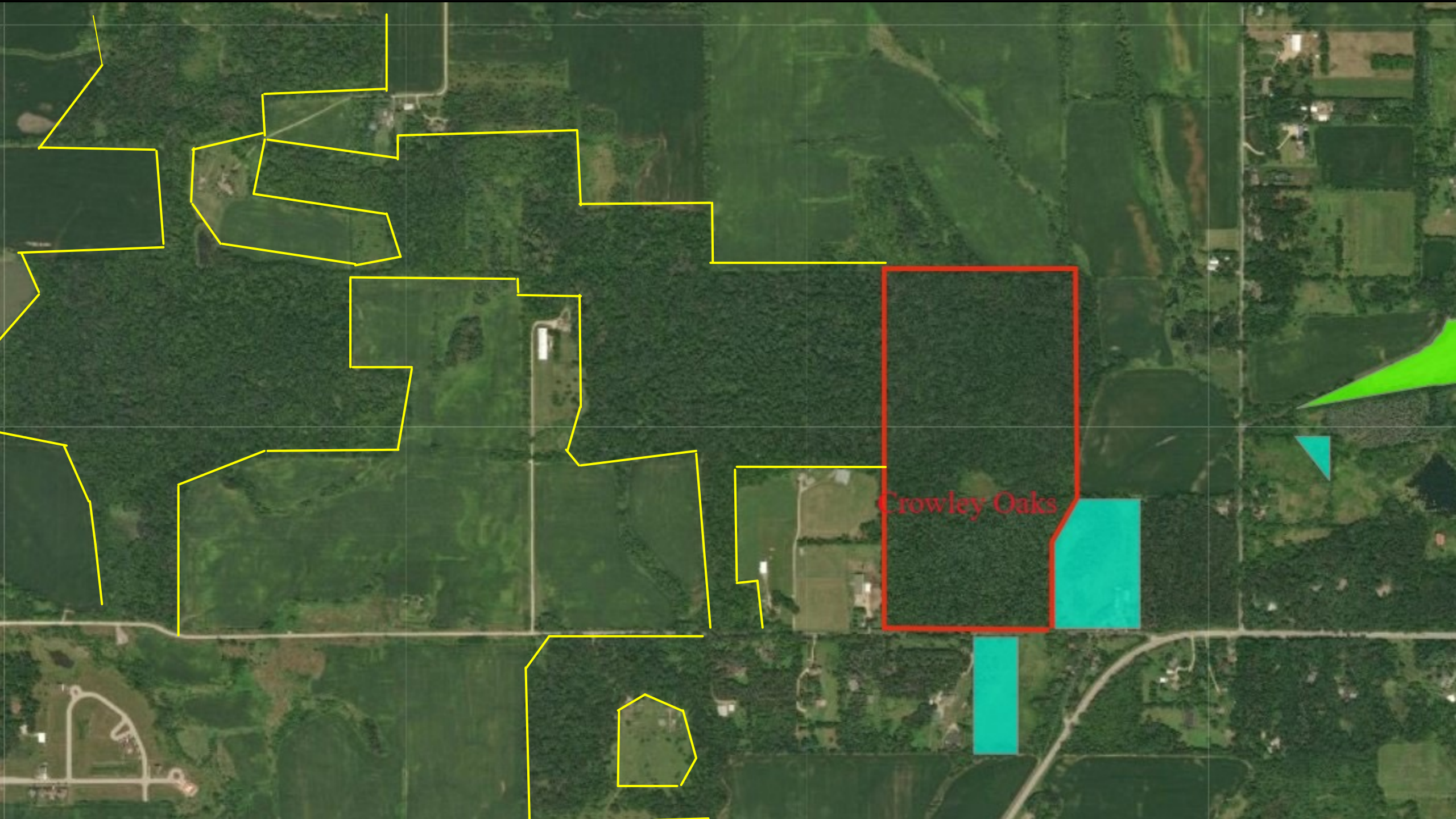


# Case Study

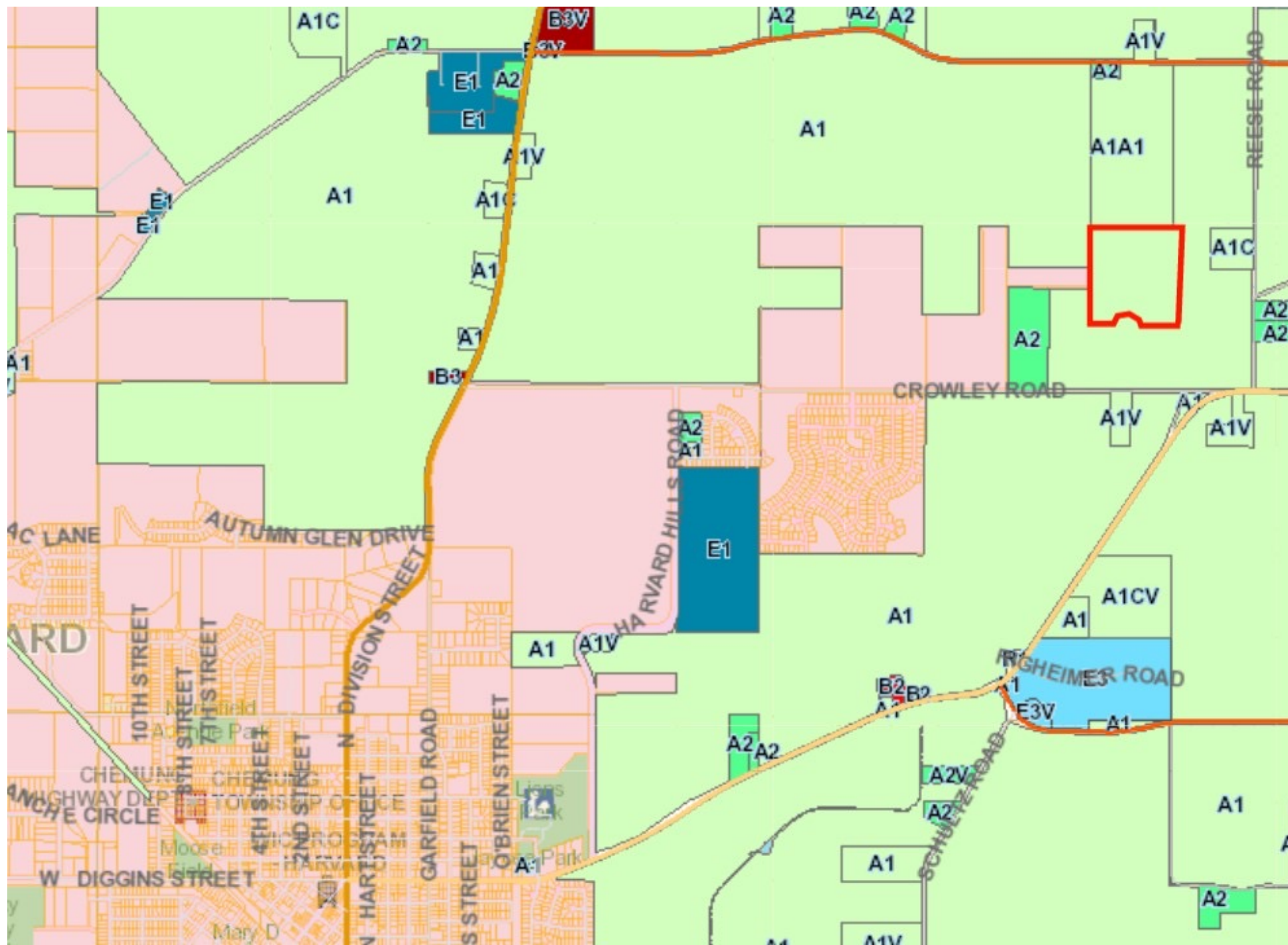


## Crowley Oaks

- **Site:** 45-acre oak-hickory woodland that is part of the largest unprotected remaining oak woods in McHenry County.
- **Goal:** preserve and restore the entire oak woodland complex for the benefit of woodland birds and wildlife
- **Project Impacts:**
  - provide a habitat anchor for several bird species that are considered species of concern (e.g. red-headed woodpecker)
  - Provide recreation opportunities and connect residents to nature
  - Protect woodland habitat and prevent fragmentation



Crowley Oaks





# Project Details

- **Details:**
  - zoned for agricultural use, and surrounding land use is a combination of farmland and large-lot residential development.
- **Carbon+ Credits:** 7,709
- **Co-Benefits:** \$112,638.68/year for 40 years
- **Commitments:**
  - Monitor and track forest health, submit report every three years for 40 years





# Crowley Oaks



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
<b>Grand Total (\$/yr)</b>		<b>\$112,638.68</b>

Species (most abundant on site)	Number of Trees	Carbon storage	Average C per tree
White oak	395	562 metric tons	1.42 mt
Pin oak	1,227	417 metric tons	0.34 mt
Bur oak	273	358 metric tons	1.31 mt
Shagbark hickory	505	51 metric tons	0.10 mt
Black cherry	2,059	428 metric tons	0.21 mt
American elm	927	79 metric tons	0.09 mt
Green ash	423	39 metric tons	0.09 mt



# Why did TLC decide to sell credits on two oak woodlands?

- ▶ **It is consistent with our mission and goals**
  - ▶ Preserve the trees for 40 years
  - ▶ Monitor property every 3 years
- ▶ **Provides funds for long-term management**
  - ▶ These are hard funds to raise
- ▶ **Possible tool for private woodland preservation**
  - ▶ Landowners are reluctant to donate easements on their woodlands, but may be willing to sell carbon credits in exchange for a 40-year restriction



# What you need to know...

- **The land needs to have been acquired recently, and it cannot be encumbered with an easement or other development restriction.**
- **The application takes time, but it isn't complicated – just thorough. It is very much like filling out a grant application.**
- **There are up-front expenses:**
  - \$1,500 registration
  - \$3,000 for 3<sup>rd</sup> party verification of carbon credits
  - \$1,000 account fee for the credit registry account
  - Also there would usually be a cost for having the property evaluated and the carbon credits determined, but The Morton Arboretum had grant funds to cover this since program is new. (estimated \$6-10K expense)



# Opens opportunities...

## ➤ Preserve more oaks

- Knowing that there is a mechanism for generating long-term management funds makes the decision to purchase additional oak woodlands much easier.
- We hope to use our experience to inspire some private landowners to sell carbon credits on their woods.



**Questions?**

