



**LAKE COUNTY FOREST PRESERVE DISTRICT – CARBON PLANTING PROJECT**  
**Initial Credit Project Design Document**

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## INSTRUCTIONS

*Project Operators complete and submit this Initial Credit Project Design Document (PDD) after planting has been completed. City Forest Credits then reviews this PDD for validation with all other required project documents. An approved third-party verifier then conducts verification. A separate amendment to the Project Design Document will need to be submitted for future verification at years 4, 6, and after year 25.*

*Please complete sections starting on page 5 where you find “[Enter text here]” as thoroughly as possible.*

## PROTOCOL REQUIREMENTS

*Below are a list of the eligibility requirements in the City Forest Credits (CFC) Tree Planting Protocol Version 9, dated February 7, 2021. Begin your responses on page 4 under PROJECT OVERVIEW.*

### **Project Operator (Section 1.1)**

Identify a Project Operator for the project. This is the person or entity who takes responsibility for the project for the 25-year duration.

### **Commit to 25-year Project Duration in the Project Implementation Agreement (Section 1.2 and Section 5)**

Sign the Project Implementation Agreement – this is the 25-year agreement between the Project Operator and CFC for an urban forest carbon project.

### **Location Eligibility (Section 1.3)**

Project Areas must be located in parcels within or along the boundary of at least one of the following criteria.

- A. The Urban Area boundary (“Urban Area”), defined by the most recent publication of the United States Census Bureau
- 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 and the Chicago Metropolitan Planning Agency;
- E. The boundary of land owned, designated, and used by a municipal or quasi-municipal entity such as a utility for source water or watershed protection;
- 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 E above.

### **Ownership Eligibility (Section 2)**

Project Operator must demonstrate ownership of property and eligibility to receive potential credits by meeting at least one of the following:

- A. Own the land, the trees, 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, own the Project trees and credits within that easement, 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 or other benefits delivered by Project trees on that landowner's land. If Project trees are on private property, this agreement must be recorded in the property records of the county in which the land containing Project trees is located.

#### **Additionality (Section 4 and Appendix D)**

Legally Required Trees NOT Eligible - project trees cannot be required by law or ordinance to be planted.

Performance Standard Baseline - project trees must be additional based on the performance standard baseline attached.

#### **Multiple planting sites may be aggregated into one project (Section 8)**

Planting sites can be on public and private land, in different cities, and aggregated into one project, provided that planting on all properties occurs within a 36-month period and that all properties comply with protocol requirements.

#### **Carbon Quantification (Section 12 and Appendix B)**

CFC has developed spreadsheets and methods for quantifying carbon stored and credited. The project design including tree spacing and goals will determine the quantification and monitoring requirements. Project Operators will quantify CO<sub>2</sub> using the method appropriate for the project type. CFC supplies all quantification tools. The three main project designs are:

- Single Tree - trees are scattered and spaced apart more than 10 feet, as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled
- Clustered Parks - trees are relatively contiguous in park-like settings and change in canopy is tracked
- Canopy – trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy

#### **Verification by third-party verifiers (Section 13)**

All projects must be verified before receiving credits.

#### **Imaging Requirements (based on planting method)**

In order to receive credits, additional information is required at Years 4, 6, and 26. Below are the imaging requirements by planting method:

- 1) Single Tree (spaced 10' or more apart, i.e. street trees or linear plantings)
  - a. Initial Credit: The carbon quantification tool for your project contains a worksheet called "Data Collection" for use in tracking each tree. In that file, document the GPS coordinates for each tree planted.
  - b. Years 4, 6, and 26: Geocoded photos or imaging of a minimum sample of 20% of the trees is required at Years 4, 6, and 26. The tracking file includes a column where each tree is assigned a unique serial number to help with tracking each coordinate and tree picture or image.
- 2) Clustered Parks (spaced 10' apart but continuously so to generate canopy over time, i.e. natural areas)

- a. Initial Credit: Projects must document the planting through photos or imaging. Select points and take geo-coded photos that when taken together capture the newly planted trees in the project area. If site is rectilinear, take a photo at each of the corners. If the site is large, take photos at points along the perimeter looking into the project area. If necessary to capture the trees, take photos facing each of the cardinal directions while standing in the middle of the project area. If site is nonrectilinear, identify critical points along property boundaries and take photographs at each point facing in towards the middle of the site. Next, take photographs from the middle of the project area facing out at each cardinal direction.
  - b. At Years 4, 6, and 26: Project provides images of the Project Area from any telemetry, imaging, remote sensing, i-Tree Canopy, or UAV service, such as Google Earth and estimate the area in tree canopy cover (acres). Imaging from Google Earth with leaf-on may be used. Project operators will calculate the percent of canopy cover from the Google Earth imaging. Projects can use i-Tree Canopy and point sampling to calculate canopy cover. Using i-Tree Canopy, continue adding points until the standard error of the estimate for both the tree and non-tree cover is less than 5%. i-Tree Canopy will supply you with the standard errors. If tree canopy cover is determined using another approach, such as image classification, a short description of the approach should be provided, as well as the QA/QC measures that were used. A tree cover classification accuracy assessment should be conducted, as with randomly placed points, and the percentage tree cover classification accuracy reported.
- 3) Canopy (closely planted with spacing less than 10' apart so to generate canopy and forest ecosystem, high tree mortality expected, i.e. riparian areas)
- a. Initial Credit: Projects must document the planting through photos or imaging. Select points and take geo-coded photos that when taken together capture the newly planted trees in the project area. If site is rectilinear, take a photo at each of the corners. If the site is large, take photos at points along the perimeter looking into the project area. If necessary to capture the trees, take photos facing each of the cardinal directions while standing in the middle of the project area. If site is nonrectilinear, identify critical points along property boundaries and take photographs at each point facing in towards the middle of the site. Next, take photographs from the middle of the project area facing out at each cardinal direction.
  - b. At Years 4, 6, and 26: Project provides images of the Project Area from any telemetry, imaging, remote sensing, i-Tree Canopy, or UAV service, such as Google Earth and estimate the area in tree canopy cover (acres). Imaging from Google Earth with leaf-on may be used. Project operators will calculate the percent of canopy cover from the Google Earth imaging. Projects can use i-Tree Canopy and point sampling to calculate canopy cover. Using i-Tree Canopy, continue adding points until the standard error of the estimate for both the tree and non-tree cover is less than 5%. i-Tree Canopy will supply you with the standard errors. If tree canopy cover is determined using another approach, such as image classification, a short description of the approach should be provided, as well as the QA/QC measures that were used. A tree cover classification accuracy assessment should be conducted, as with randomly placed points, and the percentage tree cover classification accuracy reported.



# PROJECT OVERVIEW

## Basic Project Details

**Project Name:** Lake County Forest Preserve District – Carbon Planting Project

**Project Number:** 020

**Project Type:** Planting Project

**Project Start Date:** October 29, 2021

**Project Location** (*city, town, or jurisdiction*): Multiple locations within the Lake County Forest Preserve District, Lake County, Illinois.

**Project Operator Name:** James L. Anderson

**Project Operator Contact Information:** 1899 West Winchester Road, Libertyville, Illinois 60048

Phone: 847-968-3282 Email: janderson@lcfpd.org

## Project Description

*Describe overall project goals, where the project will take place, what method of planting (per Protocol), partners, time period of when the trees have been or will be planted, and any other relevant information. (minimum of 2 paragraphs)*

The Lake County Forest Preserve District implements reforestation projects to restore and enhance lands that have been altered or degraded. Project goals include restoring natural forest types (species composition and structure), reducing habitat fragmentation, restoring connectivity, enhancing wildlife habitat, and improving the aesthetic quality of the preserves. To accomplish these goals, trees and shrubs were installed in a random distribution across large landscape areas, separated by more than 10 feet.

Trees were planted at 16 preserves from 2019 through 2021. In total, 2,940 trees representing 24 species were installed. Planting areas and project target plant communities were varied and ranged from restoration of retired agricultural fields to enlarging and enhancing existing woodlands. All project sites had the overall goal of restoring the historic tree diversity and canopy structure/density that existed prior to settlement (~early 1800s). Planting (project) locations occurred within Lake County, Illinois on lands owned by the Lake County Forest Preserve District.

## LOCATION AND OWNERSHIP OF PROJECT AREA (Section 1.3 and Section 2)

### Project Area Location

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

The project area is located within the boundary of a regional metropolitan planning agency, the Chicago Metropolitan Agency for Planning. Some planting sites are also within incorporated or unincorporated areas, and some lie within “Urban Areas” per Census Bureau maps.

Additionally, all planting areas are owned by the Lake County Forest Preserve District a County agency established for the purpose “...of protecting and preserving the flora, fauna, and scenic beauties within

such district, and to restore, restock, protect and preserve the natural forests and such lands together with their flora and fauna, as nearly as may be, in their natural state and condition, for the purpose of the education, pleasure, and recreation of the public.” –Illinois Downstate Forest Preserve Act

### **Project Area Ownership and Right to Receive Credits**

*Describe the property ownership and include relevant documentation including numbered title/filename as an attachment (Ex: 1 - Attestation of Land Ownership, or 1 - Agreement from Owner to Transfer Credits).*

All planting sites in the project area are owned by the Lake County Forest Preserve District.

Attestation of Land Ownership is attached (Attachment 1)

### **Maps**

*Provide a detailed map of the Project Area. Also provide a regional-scale map that shows the Project Area within the context of relevant urban/town boundaries. Include numbered title/filename of attachments (Ex: 2 - Regional Scale Map)*

Attachment 2 – Regional Scale Map

Attachment 3 – Project Area Map

### **Additional Notes**

Regional Scale Map shows the CMAP (Chicago Metropolitan Agency for Planning) boundary. All project locations occur within this boundary, fulfilling Project Area Location criteria.

## **PROJECT DURATION (Section 1.2 and 5)**

*Project Operator commits to the 25-year project duration requirement through a signed Project Implementation Agreement with City Forest Credits.*

## **ATTESTATIONS**

*Complete and attach the following attestations: Attestation of No Double Counting of Credits, Attestation of No Net Harm, Attestation of Planting, and Attestation of Planting Affirmation. Provide any additional notes as relevant.*

Attestation forms are attached:

4 - Attestation of No Double Counting of Credits

5 - Attestation of No Net Harm

6 - Attestation of Planting

7 - Attestation of Planting Affirmation

## ADDITIONALITY (Section 4 and Appendix D)

Legally Required Trees NOT Eligible:

Project trees are not required by law or ordinance to be planted. See Attestation of Planting.

Performance Standard Baseline:

Project trees are additional based on the performance standard baseline attached to this PDD.

## PLANTING DESIGN

*Describe detailed planting design, including spacing between trees. Will the trees be planted as scattered individual trees, clustered in groups like in natural areas, or tightly clustered to restore a forest ecosystem?*

- *Single Tree - trees are scattered and spaced apart more than 10 feet, as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled*
- *Clustered Parks - trees are relatively contiguous in park-like settings and change in canopy is tracked*
- *Canopy - trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy*

*Describe your data collection on Project Trees and show it in the quantification section below. For example, Project Operator can use the data collection sheet contained in the CFC quantification tool or your own approved method.*

Individual project (planting) locations had varied, site-specific goals. In some locations, trees were planted in areas that were former agricultural fields, while other projects were meant to enhance existing wooded areas. Lake County Forest Preserve staff ecologists customize planting design on a project basis, i.e. there is no single planting design concept that encompasses all projects/planting locations. Ecologists consider a site's soils, hydrology, current and past land use, and historic tree data from Public Land Surveys (c. ~1840), as well as on-going management needs when designing a planting project and determining target species compositions and densities (i.e. spacing).

In general, most planting projects are planted in a 'Single Tree' design, where trees are planted in a random distribution across a planting area to approximate the natural landscape composition and arrangement. Plants are typically installed with greater than 10' spacing as to generate canopy coverage over time.

## CARBON QUANTIFICATION DOCUMENTATION (Section 12 and Appendix B)

*Describe which quantification approach you anticipate using, list the project's climate zone, and outline the estimated total number of credits to be issued to the project as well as the amount to be issued upon successful verification. When requesting credits after planting, attach one of the three quantification tool documents below and provide the data you have collected for Project Trees.*

- *Single Tree* - trees are scattered and spaced apart more than 10 feet, as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled
- *Clustered Parks* - trees are relatively contiguous in park-like settings and change in canopy is tracked
- *Canopy* - trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy

Trees were installed in 2019, 2020, and 2021, beginning on September 3, 2019 and concluding on October 29, 2021. The Lake County Forest Preserve District utilizes GIS software to map/track planting areas as polygons. Individual polygon data includes planting site (preserve), ID number, Global ID, target plant community, installation labor source and total acreage. Concurrently, the District is creating a web-based application software to track additional information including quantities, species and sizes of trees installed, the vendor(s) that supplied trees, the year the trees were purchased/installed, the number of follow-up watering treatments the trees received and the year of deer protection fencing installation/removal.

All trees were quantified by direct counts, in total, 2,940 trees were installed across 445 acres. Planting occurred within 86 unique polygons which were determined by District staff based on site conditions (soils, topography, hydrology) and target plant communities (woodland, savanna, mesic forest, etc.). All planting locations occur within Climate Zone 5 (according to the International Energy Conservation Code (IECC) climate regions as published by the U.S. Department of Energy). A summary of the carbon credits quantification is shown in the table below and attachment 8. All credit data was supplied by City Forest Credits' spreadsheet calculations.

Total number of trees planted	2,940
Project area (acres), if applicable	N/A
Total number of trees per acre, if applicable	N/A
Credits attributed to the project (tCO <sub>2</sub> e)	8,097.3
Credits after mortality deduction (default is 20%)	6,477.8
Contribution to Registry Reversal Pool (5%) (tCO <sub>2</sub> e)	323.9
<b>Total credits to be issued to the Project Operator (tCO<sub>2</sub>e)</b>	<b>6,153.9</b>
<b>Total credits requested to be issued in Year 1 (10% of above)</b>	<b>615</b>

Attachment 8 – Carbon Quantification Tool  
Attachment 10 – Tree Data

## CARBON CO-BENEFITS QUANTIFICATION DOCUMENTATION (Section 12 and Appendix B)

Summarize co-benefit results based on the project's planting method and provide supporting documentation. CFC can provide co-benefits quantification for Project Operator for rainfall interception, air quality improvements, and energy savings.

- *Single Tree* - trees are scattered and spaced apart more than 10 feet, as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled
- *Clustered Parks* - trees are relatively contiguous in park-like settings and change in canopy is tracked
- *Canopy* - trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy

<b>Ecosystem Services</b>	<b>Resource Units</b>	<b>Value</b>
Rainfall Interception (m3/yr)	15,342.38	\$109,837.06
Air Quality (t/yr)	0.4684	\$2,186.89
CO2 Avoided from Energy (t, \$20/t/yr)	345.90	\$6,918.07
Cooling – Electricity (kWh/yr)	454,631.80	\$34,506.55
Heating – Natural Gas (kBtu/yr)	6,746,192.64	\$65,672.38
<b>Grand Total (\$/yr)</b>		<b>\$219,120.95</b>

The co-benefits quantification was calculated using the Midwest Single Tree Initial Credit Tool supplied by City Forest Credits. The spreadsheet is attached.

Attachment 9 – Co-Benefits Quantification Tool, tab “Co-Benefits”

## MONITORING AND REPORTING PLANS (Appendix A)

*Project Operator is required to submit an annual monitoring report by the anniversary of the first approved verification report. For example, if the verification report is dated January 1, 2021, the first monitoring report will be due by January 1, 2022 and each January 1<sup>st</sup> thereafter for the duration of the project.*

### Anticipated Reporting Schedule

Monitoring Report – Year 2	2022	Monitoring Report – Year 15	2035
Monitoring Report – Year 3	2023	Monitoring Report – Year 16	2036
Monitoring Report – Year 4*	2024	Monitoring Report – Year 17	2037
Monitoring Report – Year 5	2025	Monitoring Report – Year 18	2038
Monitoring Report – Year 6*	2026	Monitoring Report – Year 19	2039
Monitoring Report – Year 7	2027	Monitoring Report – Year 20	2040
Monitoring Report – Year 8	2028	Monitoring Report – Year 21	2041
Monitoring Report – Year 9	2029	Monitoring Report – Year 22	2042
Monitoring Report – Year 10	2030	Monitoring Report – Year 23	2043
Monitoring Report – Year 11	2031	Monitoring Report – Year 24	2044
Monitoring Report – Year 12	2032	Monitoring Report – Year 25	2045
Monitoring Report – Year 13	2033	Monitoring Report – Year 26*	2046
Monitoring Report – Year 14	2034		

\* Denotes a year where additional information is required in order to receive credits

### Monitoring Reports

*The report must contain any changes in eligibility status of the Project Operator and any significant tree loss. Monitoring report questions are listed below. The following are questions contained in CFC's annual monitoring report template:*

1. Has the contact information for the Project Operator changed? If so, provide new information.
2. Have there been changes in land ownership of the Project Area?
3. Have there been any changes in the Project Design?
4. Have there been any changes in the implementation of management of the Project?
5. Have there been any significant changes to the site (such as flooding or human changes)?
6. Have there been any significant tree or canopy losses?
7. Any other significant elements to report?

*Confirm and describe your plans for annual monitoring of this project and specifics on how imaging (see Imaging Requirements in the Protocol Requirements section above) will be conducted based on your project's planting method.*

The Lake County Forest Preserve District acknowledges the need for, and agrees to, perform annual monitoring of planting locations. Annual monitoring efforts will consist of site visits to examine qualitative attributes, such as plant health, threats/impacts, etc. Monitoring in Years 4, 6, and 26 will follow the imaging requirements set forth in this document, whereby geocoded photos or imaging of a minimum sample of 20% of the trees will take place and trees will receive a unique tracking file/number in order to trace each tree's trajectory over time.

## ADDITIONAL INFORMATION

*Include additional noteworthy aspects of the project. Examples include collaborative partnerships, community engagement, or project funders.*

This project was implemented entirely by the Lake County Forest Preserve District; however, this project and its outcomes support many regional and state (Illinois) objectives including Oak Ecosystem Recovery and Urban Canopy goals of the Chicago Region Trees Initiative; Key Findings and Recommendations of Chicago Wilderness' Biodiversity Recovery Plan; Illinois Forest Resource Strategies and Actions of the Illinois Forest Action Plan; and numerous actions from several campaigns listed within The Illinois Comprehensive Wildlife Conservation Plan & Strategy (Illinois Wildlife Action Plan).

The Chicago Region Trees Initiative (CRTI) is a partnership for coordinated action on key issues facing trees. It is the largest such initiative in the country, with leading organizations and agencies from across the seven-county metropolitan region working together. CRTI is leveraging funding, knowledge, skills, and expertise to build a healthier, more diverse regional forest.

## PROJECT OPERATOR SIGNATURE

Signed on November 11, in 2021, by James L. Anderson, Director of Natural Resources for the Lake County Forest Preserve District.

James L. Anderson

Signature

847-968-3282

Phone

janderson@lcfpd.org

Email

## ATTACHMENTS

- 1 - Attestation of Land Ownership
- 2 - Regional Area Map
- 3 - Project Area Map
- 4 - Attestation of No Double Counting of Credits
- 5 - Attestation of No Net Harm
- 6 - Attestation of Planting
- 7 - Attestation of Planting Affirmation
- 8 - Carbon Quantification Initial Credits Tool
- 9 - Co-Benefits Quantification Tool
- 10 - Tree Data



## PERFORMANCE STANDARD BASELINE METHODOLOGY (Section 4 and Appendix D)

There is a second additionality methodology set out in the WRI GHG Protocol guidelines – the Performance Standard methodology. This Performance Standard essentially allows the project developer, or in our case, the developers of the protocol, to create a performance standard baseline using the data from similar activities over geographic and temporal ranges.

The common perception, particularly in the United States, is that projects must meet a project specific test. Project-specific additionality is easy to grasp conceptually. The 2014 Climate Action Reserve urban forest protocol essentially uses project-specific requirements and methods.

However, the WRI GHG Protocol clearly states that either a project-specific test or a performance standard baseline is acceptable.<sup>1</sup> One key reason for this is that regional or national data can give a more accurate picture of existing activity than a narrow focus on one project or organization.

Narrowing the lens of additionality to one project or one tree-planting entity can give excellent data on that project or entity, which data can also be compared to other projects or entities (common practice). But plucking one project or entity out of its regional or national context ignores all comparable regional or national data. And that regional or national data may give a more accurate standard than data from one project or entity.

By analogy: one pixel on a screen may be dark. If all you look at is the dark pixel, you see darkness. But the rest of screen may consist of white pixels and be white. Similarly, one active tree-planting organization does not mean its trees are additional on a regional basis. If the region is losing trees, the baseline of activity may be negative regardless of what one active project or entity is doing. Here is the methodology described in the WRI GHG Protocol to determine a Performance Standard baseline, together with the application of each factor to urban forestry:

**Table 2.1 Performance Standard Factors**

<b>WRI Performance Standard Factor</b>	<b>As Applied to Urban Forestry</b>
Describe the project activity	Increase in urban trees
Identify the types of candidates	Cities and towns, quasi-governmental entities like utilities, watersheds, and educational institutions, and private property owners
Set the geographic scope (a national scope is explicitly approved as the starting point)	Could use national data for urban forestry, or regional data
Set the temporal scope (start with 5-7 years and justify longer or shorter)	Use 4-7 years for urban forestry
Identify a list of multiple baseline candidates	Many urban areas, which could be blended mathematically to produce a performance standard baseline

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<sup>1</sup> WRI GHG Protocol, Chapter 2.14 at 16 and Chapter 3.2 at 19.

The Performance Standard methodology approves of the use of data from many different baseline candidates. In the case of urban forestry, those baseline candidates are other urban areas.<sup>2</sup>

As stated above, the project activity defined is obtaining an increase in urban trees. The best data to show the increase in urban trees via urban forest project activities is national or regional data on tree canopy in urban areas. National or regional data will give a more comprehensive picture of the relevant activity (increase in urban trees) than data from one city, in the same way that a satellite photo of a city shows a more accurate picture of tree canopy in a city than an aerial photo of one neighborhood. Tree canopy data measures the tree cover in urban areas, so it includes multiple baseline candidates such as city governments and private property owners. Tree canopy data, over time, would show the increase or decrease in tree cover.

#### *Data on Tree Canopy Change over Time in Urban Areas*

The CFC quantitative team determined that there were data on urban tree canopy cover with a temporal range of four to six years available from four geographic regions. The data are set forth below:

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<sup>2</sup> See Nowak, et al. "Tree and Impervious Cover Change in U.S. Cities," Urban Forestry and Urban Greening, 11 (2012), 21-30

**Table 2.2 Changes in Urban Tree Canopy (UTC) by Region (from Nowak and Greenfield, 2012, see footnote 7)**

City	Abs Change UTC (%)	Relative Change UTC (%)	Ann. Rate (ha UTC/yr)	Ann. Rate (m2 UTC/cap/yr)	Data Years
<b>EAST</b>					
Baltimore, MD	-1.9	-6.3	-100	-1.5	(2001–2005)
Boston, MA	-0.9	-3.2	-20	-0.3	(2003–2008)
New York, NY	-1.2	-5.5	-180	-0.2	(2004–2009)
Pittsburgh, PA	-0.3	-0.8	-10	-0.3	(2004–2008)
Syracuse, NY	1.0	4.0	10	0.7	(2003–2009)
Mean changes	-0.7	-2.4	-60.0	-0.3	
Std Error	0.5	1.9	35.4	0.3	
<b>SOUTH</b>					
Atlanta, GA	-1.8	-3.4	-150	-3.1	(2005–2009)
Houston, TX	-3.0	-9.8	-890	-4.3	(2004–2009)
Miami, FL	-1.7	-7.1	-30	-0.8	(2003–2009)
Nashville, TN	-1.2	-2.4	-300	-5.3	(2003–2008)
New Orleans, LA	-9.6	-29.2	-1120	-24.6	(2005–2009)
Mean changes	-3.5	-10.4	-160.0	-7.6	
Std Error	1.6	4.9	60.5	4.3	
<b>MIDWEST</b>					
Chicago, IL	-0.5	-2.7	-70	-0.2	(2005–2009)
Detroit, MI	-0.7	-3.0	-60	-0.7	(2005–2009)
Kansas City, MO	-1.2	-4.2	-160	-3.5	(2003–2009)
Minneapolis, MN	-1.1	-3.1	-30	-0.8	(2003–2008)
Mean changes	-0.9	-3.3	-80.0	-1.3	
Std Error	0.2	0.3	28.0	0.7	
<b>WEST</b>					
Albuquerque, NM	-2.7	-6.6	-420	-8.3	(2006–2009)
Denver, CO	-0.3	-3.1	-30	-0.5	(2005–2009)
Los Angeles, CA	-0.9	-4.2	-270	-0.7	(2005–2009)
Portland, OR	-0.6	-1.9	-50	-0.9	(2005–2009)
Spokane, WA	-0.6	-2.5	-20	-1.0	(2002–2007)
Tacoma, WA	-1.4	-5.8	-50	-2.6	(2001–2005)
Mean changes	-1.1	-4.0	-140.0	-2.3	
Std Error	0.4	0.8	67.8	1.2	

These data have been updated by Nowak and Greenfield.<sup>3</sup> The 2012 data show that urban tree canopy is experiencing negative growth in all four regions. The 2018 data document continued loss of urban tree cover. Table 3 of the 2018 article shows data for all states, with a national loss of urban and community tree cover of 175,000 acres per year during the study years of 2009-2014.

To put this loss in perspective, the total land area of urban and community tree cover loss during the study years totals 1,367 square miles – equal to the combined land area of New York City, Atlanta, Philadelphia, Miami, Boston, Cleveland, Pittsburgh, St. Louis, Portland, OR, San Francisco, Seattle, and Boise.

Even though there may be individual tree planting activities that increase the number of urban trees within small geographic locations, the performance of activities to increase tree cover shows a negative baseline. The Drafting Group did not use negative baselines for the Tree Planting Protocol, but determined to use baselines of zero.

Deployment of the Performance Standard baseline methodology for a City Forest Planting Protocol is supported by conclusions that make sense and are anchored in the real world:

- With the data showing that tree loss exceeds gains from planting, new plantings are justified as additional to that decreasing canopy baseline. In fact, the negative baseline would justify as additional any trees that are protected from removal.
- Because almost no urban trees are planted now with carbon as a decisive factor, urban tree planting done to sequester carbon is additional;
- Almost no urban trees are currently planted with a contractual commitment for monitoring. Maintenance of trees is universally an intention, one that is frequently reached when budgets are cut, as in the Covid-19 era. The 25-year commitment required by this Protocol is entirely additional to any practice in place in the U.S. and will result in substantial additional trees surviving to maturity;
- Because the urban forest is a public resource, and because public funding falls far short of maintaining tree cover and stocking, carbon revenues will result in additional trees planted or in maintenance that will result in additional trees surviving to maturity;
- Because virtually all new large-scale urban tree planting is conducted by governmental entities or non-profits, or by private property developers complying with governmental regulations (which would not be eligible for carbon credits under our protocol), and because any carbon revenues will defray only a portion of the costs of tree planting, there is little danger of unjust enrichment to developers of city forest carbon projects.

Last, The WRI GHG Protocol recognizes explicitly that the principles underlying carbon protocols need to be adapted to different types of projects. The WRI Protocol further approves of balancing the stringency of requirements with the need to encourage participation in desirable carbon projects:

*Setting the stringency of additionality rules involves a balancing act. Additionality criteria that are too lenient and grant recognition for “non-additional” GHG reductions will undermine the GHG program’s effectiveness. On the other hand, making the criteria for additionality too stringent could unnecessarily limit the number of recognized GHG reductions, in some cases excluding project activities that are truly*

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<sup>3</sup> Nowak et al. 2018. “Declining Urban and Community Tree Cover in the United States,” *Urban Forestry and Urban Greening*, 32, 32-55

*additional and highly desirable. In practice, no approach to additionality can completely avoid these kinds of errors. Generally, reducing one type of error will result in an increase of the other. Ultimately, there is no technically correct level of stringency for additionality rules. GHG programs may decide based on their policy objectives that it is better to avoid one type of error than the other.<sup>4</sup>*

The policy considerations weigh heavily in favor of “highly desirable” planting projects to reverse tree loss for the public resource of city forests.

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<sup>4</sup> WRI GHG Protocol, Chapter 3.1 at 19.

# QUANTIFYING CARBON DIOXIDE STORAGE AND CO-BENEFITS FOR URBAN TREE PLANTING PROJECTS (Appendix B)

## Introduction

Ecoservices provided by trees to human beneficiaries are classified according to their spatial scale as global and local (Costanza 2008) (citations in Part 1 are listed in References at page 16). Removal of carbon dioxide (CO<sub>2</sub>) from the atmosphere by urban forests is global because the atmosphere is so well-mixed it does not matter where the trees are located. The effects of urban forests on building energy use is a local-scale service because it depends on the proximity of trees to buildings. To quantify these and other ecoservices City Forest Credits (CFC) has relied on peer-reviewed research that has combined measurements and modeling of urban tree biomass, and effects of trees on building energy use, rainfall interception, and air quality. CFC has used the most current science available on urban tree growth in its estimates of CO<sub>2</sub> storage (McPherson et al., 2016a). CFC's quantification tools provide estimates of co-benefits after 25 years in Resource Units (i.e., kWh of electricity saved) and dollars per year. Values for co-benefits are first-order approximations extracted from the i-Tree Streets (i-Tree Eco) datasets for each of the 16 U.S. reference cities/climate zones (<https://www.itreetools.org/tools/i-tree-eco>) (Maco and McPherson, 2003). Modeling approaches and error estimates associated with quantification of CO<sub>2</sub> storage and co-benefits have been documented in numerous publications (see References below) and are summarized here.

## Carbon Dioxide Storage

There are three different methods for quantifying carbon dioxide (CO<sub>2</sub>) storage in urban forest carbon projects:

- Single Tree Method - planted trees are scattered among many existing trees, as in street, yard, some parks, and school plantings, individual trees are tracked and randomly sampled
- Clustered Parks Planting Method - planted trees are relatively contiguous in park-like settings and change in canopy is tracked
- Canopy Method – trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy
- Area Reforestation Method – large areas are planted to generate a forest ecosystem, for example converting from agriculture and in upland areas. This quantification method is under development

In all cases, the estimated amount of CO<sub>2</sub> stored 25-years after planting is calculated. The forecasted amount of CO<sub>2</sub> stored during this time is the value from which the Registry issues credits in the amounts of 10%, 40% and 30% at Years 1, 4, and 6 after planting, respectively. A 20% mortality deduction is applied before calculation of Year 1 Credits in the Single Tree and Clustered Parks Planting Methods. A 5% buffer pool deduction is applied in all three methods before calculation of any crediting, with these funds going into a program-wide pool to insure against catastrophic loss of trees. At the end of the project, in year 25, Operators will receive credits for all CO<sub>2</sub> stored, minus credits already issued.

In the Single Tree Method, the amount of CO<sub>2</sub> stored in project trees 25-years after planting is calculated as the product of tree numbers and the 25-year CO<sub>2</sub> index (kg/tree) for each tree-type (e.g., Broadleaf Deciduous Large = BDL). The Registry requires the user to apply a 20% tree mortality deduction before

calculation of Year 1 Credits. Year 4 and Year 6 Credits depend on sampling and mortality data. A 5% buffer pool deduction is applied as well before calculation at any stage.

In the Clustered Parks Planting Method, the amount of CO<sub>2</sub> stored after 25-years by planted project trees is based on the anticipated amount of tree canopy area (TC). Because different tree-types store different amounts of CO<sub>2</sub> based on their size and wood density, TC is weighted based on species mix. The estimated amount of TC area occupied by each tree-type is the product of the total TC and each tree-type's percentage TC. This calculation distributes the TC area among tree-types based on the percentage of trees planted and each tree-type's crown projection area. Subsequent calculations reduce the amount of CO<sub>2</sub> estimated to be stored after 25 years based on the 20% anticipated mortality rate and the 5% buffer pool deduction.

In the Canopy Method, the forecasted amount of CO<sub>2</sub> stored at 25-years is the product of the amount of TC and the CO<sub>2</sub> Index (CI, t CO<sub>2</sub> per acre). This approach recognizes that forest dynamics for riparian projects are different than for park projects. In many cases, native species are planted close together and early competition results in high mortality and rapid canopy closure. Unlike urban park plantings, substantial amounts of carbon can be stored in the riparian understory vegetation and forest floor. To provide an accurate and complete accounting, we use the USDA Forest Service General Technical Report NE-343, with biometric data for 51 forest ecosystems derived from U.S. Forest Inventory and Assessment plots (Smith et al., 2006). The tables provide carbon stored per hectare for each of six carbon pools as a function of stand age. We use values for 25-year old stands that account for carbon in down dead wood and forest floor material, as well as the understory vegetation and soil. If local plot data are provided, values for live wood, dead standing and dead down wood are adjusted following guidance in GTR NE-343. More information on methods used to prepare the tables and make adjustments can be found in Smith et al., 2006. See Attachment A at the end of this Appendix for more information on the Canopy Method.

#### Source Materials for Single Tree Method and Clustered Parks Planting Methods

Estimates of stored (amount accumulated over many years) and sequestered CO<sub>2</sub> (i.e., net amount stored by tree growth over one year) are based on the U.S. Forest Service's recently published technical manual and the extensive Urban Tree Database (UTD), which catalogs urban trees with their projected growth tailored to specific geographic regions (McPherson et al. 2016a, b). The products are a culmination of 14 years of work, analyzing more than 14,000 trees across the United States. Whereas prior growth models typically featured only a few species specific to a given city or region, the newly released database features 171 distinct species across 16 U.S. climate zones. The trees studied also spanned a range of ages with data collected from a consistent set of measurements. Advances in statistical modeling have given the projected growth dimensions a level of accuracy never before seen. Moving beyond just calculating a tree's diameter or age to determine expected growth, the research incorporates 365 sets of tree growth equations to project growth.

Users select their climate zone from the 16 U.S. climate zones (Fig. 1). Calculations of CO<sub>2</sub> stored are for a representative species for each tree-type that was one of the predominant street tree species per reference city ([Peper et al., 2001](#)). The "Reference city" refers to the city selected for intensive study within each climate zone ([McPherson, 2010](#)). About 20 of the most abundant species were selected for sampling in each reference city. The sample was stratified into nine diameter at breast height (DBH) classes (0 to 7.6, 7.6 to 15.2, 15.2 to 30.5, 30.5 to 45.7, 45.7 to 61.0, 61.0 to 76.2, 76.2 to 91.4, 91.4 to 106.7, and >106.7 cm). Typically 10 to 15 trees per DBH class were randomly chosen. Data were

collected for 16 to 74 trees in total from each species. Measurements included: species name, age, DBH [to the nearest 0.1 cm (0.39 in)], tree height [to the nearest 0.5 m (1.64 ft.)], crown height [to the nearest 0.5 m (1.64 ft.)], and crown diameter in two directions [parallel and perpendicular to nearest street to the nearest 0.5 m (1.64 ft.)]. Tree age was determined from local residents, the city's urban forester, street and home construction dates, historical planting records, and aerial and historical photos.

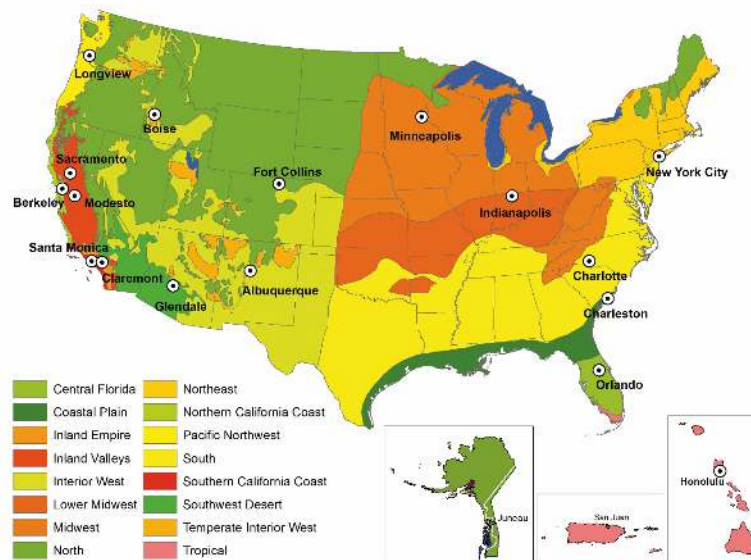


Fig. 1. Climate zones of the United States and Puerto Rico were aggregated from 45 Sunset climate zones into 16 zones. Each zone has a reference city where tree data were collected. Sacramento, California was added as a second reference city (with Modesto) to the Inland Valleys zone. Zones for Alaska, Puerto Rico and Hawaii are shown in the insets (map courtesy of Pacific Southwest Research Station).

### Species Assignment by Tree-Type

Representative species for each tree-type in the South climate zone (reference city is Charlotte, NC) are shown in Table 1. They were chosen because extensive measurements were taken on them to generate growth equations, and their mature size and form was deemed typical of other trees in that tree-type. Representative species were not available for some tree-types because none were measured. In that case, a species of similar mature size and form from the same climate zone was selected, or one from another climate zone was selected. For example, no Broadleaf Evergreen Large (BEL) species was measured in the South reference city. Because of its large mature size, *Quercus nigra* was selected to represent the BEL tree-type, although it is deciduous for a short time. *Pinus contorta*, which was measured in the PNW climate zone, was selected for the CES tree-type, because no CES species was measured in the South.



Table 1. Nine tree-types and abbreviations. Representative species assigned to each tree-type in the South climate zone are listed. The biomass equations (species, urban general broadleaf [UGB], urban general conifer [UGC]) and dry weight density (kg/m<sup>3</sup>) used to calculate biomass are listed for each tree-type.

Tree-Type	Tree-Type Abbreviation	Species Assigned	DW Density	Biomass Equations
Brdlf Decid Large (>50 ft)	BDL	<i>Quercus phellos</i>	600	<i>Quercus macrocarpa</i> <sup>1</sup> .
Brdlf Decid Med (30-50 ft)	BDM	<i>Pyrus calleryana</i>	600	UGB <sup>2</sup> .
Brdlf Decid Small (<30 ft)	BDS	<i>Cornus florida</i>	545	UGB <sup>2</sup> .
Brdlf Evgrn Large (>50 ft)	BEL	<i>Quercus nigra</i>	797	UGB <sup>2</sup> .
Brdlf Evgrn Med (30-50 ft)	BEM	<i>Magnolia grandiflora</i>	523	UGB <sup>2</sup> .
Brdlf Evgrn Small (<30 ft)	BES	<i>Ilex opaca</i>	580	UGB <sup>2</sup> .
Conif Evgrn Large (>50 ft)	CEL	<i>Pinus taeda</i>	389	UGC <sup>2</sup> .
Conif Evgrn Med (30-50 ft)	CEM	<i>Juniperus virginiana</i>	393	UGC <sup>2</sup> .
Conif Evgrn Small (<30 ft)	CES	<i>Pinus contorta</i>	397	UGC <sup>2</sup> .
<sup>1</sup> from Lefsky, M., & McHale, M., 2008.				
<sup>2</sup> from Aguaron, E., & McPherson, E. G., 2012				

#### Calculating Biomass and Carbon Dioxide Stored

To estimate CO<sub>2</sub> stored, the biomass for each tree-type was calculated using urban-based allometric equations because open-growing city trees partition carbon differently than forest trees (McPherson et al., 2017a). Input variables included climate zone, species, and DBH. To project tree size at 25-years after planting, we used DBH obtained from UTD growth curves for each representative species.

Biomass equations were compiled for 26 open-grown urban trees species from literature sources (Aguaron and McPherson, 2012). General equations (Urban Gen Broadleaf and Urban Gen Conifer) were developed from the 26 urban-based equations that were species specific (McPherson et al., 2016a). These equations were used if the species of interest could not be matched taxonomically or through wood form to one of the urban species with a biomass equation. Hence, urban general equations were an alternative to applying species-specific equations because many species did not have an equation.

These allometric equations yielded aboveground wood volume. Species-specific dry weight (DW) density factors (Table 1) were used to convert green volume into dry weight (7a). The urban general equations required looking up a dry weight density factor (in Jenkins et al. 2004 first, but if not available then the Global Wood Density Database). The amount of belowground biomass in roots of urban trees is not well researched. This work assumed that root biomass was 28% of total tree biomass (Cairns et al., 1997; Husch et al., 2003; Wenger, 1984). Wood volume (dry weight) was converted to C by multiplying by the constant 0.50 (Leith, 1975), and C was converted to CO<sub>2</sub> by multiplying by 3.667.

#### Error Estimates and Limitations

The lack of biometric data from the field remains a serious limitation to our ability to calibrate biomass equations and assign error estimates for urban trees. Differences between modeled and actual tree growth adds uncertainty to CO<sub>2</sub> sequestration estimates. Species assignment errors result from matching species planted with the tree-type used for biomass and growth calculations. The magnitude

of this error depends on the goodness of fit in terms of matching size and growth rate. In previous urban studies the prediction bias for estimates of CO<sub>2</sub> storage ranged from -9% to +15%, with inaccuracies as much as 51% RMSE (Timilsina et al., 2014). Hence, a conservative estimate of error of  $\pm 20\%$  can be applied to estimates of total CO<sub>2</sub> stored as an indicator of precision.

It should be noted that estimates of CO<sub>2</sub> stored using the Tree Canopy Approach have several limitations that may reduce their accuracy. They rely on allometric relationships for open-growing trees, so storage estimates may not be as accurate when trees are closely spaced. Also, they assume that the distribution of tree canopy cover among tree-types remains constant, when in fact mortality may afflict certain species more than others. For these reasons, periodic “truing-up” of estimates by field sampling is suggested.

#### Co-Benefit: Energy Savings

Trees and forests can offer energy savings in two important ways. In warmer climates or hotter months, trees can reduce air conditioning bills by keeping buildings cooler through reducing regional air temperatures and offering shade. In colder climates or cooler months, trees can confer savings on the fuel needed to heat buildings by reducing the amount of cold winds that can strip away heat.

Energy conservation by trees is important because building energy use is a major contributor to greenhouse gas emissions. Oil or gas furnaces and most forms of electricity generation produce CO<sub>2</sub> and other pollutants as by-products. Reducing the amount of energy consumed by buildings in urban areas is one of the most effective methods of combatting climate change. Energy consumption is also a costly burden on many low-income families, especially during mid-summer or mid-winter. Furthermore, electricity consumption during mid-summer can sometimes over-extend local power grids leading to rolling brownouts and other problems.

Energy savings are calculated through numerical models and simulations built from observational data on proximity of trees to buildings, tree shapes, tree sizes, building age classes, and meteorological data from McPherson et al. (2017) and McPherson and Simpson (2003). The main parameters affecting the overall amount of energy savings are crown shape, building proximity, azimuth, local climate, and season. Shading effects are based on the distribution of street trees with respect to buildings recorded from aerial photographs for each reference city ([McPherson and Simpson, 2003](#)). If a sampled tree was located within 18 m of a conditioned building, information on its distance and compass bearing relative to a building, building age class (which influences energy use) and types of heating and cooling equipment were collected and used as inputs to calculate effects of shade on annual heating and cooling energy effects. Because these distributions were unique to each city, energy values are considered first-order approximations.

In addition to localized shade effects, which were assumed to accrue only to trees within 18 m of a building, lowered air temperatures and windspeeds from increased neighborhood tree cover (referred to as climate effects) can produce a net decrease in demand for winter heating and summer cooling (reduced wind speeds by themselves may increase or decrease cooling demand, depending on the circumstances). Climate effects on energy use, air temperature, and wind speed, as a function of neighborhood canopy cover, were estimated from published values for each reference city. The percentages of canopy cover increase were calculated for 20-year-old large, medium, and small trees, based on their crown projection areas and effective lot size (actual lot size plus a portion of adjacent street and other rights-of-way) of 10,000 ft<sup>2</sup> (929 m<sup>2</sup>), and one tree on average was assumed per lot.

Climate effects were estimated by simulating effects of wind and air-temperature reductions on building energy use.

In the case of urban Tree Preservation Projects, trees may not be close enough to buildings to provide shading effects, but they may influence neighborhood climate. Because these effects are highly site-specific, we conservatively apply an 80% reduction to the energy effects of trees for Preservation Projects.

Energy savings are calculated as a real-dollar amount. This is calculated by applying overall reductions in oil and gas usage or electricity usage to the regional cost of oil and gas or electricity for residential customers. Colder regions tend to see larger savings in heating and warmer regions tend to see larger savings in cooling.

#### Error Estimates and Limitations

Formulaic errors occur in modeling of energy effects. For example, relations between different levels of tree canopy cover and summertime air temperatures are not well-researched. Another source of error stems from differences between the airport climate data (i.e., Los Angeles International Airport) used to model energy effects and the actual climate of the study area (i.e., Los Angeles urban area). Because of the uncertainty associated with modeling effects of trees on building energy use, energy estimates may be accurate within  $\pm 25$  percent ([Hildebrandt & Sarkovich, 1998](#)).

#### Co-Benefit: CO<sub>2</sub> Avoided

Energy savings result in reduced emissions of CO<sub>2</sub> and criteria air pollutants (volatile organic hydrocarbons [VOCs], NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>) from power plants and space-heating equipment. Cooling savings reduce emissions from power plants that produce electricity, the amount depending on the fuel mix. Electricity emissions reductions were based on the fuel mixes and emission factors for each utility in the 16 reference cities/climate zones across the U.S. The dollar values of electrical energy and natural gas were based on retail residential electricity and natural gas prices obtained from each utility. Utility-specific emission factors, fuel prices and other data are available in the Community Tree Guides for each region ([https://www.fs.fed.us/psw/topics/urban\\_forestry/products/tree\\_guides.shtml](https://www.fs.fed.us/psw/topics/urban_forestry/products/tree_guides.shtml)). To convert the amount of CO<sub>2</sub> avoided to a dollar amount in the spreadsheet tools, City Forest Credits uses the price of \$20 per metric ton of CO<sub>2</sub>.

#### Error Estimates and Limitations

Estimates of avoided CO<sub>2</sub> emissions have the same uncertainties that are associated with modeling effects of trees on building energy use. Also, utility-specific emission factors are changing as many utilities incorporate renewable fuels sources into their portfolios. Values reported in CFC tools may overestimate actual benefits in areas where emission factors have become lower.

#### Co-Benefit: Rainfall Interception

Forest canopies normally intercept 10-40% of rainfall before it hits the ground, thereby reducing stormwater runoff. The large amount of water that a tree crown can capture during a rainfall event makes tree planting a best management practice for urban stormwater control.

City Forest Credits uses a numerical interception model to calculate the amount of annual rainfall intercepted by trees, as well as throughfall and stem flow ([Xiao et al., 2000](#)). This model uses species-specific leaf surface areas and other parameters from the Urban Tree Database. For example, deciduous

trees in climate zones with longer “in-leaf” seasons will tend to intercept more rainfall than similar species in colder areas shorter foliage periods. Model results were compared to observed patterns of rainfall interception and found to be accurate. This method quantifies only the amount of rainfall intercepted by the tree crown, and does not incorporate surface and subsurface effects on overland flow.

The rainfall interception benefit was priced by estimating costs of controlling stormwater runoff. Water quality and/or flood control costs were calculated per unit volume of runoff controlled and this price was multiplied by the amount of rainfall intercepted annually.

#### Error Estimates and Limitations

Estimates of rainfall interception are sensitive to uncertainties regarding rainfall patterns, tree leaf area and surface storage capacities. Rainfall amount, intensity and duration can vary considerably within a climate zone, a factor not considered by the model. Although tree leaf area estimates were derived from extensive measurements on over 14,000 street trees across the U.S. ([McPherson et al., 2016a](#)), actual leaf area may differ because of differences in tree health and management. Leaf surface storage capacity, the depth of water that foliage can capture, was recently found to vary threefold among 20 tree species ([Xiao & McPherson, 2016](#)). A shortcoming is that this model used the same value (1 mm) for all species. Given these limitations, interception estimates may have uncertainty as great as  $\pm 20$  percent.

#### Co-Benefit: Air Quality

The uptake of air pollutants by urban forests can lower concentrations and affect human health ([Derkzen et al., 2015](#); [Nowak et al., 2014](#)). However, pollutant concentrations can be increased if the tree canopy restricts polluted air from mixing with the surrounding atmosphere ([Vos et al., 2013](#)). Urban forests are capable of improving air quality by lowering pollutant concentrations enough to significantly affect human health. Generally, trees are able to reduce ozone, nitric oxides, and particulate matter. Some trees can reduce net volatile organic compounds (VOCs), but others can increase them through natural processes. Regardless of the net VOC production, urban forests usually confer a net positive benefit to air quality. Urban forests reduce pollutants through dry deposition on surfaces and uptake of pollutants into leaf stomata.

A numerical model calculated hourly pollutant dry deposition per tree at the regional scale using deposition velocities, hourly meteorological data and pollutant concentrations from local monitoring stations ([Scott et al., 1998](#)). The monetary value of tree effects on air quality reflects the value that society places on clean air, as indicated by willingness to pay for pollutant reductions. The monetary value of air quality effects were derived from models that calculated the marginal damage control costs of different pollutants to meet air quality standards (Wang and Santini 1995). Higher costs were associated with higher pollutant concentrations and larger populations exposed to these contaminants.

#### Error Estimates and Limitations

Pollutant deposition estimates are sensitive to uncertainties associated with canopy resistance, resuspension rates and the spatial distribution of air pollutants and trees. For example, deposition to urban forests during warm periods may be underestimated if the stomata of well-watered trees remain open. In the model, hourly meteorological data from a single station for each climate zone may not be spatially representative of conditions in local atmospheric surface layers. Estimates of air pollutant uptake may be accurate within  $\pm 25$  percent.

## Conclusions

Our estimates of carbon dioxide storage and co-benefits reflect an incomplete understanding of the processes by which ecoservices are generated and valued (Schulp et al., 2014). Our choice of co-benefits to quantify was limited to those for which numerical models were available. There are many important benefits produced by trees that are not quantified and monetized. These include effects of urban forests on local economies, wildlife, biodiversity and human health and well-being. For instance, effects of urban trees on increased property values have proven to be substantial (Anderson & Cordell, 1988). Previous analyses modeled these “other” benefits of trees by applying the contribution to residential sales prices of a large front yard tree (0.88%) (McPherson et al., 2005). We have not incorporated this benefit because property values are highly variable. It is likely that co-benefits reported here are conservative estimates of the actual ecoservices resulting from local tree planting projects.

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Xiao, Q., & McPherson, E. G. (2016). Surface water storage capacity of twenty tree species in Davis, California. *Journal of Environmental Quality*, 45, 188-198.



**Lake County Forest Preserve District – Carbon Planting Project  
Attestation of Land Ownership**

I am the Chief Operations Officer of the Lake County Forest Preserve District and make this attestation regarding the ownership of land upon which the Lake County Forest Preserve District is the Project Operator of a tree planting project Lake County Forest Preserve District – Carbon Planting Project.

**1. Land Ownership**

The Lake County Forest Preserve District is the owner in fee simple of the land identified in Section 2 and in Exhibit A.

**2. Subject Lands**

The Property upon which the Lake County Forest Preserve District – Carbon Planting Project is planting trees and which is the subject of this Declaration is specified in Exhibit A.

Signed on November 10, in 2021, by Mike Tully, Chief Operations Officer of the Lake County Forest Preserve District.

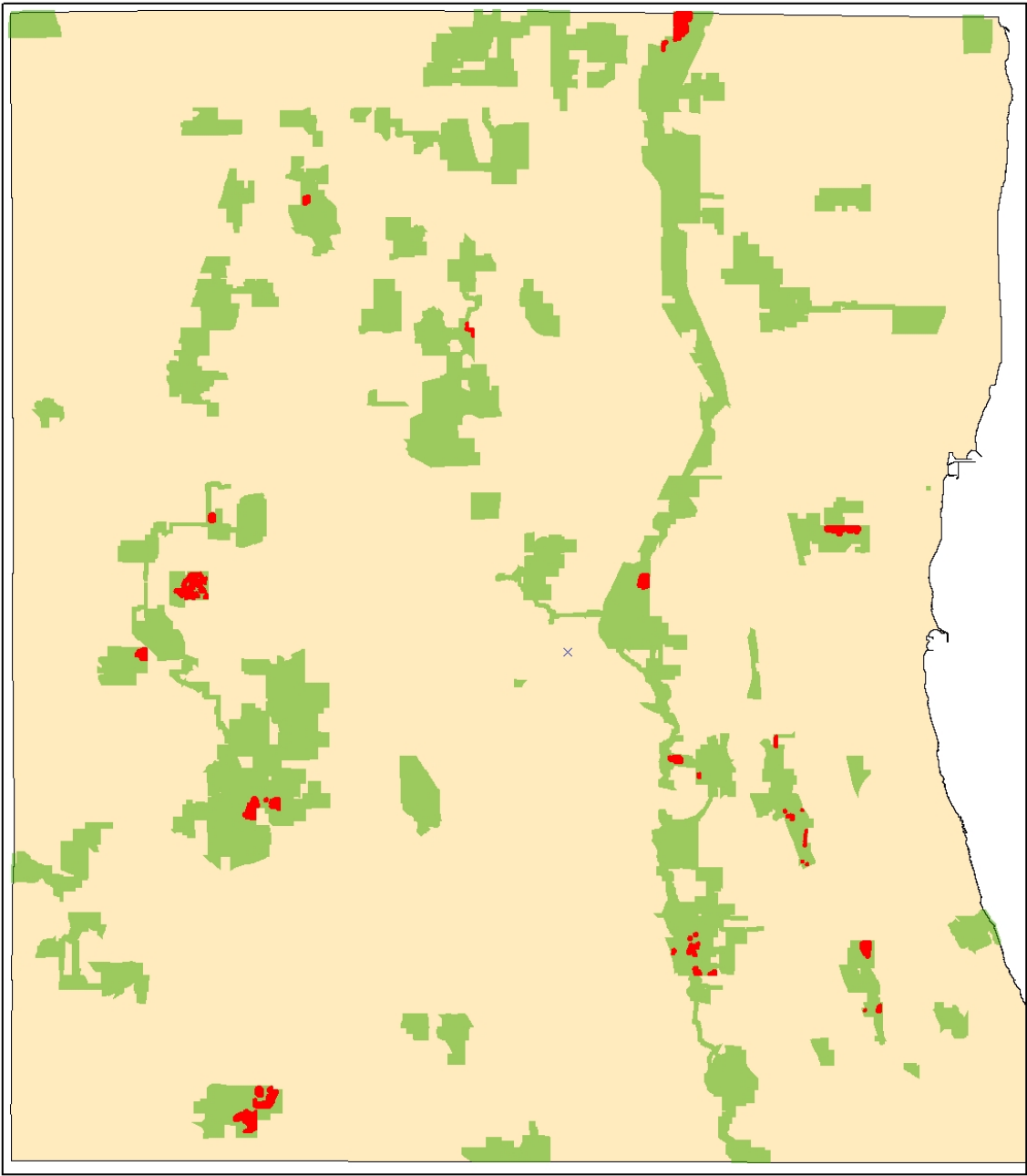
Mike Tully  
Signature

847-968-3415  
Phone

mtully@lcfpd.org  
Email



Exhibit A

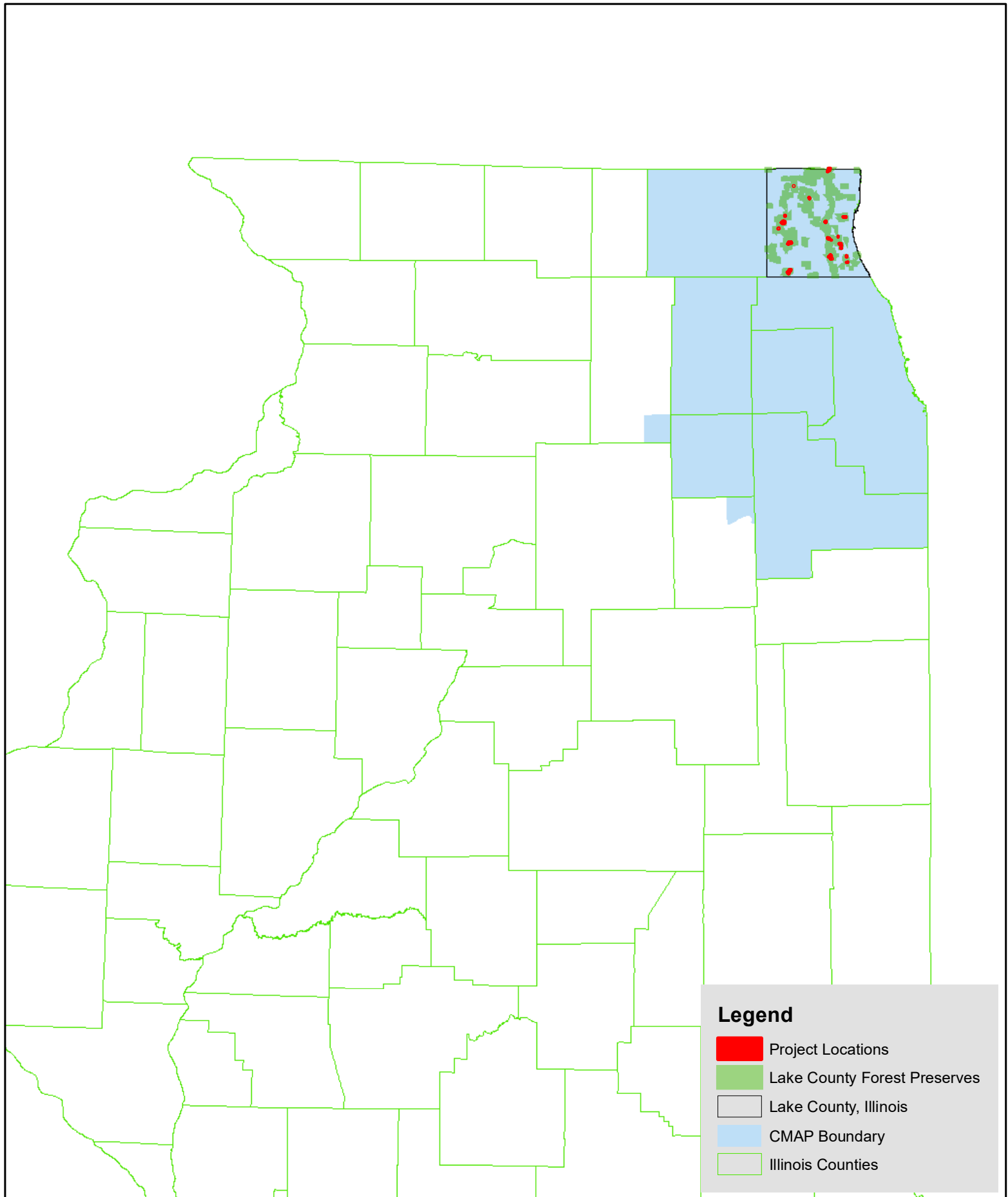


**LAKE COUNTY FOREST PRESERVE DISTRICT  
CARBON PLANTING PROJECT  
PROJECT (PLANTING) LOCATIONS 2019-2021**

0 8,000 16,000 32,000 Feet

**Legend**

- Project Locations
- Lake County Forest Preserves
- Lake County, Illinois



**LAKE COUNTY FOREST PRESERVE DISTRICT  
CARBON PLANTING PROJECT  
REGIONAL SCALE MAP**

0 80,000 160,000 320,000 Feet



**Lake County Forest Preserve District – Carbon Planting Project  
Attestation of No Double Counting of Credits**

I am the Director of Natural Resources of the Lake County Forest Preserve District and make this attestation regarding the no double counting of credits from tree planting project, Lake County Forest Preserve District – Carbon Planting Project.

**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**

[Insert name of Project Operator] will not seek credits for CO<sub>2</sub> for the project trees or for this project from any other organization or registry issuing credits for CO<sub>2</sub> storage.

**3. No Double Counting by Seeking Credits for the Same Trees or Same CO<sub>2</sub> Storage**

The Lake County Forest Preserve District will not apply for a project including the same trees as this project nor will it seek credits for CO<sub>2</sub> storage for the project trees or for this project in any other project or more than once.

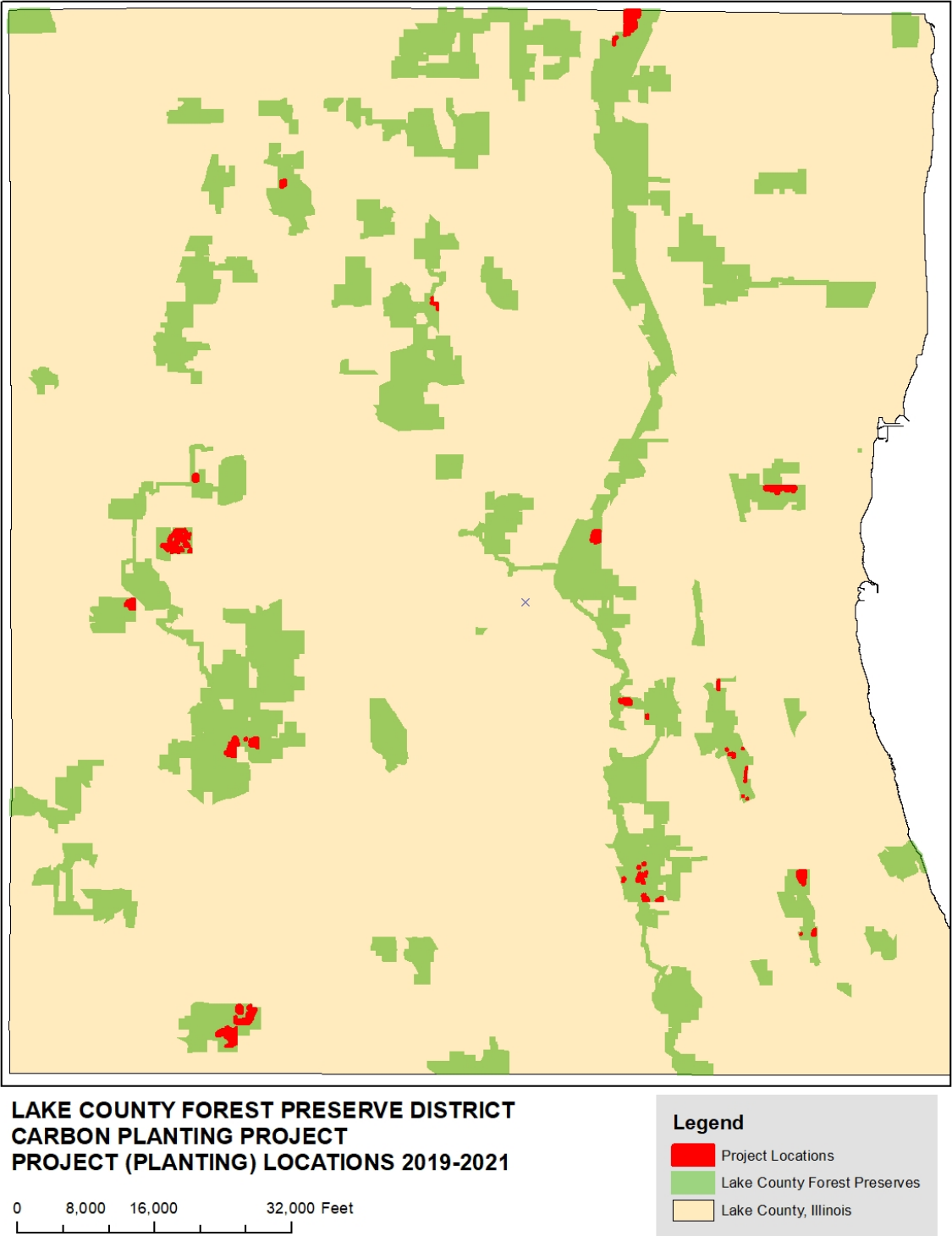
Signed on November 10, 2021, by James L. Anderson, Director of Natural Resources for the Lake County Forest Preserve District.

James L. Anderson  
Signature

847-968-3282  
Phone

janderson@lcfpd.org  
Email

Exhibit A





## Lake County Forest Preserve District – Carbon Planting Project Attestation of No Net Harm

I am the Director of Natural Resources of the Lake County Forest Preserve District and make this attestation regarding the no net harm from tree planting project, Lake County Forest Preserve District – Carbon Planting Project.

### 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 Net Harm

The trees planted (2660) in this project will produce many benefits, as described in our Application and PDD. Like almost all urban trees, the project trees are planted not for harvest but for the benefits they deliver to people, communities, and the environment as living trees 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 10, in 2021, by James L. Anderson, Director of Natural Resources for the Lake County Forest Preserve District.

James L. Anderson

Signature

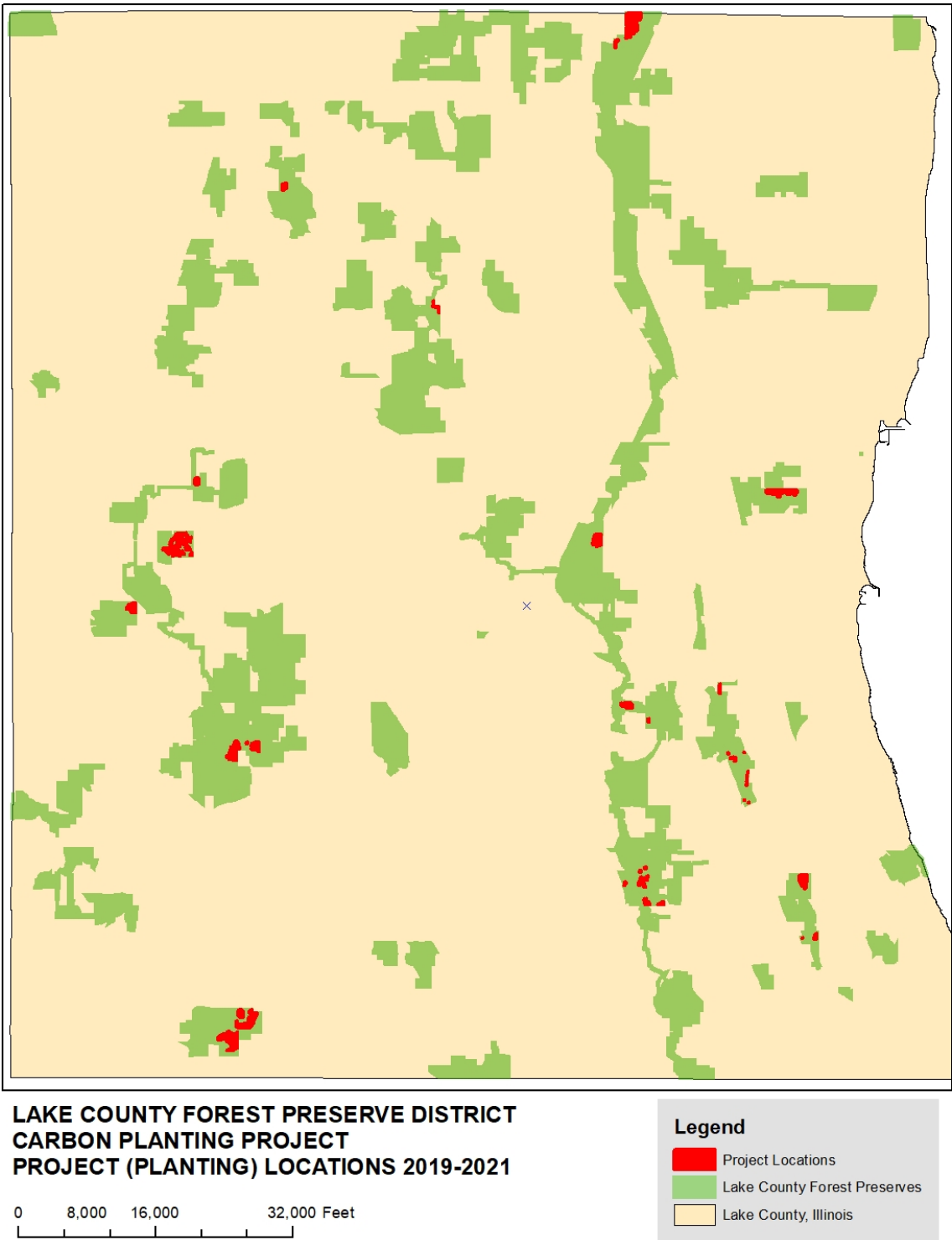
847-968-3282

Phone

janderson@lcpd.org

Email

Exhibit A





## LAKE COUNTY FOREST PRESERVE DISTRICT – CARBON PLANTING PROJECT

### Project Operator Attestation of Planting

I, the undersigned Project Operator for the Planting Project named Lake County Forest Preserve District – Carbon Planting Project, located at multiple locations with the Forest Preserve District’s holdings, and submitted to City Forest Credits by application dated November 5, 2021, attest to the following in order to confirm the planting of trees under this Project:

- Trees planted were not required by any law or ordinance to be planted;
- Trees were planted under this project on the following date (s): September 1, 2019 – October 29, 2021;
- The organizations or groups that participated in the planting event(s) are staff and volunteers of the Lake County Forest Preserve District;
- Planting events are shown in photos attached, which can include photos of tree stock and planting activities;
- The number of trees planted by species are, to a reasonable certainty, 2,660.

These planting numbers are confirmed by one or more of the following supporting and attached documents:

1. Invoices for trees planted, or
2. Invoices or a statement from the party who funded the tree purchase or supplied the trees attesting to the number of trees purchased, or
3. Any reporting to the owner or public body regarding the planting, invoices, costs, or other data re the planting, or
4. Any other reliable estimate of trees planted that is approved by the Registry

Signed on November 11, in 2021, by Mike Tully, Chief Operations Officer of the Lake County Forest Preserve District.

Mike Tully  
Signature

847-968-3415  
Phone

mtully@lcfpd.org  
Email



City Forest Credits  
Lake County Forest Preserve District – Carbon Planting Project  
Tree Planting Photographs





City Forest Credits  
Lake County Forest Preserve District – Carbon Planting Project  
Tree Planting Photographs





City Forest Credits  
Lake County Forest Preserve District – Carbon Planting Project  
Tree Planting Photographs





City Forest Credits  
Lake County Forest Preserve District – Carbon Planting Project  
Tree Planting Photographs





City Forest Credits  
Lake County Forest Preserve District – Carbon Planting Project  
Tree Planting Photographs



Project Name: Lake County Forest Preserve District – Carbon Planting Project  
Attachment 6B: Funding Statement and Sample of Tree Invoices

**Funding Statement:** All trees purchased for the Lake County Forest Preserve District – Carbon Planting Project were funded by the Lake County Forest Preserve District; however, purchases may have come from several internal accounts depending on project site.

**Invoices:** Attached are a sample of invoices from tree purchases from 2019 – 2021. Please note that this is not a complete set, as internal work procedures and invoice approvals have been partially done via email during the current pandemic, i.e. hard copies of invoices may not exist, especially for 2020.





**LAKE COUNTY FOREST PRESERVES**  
**GENERAL OFFICES**  
 1899 WEST WINCHESTER ROAD  
 LIBERTYVILLE, ILLINOIS 60048  
 847-367-6640

**PURCHASE  
ORDER #**

20190415-00 FY 2019  
 Page Number: 1

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**LAKE COUNTY FOREST PRESERVES**  
**ACCOUNTS PAYABLE**  
 1899 WEST WINCHESTER ROAD  
 LIBERTYVILLE, ILLINOIS 60048

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**MAJESTIC OAKS NURSERY**  
 8714 RICHARDSON ROAD  
 SPRING GROVE, IL 60081

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SEE BELOW  
 SEE TEXT OF PURCHASE ORDER  
 FOR SPECIFIC DELIVERY LOCATION

Tel 815-675-6240

Requisition

Delivery Reference

Fax KENKAZIMIER@CHARTER. 20190566

MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
12/21/18	002883	10/17/19	DELIVERED	PLANNING, CONSERVATION, DEV
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	<p>THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER</p> <p>TREE AND SHRUB PURCHASE 2019 - MULTIPLE PRESERVES: (GREENBELT, CUBA MARSH, ROLLINS SAVANNA &amp; KETTLE GROVE FOREST PRESERVES)            PROJECT NUMBER 60008-19017-920            ORDER PER ATTACHED ORDER SHEET            PROJECT MANAGER:            MATT UELTZEN, RESTORATION ECOLOGIST            LAKE COUNTY FOREST PRESERVES NATURAL RESOURCES            1899 WEST WINCHESTER ROAD            LIBERTYVILLE, IL 60048            PHONE: 847-968-3290            CELL: 847-276-6230            EMAIL: MUEL TZEN@LCFPD.ORG</p> <p>DELIVERY COORDINATOR:</p> <p>DELIVERIES SHALL BE COORDINATED WITH (UNLESS ANOTHER DELIVERY COORDINATOR IS</p>	<p>1.00 EACH</p> <p>9/13/19</p>	<p>18120.58000</p> <p>Inv. 132 819</p> <p>RECEIVED COPY            PARTIAL x- 9/13/19            COMPLETE  <i>[Signature]</i>            SIGNATURE</p>	<p>18,120.58</p> <p>\$8,923.73</p> <p>Please pay \$8,923.73 and keep P.O. open.</p>

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06

Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION

*[Signature]* *[Signature]*

VENDOR ACCEPTANCE

Majestic Oaks Nursery LLC

8714 Richardson Road  
Spring Grove, IL 60081

# Invoice

Date	Invoice #
9/11/2019	132819

<b>Bill To</b>
Lake County Forest Preserves 1899 West Winchester Road Libertyville Illinois 60048

<b>Ship To</b>

P.O. No.	Terms	Project
20190415	Net 30	

Item	Description	S.O. ...	Order...	Prev. Inv...	Backor...	Invoiced	Rate	Amount
CAOV5G	Carya ovata 5 gallon	692	10	0	0	10	30.95	309.50
QUAL5G	Quercus alba 5 gallon	692	6	0	0	6	16.00	96.00
QUMA5G	Quercus macrocarpa 5 gallon	692	14	0	0	14	12.73	178.22
QUVE5G	Quercus velutina 5 gallon	692	2	0	0	2	18.00	36.00
CEAM5G	Ceanothus americana 5 gallon	692	115	0	0	115	10.68	1,228.20
CESC5G	Celastrus scandens 5 gallon	692	38	0	0	38	14.40	547.20
PRVI5G	Prunus virginiana 5 gallon	692	27	0	0	27	11.38	307.26
SAHU5G	Salix humilis 5 gallon	692	67	0	0	67	11.38	762.46
SACA5G	Sambucus canadensis 5 gallon	692	12	0	0	12	10.89	130.68
VILE5G	Viburnum lentago 5 gallon	692	50	0	0	50	11.98	599.00
QUEL1"	Quercus ellipsoidalis 1"	693	7	0	0	7	57.43	402.01
COOB5G	Cornus obliqua 5 gallon	693	12	0	0	12	12.73	152.76
COST5G	Cornus stolonifera 5 gallon	693	12	0	0	12	12.73	152.76
PRAM5G	Prunus americana 5 gallon	693	50	0	0	50	11.22	561.00
RHGL5G	Rhus glabra 5 gallon	693	67	0	0	67	11.49	769.83
ROCA5G	Rosa caroliniana 5 gallon	693	115	0	0	115	11.73	1,348.95
COAM15G	Coryus americana 15 gallon				0	30	44.73	1,341.90
Kettle Grove FP					Total \$8,923.73			



LAKE COUNTY FOREST PRESERVES  
GENERAL OFFICES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
847-367-6640

**PURCHASE  
ORDER #**

20190405-00 FY 2019  
Page Number: 1

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LAKE COUNTY FOREST PRESERVES  
ACCOUNTS PAYABLE  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048

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POSSIBILITY PLACE NURSERY  
7548 WEST MONEE-MANHATTAN RD  
  
MONEE, IL 60449

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SEE BELOW  
SEE TEXT OF PURCHASE ORDER  
FOR SPECIFIC DELIVERY LOCATION

Tel 708-534-3988  
Fax 708-534-6272

Requisition  
20190569

Delivery Reference  
MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
12/19/18	000095	10/17/19	DELIVERED	NATURAL RESOURCES
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER  TREE AND SHRUB PURCHASE 2019 - MULTIPLE PRESERVES: (GREENBELT, CUBA MARSH, ROLLINS SAVANNA & KETTLE GROVE FOREST PRESERVES) PROJECT NUMBER 60008-19017-920 ORDER PER ATTACHED ORDER SHEET  PROJECT MANAGER: MATT UELTZEN, RESTORATION ECOLOGIST LAKE COUNTY FOREST PRESERVES NATURAL RESOURCES 1899 WEST WINCHESTER ROAD LIBERTYVILLE, IL 60048 PHONE: 847-968-3290 CELL: 847-276-6230 EMAIL: MUEL TZEN@LCFPD.ORG  DELIVERY COORDINATOR:  DELIVERIES SHALL BE COORDINATED WITH	1.00 EACH  9/24	24336.05000  Inv. 115996	24,336.05  14,346.29

RECEIVED COPY  
PARTIAL X-9/24/19  
COMPLETE  
SIGNATURE

Please pay \$14,346.29 and keep P.O. open.

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION

VENDOR ACCEPTANCE



**Possibility Place Nursery**

7548 W. Monee-Manhattan Rd.  
Monee, IL 60449

(708) 534-3988

**Invoice**

Invoice #: 00115996

Phone: (847) 968-3290 (Matt)

Fax: 847-367-6645 PURCH

Bill To:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Ship To:

LAKE COUNTY FOREST PRESERVE  
KETTLE GROVE  
31800 WILSON ROAD  
GRAYSLAKE, IL

SALESPERSON		YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS		DATE	PG.
KELSAY SHAW		20190405-00	PPN			10/15/19	Net 30		9/10/19	1
QTY.	ITEM NO.	DESCRIPTION			PRICE	UNIT	LOCATION	DISC %	EXTENDED PRICE	TX.
4	CAROVAT4FT	CARYA OVATA			\$70.00	4 FT	FZ-10		\$280.00	
2	CELOCCI5G17	Shagbark Hickory CELTIS OCCIDENTALIS			\$22.00	5GAL	5G2-2		\$44.00	
7	CELOCCI100	Hackberry CELTIS OCCIDENTALIS			\$59.00	"1.00	FZ-11		\$413.00	
46	QUEALBA100	Hackberry QUERCUS ALBA			\$65.00	"1.00	FZ-05		\$2,990.00	
109	QUEMACR100	White Oak QUERCUS MACROCARPA			\$52.38	"1.00	FZ-11		\$5,709.42	
18	QUEVELU100	Bur oak QUERCUS VELUTINA			\$65.00	"1.00	FZ-13		\$1,170.00	
102	CORAMER5G18	Black oak CORYLUS AMERICANA			\$11.35	5GAL	5G3-4		\$1,157.70	
67	HYPPROL5G18	American Hazelnut HYPERICUM PROLIFICUM			\$13.00	#5GA	5G3-5		\$871.00	
44	LONRETI5G18	Shrubby St. John's Wort LONICERA RETICULATA (LONICERA PROLIFERA)			\$11.75	5GAL	5G3-5		\$517.00	
14	PHYOPUL5G18	Yellow Honeysuckle PHYSOCARPUS OPULIFOLIUS			\$11.93	5GAL	5G3-4		\$167.02	
67	ROSLAN5G18	Ninebark ROSA BLANDA			\$11.45	5GAL	5G3-4		\$767.15	
20	SPIALBA5G17	Early Wild Rose SPIRAEA ALBA			\$13.00	5GAL	5G7-1		\$260.00	
ESTIMATED SHIPPING DATE.										
NOTE: ALL KNIT FABRIC IN-GROUND CONTAINERS (ROOT BAGS) AND BURLAP MUST BE REMOVED FROM PLANT MATERIAL BEFORE PLANTING.							SALE AMT.			
							FREIGHT			
							SALES TAX			
							TOTAL AMT.			
Signature: _____							PAID TODAY			
							BALANCE DUE			

**Possibility Place Nursery**  
**7548 W. Monee-Manhattan Rd.**  
**Monee, IL 60449**

(708) 534-3988

## Invoice

Invoice #: 00115996

Phone: (847) 968-3290 (Matt)

Fax: 847-367-6645 PURCH

Bill To:

LAKE COUNTY FOREST PRESERVE  
 1899 W. WINCHESTER ROAD  
 LIBERTYVILLE, IL 60048

Ship To:

LAKE COUNTY FOREST PRESERVE  
 KETTLE GROVE  
 31800 WILSON ROAD  
 GRAYSLAKE, IL

SALESPERSON		YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS		DATE	PG.
KELSAY SHAW		20190405-00	PPN			10/15/19	Net 30		9/10/19	2
QTY.	ITEM NO.	DESCRIPTION		PRICE		UNIT	LOCATION	DISC %	EXTENDED PRICE	TX.
		Meadowsweet								
ESTIMATED SHIPPING DATE.										
NOTE: ALL KNIT FABRIC IN-GROUND CONTAINERS (ROOT BAGS) AND BURLAP MUST BE REMOVED FROM PLANT MATERIAL BEFORE PLANTING.							SALE AMT.		\$14,346.29	
							FREIGHT		\$0.00	
							SALES TAX		\$0.00	
							TOTAL AMT.		\$14,346.29	
							PAID TODAY		\$0.00	
Signature: _____							BALANCE DUE		\$14,346.29	



LAKE COUNTY FOREST PRESERVES  
GENERAL OFFICES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
847-367-6640

**PURCHASE  
ORDER #**

20190405-00 FY 2019  
Page Number: 1

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LAKE COUNTY FOREST PRESERVES  
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1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048

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POSSIBILITY PLACE NURSERY  
7548 WEST MONEE-MANHATTAN RD  
  
MONEE, IL 60449

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SEE BELOW  
SEE TEXT OF PURCHASE ORDER  
FOR SPECIFIC DELIVERY LOCATION

Tel 708-534-3988  
Fax 708-534-6272

Requisition  
20190569

Delivery Reference  
MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
12/19/18	000095	10/17/19	DELIVERED	NATURAL RESOURCES
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	<p>THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER</p> <p>TREE AND SHRUB PURCHASE 2019 - MULTIPLE PRESERVES: (GREENBELT, CUBA MARSH, ROLLINS SAVANNA &amp; KETTLE GROVE FOREST PRESERVES) PROJECT NUMBER 60008-19017-920 ORDER PER ATTACHED ORDER SHEET</p> <p>PROJECT MANAGER: MATT UELTZEN, RESTORATION ECOLOGIST LAKE COUNTY FOREST PRESERVES NATURAL RESOURCES 1899 WEST WINCHESTER ROAD LIBERTYVILLE, IL 60048 PHONE: 847-968-3290 CELL: 847-276-6230 EMAIL: MUEL TZEN@LCFPD.ORG</p> <p>DELIVERY COORDINATOR:  DELIVERIES SHALL BE COORDINATED WITH</p>	<p>1.00 EACH</p> <p>9/24/10/10</p>	<p>24336.05000</p> <p>Inv. 115996 Inv. 115993</p> <p>RECEIVED COPY PARTIAL X-10/10/19 COMPLETE MUELTZEN SIGNATURE</p> <p>Please pay \$4,695.10 and keep P.O. open.</p>	<p>24,336.05</p> <p>14,346.29 4,695.10</p>

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION	
VENDOR ACCEPTANCE	

**Possibility Place Nursery**

7548 W. Monee-Manhattan Rd.  
Monee, IL 60449

(708) 534-3988

**RECEIVED**

OCT 08 2019

**ACCOUNTING**

Bill To:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

**Invoice**

Invoice #: 00115993

Phone: (847) 968-3290 (Matt)

Fax: 847-367-6645 PURCH

Ship To:

LAKE COUNTY FOREST PRESERVE  
GREENBELT CULTURAL CENTER  
1215 GREEN BAY ROAD  
NORTH CHICAGO, IL 60064

SALESPERSON		YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS		DATE	PG.
KELSAY SHAW		20190405-00	PPN			10/15/19	Net 30		10/3/19	1
QTY.	ITEM NO.	DESCRIPTION		PRICE		UNIT	LOCATION	DISC %	EXTENDED PRICE	TX.
15	MALIOEN15G16	MALUS IOENSIS		\$65.00		15GAL	#15-1		\$975.00	
20	QUEALBA100	Prairie Crab QUERCUS ALBA		\$65.00		"1.00	FZ-12		\$1,300.00	
20	QUEMACR100	White Oak QUERCUS MACROCARPA		\$52.38		"1.00	FZ-13		\$1,047.60	
30	CORAMER5G18	Bur oak CORYLUS AMERICANA		\$11.35		5GAL	5G3-4		\$340.50	
30	HYPPROL5G18	American Hazelnut HYPERICUM PROLIFICUM		\$13.00		#5GA	5G3-5		\$390.00	
20	ROSSETI5G17	Shrubby St. John's Wort ROSA SETIGERA		\$11.45		5GAL	5G4-3		\$229.00	
7	CELOCCI100	Illinois Rose <b>ADDED 1/21/19</b> CELTIS OCCIDENTALIS		\$59.00		"1.00	FZ-11		\$413.00	
Hackberry										
ESTIMATED SHIPPING DATE.										
<b>NOTE: ALL KNIT FABRIC IN-GROUND CONTAINERS (ROOT BAGS) AND BURLAP MUST BE REMOVED FROM PLANT MATERIAL BEFORE PLANTING.</b>							SALE AMT.		\$4,695.10	
							FREIGHT		\$0.00	
							SALES TAX		\$0.00	
							TOTAL AMT.		\$4,695.10	
							PAID TODAY		\$0.00	
Signature: _____							BALANCE DUE		\$4,695.10	





**LAKE COUNTY FOREST PRESERVES**  
 GENERAL OFFICES  
 1899 WEST WINCHESTER ROAD  
 LIBERTYVILLE, ILLINOIS 60048  
 847-367-6640

**PURCHASE  
ORDER #**

20190415-00 FY 2019  
 Page Number: 1

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**LAKE COUNTY FOREST PRESERVES**  
**ACCOUNTS PAYABLE**  
 1899 WEST WINCHESTER ROAD  
 LIBERTYVILLE, ILLINOIS 60048

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MAJESTIC OAKS NURSERY  
 8714 RICHARDSON ROAD  
 SPRING GROVE, IL 60081

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SEE BELOW  
 SEE TEXT OF PURCHASE ORDER  
 FOR SPECIFIC DELIVERY LOCATION

Tel 815-675-6240 Requisition  
 Fax KENKAZIMIER@CHARTER. 20190566

Delivery Reference  
 MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
12/21/18	002883	10/17/19	DELIVERED	PLANNING, CONSERVATION, DEV
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	<p>THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER</p> <p>TREE AND SHRUB PURCHASE 2019 - MULTIPLE PRESERVES: (GREENBELT, CUBA MARSH, ROLLINS SAVANNA &amp; KETTLE GROVE FOREST PRESERVES)            PROJECT NUMBER 60008-19017-920            ORDER PER ATTACHED ORDER SHEET            PROJECT MANAGER:            MATT UELTZEN, RESTORATION ECOLOGIST            LAKE COUNTY FOREST PRESERVES NATURAL RESOURCES            1899 WEST WINCHESTER ROAD            LIBERTYVILLE, IL 60048            PHONE: 847-968-3290            CELL: 847-276-6230            EMAIL: MUEL TZEN@LCFPD.ORG</p> <p>DELIVERY COORDINATOR:</p> <p>DELIVERIES SHALL BE COORDINATED WITH (UNLESS ANOTHER DELIVERY COORDINATOR IS</p>	<p>1.00 EACH</p> <p>9/13/19 10/10/19</p>	<p>18120.58000</p> <p>Inv. 132 819 Inv. 132 829 132 830</p>	<p>18,120.58</p> <p>\$8,923.73 4,136.39 203.25</p>

RECEIVED COPY  
 PARTIAL *x* - 10/10/19  
 COMPLETE  
*Matt Ueltzen*  
 SIGNATURE

Please pay \$4,339.69 and keep P.O. open.

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
 Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION  
*CM* *SP*

VENDOR ACCEPTANCE



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

MATT

## Invoice

Date	Invoice #
10/3/2019	132829

(815) 675-6240

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20190415	Net 30		10/2/2019			
Quantity	Item Code	Description			Price Each	Amount
3	CEOC1	Celtis occidentalis 1"			58.93	176.79
30	CRMO5G	Crataegus mollis 5 gallon			12.73	381.90
25	MAIO5G	Malus ioensis 5 gallon			14.73	368.25
30	QUEL1"	Quercus ellipsoidalis 1"			57.43	1,722.90
10	CEOC5G	Cephalanthus occidentalis 5 gallon			12.49	124.90
25	COOB5G	Cornus obliqua 5 gallon			12.73	318.25
30	PRAM5G	Prunus americana 5 gallon			11.22	336.60
20	PRVI5G	Prunus virginiana 5 gallon			11.38	227.60
40	VILE5G	Viburnum lentago 5 gallon			11.98	479.20
<div>RECEIVED</div> <div>OCT 09 2019</div> <div>ACCOUNTING</div>						
Greenbelt Forest Preserve					Total	\$4,136.39



## Nurserymen & Propagators

MAIT

Date	Invoice #
10/3/2019	132830

Bill To
Lake County Forest Preserves 1899 West Winchester Road Libertyville Illinois 60048

Ship To

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project	
20190415	Net 30		10/2/2019				
Quantity	Item Code	Description				Price Each	Amount
6	CEOC5G	Cephalanthus occidentalis 5 gallon				12.49	74.94
6	ILVE5G	Ilex verticillata 5 gallon				13.94	83.64
3	STTR5G	Staphlea trifolia 5 gallon				14.89	44.67
<div>RECEIVED</div> <div>OCT 09 2019</div> <div>ACCOUNTING</div>							
Rollins Savanna						Total	\$203.25



LAKE COUNTY FOREST PRESERVES  
GENERAL OFFICES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
847-367-6640

**PURCHASE  
ORDER #**

20190405-00 FY 2019  
Page Number: 1

THIS MUST APPEAR ON ALL INVOICES, PACKING LISTS AND PACKAGES

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LAKE COUNTY FOREST PRESERVES  
ACCOUNTS PAYABLE  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048

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SEE BELOW  
SEE TEXT OF PURCHASE ORDER  
FOR SPECIFIC DELIVERY LOCATION

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POSSIBILITY PLACE NURSERY  
7548 WEST MONEE-MANHATTAN RD  
MONEE, IL 60449

Tel 708-534-3988  
Fax 708-534-6272

Requisition  
20190569

Delivery Reference  
MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
12/19/18	000095	10/17/19	DELIVERED	NATURAL RESOURCES
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	<p>THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER</p> <p>TREE AND SHRUB PURCHASE 2019 - MULTIPLE PRESERVES: (GREENBELT, CUBA MARSH, ROLLINS SAVANNA &amp; KETTLE GROVE FOREST PRESERVES) PROJECT NUMBER 60008-19017-920 ORDER PER ATTACHED ORDER SHEET</p> <p>PROJECT MANAGER: MATT UELTZEN, RESTORATION ECOLOGIST LAKE COUNTY FOREST PRESERVES NATURAL RESOURCES 1899 WEST WINCHESTER ROAD LIBERTYVILLE, IL 60048 PHONE: 847-968-3290 CELL: 847-276-6230 EMAIL: MUEL TZEN@LCFPD.ORG</p> <p>DELIVERY COORDINATOR:</p> <p>DELIVERIES SHALL BE COORDINATED WITH</p>	<p>1.00 EACH</p> <p>9/24 10/10 10/24 10/24</p>	<p>24336.05000</p> <p>Inv. 115996 Inv. 115993 Inv. 115995 Inv. 116707-OAK Ridge</p> <p>RECEIVED COPY PARTIAL X-10/20/19 COMPLETE SIGNATURE</p>	<p>24,336.05</p> <p>14,346.29 4,695.10 197.66 495.00</p>

Please pay \$692.66 and keep P.O. open

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION

VENDOR ACCEPTANCE



**Possibility Place Nursery**

7548 W. Monee-Manhattan Rd.  
Monee, IL 60449

(708) 534-3988

**Invoice**

Invoice #: 00116907

Phone: (847) 968-3290 (Matt)

Fax: 847-367-6645 PURCH

Bill To:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Ship To:

LAKE COUNTY FOREST PRESERVE  
ROLLINS SAVANNA  
19876 W. WASHINGTON  
GRAYSLAKE, IL 60030

SALESPERSON		YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS		DATE	PG.	
KELSAY SHAW		OAKTOBER	PPN			10/6/19	Net 30		10/7/19	1	
QTY.	ITEM NO.	DESCRIPTION		PRICE		UNIT	LOCATION	DISC %	EXTENDED PRICE	TX.	
3	QUEBICO15G18	QUERCUS BICOLOR Swamp White Oak		\$90.00		15GAL	#15-3	50%	\$135.00		
3	QUERUBR15G17	QUERCUS RUBRA Red Oak		\$90.00		15GAL	#15-1	50%	\$135.00		
1	QUEMACR15G1	QUERCUS MACROCARPA Bur Oak		\$90.00		15GAL	#15-3	50%	\$45.00		
2	QUEALBA15G17	QUERCUS ALBA White Oak		\$90.00		15GAL	#15-1		\$180.00		
<div>RECEIVED</div> <div>OCT 14 2019</div> <div>ACCOUNTING</div>											
							CONFIRMED SHIP DATE				
							<div>NOTE: ALL KNIT FABRIC IN-GROUND CONTAINERS (ROOT BAGS) AND BURLAP MUST BE REMOVED FROM PLANT MATERIAL BEFORE PLANTING.</div>		SALE AMT.		\$495.00
									FREIGHT		\$0.00
									SALES TAX		\$0.00
TOTAL AMT.		\$495.00									
Signature: _____							PAID TODAY		\$0.00		
							BALANCE DUE		\$495.00		

**Possibility Place Nursery****7548 W. Monee-Manhattan Rd.  
Monee, IL 60449****(708) 534-3988****Invoice**

Invoice #: 00115995

Phone: (847) 968-3290 (Matt)

Fax: 847-367-6645 PURCH

Bill To:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Ship To:

LAKE COUNTY FOREST PRESERVE  
CUBA MARSH  
W. CUBA ROAD  
BARRINGTON, IL

SALESPERSON		YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS		DATE	PG.
KELSAY SHAW		20190405-00	PPN			10/15/19	Net 30		10/15/19	1
QTY.	ITEM NO.	DESCRIPTION			PRICE	UNIT	LOCATION	DISC %	EXTENDED PRICE	TX.
8	CORAMER5G18	CORYLUS AMERICANA			\$11.35	5GAL	5G3-4		\$90.80	
2	EUOATRO5G18	American Hazelnut EUONYMUS ATROPURPUREUS			\$22.00	5GAL	NO ZONE		\$44.00	
2	PHYOPUL5G18	Wahoo PHYSOCARPUS OPULIFOLIUS			\$11.93	5GAL	5G3-4		\$23.86	
2	VIBPRUN5G18	Ninebark VIBURNUM PRUNIFOLIUM Blackhaw Viburnum			\$19.50	5GAL	5G3-2		\$39.00	
ESTIMATED SHIPPING DATE.										
NOTE: ALL KNIT FABRIC IN-GROUND CONTAINERS (ROOT BAGS) AND BURLAP MUST BE REMOVED FROM PLANT MATERIAL BEFORE PLANTING.							SALE AMT.		\$197.66	
							FREIGHT		\$0.00	
							SALES TAX		\$0.00	
							TOTAL AMT.		\$197.66	
							PAID TODAY		\$0.00	
Signature: _____							BALANCE DUE		\$197.66	



**LAKE COUNTY FOREST PRESERVES**  
**GENERAL OFFICES**  
 1899 WEST WINCHESTER ROAD  
 LIBERTYVILLE, ILLINOIS 60048  
 847-367-6640

**PURCHASE  
ORDER #**

20190415-00 FY 2019  
 Page Number: 1

THIS MUST APPEAR ON ALL INVOICES, PACKING LISTS AND PACKAGES

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**LAKE COUNTY FOREST PRESERVES**  
**ACCOUNTS PAYABLE**  
 1899 WEST WINCHESTER ROAD  
 LIBERTYVILLE, ILLINOIS 60048

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MAJESTIC OAKS NURSERY  
 8714 RICHARDSON ROAD  
 SPRING GROVE, IL 60081

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SEE BELOW  
 SEE TEXT OF PURCHASE ORDER  
 FOR SPECIFIC DELIVERY LOCATION

Tel 815-675-6240 Requisition  
 Fax KENKAZIMIER@CHARTER. 20190566

Delivery Reference  
 MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
12/21/18	002883	10/17/19	DELIVERED	PLANNING, CONSERVATION, DEV
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	<p>THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER</p> <p>TREE AND SHRUB PURCHASE 2019 - MULTIPLE PRESERVES: (GREENBELT, CUBA MARSH, ROLLINS SAVANNA &amp; KETTLE GROVE FOREST PRESERVES)            PROJECT NUMBER 60008-19017-920            ORDER PER ATTACHED ORDER SHEET            PROJECT MANAGER:            MATT UELTZEN, RESTORATION ECOLOGIST            LAKE COUNTY FOREST PRESERVES NATURAL RESOURCES            1899 WEST WINCHESTER ROAD            LIBERTYVILLE, IL 60048            PHONE: 847-968-3290            CELL: 847-276-6230            EMAIL: MUEL TZEN@LCFPD.ORG</p> <p>DELIVERY COORDINATOR:</p> <p>DELIVERIES SHALL BE COORDINATED WITH (UNLESS ANOTHER DELIVERY COORDINATOR IS</p>	1.00 EACH	18120.58000	18,120.58
		9/13/19	Inv. 132 819	\$8,923.73
		10/10/19	Inv. 132 829	4,136.39
			132 830	203.25
		10/24/19	Inv. 132 840	4,444.70
		<p>RECEIVED COPY            PARTIAL X-10/24/19            COMPLETE            [Signature]            SIGNATURE</p>		
		Please pay \$4,444.70 and keep b.o. open		

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
 Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION  
 [Signature] [Signature]

VENDOR ACCEPTANCE  
 [Signature]



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

MATT

## Invoice

Date	Invoice #
10/16/2019	132840

(815) 675-6240

Bill To
Lake County Forest Preserves 1899 West Winchester Road Libertyville Illinois 60048

Ship To

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20190415	Net 30		10/15/2019			
Quantity	Item Code	Description			Price Each	Amount
100	CEAM5G	Ceanothus americana 5 gallon			10.68	1,068.00
35	PRAM5G	Prunus americana 5 gallon			11.22	392.70
50	RHGL5G	Rhus glabra 5 gallon			11.49	574.50
50	ROCA5G	Rosa caroliniana 5 gallon			11.73	586.50
50	SAHU5G	Salix humilis 5 gallon			11.38	569.00
30	VILE5G	Viburnum lentago 5 gallon			11.98	359.40
20	VILE15G	Viburnum lentago 15 gallon			44.73	894.60
<div>RECEIVED</div> <div>OCT 22 2019</div> <div>ACCOUNTING</div>						
Cuba Marsh					Total	\$4,444.70



LAKE COUNTY FOREST PRESERVES  
GENERAL OFFICES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
847-367-6640

**PURCHASE**

**ORDER #** 20190405-00 FY 2019  
Page Number: 1

THIS MUST APPEAR ON ALL INVOICES, PACKING LISTS AND PACKAGES

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LAKE COUNTY FOREST PRESERVES  
ACCOUNTS PAYABLE  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048

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POSSIBILITY PLACE NURSERY  
7548 WEST MONEE-MANHATTAN RD  
MONEE, IL 60449

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SEE BELOW  
SEE TEXT OF PURCHASE ORDER  
FOR SPECIFIC DELIVERY LOCATION

Tel 708-534-3988  
Fax 708-534-6272

Requisition  
20190569

Delivery Reference  
MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
12/19/18	000095	10/17/19	DELIVERED	NATURAL RESOURCES

LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	<p>THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER</p> <p>TREE AND SHRUB PURCHASE 2019 - MULTIPLE PRESERVES: (GREENBELT, CUBA MARSH, ROLLINS SAVANNA &amp; KETTLE GROVE FOREST PRESERVES) PROJECT NUMBER 60008-19017-920 ORDER PER ATTACHED ORDER SHEET</p> <p>PROJECT MANAGER: MATT UELTZEN, RESTORATION ECOLOGIST LAKE COUNTY FOREST PRESERVES NATURAL RESOURCES 1899 WEST WINCHESTER ROAD LIBERTYVILLE, IL 60048 PHONE: 847-968-3290 CELL: 847-276-6230 EMAIL: MUELZEN@LCFPD.ORG</p> <p>DELIVERY COORDINATOR:</p> <p>DELIVERIES SHALL BE COORDINATED WITH</p>	<p>1.00 EACH</p> <p>9/24 10/10 10/24 10/24 11/26</p>	<p>24336.05000</p> <p>Inv. 115996 Inv. 115993 Inv. 115995 Inv. 116707-0AKH Inv. 115994</p> <p>RECEIVED COPY PARTIAL X - 11/26/19 COMPLETE SIGNATURE</p>	<p>24,336.05</p> <p>14,346.29 4,695.10 197.66 495.00 4,860.00</p> <p>Please pay \$4,860.00 and keep P.O. open.</p>

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION

*[Signature]*

VENDOR ACCEPTANCE

*[Signature]*



**Lake County Forest Preserve District  
CHANGE ORDER NO. 1**

**Date:** 1/14/19  
**Project No:** 19017  
**TREE AND SHRUB PURCHASE 2019  
MULTIPLE PRESERVES**

**Contractor:** **Possibility Place Nursery**  
7548 West Monee-Manhattan Rd  
Monee, IL 60449

**Original Contract Date:** 12/19/18

**To the Contractor:** You are hereby authorized to make the following changes,  
subject to the Contract provisions.

<b>Bulletin No. 1</b>	<b>Increase</b>	<b>\$ 413.00</b>	<b>1.7%</b>
<b>TOTAL</b>	<b>Increase</b>	<b>\$ 413.00</b>	<b>1.7%</b>
<b>Original Contract Amount</b>		<b>\$ 24,336.05</b>	
<b>Change Order No. 1</b>	<b>Increase</b>	<b>\$ 413.00</b>	<b>1.7%</b>
<b>REVISED CONTRACT AMOUNT</b>		<b>\$ 24,749.05</b>	

**Other Contracts Affected:** **NONE**

**Approved By:**

James L. Ard  
Director of Natural Resources

**DATE:** 15 Jan 2019

**Accepted By:**

[Signature]  
Contractor

**DATE:** 1-21-19

**DISTRIBUTION: EXECUTED ORIGINAL:** Purchasing  
(Executed Original is: ☐ Hard Copy ☐ E-Copy)

**COPIES:** Project Manager, Contractor  
**Decrease / No Cost Change / Time Change:** Accounting  
**Increase:** Munis  
**Original PO#** 20190405-00

Rev. 01-05-18



**Possibility Place Nursery**

7548 W. Monee-Manhattan Rd.  
Monee, IL 60449

(708) 534-3988

**Invoice**

Invoice #: 00115994

Phone: (847) 968-3290 (Matt)

Fax: 847-367-6645 PURCH

Matt 11/25

**Bill To:**

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

**Ship To:**

LAKE COUNTY FOREST PRESERVE  
CUBA MARSH  
W. CUBA ROAD  
BARRINGTON, IL

SALESPERSON		YOUR NO.	SHIP VIA	COL	PPD	SHIP DATE	TERMS		DATE	PG.
KELSAY SHAW		20190405-00	PPN			10/15/19	Net 30		11/21/19	1
QTY.	ITEM NO.	DESCRIPTION			PRICE	UNIT	LOCATION	DISC %	EXTENDED PRICE	TX.
15	MALIOEN5G18	MALUS IOENSIS Prairie Crab			\$15.00	5GAL	5G3-5		\$225.00	
100	AMOCANE5G18	AMORPHA CANESCENS Leadplant			\$14.50	5GAL	#1		\$1,450.00	
75	CORAMER5G18	CORYLUS AMERICANA American Hazelnut			\$11.35	5GAL	5G3-4		\$851.25	
50	HYPPROL5G18	HYPERICUM PROLIFICUM Shrubby St. John's Wort			\$13.00	#5GA	5G3-5		\$650.00	
15	PRUAMER15G18	PRUNUS AMERICANA American Plum			\$55.00	15GAL	#15-3		\$825.00	
75	ROSSET15G18	ROSA SETIGERA Illinois Rose			\$11.45	#5GA	5G3-5		\$858.75	
ESTIMATED SHIPPING DATE.										
NOTE: ALL KNIT FABRIC IN-GROUND CONTAINERS (ROOT BAGS) AND BURLAP MUST BE REMOVED FROM PLANT MATERIAL BEFORE PLANTING.							SALE AMT.		\$4,860.00	
							FREIGHT		\$0.00	
							SALES TAX		\$0.00	
							TOTAL AMT.		\$4,860.00	
							PAID TODAY		\$0.00	
Signature: _____							BALANCE DUE		\$4,860.00	



LAKE COUNTY FOREST PRESERVES  
GENERAL OFFICES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
847-367-6640

PURCHASE  
ORDER #

20200164-00 FY 2020  
Page Number: 1

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LAKE COUNTY FOREST PRESERVES  
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1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048

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POSSIBILITY PLACE NURSERY  
7548 WEST MONEE-MANHATTAN RD

MONEE, IL 60449

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LAKE COUNTY FOREST PRESERVES  
1899 WEST WINCHESTER ROAD

LIBERTYVILLE, IL 60048

Tel 708-534-3988  
Fax 708-534-6272

Requisition  
20200229

Delivery Reference  
MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
03/02/20	000095	10/15/20	DELIVERED	PLANNING, CONSERVATION, DEV
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	BID# 20011 - TREE & SHRUB PURCHASE 2020 - MULTIPLE PRESERVES  DELIVERIES SHALL BE COORDINATED WITH: DAVE CASSIN, SUPERINTENDENT OF NATURAL RESOURCE OPERATIONS PHONE: 847-968-3427 CELL: 847-489-6148 EMAIL: DCCASSIN@LCFPD.ORG THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER 20104100-803200-60008  OUR PURCHASE ORDER NUMBER MUST APPEAR ON ALL PAPERWORK, ESPECIALLY INVOICES.	1.00 EACH  10/20/20 " " 10/21/20 2/17/21	5608.86000  Inv. 127844 Inv. 117846 Inv. 117843 Inv. 117847 Inv. 118119 Inv. 117845 Inv. 118156  PO Total	5,608.86  \$ 983.68 <del>\$ 1,228.68</del> \$ 1,185.41 \$ 711.00 \$ 630.50 \$ 26.00 \$ 794.27 \$ 13.00  5,608.86

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

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PURCHASING AUTHORIZATION

Christine J. Miller

VENDOR ACCEPTANCE





LAKE COUNTY FOREST PRESERVES  
GENERAL OFFICES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
847-367-6640

PURCHASE ORDER # 20200183-00 FY 2020  
Page Number: 1

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LAKE COUNTY FOREST PRESERVES  
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1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048

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MAJESTIC OAKS NURSERY  
8714 RICHARDSON ROAD  
SPRING GROVE, IL 60081

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LAKE COUNTY FOREST PRESERVES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Tel 815-675-6240 Requisition  
Fax KENKAZIMIER@CHARTER. 20200230

Delivery Reference  
MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
03/11/20	002883	10/15/20	DELIVERED	NATURAL RESOURCES

LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	<p>BID# 20011 - TREE &amp; SHRUB PURCHASE 2020 - MULTIPLE PRESERVES</p> <p>DELIVERIES SHALL BE COORDINATED WITH: DAVE CASSIN, SUPERINTENDENT OF NATURAL RESOURCE OPERATIONS PHONE: 847-968-3427 CELL: 847-489-6148 EMAIL: DCCASSIN@LCFPD.ORG</p> <p>THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER 20104100-803200-60008</p> <p>OUR PURCHASE ORDER NUMBER MUST APPEAR ON ALL PAPERWORK, ESPECIALLY INVOICES.</p>	<p>1.00 EACH</p> <p>VP 10/16/20 Inv. 132886 IG 10/5/20 132890 (Galamore only) MZD 10/5/20 132889 + 1711 MZD 10/20/20 132895 OAK 10/20/20 132899 LHR 10/20/20 132900 KES 10/20/20</p>	<p>24551.89000</p> <p>132886 132890 132889 132895 132899 132900</p>	<p>24,551.89</p> <p>\$8,011.61 \$6,829.34 \$5,004.21 \$3,098.96 \$2,960.01 \$2952.73</p> <p>PO Total 24,551.8</p>

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by  
reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will  
become a binding contract, upon Vendor either executing this Purchase Order in the  
VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION

Christine F. Miller

VENDOR ACCEPTANCE

Bid:  
Bid:

LAKE COUNTY FOREST PRESERVES  
ADMINISTRATIVE OFFICES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
847-66640

PURCHASE  
ORDER #

20200165-00 FY 2020  
Page Number: 1

THIS MUST APPEAR ON ALL INVOICES, PACKING LISTS AND PACKAGE

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LAKE COUNTY FOREST PRESERVES  
ACCOUNTS PAYABLE  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048

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LAKE COUNTY FOREST PRESERVES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

CHARLES J. FIORE CO., INC.  
16606 W. HIGHWAY 22

PRAIRIE VIEW, IL 60069

Tel 847-913-1414  
Fax 847-913-9690

Requisition  
20200228

Delivery Reference  
MATT UELTZEN

DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	FREIGHT METHOD/TERMS	DEPARTMENT/LOCATION
03/02/20	001021	10/15/20	DELIVERED	PLANNING, CONSERVATION, DEV
LN	DESCRIPTION/PART NO.	QTY	COST EA.	EXT. PRICE
001	BID# 20011 - TREE & SHRUB PURCHASE 2020 - MULTIPLE PRESERVES  DELIVERIES SHALL BE COORDINATED WITH: DAVE CASSIN, SUPERINTENDENT OF NATURAL RESOURCE OPERATIONS PHONE: 847-968-3427 CELL: 847-489-6148 EMAIL: DCASSIN@LCFPD.ORG THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER 20104100-803200-60008  OUR PURCHASE ORDER NUMBER MUST APPEAR ON ALL PAPERWORK, ESPECIALLY INVOICES.	1.00 EACH  INV. 190899 191639  10/16/20 INV. 191830 190018 190650 191204  PO Total	1626.00000  \$17.00 \$152.00  \$171.00 \$500.00 \$285.00 \$21.00	1,626.00           1,626.0

ILLINOIS TAX EXEMPTION IDENTIFICATION NO. E9995-6721-06  
Lake County Forest Preserves is exempt from Federal Excise Tax. See reverse side.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by  
reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will  
become a binding contract, upon Vendor either executing this Purchase Order in the  
VENDOR ACCEPTANCE box or by commencing performance.

PURCHASING AUTHORIZATION

Christine F. Miller

VENDOR ACCEPTANCE



# Lake County Forest Preserves

## Bill To

LAKE COUNTY FOREST PRESERVES  
ACCOUNTS PAYABLE  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
EMAIL: ACCOUNTSPAYABLE@LCFPD.ORG

PHONE  
(847) 367-6640

## Purchase Order

Fiscal Year 2021

Page: 1 of 1

THE BELOW PURCHASE ORDER NUMBER MUST APPEAR  
ON ALL INVOICES, PACKAGES AND SHIPPING PAPERS.

PURCHASE ORDER # **20210134**

## Vendor

MAJESTIC OAKS NURSERY  
8714 RICHARDSON ROAD  
SPRING GROVE, IL 60081

## Ship To

LAKE COUNTY FOREST PRESERVES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

VENDOR PHONE NUMBER		VENDOR EMAIL		REQUISITION NUMBER	DELIVERY REFERENCE
815-675-6240				20210182	MATT UELTZEN
DATE ORDERED	VENDOR NUMBER	DATE REQUIRED		BUYER	DEPARTMENT/LOCATION
02/22/2021	2883	02/28/2021		Michael Zahalka	NATURAL RESOURCES
NOTES					

AWARDED BY ACTION OF THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON FEBRUARY 9, 2021. THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON SUCH DATE, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER.

ITEM #	DESCRIPTION / PART #	QTY	UOM	UNIT PRICE	EXTENDED PRICE
1	21008 - TREE & SHRUB PURCHASE 2021 PER ATTACHED ORDER SHEET AWARDED BY ACTION OF THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON FEBRUARY 9, 2021. THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON SUCH DATE, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER.	1.0	EACH	\$26,576.45	\$26,576.45
<i>Partial - Matt Ueltzen</i> <i>10/14/21 Inv. 132975</i> <i>132974</i> <i>132973</i> <i>132979</i> <i>132981</i> <i>132989</i> <i>132982</i> <i>132976</i> <i>\$23,152.60</i>				<i>1262.00</i>	
				<i>1717.50</i>	
				<i>3038.20</i>	
				<i>4857.45</i>	
				<i>4034.30</i>	
				<i>5799.75</i>	
				<i>2291.75</i>	
				<i>651.25</i>	

*Please pay \$23,152.60 according to account breakdown on invoice sheets.*

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

Vendor Acceptance

Purchase Order Total

\$26,576.45

Authorized Signature





Lake County Forest Preserve District  
CHANGE ORDER NO. 1

Date: March 9, 2021

Project No: 21008  
TREE AND SHRUB PURCHASE 2021  
Multiple Preserves

Contractor: MAJESTIC OAKS NURSERY  
8714 Richardson Road  
Spring Grove, IL 60081

Original Contract Date: 2/22/21

To the Contractor: You are hereby authorized to make the following changes,  
subject to the Contract provisions.

Bulletin No. 1	Increase	\$ 651.25	2.45%
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<b>TOTAL</b>	<b>Increase</b>	<b>\$ 651.25</b>	<b>2.45%</b>
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Original Contract Amount		\$ 26,576.45	
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Change Order No. 1	Increase	\$ 651.25	2.45%
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<b>REVISED CONTRACT AMOUNT</b>		<b>\$ 27,227.70</b>	<b>102.45%</b>
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Time Extension: NONE

Other Contracts Affected: NONE

Recommended By:

Matthew C. C... DATE: 3/15/21  
Project Manager

Approved By:

James J. C... DATE: 16 Mar 21  
Director of Natural Resources

By signing below, Contractor (i) accepts and approves this Change Order and (ii) certifies that this Change Order will not cause or result in an increase in the price of any Subcontract under the Contract that, when added to all other increases to the price of such Subcontract, is 50% or more of the Subcontract's original price.

Accepted By:

Ken K... DATE: 3-25-21  
Contractor

**DISTRIBUTION:** EXECUTED ORIGINAL: Purchasing **COPIES:** Project Manager, Contractor  
(Executed Original is: ☐ Hard Copy ☐ E-Copy) Decrease / No Cost Change / Time Change: Accounting  
Increase: Munis  
Original PO# 20210134

# Purchase Order Change Order



Lake County  
Forest Preserves

1899 West Winchester Road  
Libertyville, Illinois 60048  
PurchasingDept@LCFPD.org  
847-367-8640

Date:  
08/19/2021

Change Order Number (Please use drop  
down) \*  
2

Department: (Please use drop down) \*  
Natural Resources

Fiscal Year  
2021

Purchase Order Number: \*  
20210134

Account Code: \*  
20104100-803200-60008

Administrative Assistant Email \*  
HKELLER@LCFPD.ORG

## Project Information

Project or Bid Number:  
21008

Contractor Name: \*  
Majestic Oaks Nursery

Completed

Project Name: \*  
Tree & Shrub Purchase 2021

Contractor Email \*  
PATTY@MAJESTICOAKSNURSERY.COM

Original Contract Date: \*  
02/22/2021

Site:  
Multiple Sites

Contract Type: \*  
☐ Lump Sum Contract  
☒ Unit Price Contract

**To the Contractor:** You are hereby authorized to make the following changes, subject to the Contract provisions.

## Increase

Item Number	Item	Description	Amount
1	Quercus bicolor - 1-inch	Provide 3 additional 1-inch Swamp White Oaks to Old School delivery/project site @ \$54.95/each	\$164.85

## Decrease

## Time Extension

Change to Scope that results in time extension  
or no additional costs:

Change in Contract Price  
from this Change Order:  
\$164.85

Revised Completion Date:

## Change in Contract Price

By their approval of this Change Order, Owner's Department Director and/or Standing Committee(s) hereby determine:

1. The circumstances necessitating the Change Order were not reasonably foreseeable at the time the Contract was signed;
2. The Change Order is germane to the original Contract, as signed; and
3. The Change Order is in the best interest of the Owner and is authorized by law.

This Written Determination and this Change Order shall (i) be preserved in the Owner's file for the Contract and open to the public for inspection and (ii) constitute the Written Determination required by 720 ILCS 5/33E-9.

### Contractor Approval

\*By signing below, Contractor also certifies that this Change Order will not cause or result in an increase in the price of any subcontract under the Contract that is 50% or more of such original subcontract's price.

**Name:**

Kenneth Kazimier

**Title:**


Nursery Manager

**Date of Approval:**

08/24/2021

Please click on the Signature box – Sign your name with your mouse. Then click **Save**. Click the Return to LCFPD button to send the item back to Lake County Forest Preserves.

**Signature:**

A handwritten signature in black ink, appearing to read "Ken Kazimier", is written within a blue rectangular signature box.

# Purchase Order Change Order



**Lake County  
Forest Preserves**

1899 West Winchester Road  
Libertyville, Illinois 60048  
PurchasingDept@LCFPD.org  
847-367-6640

**Date:**  
09/14/2021

**Fiscal Year**  
2021

**Change Order Number (Please use drop down) \***  
3

**Purchase Order Number: \***  
20210134

**Department (Please use drop down) \***  
Natural Resources

**Account Code: \***  
20104100-803200-60008

**Administrative Assistant Email \***  
HKELLER@LCFPD.ORG

## Project Information

**Project or Bid Number:**  
21008

**Project Name: \***  
Tree & Shrub Purchase 2021

**Site:**  
ERCA08 Edward L. Ryerson Conservation  
Area

**Contractor Name: \***  
Majestic Oaks Nursery

**Contractor Email \***  
PATTY@MAJESTICOAKSNURSERY.COM

**Completed**

**Original Contract Date: \***  
02/22/2021

**Contract Type: \***  
☐ Lump Sum Contract  
☒ Unit Price Contract

**To the Contractor:** You are hereby authorized to make the following changes, subject to the Contract provisions.

Net Percentage Change from  
original Contract Price  
resulting form this Change  
Order and all previous  
Change Orders:  
5.000000%

### Change in Contract Time


Original Contract Time	Contract Time (as amended by <i>previous</i> Change Orders, if any)	New Contract Time
Commencement Date: 02/22/2021	Commencement Date:	Commencement Date:
Completion Date: 10/31/2021	Completion Date:	Completion Date

### Project Manager Recommendation

Project Manager \*  
MUELTZEN

Date of Recommendation:  
09/14/2021

Signature:

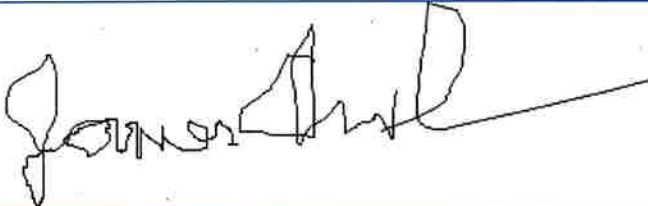


### Department Director Approval

Department Director:  
Jim Anderson

Date of Approval:  
09/14/2021

Signature:







# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

*MATT*

(815) 675-6240

## Invoice

Date	Invoice #
9/18/2021	132975

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		9/14/2021			
Quantity	Item Code	Description			Price Each	Amount
3	CEOC5G	Cephalanthus occidentalis 5 gallon			12.65	37.95
1	CECA15G	Cercis canadensis 15 gallon			64.95	64.95
6	CRMO5G	Crataegus mollis 5 gallon			12.50	75.00
2	PHOP5G	Physocarpus opulifolius 5 gallon			12.25	24.50
5	QUBI5G	Quercus bicolor 5 gallon			14.25	71.25
3	QUBI10G	Quercus bicolor 10 gallon (1")			54.95	164.85
6	QUMA5G	Quercus macrocarpa 5 gallon			12.75	76.50
6	QUMA10G	Quercus macrocarpa 10 gallon (1")			51.95	311.70
2	QUVE10G	Quercus velutina 10 gallon (1")			62.95	125.90
10	ROSE5G	Rosa setigera 5 gallon			11.35	113.50
6	SAHU5G	Salix humilis 5 gallon			13.25	79.50
4	SACA5G	Sambucus canadensis 5 gallon			11.20	44.80
4	VIPR5G	Viburnum prunifolium 5 gallon			17.95	71.80
11104100-8032ev-60008						
Rollins Savanna FP (SO # 866 & 867)					Total	\$1,262.20



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

MATT

## Invoice

Date	Invoice #
9/18/2021	132974

(815) 675-6240

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		9/14/2021			
Quantity	Item Code	Description			Price Each	Amount
5	CRMO5G	Crataegus mollis 5 gallon			12.50	62.50
6	PHOP5G	Physocarpus opulifolius 5 gallon			12.25	73.50
6	QUMA5G	Quercus macrocarpa 5 gallon			12.75	76.50
15	QUMA10G	Quercus macrocarpa 10 gallon			51.95	779.25
1	QUVE10G	Quercus velutina 10 gallon			62.95	62.95
3	ROBL5G	Rosa blanda 5 gallon			12.95	38.85
5	ROSE5G	Rosa setigera 5 gallon			11.35	56.75
6	SACA5G	Sambucus canadensis 5 gallon			11.20	67.20
11104100-803200-60008						
Operations Facility (Lake Villa)					Total	\$1,217.50



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

MA-TT

(815) 675-6240

## Invoice

Date	Invoice #
9/18/2021	132973

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		9/13/2021			
Quantity	Item Code	Description			Price Each	Amount
8	CRMO5G	Crataegus mollis 5 gallon			12.50	100.00
3	PHOP5G	Physocarpus opulifolius 5 gallon			12.25	36.75
8	QUEL5G	Quercus ellipsoidalis 5 gallon			17.95	143.60
10	QUMA5G	Quercus macrocarpa 5 gallon			12.75	127.50
27	QUMA1	Quercus macrocarpa 1"			51.95	1,402.65
2	QUVE1	Quercus velutina 1"			62.95	125.90
40	ROCA5G	Rosa caroliniana 5 gallon			12.95	518.00
21	ROSE5G	Rosa setigera 5 gallon			11.35	238.35
21	SAHU5G	Salix humilis 5 gallon			13.25	278.25
6	SACA5G	Sambucus canadensis 5 gallon			11.20	67.20
111 04100-803200-60008						
Singing Hills FP					Total	\$3,038.20

11104100-803200-60008



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

(815) 675-6240

## Invoice

Date	Invoice #
9/22/2021	132979

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

Lakewood Center FP  
Andy Strom  
815-701-2811

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		9/20/2021			
Quantity	Item Code	Description			Price Each	Amount
6	CEAM5G	Ceanothus americana 5 gallon			11.75	70.50
14	CESC5G	Celastrus scandens 5 gallon			11.95	167.30
12	CRMO5G	Crataegus mollis 5 gallon			12.50	150.00
5	PHOP5G	Physocarpus opulifolius 5 gallon			12.25	61.25
14	QUCO5G	Quercus coccinea 5 gallon			17.95	251.30
17	QUMA5G	Quercus macrocarpa 5 gallon			12.75	216.75
30	QUMA1	Quercus macrocarpa 1"			51.95	1,558.50
12	QUVE1	Quercus velutina 1"			62.95	755.40
60	ROCA5G	Rosa caroliniana 5 gallon			12.95	777.00
36	ROSE5G	Rosa setigera 5 gallon			11.35	408.60
15	SAHU5G	Salix humilis 5 gallon			13.25	198.75
12	SACA5G	Sambucus canadensis 5 gallon			11.20	134.40
6	VIPR5G	Viburnum prunifolium 5 gallon			17.95	107.70
11104100-803200-60008						
Lakewood (Center)					Total	\$4,857.45

11104100-803200-60008



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

MATT

(815) 675-6240

## Invoice

Date	Invoice #
9/30/2021	132981

Bill To
Lake County Forest Preserves 1899 West Winchester Road Libertyville Illinois 60048

Ship To
Lakewood FP (Schreiber)

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		9/27/2021			
Quantity	Item Code	Description			Price Each	Amount
4	QUCO1"	Quercus coccinea 1"			73.95	295.80
10	CEAM5G	Ceanothus americana 5 gallon			11.75	117.50
52	CESC5G	Celastrus scandens 5 gallon			11.95	621.40
3	QUMA5G	Quercus macrocarpa 5 gallon			12.75	38.25
13	QUMA1	Quercus macrocarpa 1"			51.95	675.35
10	QURU1	Quercus rubra 1"			59.95	599.50
8	QUVE1	Quercus velutina 1"			62.95	503.60
10	ROBL5G	Rosa blanda 5 gallon			12.95	129.50
10	ROCA5G	Rosa caroliniana 5 gallon			12.95	129.50
28	SACA5G	Sambucus canadensis 5 gallon			11.20	313.60
34	VIPR5G	Viburnum prunifolium 5 gallon			17.95	610.30
11104100-803200-60008						
Lakewood (Schreiber)					Total	\$4,034.30





# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

*MATT*

(815) 675-6240

## Invoice

Date	Invoice #
10/5/2021	132989

<b>Bill To</b>
Lake County Forest Preserves 1899 West Winchester Road Libertyville Illinois 60048

<b>Ship To</b>
Old School FP 28285 N St. Mary's Rd Libertyville IL 60048

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		10/4/2021			

Quantity	Item Code	Description	Price Each	Amount
21	CESC5G	Celastrus scandens 5 gallon	11.95	250.95
29	CEOC5G	Cephalanthus occidentalis 5 gallon	12.65	366.85
6	HAVI5G	Hamamelis virginiana 5 gallon	19.50	117.00
14	PHOP5G	Physocarpus opulifolius 5 gallon	12.25	171.50
25	PRVI5G	Prunus virginiana 5 gallon	13.50	337.50
10	QUBI5G	Quercus bicolor 5 gallon	14.25	142.50
27	QUBI1	Quercus bicolor 1"	54.95	1,483.65
3	QUCO5G	Quercus coccinea 5 gallon	17.95	53.85
1	QUCO1"	Quercus coccinea 1"	73.95	73.95
3	QUMA5G	Quercus macrocarpa 5 gallon	12.75	38.25
9	QUMA1	Quercus macrocarpa 1"	51.95	467.55
24	QURU1	Quercus rubra 1"	59.95	1,438.80
6	QUVE1	Quercus velutina 1"	62.95	377.70
14	SACA5G	Sambucus canadensis 5 gallon	11.20	156.80
18	VIPR5G	Viburnum prunifolium 5 gallon	17.95	323.10

*~~\$\$\$~~ \$164.85 to 20104100-803200-60008  
rest to 11104100-803200-60008*

Old School FP

*Includes CO #2*

**Total**

\$5,799.95



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

*MA77*

(815) 675-6240

## Invoice

Date	Invoice #
9/30/2021	132982

<b>Bill To</b>
Lake County Forest Preserves 1899 West Winchester Road Libertyville Illinois 60048

<b>Ship To</b>
21950 N Riverwoods Rd Riverwoods IL 60015

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		9/30/2021			
Quantity	Item Code	Description	Price Each	Amount		
15	AMLA5G	Amelanchier laevis 5 gallon	19.50	292.50		
6	CRMO5G	Crataegus mollis 5 gallon	12.50	75.00		
3	HAVI5G	Hamamelis virginiana 5 gallon	19.50	58.50		
10	PHOP5G	Physocarpus opulifolius 5 gallon	12.25	122.50		
6	QUBI5G	Quercus bicolor 5 gallon	14.25	85.50		
4	QUBI1	Quercus bicolor 1"	54.95	219.80		
10	QUCO3G	Quercus coccinea 3 gallon	15.00	150.00		
6	QUMA5G	Quercus macrocarpa 5 gallon	12.75	76.50		
6	QUMA1	Quercus macrocarpa 1"	51.95	311.70		
4	QURU1	Quercus rubra 1"	59.95	239.80		
3	QUVE1	Quercus velutina 1"	62.95	188.85		
12	ROBL5G	Rosa blanda 5 gallon	12.95	155.40		
12	ROSE5G	Rosa setigera 5 gallon	11.35	136.20		
10	VIPR5G	Viburnum prunifolium 5 gallon	17.95	179.50		
Charge to: 14433800-643000-42050						
Ryerson Woods Oaktober Event Ed + Tr. Sales CO #3			Total	\$2,291.75		



# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

MATT

(815) 675-6240

## Invoice

Date	Invoice #
9/18/2021	132976

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

Rollins Savana FP

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		9/15/2021			
Quantity	Item Code	Description			Price Each	Amount
1	QUB11	Quercus bicolor 1"			54.95	54.95
2	QUEL5G	Quercus ellipsoidalis 5 gallon			17.95	35.90
1	CEOC5G	Cephalanthus occidentalis 5 gallon			12.65	12.65
5	COOB5G	Cornus obliqua 5 gallon			12.75	63.75
14	PHOP5G	Physocarpus opulifolius 5 gallon			12.25	171.50
12	ROBL5G	Rosa blanda 5 gallon			12.95	155.40
2	ROSE5G	Rosa setigera 5 gallon			11.35	22.70
12	SACA5G	Sambucus canadensis 5 gallon			11.20	134.40
69644100-803200-61104						
Change Order #1 Rollins Savanna FP MID Pink					Total	\$651.25



# Lake County Forest Preserves

## Bill To

LAKE COUNTY FOREST PRESERVES  
ACCOUNTS PAYABLE  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
EMAIL: ACCOUNTSPAYABLE@LCFPD.ORG

PHONE  
(847) 367-6640

## Purchase Order

Fiscal Year 2021

Page: 1 of 1

THE BELOW PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES AND SHIPPING PAPERS.

PURCHASE ORDER # **20210134**

## Vendor

MAJESTIC OAKS NURSERY  
8714 RICHARDSON ROAD  
SPRING GROVE, IL 60081

## Ship To

LAKE COUNTY FOREST PRESERVES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

VENDOR PHONE NUMBER		VENDOR EMAIL	REQUISITION NUMBER	DELIVERY REFERENCE
815-675-6240			20210182	MATT UELTZEN
DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	BUYER	DEPARTMENT/LOCATION
02/22/2021	2883	02/28/2021	Michael Zahalka	NATURAL RESOURCES
NOTES				

AWARDED BY ACTION OF THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON FEBRUARY 9, 2021. THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON SUCH DATE, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER.

ITEM #	DESCRIPTION / PART #	QTY	UOM	UNIT PRICE	EXTENDED PRICE
1	21008 - TREE & SHRUB PURCHASE 2021 PER ATTACHED ORDER SHEET	1.0	EACH	\$26,576.45	\$26,576.45

AWARDED BY ACTION OF THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON FEBRUARY 9, 2021. THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON SUCH DATE, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER.

10/14/21 Inv. 132975 1,262.20  
132974 1,217.50  
132973 3,038.20  
132979 4,857.45  
132981 4,034.30  
132989 5,799.75  
132982 2,291.75  
132976 651.25  
\$23,152.60

Complete - 10/28/21  
Matt Ueltzen

10/28/21 Inv. 132996 3,568.75  
133003 1,069.90  
\$4,638.65

Please pay \$4,638.64 according to current rates on invoices and close P.O.

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

Vendor Acceptance

Purchase Order Total \$26,576.45

Authorized Signature



**Lake County Forest Preserve District  
CHANGE ORDER NO. 1**

**Date:** March 9, 2021

**Project No:** 21008  
**TREE AND SHRUB PURCHASE 2021**  
Multiple Preserves

**Contractor:** **MAJESTIC OAKS NURSERY**  
8714 Richardson Road  
Spring Grove, IL 60081

**Original Contract Date:** 2/22/21

**To the Contractor:** You are hereby authorized to make the following changes, subject to the Contract provisions.

Bulletin No. 1	Increase	\$ 651.25	2.45%
<b>TOTAL</b>	<b>Increase</b>	<b>\$ 651.25</b>	<b>2.45%</b>
Original Contract Amount		\$ 26,576.45	
Change Order No. 1	Increase	\$ 651.25	2.45%
<b>REVISED CONTRACT AMOUNT</b>		<b>\$ 27,227.70</b>	<b>102.45%</b>

**Time Extension:** NONE

**Other Contracts Affected:** NONE

**Recommended By:**

*Munis* *UPR* **DATE:** 3/15/21  
Project Manager

**Approved By:**

*James J. Cuth* **DATE:** 16 Mar 21  
Director of Natural Resources

By signing below, Contractor (i) accepts and approves this Change Order and (ii) certifies that this Change Order will not cause or result in an increase in the price of any Subcontract under the Contract that, when added to all other increases to the price of such Subcontract, is 50% or more of the Subcontract's original price.

**Accepted By:**

*Ken Vayns* **DATE:** 3-25-21  
Contractor

**DISTRIBUTION:** EXECUTED ORIGINAL: Purchasing **COPIES:** Project Manager, Contractor  
(Executed Original is: ☐ Hard Copy ☐ E-Copy) **Decrease / No Cost Change / Time Change:** Accounting  
**Increase:** Munis  
**Original PO#** 20210134

Rev. 01-05-18



# Purchase Order Change Order



**Lake County  
Forest Preserves**

1899 West Winchester Road  
Libertyville, Illinois 60048  
PurchasingDept@LCFPD.org  
847-367-6640

**Date:**  
08/19/2021

**Change Order Number (Please use drop down) \***  
2

**Department (Please use drop down) \***  
Natural Resources

**Fiscal Year**  
2021

**Purchase Order Number: \***  
20210134

**Account Code: \***  
20104100-803200-60008

**Administrative Assistant Email \***  
HKELLER@LCFPD.ORG

## Project Information

**Project or Bid Number:**  
21008

**Contractor Name: \***  
Majestic Oaks Nursery

**Completed**

**Project Name: \***  
Tree & Shrub Purchase 2021

**Contractor Email \***  
PATTY@MAJESTICOAKSNURSERY.COM

**Original Contract Date: \***  
02/22/2021

**Site:**  
Multiple Sites

**Contract Type: \***  
☐ Lump Sum Contract  
☒ Unit Price Contract

**To the Contractor:** You are hereby authorized to make the following changes, subject to the Contract provisions.

## Increase

Item Number	Item	Description	Amount
1	Quercus bicolor - 1-inch	Provide 3 additional 1-inch Swamp White Oaks to Old School delivery/project site @ \$54.95/each	\$164.85

## Decrease

## Time Extension

**Change to Scope that results in time extension or no additional costs:**

**Change in Contract Price  
from this Change Order:**  
\$164.85

**Revised Completion Date:**

**Change in Contract Price**

By their approval of this Change Order, Owner's Department Director and/or Standing Committee(s) hereby determine:

1. The circumstances necessitating the Change Order were not reasonably foreseeable at the time the Contract was signed;
2. The Change Order is germane to the original Contract, as signed; and
3. The Change Order is in the best interest of the Owner and is authorized by law.

This Written Determination and this Change Order shall (i) be preserved in the Owner's file for the Contract and open to the public for inspection and (ii) constitute the Written Determination required by 720 ILCS 5/33E-9.

### Contractor Approval

\*By signing below, Contractor also certifies that this Change Order will not cause or result in an increase in the price of any subcontract under the Contract that is 50% or more of such original subcontract's price.

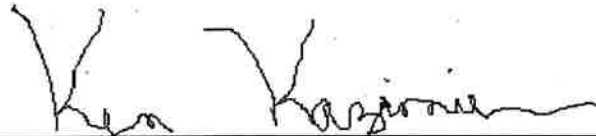
**Name:**  
Kenneth Kazimier

**Title:**  
Nursery Manager

**Date of Approval:**  
08/24/2021

Please click on the Signature box – Sign your name with your mouse. Then click **Save**. Click the Return to LCFPD button to send the item back to Lake County Forest Preserves.

**Signature:**

A rectangular box containing a handwritten signature in black ink. The signature appears to be 'Ken Kazimier' written in a cursive, flowing style.

# Purchase Order Change Order



**Lake County  
Forest Preserves**

1899 West Winchester Road  
Libertyville, Illinois 60048  
PurchasingDept@LCFPD.org  
847-367-6640

**Date:**  
09/14/2021

**Fiscal Year**  
2021

**Change Order Number (Please use drop down)\***

3

**Purchase Order Number: \***  
20210134

**Department: (Please use drop down) \***  
Natural Resources

**Account Code: \***  
20104100-803200-60008

**Administrative Assistant Email \***  
HKELLER@LCFPD.ORG

## Project Information

**Project or Bid Number:**  
21008

**Project Name: \***  
Tree & Shrub Purchase 2021

**Site:**  
ERCA08 Edward L. Ryerson Conservation  
Area

**Contractor Name: \***  
Majestic Oaks Nursery

**Contractor Email \***  
PATTY@MAJESTICOAKSNURSERY.COM

**Completed**

**Original Contract Date: \***  
02/22/2021

**Contract Type: \***  
☐ Lump Sum Contract  
☒ Unit Price Contract

**To the Contractor:** You are hereby authorized to make the following changes, subject to the Contract provisions.

Net Percentage Change from  
original Contract Price  
resulting from this Change  
Order and all previous  
Change Orders:  
5.000000%

### Change in Contract Time

Original Contract Time	Contract Time (as amended by previous Change Orders, if any)	New Contract Time
Commencement Date: 02/22/2021	Commencement Date:	Commencement Date:
Completion Date: 10/31/2021	Completion Date:	Completion Date:

### Project Manager Recommendation

Project Manager \*  
MUELTZEN

Date of Recommendation:  
09/14/2021

Signature:

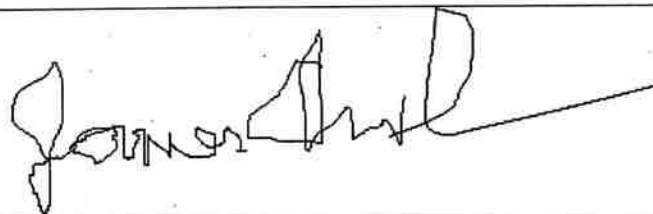


### Department Director Approval

Department Director:  
Jim Anderson

Date of Approval:  
09/14/2021

Signature:





# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

(815) 675-6240

## Invoice

Date	Invoice #
10/13/2021	132996

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
20210134	Net 30		10/12/2021			
Quantity	Item Code	Description			Price Each	Amount
3	CEOC5G	Cephalanthus occidentalis 5 gallon			12.65	37.95
8	COOB5G	Cornus obliqua 5 gallon			12.75	102.00
12	COST5G	Cornus stolonifera 5 gallon			12.75	153.00
8	CRMO5G	Crataegus mollis 5 gallon			12.50	100.00
3	HAVI5G	Hamamelis virginiana 5 gallon			19.50	58.50
30	QUBI5G	Quercus bicolor 5 gallon			14.25	427.50
15	QUBI1	Quercus bicolor 1"			54.95	824.25
16	QUMA5G	Quercus macrocarpa 5 gallon			12.75	204.00
13	QUMA1	Quercus macrocarpa 1"			51.95	675.35
2	QURU1	Quercus rubra 1"			59.95	119.90
3	QUVE1	Quercus velutina 1"			62.95	188.85
8	ROBL5G	Rosa blanda 5 gallon			12.95	103.60
31	ROSE5G	Rosa setigera 5 gallon			11.35	351.85
7	SACA5G	Sambucus canadensis 5 gallon			11.20	78.40
8	VIPR5G	Viburnum prunifolium 5 gallon			17.95	143.60
11104100-803200-600008						
Cap. Daniel Wright Woods FP					Total	\$3,568.75





# Majestic Oaks Nursery

8714 Richardson Road  
Spring Grove, IL 60081-9492

Nurserymen & Propagators

(815) 675-6240

## Invoice

Date	Invoice #
10/19/2021	133003

### Bill To

Lake County Forest Preserves  
1899 West Winchester Road  
Libertyville Illinois 60048

### Ship To

P.O. Number		Terms	Rep	Ship	Via	F.O.B.	Project
20210134		Net 30		10/18/2021			
Quantity	Item Code	Description				Price Each	Amount
5	AMLA5G	Amelanchier laevis 5 gallon				19.50	97.50
12	CESC5G	Celastrus scandens 5 gallon				11.95	143.40
5	COOB5G	Cornus obliqua 5 gallon				12.75	63.75
5	CRMO5G	Crataegus mollis 5 gallon				12.50	62.50
3	PHOP5G	Physocarpus opulifolius 5 gallon				12.25	36.75
8	ROBL5G	Rosa blanda 5 gallon				12.95	103.60
12	ROSE5G	Rosa setigera 5 gallon				11.35	136.20
6	SACA5G	Sambucus canadensis 5 gallon				11.20	67.20
20	VIPR5G	Viburnum prunifolium 5 gallon				17.95	359.00
11104100-903200-60008							
Prairie Wolf FP						Total	\$1,069.90



# Lake County Forest Preserves

## Bill To

LAKE COUNTY FOREST PRESERVES  
ACCOUNTS PAYABLE  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, ILLINOIS 60048  
EMAIL: ACCOUNTSPAYABLE@LCFPD.ORG

PHONE  
(847) 367-6640

## Vendor

POSSIBILITY PLACE NURSERY  
7548 WEST MONEE-MANHATTAN RD  
MONEE, IL 60449

## Purchase Order

Fiscal Year 2021

Page: 1 of 1

THE BELOW PURCHASE ORDER NUMBER MUST APPEAR  
ON ALL INVOICES, PACKAGES AND SHIPPING PAPERS.

PURCHASE ORDER # **20210133**

## Ship To

LAKE COUNTY FOREST PRESERVES  
1899 WEST WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

VENDOR PHONE NUMBER		VENDOR EMAIL		REQUISITION NUMBER	DELIVERY REFERENCE
708-534-3988				20210183	MATT UELTZEN
DATE ORDERED	VENDOR NUMBER	DATE REQUIRED	BUYER		DEPARTMENT/LOCATION
02/22/2021	95	02/28/2021	Michael Zahalka		NATURAL RESOURCES
NOTES					

AWARDED BY ACTION OF THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON FEBRUARY 9, 2021. THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON SUCH DATE, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER.

ITEM #	DESCRIPTION / PART #	QTY	UOM	UNIT PRICE	EXTENDED PRICE
--------	----------------------	-----	-----	------------	----------------

1	21008 - TREE & SHRUB PURCHASE 2021 PER ATTACHED ORDER SHEET	1.0	EACH	\$37,781.70	\$37,781.70
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AWARDED BY ACTION OF THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON FEBRUARY 9, 2021. THE PURCHASE DESCRIBED IN THIS PURCHASE ORDER WILL BE GOVERNED BY THE TERMS AND CONDITIONS OF THE CONTRACT APPROVED BY THE LAKE COUNTY FOREST PRESERVE DISTRICT BOARD OF COMMISSIONERS ON SUCH DATE, AND NOT BY THE TERMS AND CONDITIONS ON THE REVERSE OF THIS PURCHASE ORDER.

10/18/21	680	1,760.20
	679	1,344.95
	671	2,439.00
	670	9,161.65
	1048	1,671.50
		<u>16,377.30</u>

*Partial - Matt Ueltzen*

*Please pay \$16,377.30*

*according to account breakdown  
on invoices*

The TERMS AND CONDITIONS set forth on the reverse side hereof are incorporated herein by reference. Vendor will be deemed to accept this Purchase Order, and this Purchase Order will become a binding contract, upon Vendor either executing this Purchase Order in the VENDOR ACCEPTANCE box or by commencing performance.

Vendor Acceptance

Purchase Order Total

\$37,781.70

Authorized Signature



**Lake County Forest Preserve District  
CHANGE ORDER NO. 1**

**Date:** March 9, 2021

**Project No:** 21008  
**TREE AND SHRUB PURCHASE 2021**  
Multiple Preserves

**Contractor:** **POSSIBILITY PLACE NURSERY**  
7548 West Monee-Manhattan Road  
Monee, IL 60449

**Original Contract Date:** 2/22/21


**To the Contractor:** You are hereby authorized to make the following changes,  
subject to the Contract provisions.

<b>Bulletin No. 1</b>	Increase	\$ 2,027.60	5.37%
<b>TOTAL</b>	<b>Increase</b>	<b>\$ 2,027.60</b>	<b>5.37%</b>

<b>Original Contract Amount</b>		\$ 37,781.70	
<b>Change Order No. 1</b>	Increase	\$ 2,027.60	5.37%
<b>REVISED CONTRACT AMOUNT</b>		<b>\$ 39,809.30</b>	<b>105.37%</b>

**Time Extension:** NONE  
**Other Contracts Affected:** NONE

**Recommended By:**

  
Project Manager **DATE:** 3/15/21

**Approved By:**

  
Director of Natural Resources **DATE:** 16 Mar 21

By signing below, Contractor (i) accepts and approves this Change Order and (ii) certifies that this Change Order will not cause or result in an increase in the price of any Subcontract under the Contract that, when added to all other increases to the price of such Subcontract, is 50% or more of the Subcontract's original price.

**Accepted By:**

  
Contractor **DATE:** 4/15/21

**DISTRIBUTION:** EXECUTED ORIGINAL: Purchasing **COPIES:** Project Manager, Contractor  
(Executed Original is: ☒ Hard Copy ☐ E-Copy) **Decrease / No Cost Change / Time Change:** Accounting  
**Increase:** Munis  
**Original PO#** 20210133

Rev 01-05-18



Lake County Forest Preserve District  
Tree and Shrub Purchase 2021  
CHANGE ORDER NO. 1

BULLETIN NO. 1

YOU ARE HEREBY AUTHORIZED TO MAKE THE FOLLOWING CHANGES IN THE CONTRACT DOCUMENTS:

THE FOLLOWING ITEMS ARE ADDED TO THE CONTRACT DOCUMENTS:

Item No. 1:	Add 15 5-Gallon <i>Carpinus caroliniana</i> @ \$14.50 each	Total Increase Item No. 1:	\$ 217.50
Item No. 2:	Add 5 5-Gallon <i>Carya ovata</i> @ \$16.00 each	Total Increase Item No. 2:	\$ 80.00
Item No. 3:	Add 2 1-Inch <i>Populus grandidentata</i> @ \$65.00 each	Total Increase Item No. 3:	\$ 130.00
Item No. 4:	Add 2 1-Inch <i>Populus tremuloides</i> @ \$65.00 each	Total Increase Item No. 4:	\$ 130.00
Item No. 5:	Add 2 5-Gallon <i>Prunus serotina</i> @ \$22.00 each	Total Increase Item No. 5:	\$ 44.00
Item No. 6:	Add 2 5-Gallon <i>Morus rubra</i> @ \$25.00 each	Total Increase Item No. 6:	\$ 50.00
Item No. 7:	Add 5 5-Gallon <i>Cornus alternifolia</i> @ \$16.00 each	Total Increase Item No. 7:	\$ 80.00
Item No. 8:	Add 8 5-Gallon <i>Cornus stolonifera</i> @ \$13.50 each	Total Increase Item No. 8:	\$ 108.00
Item No. 9:	Add 5 5-Gallon <i>Corylus americana</i> @ \$11.15 each	Total Increase Item No. 9:	\$ 55.75
Item No. 10:	Add 11 5-Gallon <i>Euonymus atropurpureus</i> @ \$22.00 each	Total Increase Item No. 10:	\$ 242.00
Item No. 11:	Add 9 5-Gallon <i>Ilex verticillata</i> @ \$14.00 each	Total Increase Item No. 11:	\$ 126.00
Item No. 12:	Add 1 5-Gallon <i>Lonicera prolifera</i> @ \$13.00 each	Total Increase Item No. 12:	\$ 13.00
Item No. 13:	Add 2 5-Gallon <i>Prunus virginiana</i> @ \$13.50 each	Total Increase Item No. 13:	\$ 27.00
Item No. 14:	Add 6 5-Gallon <i>Ribes americanum</i> @ \$13.00 each	Total Increase Item No. 14:	\$ 78.00
Item No. 15:	Add 6 5-Gallon <i>Ribes missouriense</i> @ \$12.00 each	Total Increase Item No. 15:	\$ 72.00
Item No. 16:	Add 10 5-Gallon <i>Rosa palustris</i> @ \$14.50 each	Total Increase Item No. 16:	\$ 145.00
Item No. 17:	Add 31 5-Gallon <i>Viburnum lentago</i> @ \$13.85 each	Total Increase Item No. 17:	\$ 429.35
		<b>TOTAL CONTRACT INCREASE:</b>	<b>\$ 2,027.60</b>

Note: All items shall be delivered to Rollins Savanna Forest Preserve near Grayslake, IL

# Purchase Order Change Order



**Lake County  
Forest Preserves**

1899 West Winchester Road  
Libertyville, Illinois 60048  
PurchasingDept@LCFPD.org  
847-367-6640

**Date:**  
08/20/2021

**Fiscal Year**  
2021

**Change Order Number (Please use drop down) \***  
2

**Purchase Order Number: \***  
20210133

**Department (Please use drop down) \***  
Natural Resources

**Account Code: \***  
20104100-803200-60008

**Administrative Assistant Email \***  
HKELLER@LCFPD.ORG

## Project Information

**Project or Bid Number:**  
21008

**Project Name: \***  
Tree & Shrub Purchase 2021

**Site:**  
Multiple Sites

**Contractor Name: \***  
Possibility Place Nursery

**Contractor Email \***  
KELSAY@POSSIBILITYPLACE.COM

**Completed**

**Original Contract Date: \***  
02/22/2021

**Contract Type: \***  
☐ Lump Sum Contract  
☒ Unit Price Contract

**To the Contractor:** You are hereby authorized to make the following changes, subject to the Contract provisions.



**Increase**

Item Number	Item	Description	Amount
1	Carpinus Caroliniana	Provide 7 additional #5 plants @ \$14.50 each. Deliver to Old School project site.	\$101.50
2	Carya cordiformis	Provide 4 additional #5 plants @ \$16.00 each. Deliver to Old School project site.	\$64.00
3	Celtis occidentalis	Provide 1 additional #10 tree @ \$65.00. Deliver to Old School project site.	\$65.00
4	Ostrya virginiana	Provide 2 additional #5 plants @ \$22.00 each. Deliver to Old School project site.	\$44.00
5	Populus grandidentata	Provide 5 additional #5 plants @ \$22.00 each. Deliver to Old School project site.	\$110.00
6	Styphylea trifolia	Provide 8 additional #5 plants @ \$14.50 each. Deliver to Old School project site.	\$116.00
7	Viburnum lentago	Provide 9 additional #5 plants @ \$13.85 each. Deliver to Old School project site.	\$124.65

**Decrease**

Item Number	Item	Description	Amount (enter as a negative number):
-------------	------	-------------	---

**Time Extension**

Change to Scope that results in time extension  
or no additional costs:

Change in Contract Price  
from this Change Order:  
\$625.15

Revised Completion Date:

**Change in Contract Price**

**Original Contract Price: \***

\$37,781.70

**Contract Price prior to this  
Change Order (as amended  
by *previous* Change Orders,  
if any): \***

\$39,809.30

**Net Change from original  
Contract Price resulting from  
this Change Order and all  
previous Change Orders:**

\$2,652.75

**New Contract Price**

\$40,434.45

**Net Percentage Change from  
original Contract Price  
resulting from this Change  
Order and all previous  
Change Orders:**  
7.000000%**Change in Contract Time****Original Contract Time****Contract Time (as  
amended by *previous*  
Change Orders, if any)****New Contract Time****Commencement Date:**  
02/22/2021**Commencement Date:****Commencement Date:****Completion Date:**  
10/31/2021**Completion Date:****Completion Date****Project Manager Recommendation****Project Manager \***

MUELTZEN

**Date of Recommendation:**  
08/20/2021**Signature:****Department Director Approval****Department Director:**

Jim Anderson

**Date of Approval:**  
08/23/2021**Signature:**

By their approval of this Change Order, Owner's Department Director and/or Standing Committee(s) hereby determine:

1. The circumstances necessitating the Change Order were not reasonably foreseeable at the time the Contract was signed;
2. The Change Order is germane to the original Contract, as signed; and
3. The Change Order is in the best interest of the Owner and is authorized by law.

This Written Determination and this Change Order shall (i) be preserved in the Owner's file for the Contract and open to the public for inspection and (ii) constitute the Written Determination required by 720 ILCS 5/33E-9.

### Contractor Approval

\*By signing below, Contractor also certifies that this Change Order will not cause or result in an increase in the price of any subcontract under the Contract that is 50% or more of such original subcontract's price.

**Name:**

Kelsay Shaw

Please click on the Signature box – Sign your name with your mouse. Then click **Save**. Click the Return to LCFPD button to send the item back to Lake County Forest Preserves.


**Title:**

Owner

**Signature:**

**Date of Approval:**

08/24/2021

A handwritten signature in black ink, appearing to read "Kelsay Shaw", is written within a blue rectangular box.

# Purchase Order Change Order



**Lake County  
Forest Preserves**

1899 West Winchester Road  
Libertyville, Illinois 60048  
PurchasingDept@LCFPD.org  
847-367-6640

**Date:**  
09/14/2021

**Fiscal Year**  
2021

**Change Order Number (Please use drop  
down) \***  
3

**Purchase Order Number: \***  
20210133

**Department: (Please use drop down) \***  
Natural Resources

**Account Code: \***  
20104100-803200-60008

**Administrative Assistant Email \***  
HKELLER@LCFPD.ORG

## Project Information

**Project or Bid Number:**  
21008

**Project Name: \***  
Tree & Shrub Purchase 2021

**Site:**  
Rollins Savanna - Nursery

**Contractor Name: \***  
Possibility Place Nursery

**Contractor Email \***  
KELSAY@POSSIBILITYPLACE.COM

**Completed**

**Original Contract Date: \***  
02/22/2021

**Contract Type: \***  
☐ Lump Sum Contract  
☒ Unit Price Contract

**To the Contractor:** You are hereby authorized to make the following changes, subject to the Contract provisions.

**Increase**

Item Number	Item	Description	Amount
1	Carpinus caroliniana - #5	Provide 2 additional plants @ \$14.50 each	\$29.00
Item Number	Item	Description	Amount
2	Malus ioensis - #5	Provide 4 additional plants @ \$14.50 each	\$58.00
Item Number	Item	Description	Amount
3	Quercus alba - #5	Provide 2 additional plants @ \$14.50 each	\$29.00
Item Number	Item	Description	Amount
4	Quercus rubra - #5	Provide 2 additional plants @ \$14.50 each	\$29.00
Item Number	Item	Description	Amount
5	Cercis canadensis - #5	Provide 5 additional plants @ \$22.00 each	\$110.00
Item Number	Item	Description	Amount
6	Cornus stolonifera - #5	Provide 3 additional plants @ \$13.50 each	\$40.50
Item Number	Item	Description	Amount
7	Ilex verticillata - #5	Provide 4 additional plants @ \$14.00 each	\$56.00
Item Number	Item	Description	Amount
8	Prunus americana - #5	Provide 2 additional plants @ \$13.25 each	\$26.50
Item Number	Item	Description	Amount
9	Ribes americanum - #5	Provide 4 additional plants @ \$13.00 each	\$52.00
Item Number	Item	Description	Amount
10	Ribes missouriense - #5	Provide 4 additional plants @ \$12.00 each	\$48.00
Item Number	Item	Description	Amount
11	Viburnum acerifolium - #5	Provide 5 additional plants @ \$25.00 each	\$125.00

**Decrease**

Item Number	Item	Description	Amount (enter as a negative number):
----------------	------	-------------	--

**Time Extension**



Change to Scope that results in time extension  
or no additional costs:

Change in Contract Price  
from this Change Order:  
\$603.00

Revised Completion Date:

### Change in Contract Price

<b>Original Contract Price: *</b> \$37,781.70	<b>Contract Price prior to this Change Order (as amended by <i>previous</i> Change Orders, if any): *</b> \$40,434.45	<b>Net Change from original Contract Price resulting from this Change Order and all previous Change Orders:</b> \$3,255.75	<b>New Contract Price</b> \$41,037.45
		<b>Net Percentage Change from original Contract Price resulting form this Change Order and all previous Change Orders:</b> 9.000000%	

### Change in Contract Time

<b>Original Contract Time</b>	<b>Contract Time (as amended by <i>previous</i> Change Orders, if any)</b>	<b>New Contract Time</b>
<b>Commencement Date:</b>	<b>Commencement Date:</b>	<b>Commencement Date:</b>
<b>Completion Date:</b>	<b>Completion Date:</b>	<b>Completion Date:</b>

### Project Manager Recommendation

**Project Manager \***  
MUELTZEN

**Date of Recommendation:**  
09/14/2021

**Signature:**



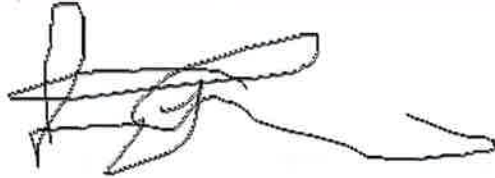
### Department Director Approval

**Department Director:**

Jim Anderson

**Date of Approval:**

09/14/2021

**Signature:**

By their approval of this Change Order, Owner's Department Director and/or Standing Committee(s) hereby determine:

1. The circumstances necessitating the Change Order were not reasonably foreseeable at the time the Contract was signed;
2. The Change Order is germane to the original Contract, as signed; and
3. The Change Order is in the best interest of the Owner and is authorized by law.

This Written Determination and this Change Order shall (i) be preserved in the Owner's file for the Contract and open to the public for inspection and (ii) constitute the Written Determination required by 720 ILCS 5/33E-9.

**Contractor Approval**

\*By signing below, Contractor also certifies that this Change Order will not cause or result in an increase in the price of any subcontract under the Contract that is 50% or more of such original subcontract's price.

**Name:**

Kelsay Shaw


**Title:**

Owner

**Date of Approval:**

09/28/2021

Please click on the Signature box - Sign your name with your mouse. Then click Save. Click the Return to LCFPD button to send the item back to Lake County Forest Preserves.

**Signature:**

ORDER NO.	680
CUSTOMER NO.	2717

## INVOICE

ROLLINS SAVANNA FP (SEED

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
ROLLINS SAVANNA FOREST PRESERVE (SEED  
NURSERY)  
19876 W Washington St  
GRAYSLAKE, IL 60030

Phone: (847) 968-3290 (Matt

SHIP DATE		SHIP VIA		F.O.B.		TERMS	
09/15/21						Net 30	
P.O. NUMBER			ORDER DATE	SALES PERSON			REFERENCE NO.
20210133			06/30/21	Kelsay			
QUANTITY			DESCRIPTION			UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLDG	SHIP					
1	1	1	CARYA CORDIFORMIS #5 Bitternut Hickory			16.00	16.00
1	1	1	CELTIS OCCIDENTALIS 1" Hackberry			80.00	80.00
1	1	1	CERCIS CANADENSIS #5 Eastern Redbud			65.00	65.00
10	10	10	CORNUS SERICEA #5 Red Osier Dogwood			13.50	135.00
25	25	25	CORYLUS AMERICANA #5 American Hazelnut			11.15	278.75
2	2	2	EUONYMUS ATROPURPUREUS #5 Eastern Wahoo			22.00	44.00
5	5	5	ILEX VERTICILLATA #5 Winterberry			14.00	70.00
12	12	12	MALUS IOENSIS #5 Prairie Crabapple			14.50	174.00
1	1	1	OSTRYA VIRGINIANA #1 Ironwood			12.00	12.00
2	1	1	OSTRYA VIRGINIANA #5 Ironwood			22.00	22.00
2	2	2	POPULUS GRANDIDENTATA #5 Bigtooth Aspen			22.00	44.00
9	9	9	PRUNUS AMERICANA #5 American Plum			13.25	119.25
1	1	1	PRUNUS SEROTINA #15 Black Cherry			65.00	65.00

\$219.50 to 14433800-643000-42050  
\$55.75 to 69644100-803200-61104  
\$1484.95 to 11104100-803200-60008

ORDER NO.	680
CUSTOMER NO.	2717

## INVOICE

ROLLINS SAVANNA FP (SEED

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
ROLLINS SAVANNA FOREST PRESERVE (SEED  
NURSERY)  
19876 W Washington St  
GRAYSLAKE, IL 60030

Phone: (847) 968-3290 (Matt

SHIP DATE		SHIP VIA		F.O.B.		TERMS	
09/15/21						Net 30	
P.O. NUMBER			ORDER DATE	SALES PERSON			REFERENCE NO.
20210133			06/30/21	Kelsay			
QUANTITY			DESCRIPTION			UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLDG	SHIP					
7	0	0	PRUNUS VIRGINIANA #5 Chokecherry			13.50	0.00
5	5	5	QUERCUS ALBA #5 White Oak			14.50	72.50
2	2	2	QUERCUS ALBA 1" White Oak			58.50	117.00
2	2	2	QUERCUS RUBRA #5 Red Oak			14.50	29.00
3	3	3	QUERCUS VELUTINA #5 Black Oak			14.50	43.50
3	3	3	RIBES AMERICANUM #5 Wild Black Currant			13.00	39.00
11	11	11	RIBES MISSOURIENSE #5 Wild Gooseberry			12.00	132.00
3	3	3	VIBURNUM ACERIFOLIUM #1 Maple-Leaved Viburnum			12.00	36.00
12	12	12	VIBURNUM LENTAGO #5 Nannyberry Viburnum			13.85	166.20
120	112	112				NET AMOUNT	1760.20
						BALANCE DUE	1760.20

ORDER NO.	671
CUSTOMER NO.	2717

## INVOICE

SINGING HILLS FP

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
SINGING HILLS FOREST PRESERVE  
30704 N. CALLAHAN ROAD  
WAUCONDA, IL 0

Phone: (847) 968-3290 (Matt  
Contact: Farm gates on west side into f

SHIP DATE		SHIP VIA		F.O.B.		TERMS		
09/13/21						Net 30		
P.O. NUMBER			ORDER DATE	SALES PERSON			REFERENCE NO.	
20210133			06/29/21	Kelsay				
QUANTITY			DESCRIPTION				UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLDG	SHIP						
3	3	3	CARYA OVATA #5 Shagbark Hickory				16.00	48.00
99	99	99	CORYLUS AMERICANA #5 American Hazelnut				11.15	1103.85
21	21	21	MALUS IOENSIS #5 Prairie Crabapple				14.50	304.50
18	18	18	PRUNUS AMERICANA #5 American Plum				13.25	238.50
4	4	4	QUERCUS ALBA #5 White Oak				14.50	58.00
4	4	4	QUERCUS ALBA 1" White Oak				58.50	234.00
2	2	2	QUERCUS VELUTINA #5 Black Oak				14.50	29.00
4	4	4	RHUS GLABRA #5 Smooth Sumac				13.00	52.00
9	9	9	RIBES MISSOURIENSE #5 Wild Gooseberry				12.00	108.00
19	19	19	VIBURNUM LENTAGO #5 Nannyberry Viburnum				13.85	263.15
183	183	183					NET AMOUNT	2439.00
							BALANCE DUE	2439.00

11/04/00-803200-60008



ORDER NO.	679
CUSTOMER NO.	2717

## INVOICE

FP OPERATIONS FACILITY (L

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
19808 W Grand Ave  
LAKE VILLA, IL 60046

Phone: (847) 968-3290 (Matt

SHIP DATE		SHIP VIA		F.O.B.		TERMS	
09/15/21						Net 30	
P.O. NUMBER			ORDER DATE	SALES PERSON			REFERENCE NO.
20210133			06/30/21	Kelsay			
QUANTITY			DESCRIPTION			UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLDG	SHIP					
5	5	5	CORNUS SERICEA #5 Red Osier Dogwood			13.50	67.50
25	25	25	CORYLUS AMERICANA #5 American Hazelnut			11.15	278.75
12	12	12	MALUS IOENSIS #5 Prairie Crabapple			14.50	174.00
2	2	2	POPULUS TREMULOIDES #15 Quaking Aspen			65.00	130.00
12	12	12	PRUNUS AMERICANA #5 American Plum			13.25	159.00
1	1	1	PRUNUS SEROTINA #15 Black Cherry			65.00	65.00
2	2	2	QUERCUS ALBA #5 White Oak			14.50	29.00
2	2	2	QUERCUS ALBA 1" White Oak			58.50	117.00
1	1	1	QUERCUS VELUTINA #5 Black Oak			14.50	14.50
12	12	12	RIBES MISSOURIENSE #5 Wild Gooseberry			12.00	144.00
12	12	12	VIBURNUM LENTAGO #5 Nannyberry Viburnum			13.85	166.20

11104100-803200-60008



7548 W Monee Manhattan Rd  
Monee, Illinois 60449  
708.534.3988

ORDER NO.	679
CUSTOMER NO.	2717

## INVOICE

FP OPERATIONS FACILITY (L

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
19808 W Grand Ave  
LAKE VILLA, IL 60046

Phone: (847) 968-3290 (Matt

SHIP DATE	SHIP VIA	F.O.B.	TERMS
09/15/21			Net 30
P.O. NUMBER	ORDER DATE	SALES PERSON	REFERENCE NO.
20210133	06/30/21	Kelsay	
QUANTITY	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLDG	SHIP	
86	86	86	
NET AMOUNT			1344.95
BALANCE DUE			1344.95

ORDER NO.	670
CUSTOMER NO.	2717

## INVOICE

LAKEWOOD (CENTER) FP

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
LAKEWOOD FOREST PRESERVE (CENTER)  
27277 N Forest Preserve Rd (IVANHOE  
ROAD)  
WACAUNDA, IL 60048

Phone: (847) 968-3290 (Matt

SHIP DATE		SHIP VIA		F.O.B.		TERMS	
09/20/21						Net 30	
P.O. NUMBER			ORDER DATE	SALES PERSON			REFERENCE NO.
20210133			06/29/21	Meghan			
QUANTITY			DESCRIPTION			UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLDG	SHIP					
8	8	8	CARYA OVATA #5 Shagbark Hickory			16.00	128.00
153	153	153	CORYLUS AMERICANA #5 American Hazelnut			11.15	1705.95
10	10	10	LONICERA RETICULATA #5 Grape Honeysuckle			13.00	130.00
35	35	35	MALUS IOENSIS #5 Prairie Crabapple			14.50	507.50
19	19	19	PRUNUS AMERICANA #5 American Plum			13.25	251.75
2	2	2	PRUNUS SEROTINA #15 Black Cherry			65.00	130.00
1	1	1	PRUNUS SEROTINA #5 Black Cherry			22.00	22.00
27	0	0	PRUNUS VIRGINIANA #5 Chokecherry			13.50	0.00
27	27	27	QUERCUS ALBA #5 White Oak			14.50	391.50
73	73	73	QUERCUS ALBA 1" White Oak			58.50	4270.50
5	5	5	QUERCUS VELUTINA #5 Black Oak			14.50	72.50
13	13	13	RHUS GLABRA #5 Smooth Sumac			13.00	169.00
61	61	61	RIBES MISSOURIENSE #5 Wild Gooseberry			12.00	732.00

\$ 80.00 to 69644100-803200-61104

\$ 9,081.65 to 11104100-803200-60008

ORDER NO.	670
CUSTOMER NO.	2717

## INVOICE

LAKEWOOD (CENTER) FP

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
LAKEWOOD FOREST PRESERVE (CENTER)  
27277 N Forest Preserve Rd (IVANHOE  
ROAD)  
WACAUNDA, IL 60048

Phone: (847) 968-3290 (Matt

SHIP DATE		SHIP VIA		F.O.B.		TERMS		
09/20/21						Net 30		
P.O. NUMBER			ORDER DATE	SALES PERSON			REFERENCE NO.	
20210133			06/29/21	Meghan				
QUANTITY			DESCRIPTION				UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLGD	SHIP						
47	47	47	VIBURNUM LENTAGO #5				13.85	650.95
			Nannyberry Viburnum					
481	454	454					NET AMOUNT	9161.65
							BALANCE DUE	9161.65

ORDER NO.	1048
CUSTOMER NO.	2717

## INVOICE

Rollins Savanna Addition

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
Rollins Savanna Seed Nursery  
19876 West Washington St  
Grayslake, IL 60030

Phone: (847) 968-3290 (Matt  
Contact: 847-968-3290 Matt Cell

SHIP DATE		SHIP VIA		F.O.B.		TERMS	
09/15/21						COD	
P.O. NUMBER			ORDER DATE	SALES PERSON			REFERENCE NO.
20210133			09/14/21	Kelsay			
QUANTITY			DESCRIPTION	UNIT PRICE	EXTENDED PRICE		
ORDERED	AKNWLDG	SHIP					
15	15	15	CARPINUS CAROLINIANA #5 Blue Beech	14.50	217.50		
5	5	5	CORNUS ALTERNIFOLIA #5 Pagoda Dogwood	16.00	80.00		
8	8	8	CORNUS SERICEA #5 Red Osier Dogwood	13.50	108.00		
11	11	11	EUONYMUS ATROPURPUREUS #5 Eastern Wahoo	22.00	242.00		
9	9	9	ILEX VERTICILLATA #5 Winterberry	14.00	126.00		
1	1	1	LONICERA RETICULATA #5 Grape Honeysuckle	13.00	13.00		
2	2	2	POPULUS GRANDIDENTATA #15 Bigtooth Aspen	65.00	130.00		
2	2	2	POPULUS TREMULOIDES #5 Quaking Aspen	22.00	44.00		
2	2	2	PRUNUS SEROTINA #5 Black Cherry	22.00	44.00		
6	6	6	RIBES AMERICANUM #5 Wild Black Currant	13.00	78.00		
6	6	6	RIBES MISSOURIENSE #5 Wild Gooseberry	12.00	72.00		
10	10	10	ROSA PALUSTRIS #5 Swamp Rose	14.50	145.00		
31	31	31	VIBURNUM LENTAGO #1 Nannyberry Viburnum	12.00	372.00		

69644100-803200-61104





7548 W Monee Manhattan Rd  
Monee, Illinois 60449  
708.534.3988

ORDER NO.	1048
CUSTOMER NO.	2717

## INVOICE

Rollins Savanna Addition

### BILL TO:

LAKE COUNTY FOREST PRESERVE  
1899 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

Phone: (847) 968-3290 (Matt  
Fax: 847-367-6645 PURCH

### SHIP TO:

LAKE COUNTY FOREST PRESERVE  
Rollins Savanna Seed Nursery  
19876 West Washington St  
Grayslake, IL 60030

Phone: (847) 968-3290 (Matt  
Contact: 847-968-3290 Matt Cell

SHIP DATE		SHIP VIA		F.O.B.		TERMS	
09/15/21						COD	
P.O. NUMBER		ORDER DATE		SALES PERSON		REFERENCE NO.	
20210133		09/14/21		Kelsay			
QUANTITY			DESCRIPTION			UNIT PRICE	EXTENDED PRICE
ORDERED	AKNWLDG	SHIP					
108	108	108				NET AMOUNT	1671.50
						BALANCE DUE	1671.50



Lake County Forest Preserve District – Carbon Planting Project  
Attestation of Planting Affirmation

I, Lydia Scott, the undersigned, working on behalf of Chicago Region Trees Initiative at The Morton Arboretum, attest and confirm that tree planting(s) occurred on the following dates under the project named in the City Forest Credits registry “Lake County Forest Preserve District – Carbon Planting Project” by the Project Operator, the Lake County Forest Preserve District.

Trees were planted under this project on the following date(s): September 2019 - October 2021

The approximate number of trees planted is: 2,660

Signed on November 11, in 2021, by Lydia Scott, for the Chicago Region Trees Initiative.

  
\_\_\_\_\_  
Signature

\_\_\_\_ 630-719-2425 \_\_\_\_\_  
Phone

LSOOTT@MORTONARB.ORG  
Email

Directions
1) In Table 1 record the number of sites planted for each tree species.
2) If species are not listed, add them to the bottom of Table 1.

Table 1. Planting List

Scientific Name	Common Name	Tree-Type Abbreviation	No. Sites Planted
<i>Acer ginnala</i>	Amur maple	BDS	
<i>Acer negundo</i>	boxelder	BDM	
<i>Acer nigrum</i>	black maple	BDL	
<i>Acer palmatum</i>	Japanese maple	BDS	
<i>Acer platanoides</i>	Norway maple	BDL	
<i>Acer rubrum</i>	red maple	BDL	
<i>Acer saccharinum</i>	silver maple	BDL	
<i>Acer saccharum</i>	sugar maple	BDL	
<i>Acer species</i>	maple	BDL	
<i>Aesculus glabra</i>	Ohio buckeye	BDL	
<i>Albizia julibrissin</i>	mimosa	BDS	
<i>Alnus species</i>	alder	BDM	
<i>Amelanchier laevis</i>	serviceberry, Allegheny	BDS	11
<i>Amelanchier spp.</i>	serviceberry, spp.	BDS	9
<i>Betula nigra</i>	river birch	BDM	
<i>Betula papyrifera</i>	paper birch	BDL	
<i>Betula species</i>	birch	BDM	
<i>Broadleaf Deciduous Large</i>	broadleaf deciduous large	BDL	
<i>Broadleaf Deciduous Medium</i>	broadleaf deciduous medium	BDM	
<i>Broadleaf Deciduous Small</i>	broadleaf deciduous small	BDS	
<i>Broadleaf Evergreen Large</i>	broadleaf evergreen large	BEL	
<i>Broadleaf Evergreen Medium</i>	broadleaf evergreen medium	BEM	
<i>Broadleaf Evergreen Small</i>	broadleaf evergreen small	BES	
<i>Carpinus caroliniana</i>	Muscledwood	BDS	58
<i>Carya species</i>	hickory	BDL	68
<i>Castanea dentata</i>	American chestnut	BDL	
<i>Catalpa species</i>	catalpa	BDL	
<i>Catalpa speciosa</i>	northern catalpa	BDL	
<i>Celtis occidentalis</i>	northern hackberry	BDL	29
<i>Cercis canadensis</i>	eastern redbud	BDS	
<i>Cladrastis kentukea</i>	yellowwood	BDM	
<i>Conifer Evergreen Large</i>	conifer evergreen large	CEL	
<i>Conifer Evergreen Medium</i>	conifer evergreen medium	CEM	
<i>Conifer Evergreen Small</i>	conifer evergreen small	CES	
<i>Cornus florida</i>	flowering dogwood	BDS	
<i>Cornus species</i>	dogwood	BDS	50
<i>Crataegus spp.</i>	hawthorn, spp.	BDS	167
<i>Fraxinus americana</i>	white ash	BDL	
<i>Fraxinus nigra</i>	black ash	BDM	
<i>Fraxinus pennsylvanica</i>	green ash	BDL	
<i>Fraxinus species</i>	ash	BDM	
<i>Ginkgo biloba</i>	ginkgo	BDM	
<i>Gleditsia triacanthos</i>	honeylocust	BDM	
<i>Gymnocladus dioica</i>	Kentucky coffeetree	BDL	
<i>Hamamelis virginiana</i>	Witch Hazel	BDS	9
<i>Hibiscus syriacus</i>	rose-of-sharon	BDS	
<i>Ilex opaca</i>	American holly	BES	
<i>Ilex species</i>	holly	BES	45
<i>Juglans nigra</i>	black walnut	BDL	3
<i>Juniperus species</i>	juniper	CEM	
<i>Juniperus virginiana</i>	eastern red cedar	CEM	
<i>Liquidambar styraciflua</i>	sweetgum	BDL	
<i>Liriodendron tulipifera</i>	tulip tree	BDL	
<i>Magnolia grandiflora</i>	southern magnolia	BEM	
<i>Magnolia virginiana</i>	sweetbay	BEM	
<i>Malus species</i>	apple	BDS	214
<i>Morus alba</i>	white mulberry	BDM	
<i>Morus species</i>	mulberry	BDM	
<i>Ostrya virginiana</i>	eastern hophornbeam	BDM	41
<i>Phellodendron amurense</i>	Amur corktree	BDM	
<i>Picea abies</i>	Norway spruce	CEL	
<i>Picea mariana</i>	black spruce	CEM	
<i>Picea pungens</i>	blue spruce	CEM	
<i>Picea species</i>	spruce	CEL	
<i>Pinus contorta</i>	Bolander beach pine	CES	
<i>Pinus nigra</i>	Austrian pine	CEM	
<i>Pinus ponderosa</i>	ponderosa pine	CEL	
<i>Pinus resinosa</i>	red pine	CEL	
<i>Pinus strobus</i>	eastern white pine	CEL	
<i>Pinus sylvestris</i>	Scotch pine	CEM	
<i>Pinus virginiana</i>	Virginia pine	CEM	
<i>Platanus occidentalis</i>	American sycamore	BDL	
<i>Populus deltoides</i>	eastern cottonwood	BDL	
<i>Populus nigra</i>	black poplar	BDL	
<i>Populus species</i>	cottonwood	BDL	7
<i>Populus tremulaoides</i>	quaking aspen	BDL	2
<i>Prunus cerasifera</i>	cherry plum	BDS	
<i>Prunus serotina</i>	black cherry	BDL	14
<i>Prunus serrulata</i>	Kwanzan cherry	BDS	
<i>Prunus species</i>	plum	BDS	268
<i>Prunus virginiana</i>	common chokecherry	BDS	103
<i>Pyrus calleryana</i>	Callery pear	BDM	
<i>Pyrus species</i>	pear	BDM	
<i>Quercus alba</i>	white oak	BDL	729
<i>Quercus bicolor</i>	swamp white oak	BDL	84
<i>Quercus coccinea</i>	scarlet oak	BDL	
<i>Quercus ellipsoidalis</i>	northern pin oak	BDL	79
<i>Quercus macrocarpa</i>	bur oak	BDL	659
<i>Quercus nigra</i>	water oak	BEL	
<i>Quercus palustris</i>	pin oak	BDL	
<i>Quercus rubra</i>	northern red oak	BDL	66
<i>Quercus species</i>	oak	BDL	81
<i>Rhamnus species</i>	buckthorn	BDS	
<i>Rhus species</i>	sumac	BDS	142
<i>Robinia pseudoacacia</i>	black locust	BDL	
<i>Salix discolor</i>	pussy willow	BDS	
<i>Salix species</i>	willow	BDL	2
<i>Sorbus species</i>	mountain ash	BDS	
<i>Syringa reticulata</i>	Japanese tree lilac	BDS	
<i>Syringa species</i>	lilac	BDS	
<i>Thuja occidentalis</i>	northern white cedar	CEL	
<i>Tilia americana</i>	American basswood	BDL	
<i>Tilia cordata</i>	littleleaf linden	BDM	
<i>Tilia species</i>	basswood	BDL	
<i>Tsuga canadensis</i>	eastern hemlock	CEL	
<i>Ulmus americana</i>	American elm	BDL	
<i>Ulmus parvifolia</i>	Chinese elm	BDL	
<i>Ulmus pumila</i>	Siberian elm	BDM	
<i>Ulmus species</i>	elm	BDL	

Table 2. Summary of Planting Sites

Tree-Type	Tree-Type Abbreviation	No. Sites Planted
Brdf Decid Large (>50 ft)	BDL	1823
Brdf Decid Med (30-50 ft)	BDM	41
Brdf Decid Small (<30 ft)	BDS	1031
Brdf Evgrn Large (>50 ft)	BEL	0
Brdf Evgrn Med (30-50 ft)	BEM	0
Brdf Evgrn Small (<30 ft)	BES	45
Conif Evgrn Large (>50 ft)	CEL	0
Conif Evgrn Med (30-50 ft)	CEM	0
Conif Evgrn Small (<30 ft)	CES	0
Total Sites Planted		2940

Listed for prunus americana

Listed for quercus velutina

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#### Directions

Using the information you provide and background data, the tool calculates the amount of Credits that could be issued at years 1 (10%), 3 (40%), and 5 (30%) after planting. A mortality deductions (%) is applied to account for anticipated tree losses (Cell D6). A 5% buffer pool deduction is applied that will go into a program-wide pool to insure against catastrophic loss of trees. This tool is used to determine credits issued after planting (Initial Crediting). A different tool is used for credit issuance in Years 4 and 6. The tool in those years requires calculation of a sample and collection of data on tree status in the sample sites.

Mortality Deduction (%):	20%
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**Table 3. Credits are based on 10%, 40%, and 30% at Years 1, 3, and 5 after planting, respectively, of the projected CO<sub>2</sub> stored by live trees 25-years after planting. These values account for anticipated tree losses and the 5% buffer pool deduction.**

						10%	40%	30%	20%
	No. Sites Planted	No. Live Trees	Mortality Deduction (%)	25-yr CO <sub>2</sub> stored (kg/tree)	Tot. 25-yr CO <sub>2</sub> stored w/ losses and 5% deduction (t)	10% CO <sub>2</sub> (t)	40% CO <sub>2</sub> (t)	30% CO <sub>2</sub> (t)	20% CO <sub>2</sub> (t)
<b>BDL</b>	1823	1458	0.20	3,978.85	5512.6	551.26	2205.05	1653.78	1102.52
<b>BDM</b>	41	33	0.20	2,451.33	76.4	7.64	30.55	22.92	15.28
<b>BDS</b>	1031	825	0.20	700.27	548.7	54.87	219.48	164.61	109.74
<b>BEL</b>	0	0	0.20	0.00	0.0	0.00	0.00	0.00	0.00
<b>BEM</b>	0	0	0.20	0.00	0.0	0.00	0.00	0.00	0.00
<b>BES</b>	45	36	0.20	475.12	16.2	1.62	6.50	4.87	3.25
<b>CEL</b>	0	0	0.20	0.00	0.0	0.00	0.00	0.00	0.00
<b>CEM</b>	0	0	0.20	0.00	0.0	0.00	0.00	0.00	0.00
<b>CES</b>	0	0	0.20	0.00	0.0	0.00	0.00	0.00	0.00
	2940	2352	0.20	7,605.57	6154.0	615.40	2461.58	1846.19	1230.79

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In Table 4 the tool infers the amount of CO<sub>2</sub> stored after 25 years from the sample to the population of live trees. Values in column H account for anticipated tree losses and the 5% buffer pool deduction.

**Table 4. Grand Total CO<sub>2</sub> Stored after 25 years (all live trees, includes tree losses and buffer pool deduction)**

Tree-Type	No. Sites Planted	Mortality Deduction (%)	Total Live Trees After Mortality	25-yr CO <sub>2</sub> stored (kg/tree)	CO <sub>2</sub> Tot. - No Deductions (t)	Grand Total CO <sub>2</sub> w/ Deductions (t)
Brdlf Decid Large (>50 ft)	1823	0.20	1458	3,978.85	7,253.4	5,512.6
Brdlf Decid Med (30-50 ft)	41	0.20	33	2,451.33	100.5	76.4
Brdlf Decid Small (<30 ft)	1031	0.20	825	700.27	722.0	548.7
Brdlf Evgrn Large (>50 ft)	0	0.20	0	0.00	0.0	0.0
Brdlf Evgrn Med (30-50 ft)	0	0.20	0	0.00	0.0	0.0
Brdlf Evgrn Small (<30 ft)	45	0.20	36	475.12	21.4	16.2
Conif Evgrn Large (>50 ft)	0	0.20	0	0.00	0.0	0.0
Conif Evgrn Med (30-50 ft)	0	0.20	0	0.00	0.0	0.0
Conif Evgrn Small (<30 ft)	0	0.20	0	0.00	0.0	0.0
	2940		2352	7606	8,097.3	6,154.0



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**Directions**

In Table 5, enter the low and high price of CO<sub>2</sub> in \$ per tonne (t).

This table incorporates error estimates of ±15% to the high and low estimates of the total CO<sub>2</sub> (t) stored by the live tree population after 25 years. For planning purposes only, it calculates dollar values.

**Table 5. CO<sub>2</sub> value**

	CO <sub>2</sub> \$ per tonne
Low	\$20.00
High	\$40.00

**Table 6. Summary of CO<sub>2</sub> stored after 25 years (all live trees, includes tree losses)**

Tree-Type	Total CO <sub>2</sub> (t) at 25 years	Low \$ value	High \$ value
Brdlf Decid	6137.7	\$122,754.07	\$245,508.14
Brdlf Evgrn	16.2	\$324.98	\$649.97
Conif Evgrn	0.0	\$0.00	\$0.00
Total	6154.0	\$123,079.05	\$246,158.11
	CO <sub>2</sub> (t)	Total \$	Total \$
Grand Total CO <sub>2</sub> (t) at 25 years:	6154.0	\$123,079.05	\$246,158.11
High Est. with Error:	7077.0	\$141,540.91	\$283,081.82
Low Est. with Error:	5230.9	\$104,617.20	\$104,617.20
± 15% error = ± 10% formulaic ± 3% sampling ± 2% measurement			

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Using the information you provide and background data, the tool provides estimates of co-benefits after 25 years in Resource Units per year and \$ per year.

**Table 7. Co-Benefits per year after 25 years (all live trees, includes tree losses)**

Ecosystem Services	Resource Units Totals	Resource Unit/site	Total \$	\$/site
Rainfall Interception (m3/yr)	15,342.38	5.22	\$109,837.06	\$37.360
CO <sub>2</sub> Avoided (t, \$20/t/yr)	345.90	0.12	\$6,918.07	\$2.353
Air Quality (t/yr)				
O3	0.1967	0.0001	\$657.05	\$0.223
NOx	0.0316	0.0000	\$105.38	\$0.036
PM10	0.1033	0.0000	\$293.31	\$0.100
Net VOCs	0.1368	0.0000	\$1,131.15	\$0.385
Air Quality Total	0.4684	0.0002	\$2,186.89	\$0.74
Energy (kWh/yr & kBtu/yr)				
Cooling - Electricity	454,631.80	154.64	\$34,506.55	\$11.74
Heating - Natural Gas	6,746,192.64	2,294.62	\$65,672.38	\$22.34
Energy Total (\$/yr)			\$100,178.93	\$34.07
Grand Total (\$/yr)			\$219,120.95	\$74.53

\$5,478,023.71

Row Labels	Sum of Plant Quantities	
Amelanchier interior	9 Yes	
Amelanchier laevis	11 Yes	
Carpinus caroliniana	58 Yes	
Carya cordiformis	21 Yes	
Carya ovata	47 Yes	
Celtis occidentalis	29 Yes	
Cornus alternifolia	10 Yes	
Cornus obliqua	40 Yes	
Crataegus mollis	167 Yes	
Hamamelis virginiana	9 Yes	
Ilex verticillata	45 Yes	
Juglans nigra	3 Yes	
Malus ioensis	214 Yes	
Ostrya virginiana	41 Yes	
Populus grandidentata	7 Yes	
Populus tremuloides	2 Yes	
Prunus americana	268 Yes	Listed as prunus americana
Prunus serotina	14 Yes	
Prunus virginiana	103 Yes	
Quercus alba	729 Yes	
Quercus bicolor	84 Yes	
Quercus ellipsoidalis	79 Yes	
Quercus macrocarpa	659 Yes	
Quercus rubra	66 Yes	
Quercus velutina	81 Yes	Listed as Quercus species
Rhus glabra	142 Yes	
Salix nigra	2 Yes	
<b>Grand Total</b>	<b>2940</b>	

Species	GIS Polygon ID #	Latitude	Longitude	Plant Quantities	Preserve	Installation Date
Malus ioensis	575	42.169023	-88.101797	15	Cuba Marsh	9/3/2019
Prunus americana	575	42.169023	-88.101797	50	Cuba Marsh	9/3/2019
Rhus glabra	575	42.169023	-88.101797	50	Cuba Marsh	9/3/2019
Celtis occidentalis	576	42.34072	-87.866605	10	Greenbelt	9/15/2019
Crataegus mollis	576	42.34072	-87.866605	30	Greenbelt	9/15/2019
Malus ioensis	576	42.34072	-87.866605	40	Greenbelt	9/15/2019
Quercus alba	576	42.34072	-87.866605	20	Greenbelt	9/15/2019
Quercus macrocarpa	576	42.34072	-87.866605	20	Greenbelt	9/15/2019
Quercus ellipsoidalis	576	42.34072	-87.866605	30	Greenbelt	9/15/2019
Cornus obliqua	576	42.34072	-87.866605	25	Greenbelt	9/15/2019
Prunus americana	576	42.34072	-87.866605	30	Greenbelt	9/15/2019
Prunus virginiana	576	42.34072	-87.866605	20	Greenbelt	9/15/2019
Quercus macrocarpa	545	42.326524	-88.126931	1	Kettle Grove	10/1/2019
Quercus macrocarpa	542	42.327617	-88.125323	8	Kettle Grove	10/1/2019
Quercus velutina	542	42.327617	-88.125323	1	Kettle Grove	10/1/2019
Prunus americana	542	42.327617	-88.125323	4	Kettle Grove	10/1/2019
Rhus glabra	542	42.327617	-88.125323	4	Kettle Grove	10/1/2019
Quercus macrocarpa	543	42.327087	-88.122533	4	Kettle Grove	10/1/2019
Prunus americana	543	42.327087	-88.122533	3	Kettle Grove	10/1/2019
Quercus macrocarpa	544	42.326098	-88.12243	2	Kettle Grove	10/1/2019
Quercus macrocarpa	546	42.325324	-88.126387	2	Kettle Grove	10/1/2019
Rhus glabra	546	42.325324	-88.126387	5	Kettle Grove	10/1/2019
Quercus ellipsoidalis	547	42.324846	-88.123916	1	Kettle Grove	10/1/2019
Quercus macrocarpa	547	42.324846	-88.123916	18	Kettle Grove	10/1/2019
Quercus velutina	547	42.324846	-88.123916	2	Kettle Grove	10/1/2019
Prunus americana	547	42.324846	-88.123916	6	Kettle Grove	10/1/2019
Rhus glabra	547	42.324846	-88.123916	9	Kettle Grove	10/1/2019
Quercus macrocarpa	548	42.32345	-88.12229	6	Kettle Grove	10/1/2019
Quercus velutina	548	42.32345	-88.12229	1	Kettle Grove	10/1/2019
Quercus macrocarpa	549	42.321680	-88.121139	2	Kettle Grove	10/1/2019
Rhus glabra	549	42.32168	-88.121139	5	Kettle Grove	10/1/2019
Quercus macrocarpa	551	42.322378	-88.126366	4	Kettle Grove	10/1/2019
Rhus glabra	551	42.322378	-88.126366	5	Kettle Grove	10/1/2019
Quercus macrocarpa	552	42.322044	-88.127810	4	Kettle Grove	10/1/2019
Quercus macrocarpa	550	42.324051	-88.126856	1	Kettle Grove	10/1/2019
Quercus macrocarpa	553	42.323295	-88.127385	1	Kettle Grove	10/1/2019
Quercus macrocarpa	554	42.323779	-88.129054	4	Kettle Grove	10/1/2019
Quercus velutina	554	42.323779	-88.129054	1	Kettle Grove	10/1/2019
Prunus americana	554	42.323779	-88.129054	4	Kettle Grove	10/1/2019
Rhus glabra	554	42.323779	-88.129054	5	Kettle Grove	10/1/2019
Quercus macrocarpa	557	42.322290	-88.130113	1	Kettle Grove	10/1/2019
Quercus macrocarpa	555	42.323238	-88.130916	3	Kettle Grove	10/1/2019
Quercus ellipsoidalis	556	42.322757	-88.132108	1	Kettle Grove	10/1/2019
Quercus macrocarpa	556	42.322757	-88.132108	10	Kettle Grove	10/1/2019
Quercus velutina	556	42.322757	-88.132108	1	Kettle Grove	10/1/2019
Prunus americana	556	42.322757	-88.132108	4	Kettle Grove	10/1/2019
Rhus glabra	556	42.322757	-88.132108	5	Kettle Grove	10/1/2019
Carya ovata	558	42.327953	-88.126298	3	Kettle Grove	10/1/2019
Celtis occidentalis	558	42.327953	-88.126298	2	Kettle Grove	10/1/2019
Quercus alba	558	42.327953	-88.126298	13	Kettle Grove	10/1/2019
Quercus ellipsoidalis	558	42.327953	-88.126298	1	Kettle Grove	10/1/2019
Quercus macrocarpa	558	42.327953	-88.126298	13	Kettle Grove	10/1/2019
Quercus velutina	558	42.327953	-88.126298	3	Kettle Grove	10/1/2019
Prunus americana	558	42.327953	-88.126298	7	Kettle Grove	10/1/2019
Prunus virginiana	558	42.327953	-88.126298	7	Kettle Grove	10/1/2019
Rhus glabra	558	42.327953	-88.126298	8	Kettle Grove	10/1/2019
Carya ovata	559	42.325495	-88.126573	2	Kettle Grove	10/1/2019

Celtis occidentalis	559	42.325495	-88.126573	1	Kettle Grove	10/1/2019
Quercus alba	559	42.325495	-88.126573	6	Kettle Grove	10/1/2019
Quercus ellipsoidal	559	42.325495	-88.126573	1	Kettle Grove	10/1/2019
Quercus macrocarpa	559	42.325495	-88.126573	7	Kettle Grove	10/1/2019
Quercus velutina	559	42.325495	-88.126573	2	Kettle Grove	10/1/2019
Prunus americana	559	42.325495	-88.126573	7	Kettle Grove	10/1/2019
Prunus virginiana	559	42.325495	-88.126573	7	Kettle Grove	10/1/2019
Rhus glabra	559	42.325495	-88.126573	8	Kettle Grove	10/1/2019
Carya ovata	562	42.322828	-88.128908	2	Kettle Grove	10/1/2019
Celtis occidentalis	562	42.322828	-88.128908	1	Kettle Grove	10/1/2019
Quercus alba	562	42.322828	-88.128908	7	Kettle Grove	10/1/2019
Quercus ellipsoidal	562	42.322828	-88.128908	1	Kettle Grove	10/1/2019
Quercus macrocarpa	562	42.322828	-88.128908	7	Kettle Grove	10/1/2019
Quercus velutina	562	42.322828	-88.128908	2	Kettle Grove	10/1/2019
Prunus americana	562	42.322828	-88.128908	5	Kettle Grove	10/1/2019
Prunus virginiana	562	42.322828	-88.128908	3	Kettle Grove	10/1/2019
Rhus glabra	562	42.322828	-88.128908	4	Kettle Grove	10/1/2019
Carya ovata	560	42.325376	-88.129551	4	Kettle Grove	10/1/2019
Celtis occidentalis	560	42.325376	-88.129551	3	Kettle Grove	10/1/2019
Quercus alba	560	42.325376	-88.129551	16	Kettle Grove	10/1/2019
Quercus ellipsoidal	560	42.325376	-88.129551	1	Kettle Grove	10/1/2019
Quercus macrocarpa	560	42.325376	-88.129551	14	Kettle Grove	10/1/2019
Quercus velutina	560	42.325376	-88.129551	4	Kettle Grove	10/1/2019
Prunus americana	560	42.325376	-88.129551	8	Kettle Grove	10/1/2019
Prunus virginiana	560	42.325376	-88.129551	8	Kettle Grove	10/1/2019
Rhus glabra	560	42.325376	-88.129551	8	Kettle Grove	10/1/2019
Carya ovata	561	42.323286	-88.131615	3	Kettle Grove	10/1/2019
Celtis occidentalis	561	42.323286	-88.131615	2	Kettle Grove	10/1/2019
Quercus alba	561	42.323286	-88.131615	10	Kettle Grove	10/1/2019
Quercus ellipsoidal	561	42.323286	-88.131615	1	Kettle Grove	10/1/2019
Quercus macrocarpa	561	42.323286	-88.131615	11	Kettle Grove	10/1/2019
Quercus velutina	561	42.323286	-88.131615	3	Kettle Grove	10/1/2019
Prunus americana	561	42.323286	-88.131615	5	Kettle Grove	10/1/2019
Prunus virginiana	561	42.323286	-88.131615	6	Kettle Grove	10/1/2019
Rhus glabra	561	42.323286	-88.131615	6	Kettle Grove	10/1/2019
Crataegus mollis	584	42.489775	-87.929414	6	Van Patten	10/1/2020
Malus ioensis	584	42.489775	-87.929414	6	Van Patten	10/1/2020
Prunus americana	584	42.489775	-87.929414	8	Van Patten	10/1/2020
Quercus alba	588	42.491627	-87.930318	2	Van Patten	10/1/2020
Quercus macrocarpa	588	42.491627	-87.930318	1	Van Patten	10/1/2020
Crataegus mollis	589	42.488952	-87.931787	3	Van Patten	10/1/2020
Malus ioensis	589	42.488952	-87.931787	9	Van Patten	10/1/2020
Quercus alba	589	42.488952	-87.931787	14	Van Patten	10/1/2020
Quercus macrocarpa	589	42.488952	-87.931787	20	Van Patten	10/1/2020
Quercus velutina	589	42.488952	-87.931787	8	Van Patten	10/1/2020
Prunus americana	589	42.488952	-87.931787	5	Van Patten	10/1/2020
Amelanchier laevis	590	42.493152	-87.929401	6	Van Patten	10/1/2020
Crataegus mollis	590	42.493152	-87.929401	10	Van Patten	10/1/2020
Malus ioensis	590	42.493152	-87.929401	15	Van Patten	10/1/2020
Quercus alba	590	42.493152	-87.929401	12	Van Patten	10/1/2020
Quercus macrocarpa	590	42.493152	-87.929401	12	Van Patten	10/1/2020
Prunus americana	590	42.493152	-87.929401	9	Van Patten	10/1/2020
Crataegus mollis	591	42.486591	-87.931922	3	Van Patten	10/1/2020
Malus ioensis	591	42.486591	-87.931922	3	Van Patten	10/1/2020
Quercus macrocarpa	591	42.486591	-87.931922	6	Van Patten	10/1/2020
Crataegus mollis	592	42.486750	-87.932604	2	Van Patten	10/1/2020
Quercus macrocarpa	592	42.486750	-87.932604	2	Van Patten	10/1/2020
Crataegus mollis	595	42.484847	-87.937030	6	Van Patten	10/1/2020
Malus ioensis	595	42.484847	-87.937030	3	Van Patten	10/1/2020



Quercus alba	595	42.484847	-87.937030	9	Van Patten	10/1/2020
Quercus macrocarpa	595	42.484847	-87.937030	15	Van Patten	10/1/2020
Prunus americana	595	42.484847	-87.937030	6	Van Patten	10/1/2020
Amelanchier interior	191	42.344943	-88.118817	9	Kestrel Ridge	9/1/2020
Carya cordiformis	191	42.344943	-88.118817	3	Kestrel Ridge	9/1/2020
Carya ovata	191	42.344943	-88.118817	4	Kestrel Ridge	9/1/2020
Crataegus mollis	191	42.344943	-88.118817	7	Kestrel Ridge	9/1/2020
Malus ioensis	191	42.344943	-88.118817	3	Kestrel Ridge	9/1/2020
Prunus serotina	191	42.344943	-88.118817	3	Kestrel Ridge	9/1/2020
Quercus alba	191	42.344943	-88.118817	27	Kestrel Ridge	9/1/2020
Quercus ellipsoidalis	191	42.344943	-88.118817	3	Kestrel Ridge	9/1/2020
Quercus macrocarpa	191	42.344943	-88.118817	25	Kestrel Ridge	9/1/2020
Quercus velutina	191	42.344943	-88.118817	3	Kestrel Ridge	9/1/2020
Prunus americana	191	42.344943	-88.118817	7	Kestrel Ridge	9/1/2020
Prunus virginiana	191	42.344943	-88.118817	7	Kestrel Ridge	9/1/2020
Rhus glabra	191	42.344943	-88.118817	3	Kestrel Ridge	9/1/2020
Carpinus caroliniana	520	42.325834	-87.944859	5	Independence Grove	9/8/2020
Carya cordiformis	520	42.325834	-87.944859	3	Independence Grove	9/8/2020
Carya ovata	520	42.325834	-87.944859	6	Independence Grove	9/8/2020
Crataegus mollis	520	42.325834	-87.944859	19	Independence Grove	9/8/2020
Ostrya virginiana	520	42.325834	-87.944859	4	Independence Grove	9/8/2020
Prunus serotina	520	42.325834	-87.944859	2	Independence Grove	9/8/2020
Quercus alba	520	42.325834	-87.944859	65	Independence Grove	9/8/2020
Quercus ellipsoidalis	520	42.325834	-87.944859	3	Independence Grove	9/8/2020
Quercus macrocarpa	520	42.325834	-87.944859	11	Independence Grove	9/8/2020
Quercus rubra	520	42.325834	-87.944859	15	Independence Grove	9/8/2020
Quercus velutina	520	42.325834	-87.944859	7	Independence Grove	9/8/2020
Prunus virginiana	520	42.325834	-87.944859	36	Independence Grove	9/8/2020
Carya cordiformis	211	42.325714	-87.946621	5	Independence Grove	9/8/2020
Carya ovata	211	42.325714	-87.946621	3	Independence Grove	9/8/2020
Crataegus mollis	211	42.325714	-87.946621	8	Independence Grove	9/8/2020
Ostrya virginiana	211	42.325714	-87.946621	5	Independence Grove	9/8/2020
Prunus serotina	211	42.325714	-87.946621	2	Independence Grove	9/8/2020
Prunus americana	211	42.325714	-87.946621	6	Independence Grove	9/8/2020
Prunus virginiana	211	42.325714	-87.946621	9	Independence Grove	9/8/2020
Crataegus mollis	636	42.323835	-87.945812	2	Independence Grove	9/8/2020
Malus ioensis	636	42.323835	-87.945812	2	Independence Grove	9/8/2020
Quercus alba	636	42.323835	-87.945812	3	Independence Grove	9/8/2020
Quercus macrocarpa	636	42.323835	-87.945812	3	Independence Grove	9/8/2020
Crataegus mollis	605	42.254735	-87.887313	1	Middlefork Savanna	9/15/2020
Malus ioensis	605	42.254735	-87.887313	3	Middlefork Savanna	9/15/2020
Quercus alba	605	42.254735	-87.887313	2	Middlefork Savanna	9/15/2020
Crataegus mollis	606	42.255323	-87.887237	1	Middlefork Savanna	9/15/2020
Quercus ellipsoidalis	606	42.255323	-87.887237	1	Middlefork Savanna	9/15/2020
Quercus macrocarpa	606	42.255323	-87.887237	2	Middlefork Savanna	9/15/2020
Crataegus mollis	607	42.257187	-87.890140	2	Middlefork Savanna	9/15/2020
Quercus macrocarpa	607	42.257187	-87.890140	4	Middlefork Savanna	9/15/2020
Crataegus mollis	608	42.255946	-87.887717	2	Middlefork Savanna	9/15/2020
Malus ioensis	608	42.255946	-87.887717	4	Middlefork Savanna	9/15/2020
Quercus macrocarpa	608	42.255946	-87.887717	2	Middlefork Savanna	9/15/2020
Malus ioensis	609	42.257636	-87.883229	3	Middlefork Savanna	9/15/2020
Quercus macrocarpa	609	42.257636	-87.883229	3	Middlefork Savanna	9/15/2020
Crataegus mollis	610	42.255846	-87.888952	3	Middlefork Savanna	9/15/2020
Malus ioensis	610	42.255846	-87.888952	3	Middlefork Savanna	9/15/2020
Quercus macrocarpa	610	42.255846	-87.888952	3	Middlefork Savanna	9/15/2020
Crataegus mollis	611	42.248812	-87.882045	3	Middlefork Savanna	9/15/2020
Malus ioensis	611	42.248812	-87.882045	3	Middlefork Savanna	9/15/2020
Prunus americana	611	42.248812	-87.882045	6	Middlefork Savanna	9/15/2020
Crataegus mollis	612	42.241423	-87.881364	3	Middlefork Savanna	9/15/2020

Malus ioensis	612	42.241423	-87.881364	3	Middlefork Savanna	9/15/2020
Quercus macrocarpa	612	42.241423	-87.881364	3	Middlefork Savanna	9/15/2020
Crataegus mollis	613	42.241423	-87.881364	3	Middlefork Savanna	9/15/2020
Malus ioensis	613	42.241423	-87.881364	2	Middlefork Savanna	9/15/2020
Quercus macrocarpa	613	42.241423	-87.881364	3	Middlefork Savanna	9/15/2020
Prunus americana	613	42.241423	-87.881364	3	Middlefork Savanna	9/15/2020
Crataegus mollis	614	42.241423	-87.881364	3	Middlefork Savanna	9/15/2020
Prunus americana	614	42.241423	-87.881364	6	Middlefork Savanna	9/15/2020
Crataegus mollis	615	42.255465	-87.886782	2	Middlefork Savanna	9/15/2020
Prunus americana	615	42.255465	-87.886782	2	Middlefork Savanna	9/15/2020
Crataegus mollis	629	42.242234	-87.883216	2	Middlefork Savanna	9/15/2020
Quercus macrocarpa	629	42.242234	-87.883216	1	Middlefork Savanna	9/15/2020
Crataegus mollis	634	42.247407	-87.882100	3	Middlefork Savanna	9/15/2020
Cornus obliqua	634	42.247407	-87.882100	2	Middlefork Savanna	9/15/2020
Prunus americana	634	42.247407	-87.882100	3	Middlefork Savanna	9/15/2020
Crataegus mollis	474	42.277941	-87.893397	5	Middlefork Savanna	9/15/2020
Malus ioensis	474	42.277941	-87.893397	10	Middlefork Savanna	9/15/2020
Prunus serotina	474	42.277941	-87.893397	1	Middlefork Savanna	9/15/2020
Quercus alba	474	42.277941	-87.893397	2	Middlefork Savanna	9/15/2020
Quercus macrocarpa	474	42.277941	-87.893397	2	Middlefork Savanna	9/15/2020
Prunus americana	474	42.277941	-87.893397	5	Middlefork Savanna	9/15/2020
Quercus bicolor	526	42.274762	-87.937400	13	Old School	10/4/2021
Celtis occidentalis	1475	42.273058	-87.935309	3	Old School	10/4/2021
Quercus bicolor	1475	42.273058	-87.935309	16	Old School	10/4/2021
Quercus macrocarpa	1475	42.273058	-87.935309	3	Old School	10/4/2021
Quercus rubra	1475	42.273058	-87.935309	3	Old School	10/4/2021
Ilex verticillata	1475	42.273058	-87.935309	14	Old School	10/4/2021
Carpinus caroliniana	59	42.272836	-87.933461	23	Old School	10/4/2021
Carya cordiformis	59	42.272836	-87.933461	5	Old School	10/4/2021
Celtis occidentalis	59	42.272836	-87.933461	3	Old School	10/4/2021
Juglans nigra	59	42.272836	-87.933461	3	Old School	10/4/2021
Ostrya virginiana	59	42.272836	-87.933461	22	Old School	10/4/2021
Populus grandidentata	59	42.272836	-87.933461	5	Old School	10/4/2021
Quercus bicolor	59	42.272836	-87.933461	5	Old School	10/4/2021
Quercus macrocarpa	59	42.272836	-87.933461	5	Old School	10/4/2021
Quercus rubra	59	42.272836	-87.933461	24	Old School	10/4/2021
Hamamelis virginiana	59	42.272836	-87.933461	6	Old School	10/4/2021
Carya ovata	527	42.272360	-87.932259	7	Old School	10/4/2021
Quercus alba	527	42.272360	-87.932259	45	Old School	10/4/2021
Quercus ellipsoidalis	527	42.272360	-87.932259	4	Old School	10/4/2021
Quercus macrocarpa	527	42.272360	-87.932259	4	Old School	10/4/2021
Quercus rubra	527	42.272360	-87.932259	6	Old School	10/4/2021
Quercus velutina	527	42.272360	-87.932259	8	Old School	10/4/2021
Carpinus caroliniana	649	42.209215	-87.919217	3	Wright Woods	10/11/2021
Crataegus mollis	649	42.209215	-87.919217	2	Wright Woods	10/11/2021
Malus ioensis	649	42.209215	-87.919217	3	Wright Woods	10/11/2021
Quercus alba	649	42.209215	-87.919217	5	Wright Woods	10/11/2021
Quercus bicolor	649	42.209215	-87.919217	10	Wright Woods	10/11/2021
Quercus macrocarpa	649	42.209215	-87.919217	5	Wright Woods	10/11/2021
Ilex verticillata	649	42.209215	-87.919217	4	Wright Woods	10/11/2021
Prunus americana	649	42.209215	-87.919217	2	Wright Woods	10/11/2021
Carpinus caroliniana	638	42.210321	-87.925677	3	Wright Woods	10/11/2021
Carya cordiformis	638	42.210321	-87.925677	1	Wright Woods	10/11/2021
Crataegus mollis	638	42.210321	-87.925677	1	Wright Woods	10/11/2021
Ostrya virginiana	638	42.210321	-87.925677	2	Wright Woods	10/11/2021
Prunus serotina	638	42.210321	-87.925677	1	Wright Woods	10/11/2021
Quercus alba	638	42.210321	-87.925677	2	Wright Woods	10/11/2021
Quercus velutina	638	42.210321	-87.925677	1	Wright Woods	10/11/2021
Hamamelis virginiana	638	42.210321	-87.925677	3	Wright Woods	10/11/2021

Crataegus mollis	639	42.209890	-87.926263	1	Wright Woods	10/11/2021
Quercus bicolor	639	42.209890	-87.926263	3	Wright Woods	10/11/2021
Quercus macrocarpa	639	42.209890	-87.926263	2	Wright Woods	10/11/2021
Salix nigra	639	42.209890	-87.926263	2	Wright Woods	10/11/2021
Cornus obliqua	639	42.209890	-87.926263	2	Wright Woods	10/11/2021
Quercus bicolor	644	42.209438	-87.924830	3	Wright Woods	10/11/2021
Quercus macrocarpa	644	42.209438	-87.924830	1	Wright Woods	10/11/2021
Ilex verticillata	644	42.209438	-87.924830	2	Wright Woods	10/11/2021
Quercus bicolor	600	42.217968	-87.925096	1	Wright Woods	10/11/2021
Ilex verticillata	600	42.217968	-87.925096	3	Wright Woods	10/11/2021
Carpinus caroliniana	601	42.216993	-87.925668	3	Wright Woods	10/11/2021
Quercus bicolor	601	42.216993	-87.925668	3	Wright Woods	10/11/2021
Quercus macrocarpa	601	42.216993	-87.925668	2	Wright Woods	10/11/2021
Ilex verticillata	601	42.216993	-87.925668	3	Wright Woods	10/11/2021
Carpinus caroliniana	602	42.217111	-87.926968	2	Wright Woods	10/11/2021
Quercus macrocarpa	602	42.217111	-87.926968	1	Wright Woods	10/11/2021
Carpinus caroliniana	603	42.215164	-87.926467	3	Wright Woods	10/11/2021
Quercus bicolor	603	42.215164	-87.926467	2	Wright Woods	10/11/2021
Quercus macrocarpa	603	42.215164	-87.926467	2	Wright Woods	10/11/2021
Cornus alternifolia	603	42.215164	-87.926467	5	Wright Woods	10/11/2021
Ilex verticillata	603	42.215164	-87.926467	3	Wright Woods	10/11/2021
Carpinus caroliniana	637	-87.928247	42.219629	2	Wright Woods	10/11/2021
Crataegus mollis	637	-87.928247	42.219629	2	Wright Woods	10/11/2021
Malus ioensis	637	-87.928247	42.219629	3	Wright Woods	10/11/2021
Ostrya virginiana	637	-87.928247	42.219629	1	Wright Woods	10/11/2021
Quercus alba	637	-87.928247	42.219629	1	Wright Woods	10/11/2021
Quercus macrocarpa	637	-87.928247	42.219629	3	Wright Woods	10/11/2021
Quercus rubra	637	-87.928247	42.219629	1	Wright Woods	10/11/2021
Quercus velutina	637	-87.928247	42.219629	1	Wright Woods	10/11/2021
Prunus americana	637	-87.928247	42.219629	3	Wright Woods	10/11/2021
Carpinus caroliniana	640	42.220670	-87.926052	1	Wright Woods	10/11/2021
Quercus bicolor	640	42.220670	-87.926052	1	Wright Woods	10/11/2021
Quercus bicolor	640	42.220670	-87.926052	2	Wright Woods	10/11/2021
Quercus macrocarpa	640	42.220670	-87.926052	1	Wright Woods	10/11/2021
Carya cordiformis	641	42.220791	-87.926007	1	Wright Woods	10/11/2021
Malus ioensis	641	42.220791	-87.926007	2	Wright Woods	10/11/2021
Ostrya virginiana	641	42.220791	-87.926007	1	Wright Woods	10/11/2021
Quercus alba	641	42.220791	-87.926007	1	Wright Woods	10/11/2021
Quercus macrocarpa	641	42.220791	-87.926007	1	Wright Woods	10/11/2021
Carpinus caroliniana	642	42.216535	-87.928336	4	Wright Woods	10/11/2021
Carya cordiformis	642	42.216535	-87.928336	3	Wright Woods	10/11/2021
Carya ovata	642	42.216535	-87.928336	2	Wright Woods	10/11/2021
Crataegus mollis	642	42.216535	-87.928336	2	Wright Woods	10/11/2021
Malus ioensis	642	42.216535	-87.928336	3	Wright Woods	10/11/2021
Ostrya virginiana	642	42.216535	-87.928336	2	Wright Woods	10/11/2021
Populus grandidentata	642	42.216535	-87.928336	2	Wright Woods	10/11/2021
Prunus serotina	642	42.216535	-87.928336	1	Wright Woods	10/11/2021
Quercus alba	642	42.216535	-87.928336	3	Wright Woods	10/11/2021
Quercus bicolor	642	42.216535	-87.928336	6	Wright Woods	10/11/2021
Quercus macrocarpa	642	42.216535	-87.928336	6	Wright Woods	10/11/2021
Quercus rubra	642	42.216535	-87.928336	1	Wright Woods	10/11/2021
Quercus velutina	642	42.216535	-87.928336	1	Wright Woods	10/11/2021
Cornus alternifolia	642	42.216535	-87.928336	3	Wright Woods	10/11/2021
Cornus obliqua	642	42.216535	-87.928336	3	Wright Woods	10/11/2021
Prunus americana	642	42.216535	-87.928336	6	Wright Woods	10/11/2021
Carpinus caroliniana	643	42.216094	-87.928010	3	Wright Woods	10/11/2021
Quercus bicolor	643	42.216094	-87.928010	14	Wright Woods	10/11/2021
Quercus macrocarpa	643	42.216094	-87.928010	5	Wright Woods	10/11/2021
Cornus alternifolia	643	42.216094	-87.928010	2	Wright Woods	10/11/2021

Cornus obliqua	643	42.216094	-87.928010	3	Wright Woods	10/11/2021
Ilex verticillata	643	42.216094	-87.928010	6	Wright Woods	10/11/2021
Amelanchier laevis	1479	42.216342	-87.858005	5	Prairie Wolf	10/18/2021
Carpinus caroliniana	1479	42.216342	-87.858005	6	Prairie Wolf	10/18/2021
Crataegus mollis	1479	42.216342	-87.858005	5	Prairie Wolf	10/18/2021
Malus ioensis	1479	42.216342	-87.858005	8	Prairie Wolf	10/18/2021
Ostrya virginiana	1479	42.216342	-87.858005	4	Prairie Wolf	10/18/2021
Cornus obliqua	1479	42.216342	-87.858005	5	Prairie Wolf	10/18/2021
Ilex verticillata	1479	42.216342	-87.858005	10	Prairie Wolf	10/18/2021
Prunus americana	1479	42.216342	-87.858005	12	Prairie Wolf	10/18/2021
Celtis occidentalis	1463	42.259594	-88.095252	3	Lakewood	9/27/2021
Quercus alba	1463	42.259594	-88.095252	3	Lakewood	9/27/2021
Quercus ellipsoidalis	1463	42.259594	-88.095252	1	Lakewood	9/27/2021
Quercus macrocarpa	1463	42.259594	-88.095252	6	Lakewood	9/27/2021
Quercus velutina	1463	42.259594	-88.095252	1	Lakewood	9/27/2021
Prunus americana	1463	42.259594	-88.095252	6	Lakewood	9/27/2021
Celtis occidentalis	1468	42.258913	-88.092584	1	Lakewood	9/27/2021
Quercus alba	1468	42.258913	-88.092584	2	Lakewood	9/27/2021
Quercus ellipsoidalis	1468	42.258913	-88.092584	1	Lakewood	9/27/2021
Quercus macrocarpa	1468	42.258913	-88.092584	5	Lakewood	9/27/2021
Quercus velutina	1468	42.258913	-88.092584	1	Lakewood	9/27/2021
Prunus americana	1468	42.258913	-88.092584	3	Lakewood	9/27/2021
Carya ovata	1461	42.261246	-88.097430	1	Lakewood	9/27/2021
Quercus alba	1461	42.261246	-88.097430	8	Lakewood	9/27/2021
Quercus macrocarpa	1461	42.261246	-88.097430	1	Lakewood	9/27/2021
Quercus rubra	1461	42.261246	-88.097430	2	Lakewood	9/27/2021
Quercus velutina	1461	42.261246	-88.097430	1	Lakewood	9/27/2021
Carya ovata	200	42.260800	-88.093169	3	Lakewood	9/27/2021
Quercus alba	200	42.260800	-88.093169	29	Lakewood	9/27/2021
Quercus ellipsoidalis	200	42.260800	-88.093169	2	Lakewood	9/27/2021
Quercus macrocarpa	200	42.260800	-88.093169	3	Lakewood	9/27/2021
Quercus rubra	200	42.260800	-88.093169	12	Lakewood	9/27/2021
Quercus velutina	200	42.260800	-88.093169	5	Lakewood	9/27/2021
Carya ovata	1467	42.259438	-88.092562	1	Lakewood	9/27/2021
Quercus alba	1467	42.259438	-88.092562	5	Lakewood	9/27/2021
Quercus macrocarpa	1467	42.259438	-88.092562	1	Lakewood	9/27/2021
Quercus rubra	1467	42.259438	-88.092562	2	Lakewood	9/27/2021
Quercus velutina	1467	42.259438	-88.092562	1	Lakewood	9/27/2021
Carya ovata	199	42.257103	-88.103476	2	Lakewood	9/20/2021
Crataegus mollis	199	42.257103	-88.103476	5	Lakewood	9/20/2021
Malus ioensis	199	42.257103	-88.103476	15	Lakewood	9/20/2021
Prunus serotina	199	42.257103	-88.103476	2	Lakewood	9/20/2021
Quercus alba	199	42.257103	-88.103476	71	Lakewood	9/20/2021
Quercus ellipsoidalis	199	42.257103	-88.103476	9	Lakewood	9/20/2021
Quercus macrocarpa	199	42.257103	-88.103476	20	Lakewood	9/20/2021
Quercus velutina	199	42.257103	-88.103476	10	Lakewood	9/20/2021
Prunus americana	199	42.257103	-88.103476	12	Lakewood	9/20/2021
Rhus glabra	199	42.257103	-88.103476	9	Lakewood	9/20/2021
Malus ioensis	1456	42.261481	-88.102379	3	Lakewood	9/20/2021
Quercus alba	1456	42.261481	-88.102379	2	Lakewood	9/20/2021
Quercus macrocarpa	1456	42.261481	-88.102379	1	Lakewood	9/20/2021
Malus ioensis	1455	42.260389	-88.102755	6	Lakewood	9/20/2021
Prunus serotina	1455	42.260389	-88.102755	1	Lakewood	9/20/2021
Quercus alba	1455	42.260389	-88.102755	4	Lakewood	9/20/2021
Quercus macrocarpa	1455	42.260389	-88.102755	2	Lakewood	9/20/2021
Quercus velutina	1455	42.260389	-88.102755	2	Lakewood	9/20/2021
Carya ovata	1452	42.259314	-88.103866	1	Lakewood	9/20/2021
Crataegus mollis	1452	42.259314	-88.103866	3	Lakewood	9/20/2021
Malus ioensis	1452	42.259314	-88.103866	5	Lakewood	9/20/2021

Quercus alba	1452	42.259314	-88.103866	13	Lakewood	9/20/2021
Quercus ellipsoidal	1452	42.259314	-88.103866	7	Lakewood	9/20/2021
Quercus macrocarpa	1452	42.259314	-88.103866	15	Lakewood	9/20/2021
Quercus velutina	1452	42.259314	-88.103866	3	Lakewood	9/20/2021
Prunus americana	1452	42.259314	-88.103866	3	Lakewood	9/20/2021
Rhus glabra	1452	42.259314	-88.103866	2	Lakewood	9/20/2021
Crataegus mollis	1453	42.260303	-88.101702	2	Lakewood	9/20/2021
Malus ioensis	1453	42.260303	-88.101702	3	Lakewood	9/20/2021
Quercus alba	1453	42.260303	-88.101702	8	Lakewood	9/20/2021
Quercus ellipsoidal	1453	42.260303	-88.101702	2	Lakewood	9/20/2021
Quercus macrocarpa	1453	42.260303	-88.101702	4	Lakewood	9/20/2021
Quercus velutina	1453	42.260303	-88.101702	1	Lakewood	9/20/2021
Prunus americana	1453	42.260303	-88.101702	2	Lakewood	9/20/2021
Crataegus mollis	1460	42.261100	-88.101379	2	Lakewood	9/20/2021
Malus ioensis	1460	42.261100	-88.101379	3	Lakewood	9/20/2021
Quercus alba	1460	42.261100	-88.101379	2	Lakewood	9/20/2021
Quercus ellipsoidal	1460	42.261100	-88.101379	1	Lakewood	9/20/2021
Quercus macrocarpa	1460	42.261100	-88.101379	5	Lakewood	9/20/2021
Quercus velutina	1460	42.261100	-88.101379	1	Lakewood	9/20/2021
Prunus americana	1460	42.261100	-88.101379	2	Lakewood	9/20/2021
Rhus glabra	1460	42.261100	-88.101379	2	Lakewood	9/20/2021
Carya ovata	241	42.304574	-88.146749	3	Singing Hills	9/13/2021
Crataegus mollis	241	42.304574	-88.146749	8	Singing Hills	9/13/2021
Malus ioensis	241	42.304574	-88.146749	21	Singing Hills	9/13/2021
Quercus alba	241	42.304574	-88.146749	8	Singing Hills	9/13/2021
Quercus ellipsoidal	241	42.304574	-88.146749	8	Singing Hills	9/13/2021
Quercus macrocarpa	241	42.304574	-88.146749	37	Singing Hills	9/13/2021
Quercus velutina	241	42.304574	-88.146749	4	Singing Hills	9/13/2021
Prunus americana	241	42.304574	-88.146749	18	Singing Hills	9/13/2021
Rhus glabra	241	42.304574	-88.146749	4	Singing Hills	9/13/2021
Crataegus mollis	1478	42.400496	-88.015113	5	Fourth Lake	9/15/2021
Malus ioensis	1478	42.400496	-88.015113	12	Fourth Lake	9/15/2021
Populus tremuloides	1478	42.400496	-88.015113	2	Fourth Lake	9/15/2021
Prunus serotina	1478	42.400496	-88.015113	1	Fourth Lake	9/15/2021
Quercus alba	1478	42.400496	-88.015113	4	Fourth Lake	9/15/2021
Quercus macrocarpa	1478	42.400496	-88.015113	21	Fourth Lake	9/15/2021
Quercus velutina	1478	42.400496	-88.015113	2	Fourth Lake	9/15/2021
Quercus macrocarpa	1879	42.198575	-87.852763	40	Prairie Wolf	10/1/2020
Quercus alba	1879	42.198575	-87.852763	5	Prairie Wolf	10/1/2020
Quercus bicolor	1879	42.198575	-87.852763	5	Prairie Wolf	10/1/2020
Quercus macrocarpa	1881	42.272718	-87.933210	15	Old School	10/1/2020
Quercus alba	1881	42.272718	-87.933210	70	Old School	10/1/2020
Quercus macrocarpa	1884	42.268011	-87.924377	25	Old School	10/1/2020
Quercus alba	1884	42.268011	-87.924377	25	Old School	10/1/2020
Quercus alba	211	42.325714	-87.946621	30	Independence Grove	10/1/2020
Quercus macrocarpa	1880	42.340727	-87.862508	50	Greenbelt	10/1/2020
Quercus alba	1880	42.340727	-87.862508	69	Greenbelt	10/1/2020
Quercus macrocarpa	1882	42.215742	-87.934835	50	Half Day	10/1/2020
Quercus alba	1882	42.215742	-87.934835	50	Half Day	10/1/2020
Quercus macrocarpa	1883	42.171204	-88.102205	6	Cuba Marsh	10/1/2020
Quercus alba	1883	42.171204	-88.102205	6	Cuba Marsh	10/1/2020
Quercus macrocarpa	1886	42.439292	-88.080576	50	Sun Lake	10/1/2020
Quercus alba	1886	42.439292	-88.080576	50	Sun Lake	10/1/2020