



## Southington Forest Preserve Project Design Document

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## INSTRUCTIONS

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

*The Protocol Requirements at the end of this document are a list of eligibility requirements for informational purposes which are also found in more detail in the CFC Tree Preservation Protocol Version 12.40, dated February 22, 2023.*

*Project Operators should enter data and supporting attachments starting on page 3 under Project Overview where you find “[Enter text here]” as thoroughly as possible and provide numbered attachments for maps and other documentation (ex: 1 – Regional Map). Keep all instructions in the document.*

*Below is a list of documents that are needed to complete a successful project:*

- *Geospatial Location Map*
- *Regional Map*
- *Project Area Map*
- *Proof of Land Ownership or Agreement to Transfer Credits*
- *Preservation Commitment*
- *Land Use Regulations*
- *Land Use/Zoning Map*
- *Overlay Zones or Restrictions*
- *Threat of Loss Demonstration*
- *Attestation of No Double Counting and No Net Harm*
- *Attestation of Additionality*
- *Carbon Quantification Calculator*
- *Plot Sampling Map (if relevant)*
- *Sampling Raw Data*
- *Carbon Biomass calculations*
- *i-Tree Eco file*
- *Forest Composition*
- *Co-Benefit Quantification Calculator*
- *iTree Canopy Report*
- *Social Impacts*

## PROJECT OVERVIEW

**Project Name:** Southington Forest Preserve

**Project Number:** 54

**Project Type:** Preservation Project (under the Tree Preservation Protocol – version 12.40, dated February 22, 2023)

**Credit Commencement Date:** April 3, 2024

**Project Location:** Southington Township, Ohio

**Project Operator Name:** West Creek Conservancy

**Project Operator Contact Information:** Brett Rodstrom, Director of Conservation, (440) 867-6659, brett@westcreek.org

### **Project Description:**

*Describe overall project details and goals as summarized in application. Include information about where the Project is located, Project Area acreage and other relevant background. If the Project Area is part of a larger program or preservation effort, include one sentence with more information (2 paragraphs).*

The Southington Forest Preserve is a 43-acre property in Southington Township, OH, that was donated to West Creek Conservancy in December 2021. The Project Area consists of 34.9 acres of mature, upland hardwood forest, containing a mix of impressive upland hardwoods including hickory, oaks, beech, and sugar maples.

West Creek Conservancy intends to permanently preserve this high-quality forested area in order to protect the property from the pattern of timbering that is prevalent in the immediately surrounding community, as well as from any future commercial development. West Creek Conservancy's conservation of the Southington Forest Preserve through encumbrance with a Declaration of Development Restrictions will preserve the property's trees and other natural assets in perpetuity. Southington Forest Preserve will also be integrated into West Creek Conservancy's guided nature hike series, to promote public access and appreciation for the area's natural resources.

## DEFINING THE PROJECT AREA (Section 1.3 and 1.4)

### **Project Area Location**

*Describe the city, town, or jurisdiction where the Project is located. State which urban location criteria is met from Protocol Section 1.3.*

The Southington Forest Preserve property is located in Southington Township, Trumbull County, Ohio. The project meets the urban area criteria because it is part of the planning area for the Eastgate Regional Council of Governments, the Metropolitan Planning Organization covering Ashtabula, Mahoning, and Trumbull counties.

Reference Address: Parkman Road, Southington Township, OH 44470

Property Centroid: 41.3145429, -80.9784625

### Project Area Parcel Information

List parcel(s) in the Project Area.

Municipality	Parcel Number	Notes <i>Include total acres and acres included in Project Area</i>
Southington Township	57-101650	Total acres: 43.49 Project Area acres: 34.9
	<b>Total Project Area</b>	34.9 acres

### Project Area Maps

Provide three maps of the Project Area that illustrate the location: geospatial location, regional, and detailed. Maps should include project title, relevant urban or town boundaries, defined Project Area, and legend.

- Geospatial Location Map  
*Show the boundaries of the Project Area in a KML, KMZ, or shapefile format*  
Attachment: 1. Southington Shapefiles
- Regional Map  
*Show where the Project Area is located in relation to the state and/or region*  
Attachment: 2. Southington Regional Map
- Detailed map of Project Area  
*Show the Project Area and parcel boundaries.*  
Attachment: 3. Southington Project Area Map

## OWNERSHIP OR ELIGIBILITY TO RECEIVE POTENTIAL CREDITS (Section 1.5)

*Project Operator must demonstrate ownership of potential credits or eligibility to receive potential credits. If Project Operator is the landowner, attach a deed showing ownership and explanation of when the property was acquired. If the Project Operator is not the landowner, provide the Agreement between Project Operator and landowner authorizing Project Operator to execute this project.*

### Name of landowner of Project Area and explanation

The Project Operator, West Creek Conservancy, is the landowner of the Southington Forest Preserve property. The property was donated to West Creek Conservancy in December of 2021.

Attachment: 4. Southington Forest Preserve Deed

## PROJECT DURATION (Section 2.2)

*Project Operator commits to the 40- or 100-year project duration requirement through a signed Project Implementation Agreement with City Forest Credits and agrees to the statement below.*

Project Operator has committed to the 40-year project duration and signed a Project Implementation Agreement with City Forest Credits on November 9, 2023.

## PRESERVATION COMMITMENT (Section 4.1)

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

**Preservation Term:** 40 years

**Date recorded:** April 3, 2024

**Preservation Commitment Explanation:** The Tree Preservation language is captured in Section 1 of the Declaration of Development Restrictions dated March 29, 2024 and recorded by West Creek Conservancy on April 3, 2024.

“1. Removal of Trees. Declarant shall not cut down, destroy, or remove trees located on the Property, except as necessary to control or prevent hazard, disease or fire or to improve forest health, Recreational non-motor-use trails have negligible or de minimis impacts on biomass and carbon stock and are permissible.”

Section 2 further stipulates that:

“the covenants and restrictions declared, granted, conveyed and established under this Declaration shall run with the land and inure to the benefit of, and be binding upon, Declarant and Declarant’s successors and assigns, and all future owners of the Property during the Term.”

Attachment: 5. Southington Preservation Commitment

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

*Demonstrating the Threat of Loss is shown in several ways: land use designation that allows a non-forest use, overlay zones, existing restrictions, and one of three conditions that illustrate pressure to convert the Project Area to a non-forest use.*

### **Land use designation**

*Describe the land use designation, including what types of non-forest use it allows. Attach a copy of the relevant land use designations, which may include development regulations such as zoning ordinances. Include a map depicting the designation of the relevant municipality, with the Project Area boundaries clearly indicated on the map.*

22.4 acres of the Project Area are zoned for Commercial use. Permitted uses in the Business and Commercial District, as defined in the Southing Township Zoning Resolution, include all uses permitted in Residential zoning districts; apartment houses, rooming houses, hotels, living quarters over business establishments, restaurants, lunch rooms, garages, taverns and motels; retail stores or shops, repair shops, beauty shops or parlors, barbershops, funeral homes, office or office buildings, mercantile establishments, and studios; dairy plants, dairy stores and roadside stands; lodge halls; gasoline filling and service stations; indoor theaters, bowling alleys, dance halls and roller rinks; job printing and newspaper printing plants; and builders supply and plumbing/heating supply.

The remaining 12.5 acres of the Project Area are zoned for Residential/Agricultural use. Permitted uses include single- and two-family dwellings for residence purposes, as well as churches, schools, colleges, universities, public libraries, public museums, community centers, fire stations, township halls, publicly owned parks, publicly owned playgrounds, YMCA, and YWCA.

Attachment: 6. Southington Township Zoning Regulations; 7. Southington Township Zoning Map

#### **Overlay zones or other restrictions**

*Describe any overlay zones that prohibit development or forest clearance such as critical areas, wetlands, or steep slopes and their protection buffers. Describe any legal encumbrances or other pre-existing tree/forest restrictions that may have hindered removal of the Project Trees (in the pre-Preservation Commitment condition). If present, attach a copy of the applicable restriction and a map depicting the overlay boundaries, with the Project Area boundaries clearly indicated on the map.*

The property containing the Project Area included several critical areas, including:

- Wetlands, as identified by the US Fish and Wildlife Service National Wetlands Inventory
- Streams, as identified by the US Fish and Wildlife Service National Wetlands Inventory and the USGS National Hydrography Dataset plus High Resolution (NHDPlus HR)
- Riparian Buffer - Per the Trumbull County Subdivision Regulations, Section 701 Riparian Buffer Areas, a minimum of 65 feet of riparian buffer shall be established on either side of all streams draining an area greater than 0.5 square miles, and a minimum of 25 feet on either side of all watercourses draining an area less than 0.5 square miles. To be conservative, a 65 foot-riparian buffer was drawn around all streams within the Project Area (see Attachment 3 Project Area Map).

All of the critical areas, including the wetlands, streams, and riparian buffer, listed above were **excluded** from the carbon Project Area.

Attachment: 3. Southington Project Area Map; 8. Southington Critical Area Regulations Trumbull County

#### **Threat of loss demonstration (Section 4.4 A, B, or C)**

*Describe one of the three threat of loss conditions that are applicable prior to the Preservation Commitment. Provide supporting evidence such as maps, sale or assessed value documentation, or appraisal information.*

- A) *Developed or improved uses surrounding at least 30% of perimeter of Project Area*
  - *A map depicting the Project Area with parcel boundaries, perimeter of developed or improved uses, and calculation of the border with these uses*
- B) *Sold, conveyed, or assessed in past three years at value greater than \$8K/acre for bare land*
  - *A settlement statement, assessor statement, or other evidence of land transaction*
- C) *Fair market value higher after conversion to a non-forested use*
  - *A “highest and best use” study from a state certified general real estate appraiser stating that the Project Area Would have a fair market value after conversion to a non-forested “highest and best use” greater than the fair market value after preservation]*

79.8% of the Project Area perimeter is surrounded by developed or improved uses, meeting Threat of Loss criteria A. The property shares its southern boundary with US Route 422.

Attachment: 9. Southington Perimeter Development Map

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

*Complete and attach the following attestation: Attestation of No Double Counting of Credits and Attestation of No Net Harm. Provide any additional notes as relevant. Provide a map that includes both the Project Area and the closest registered urban forest Preservation Project based on the registered urban forest preservation database KML/Shapefile provided by CFC to demonstrate that the Project does not overlap with any existing urban forest carbon projects.*

Project Operator has mapped the Project Area against the registered urban forest preservation project database and determined that there is no overlap of Project Area with any registered urban forest preservation carbon project.

Project Operator has signed the Attestation of No Double Counting of Credits and No Net Harm on April 1, 2024.

Attachment: 10a. Southington Attestation No Net Harm and No Double Count; 10b. Southington No Double Counting Map

## **ADDITIONALITY (Section 6)**

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

Project Operator demonstrates that additionality was met through the following:

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

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

Additionality is also embedded in the quantification methodology. Projects cannot receive credits for trees that would have remained had development occurred, nor can they receive soil carbon credits for soil that would have been undisturbed had development occurred. Leakage is prevented by a deduction for displaced development in Protocol Section 11.4.

Additionality is also reflected in the project financing. The revenue from the sale of carbon credits will play a material role in the successful and durable preservation of the Project Area's carbon stock by providing funding for stewardship and maintenance that ensure the forest's long-term health and resilience. Revenue generated from the sale of carbon credits will support West Creek Conservancy's ongoing stewardship and management of the property, as well as protection of additional forested carbon resources within the conservation organization's service area.

West Creek Conservancy became aware of carbon crediting as a potential source of revenue for projects through the success that another conservation organization in Northeast Ohio, Western Reserve Land Conservancy, had in securing carbon credits to fund ongoing stewardship of protected forested properties in the region. West Creek Conservancy became aware of the work of City Forest Credits in the same manner. West Creek Conservancy first engaged City Forest Credits in January of 2023, and Southington Forest Preserve was identified as a potentially viable property for carbon crediting in February. No Notice of Intent was signed for the Southington Forest Preserve project.

Project Operator has signed an Attestation of Additionality on April 1, 2024.

Attachment: 11. Southington Attestation of Additionality

## **CARBON QUANTIFICATION DOCUMENTATION (Section 11)**

*Follow detailed instructions in the Protocol for conducting quantification and use the Carbon Quantification Calculator to show calculations. CFC will provide the Carbon Quantification Calculator and Forest Composition Report Template. Ensure that your requested credit issuance schedule (issuance dates) is accurate and complete in the calculator. Project Operators should describe and appropriately*



reflect in their carbon quantification any and all planned future activities that may affect the percent canopy or carbon stocking.

**Summary numbers from Carbon Quantification Calculator**

Project Area (acres)	<b>34.9</b>
Does carbon quantification use stratification (yes or no)	<b>No</b>
Accounting Stock (tCO <sub>2</sub> e)	<b>6,390</b>
On-site avoided biomass emissions (tCO <sub>2</sub> e)	<b>5,751</b>
On-site avoided soil carbon emissions (tCO <sub>2</sub> e)	<b>3,167</b>
Deduction for displaced biomass emissions (tCO <sub>2</sub> e)	<b>1,052</b>
Deduction for displaced soil emissions (tCO <sub>2</sub> e)	<b>960</b>
Credits from avoided biomass emissions (tCO <sub>2</sub> e)	<b>4,699</b>
Credits from avoided soil emissions (tCO <sub>2</sub> e)	<b>2,207</b>
Total credits from avoided biomass and soil emissions (tCO <sub>2</sub> e)	<b>6,906</b>
Credits attributed to the project (tCO <sub>2</sub> e), excluding future growth	<b>6,906</b>
Contribution to Registry Reversal Pool Account	<b>691</b>
<b>Total credits to be issued to the Project Operator (tCO<sub>2</sub>e)</b> <i>(excluding future growth)</i>	<b>6,216</b>

**GHG Assertion:**

Project Operator asserts that the Project results in GHG emissions mitigation of 6,216 tons CO<sub>2</sub>e issued to the project.

**Approach to quantifying carbon**

*Describe the forest conditions and general approach used to quantify carbon (e.g., 11.1.B with full inventory, i-Tree Eco plots, other). Attach the Carbon Quantification Calculator.*

Kathryn Downie, ACF (contracted forester) of Legacy Forestry Consulting, provided on-site plot-sample inventory work to determine the carbon stock. A plot sample forest assessment adhering to the standards set in CFC Tree Preservation Protocol Section 11.1.B was conducted. The sample established 20 sample plots sized at 1/10<sup>th</sup> acre. Within every plot, each live tree at least 5” in diameter at 4.5’ above the ground where the height is measured on the uphill side of the tree was inventoried. Species, diameter, and overall tree condition were recorded for each tree. I-Tree Eco was utilized to input the sample plot data to determine the carbon storage. The CFC Carbon Calculator was used for quantification for subsequent steps 11.2, 11.3, 11.4 and 11.5.

Attachment: 12. Southington Carbon Quantification Calculator; 13. Southington Preserve Cruise Map; 14. Southington iTree Eco Sampling Raw Data; 15. Southington Carbon Biomass Report; 16. Southington Forest i-Tree Eco Source File

**Accounting Stock Measurement Method**

*Provide an overview to describe quantification methods, including which method was used to determine the accounting stock.*

A plot sample forest assessment adhering to the standards set in CFC Tree Preservation Protocol Section 11.1.B was conducted, using randomized 1/10<sup>th</sup>-acre plots. I-Tree Eco was used to determine the accounting stock, with a standard error of 10%.

### **Plot Sampling Map and Raw Data**

*If sampling was utilized to estimate the carbon stock, include the map of plot sample locations and raw data collected.*

Kathryn Downie, ACF of Legacy Forestry Consulting sampled 20 plots to estimate the carbon stock. See attached map for the location of plot samples and raw data associated with each plot location.

Attachment: 13. Southington Preserve Cruise Map; 14. Southington iTree Eco Sampling Raw Data

### **Carbon Biomass Calculations**

*Include calculations used to determine the biomass in the Project Area. Attach i-Tree Eco file if i-Tree was used to calculate the carbon biomass.*

Carbon quantification is based on the sample plots. The metric tons of carbon is 1,937.15. The standard error is 194.36.

Biomass tC/acre = (metric tons of carbon – standard error)/project area acres  
(1937.15-194.36/34.9 = 49.94) (cell B11 on carbon calculator, Attachment 12)

Attachment: 15. Southington Carbon Biomass Report

### **Stratification**

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

Not applicable

Attachment: N/A

### **Forest Composition**

*Summarize the forest composition and attach the Forest Composition Report.*

Based on the plot sample inventory and iTree Eco analysis conducted by Legacy Forest Consulting on behalf of the Project Operator, the Southington Forest Preserve property has an estimated 4,066 trees with a tree cover of 98%. An estimated 36.5% of trees are American beech, with the next most abundant species being sugar maple (17.6%) and red maple (12.0%). Other species identified include downy serviceberry, hickory spp., black tupelo, eastern hophornbeam, black cherry, white oak, swamp white oak, pin oak, northern red oak, and American elm.

Attachment: 15. Southington Carbon Biomass Report; 17. Southington Forest Composition Report

### **Area Expected to Remain in Trees after Potential Development (11.2)**

*Describe the land use designation, any restrictions, and the method used to determine the area expected to remain in trees after potential development (fraction at risk of removal). If residential land use, follow 11.2.B. and provide the calculation showing which percentage of accounting stock at risk of removal is appropriate to include.*

For the 12.5 residentially zoned acres in the Project Area, 90% Fraction at Risk of Tree Removal was used. Section 11.2.B.ii of CFC's Tree Preservation Protocol stipulates that for residentially zoned parcels with a minimum lot size smaller than 2.25 acres, the lesser of 90% or two acres per allowed dwelling unit plus 10% of the remaining Project Area, calculated as:  $\text{Avoided Biomass Emissions} = \text{Accounting Stock} * (((2 * \text{Dwellings}) + ((\text{Project Acres} - (2 * \text{Dwellings})) * 0.1)) / \text{Project acres})$  Per Section 9 of Southington Township's Zoning Resolution, the minimum lot area for a single-family dwelling is 100'x200' (20,000 square feet, or 0.46 acres), which resulted in a greater value than 90%.

For the 22.4 commercially zoned acres in the Project Area, 90% Fraction at Risk of Tree Removal was used. Southington Township's Zoning Resolution does not stipulate any landscaping requirements for commercially zoned properties. Therefore, per CFC Tree Preservation Protocol Section 11.2.A, 90% was used.

#### **Quantification of Soil Carbon – Existing Impervious Area and Impervious Limits (11.4)**

*The Project may claim avoidance of emissions from soil carbon caused by conversion of soils to impervious surfaces. Describe applicable land use designation and development rules, any restrictions, existing impervious area and maximum fraction impervious cover.*

Southington Township's Zoning Resolution does not specify maximum lot coverage for residentially zoned areas; therefore, minimum yard setbacks as stipulated by the Southington Township Zoning Resolution were used to estimate impervious surface area. The calculated avoided impervious surface area was 56%. Since the side yard minimums allowed for avoided impervious surface area greater than 50%, the Protocol-specified standard deduction of 50% impervious surface avoided for residential use was used instead, to be conservative (per CFC Tree Preservation Protocol 11.3.B).

Per CFC Tree Preservation Protocol 11.3.A, 90% of the Project Area acreage within Southington Township's commercial zoning district is eligible as avoided impervious surface.

#### **Future Planned Project Activities**

*Describe future activities that may affect the percent canopy or carbon stocking in any way. Describe maintenance and stewardship activities that could improve the carbon stock.*

West Creek Conservancy plans to manage the Southington Forest Preserve property as a nature preserve for passive recreation and nature observation. Any public access improvements to facilitate this use of the property would avoid disruption of the natural landscape and would not result in any reduction to the tree canopy, in accordance with the terms of the Declaration of Development Restrictions and in alignment with West Creek Conservancy's conservation priorities. West Creek Conservancy's conservation stewardship of the property will foster continued healthy growth of the Southington Forest Preserve's forest and associated carbon stock.

## CO-BENEFITS QUANTIFICATION DOCUMENTATION (Section 11.5)

Summarize co-benefit quantification per year and provide supporting documentation. CFC will provide a Co-Benefits Quantification calculator for quantifying rainfall interception, reduction of certain air compounds, and energy savings.

<b>Ecosystem Services</b>	<b>Resource Units</b>	<b>Value</b>
Rainfall Interception (m3/yr)	17,491.5	\$36,970.07
Air Quality (t/yr)	1.2068	\$2,974.89
Cooling – Electricity (kWh/yr)	53,113	\$7,441.11
Heating – Natural Gas (kBtu/yr)	2,198,600	\$30,750.26
<b>Grand Total (\$/yr)</b>		<b>\$78,136.32</b>

Co-benefits were quantified using CFC’s Co-Benefits Quantification Calculator. These ecosystem services represent values in avoided costs of \$78,136.32 annually and \$3,125,452.92 over 40 years.

Attachment: 18. Southington Northeast CoBenefit Calculator

### Canopy Cover

*i-Tree Canopy report was completed to quantify the cobenefits. Include the results below.*

The i-Tree Eco analysis of the raw data from the on-site inventory revealed a 98% canopy cover. An i-Tree Canopy report was also completed on the property, which indicated a 96% canopy cover. The canopy cover of 98% was used for quantification of cobenefits, with the assumption that the calculation resulting from the on-site inventory data would be more accurate than the calculation resulting from the remote assessment.

Attachment: 17. Southington Forest Composition Report; 19. Southington i-Tree Canopy Report

## SOCIAL IMPACTS (Section 12)

*Project Operators shall use the Carbon Project Social Impacts template to evaluate how their Project aligns with the UN Sustainable Development Goals (SDGs). CFC will provide the template. Summarize the three to five main SDGs attributed to this Project.*

Preservation of the Southington Forest Preserve property contributes to numerous SDGs, including primarily Climate Action, Life Below Water, and Life On Land.

### SDG 13 – Climate Action

Permanent conservation of the Southington Forest Preserve will preserve the ecosystem services that this forested natural area provides to the surrounding community, and to the Grand River Watershed more broadly. Educational opportunities including guided nature hikes hosted by West Creek Conservancy and its conservation partners will provide opportunities for the community to engage with the project and learn about the importance of conservation in the context of climate change and environmental degradation as specifically experienced in Northeast Ohio and the Great Lakes region.

The Southington Forest Preserve property also provides habitat for a globally listed species – the West Virginia white butterfly – which has been identified on the property.

### **SDG 14 – Life Below Water**

The Southington Forest Preserve is located within the Grand River Headwaters subwatershed, and the northwest portion of the property contains an ephemeral headwater stream that eventually feeds into Dead Branch, a main tributary to the Grand River. Preservation of the mature upland forest on the property, intercepting an estimated 17,491 cubic meters of rainfall each year, will thus protect an important buffer to the headwaters of the Grand River. The Grand River is one of only three rivers in the state of Ohio to be designated as both Wild and Scenic. As a tributary to Lake Erie, preservation of water quality in the Grand River watershed has greater implications for the region’s aquatic biodiversity and the health of this tremendous freshwater resource, which is threatened by agricultural runoff in the watershed. West Creek Conservancy’s conservation of the Southington Forest Preserve property permanently preserves a forested buffer to a headwater stream to the Grand River, in an area with heavy agricultural land use.

### **SDG 15 – Life On Land**

The Southington Forest Preserve provides habitat for a globally listed species, the West Virginia white butterfly (*Pieris virginensis*), which has been identified on the property. The West Virginia white butterfly relies on forested understory flowers for laying its eggs – permanent protection of this forested tract will therefore preserve necessary habitat for this vulnerable species.

Attachment: 20. Southington Social Impacts

## **MONITORING AND REPORTING (Section 8)**

*Throughout the Project Duration, the Project Operator must report on tree conditions across the Project Area.*

### **Monitoring Reports**

*Monitoring reports are due every three years determined by the date of the verification report. For example, if the verification report is dated January 1, 2023, the first report will be due by January 1, 2026 and every three years thereafter for the duration of the project. CFC will provide a list of dates to Project Operator after the first verification report is approved. Project Operators must submit reports in writing and must attest to the accuracy of the reports. The reports must contain any changes in eligibility status of the Project Operator and any significant tree loss. The information includes updates to land ownership, changes to project design, changes in implementation or management and changes in tree or canopy loss. The reports must be accompanied by some form of telemetry or imaging that captures tree canopy, such as Google Earth, aerial imagery, or LiDAR. The reports must estimate any loss of stored carbon stock or soil disturbance in the Project Area.*

### **Monitoring Plans**

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

The Southington Forest Preserve property will be included in the annual monitoring schedule for all protected properties under West Creek Conservancy's stewardship. West Creek Conservancy will create a report of each annual inspection, which will be retained in the Southington Forest Preserve stewardship file. West Creek Conservancy will submit triennial monitoring reports for the project duration as specific in the protocol.

Should West Creek Conservancy decide to claim additional credits for future growth of the Southington Forest Preserve carbon stock, this future growth will be quantified in adherence with the standards set in CFC Tree Preservation Protocol Section 11.6. At such time, updated project and eligibility documentation will be provided along with the updated carbon quantification for validation and verification.

## PROJECT OPERATOR SIGNATURE

Signed on April 10 in 2024, by Derek Schafer, Executive Director for West Creek Conservancy.

  
\_\_\_\_\_

Signature

*Derek Schafer*  
\_\_\_\_\_

Printed Name

*440-915-2940*  
\_\_\_\_\_

Phone

*dschafer@westcreek.org*  
\_\_\_\_\_

Email

## ATTACHMENTS

*Update the attachments list as appropriate for your project.*

- 1 – Geospatial Location Map
- 2 - Regional Map
- 3- Project Area Map
- 4 – Proof of Land Ownership or Agreement to Transfer Credits
- 5 – Preservation Commitment
- 6 - Land Use Regulations
- 7 – Land Use/Zoning Map
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# PROTOCOL REQUIREMENTS

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

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

## **Project Duration and Project Implementation Agreement (Section 1.2, 2.2)**

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

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

Projects must be located in or along the boundary of at least one of the following criteria:

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

## **Ownership or Right to Receive Credits Eligibility (Section 1.5)**

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

- A. Own the land and potential credits upon which the Project trees are located; or
- B. Own an easement or equivalent property interest for a public right of way within which Project trees are located and accept ownership of those Project trees by assuming responsibility for maintenance and liability for them; or
- C. Have a written and signed agreement from the landowner, granting ownership to the Project Operator of any credits for carbon storage, other greenhouse gas benefits, and other co-benefits delivered by Project trees on that landowner’s land. If the Project Area is on private property, the agreements in this sub-section must be recorded in the public records in the county where the property is located. The recordation requirement can be satisfied if the agreements specified in this sub-section are contained in a recorded easement, covenant, or deed restriction on the property.

## **Demonstrate Tree Preservation (Section 4.1)**



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

#### **Demonstrate Threat of Loss (Section 4.2, 4.3, and 4.4):**

The Project Operator must show that prior to the Preservation Commitment:

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

#### **Additionality (Section 6)**

Additionality is ensured through the following:

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

#### **Quantification for Credits (Section 11)**

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

1. Stored carbon stock present in Project Area (Section 11.1)  
Estimate the biomass stock present and adjust for uncertainty to calculate the “Accounting Stock”. This can be done using the US Forest Service General Technical Report NE-343 tables, on-site inventory of some live trees with i-Tree methods and tools, or an on-site forest inventory
2. Areas expected to remain in trees after potential development (Section 11.2)

Calculate the fraction of the Accounting Stock that likely would be emitted as a result of development, to calculate “Avoided Biomass Emissions”

3. Quantification of soil carbon (Section 11.3)  
Calculate “Avoided Soil Carbon Emissions” caused by conversion of soils to impervious surfaces in the Project Area
4. Deduction for displaced development (Section 11.4)  
Apply the deductions in Section 11.5 and Appendix B to Biomass and Soil Carbon calculations to adjust for development and emissions that would be displaced by the preservation of the Project Area (leakage deductions). This will reduce the creditable tonnes of Avoided Biomass Emissions and Avoided Soil Carbon Emissions to adjust for displaced development
5. Quantify Co-Benefits (Section 11.5)  
The Project Operator will calculate co-benefits separately from CO<sub>2</sub>(e). The Registry will supply a spreadsheet template based on their climate zone, and will provide values for rainfall interception, reductions of air compounds, and energy savings.
6. Claiming additional credit for growth (Section 11.6)  
The Project Operator may elect to also account for ongoing growth of trees within the Project Area after Project Commencement

### **Social Impacts (Section 12)**

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

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

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

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

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

### **Issuance of Credits to Project Operator (Section 7)**

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

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

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

**Credits for Reversal Pool Account (Section 7.3):**

The Registry will issue 90% of Project credits earned and requested and will hold 10% in the Registry's Reversal Pool Account.

**Understand Reversals (Section 9)**

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

**Monitoring and Reporting (Section 8)**

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

## Attachments

[Deed](#)

[Project Area Map](#)

[Regional Area Map](#)

[Preservation Commitment](#)

[Zoning Maps](#)

[Zoning Description\(s\)](#)

[Threat of Loss Demonstration](#)

[Attestation of No Double Counting and No Net Harm](#)

[Attestation of Additionality](#)

[Carbon Quantification Tool](#)

[Tree Plot Map](#)

[Tree Characteristics Chart\(s\)](#)

[iTree Eco Raw Data & Carbon Biomass Report](#)

[iTree Canopy Report & Data Points](#)

[Cobenefit Calculator](#)

[Social Impacts](#)

Deed

TRANSFERRED  
IN COMPLIANCE WITH SEC 319.202 RC

Dec 28, 2021

Adrian S BiViano, Trumbull County Auditor  
Conveyance Fee: \$ 0.00  
Transfer Fee: \$0.50  
eFile#: 20124298 by IM

TRUMBULL COUNTY  
Dec 28, 2021  
GIS/TAX MAP By KV

202112280029800

Page: 1 of 4 RF SIMPLIF  
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Trumbull County Recorder Tod Latell

**LIMITED WARRANTY DEED**

KNOW ALL MEN BY THESE PRESENTS that this Limited Warranty Deed is given as of December 21, 2021, by W&B Horton Family Limited Partnership (“Grantor”), in favor of West Creek Conservancy, an Ohio non-profit corporation (“Grantee”), whose tax mailing address will be P. O. Box 347113, Parma, Ohio 44134. As used in this Limited Warranty Deed, the terms “Grantor” and “Grantee” include those parties’ respective successors and assigns where the context requires or permits.

Grantor, for good and valuable consideration, the receipt and sufficiency of which are acknowledged, does hereby grant, sell, and convey to Grantee that parcel of land described in Exhibit A attached hereto (“Property”). Grantor became vested in the Property pursuant to an instrument previously recorded in the Official Records of Trumbull County in Instrument No. ~~97002078~~ PRIOR VOLUME 1151, PAGE 684

TO HAVE AND TO HOLD the Property, with all the easements and the appurtenances thereto, belonging to the use and benefit of Grantee forever, subject to restrictions, conditions and easements of record, zoning ordinances, if any, and taxes and assessments, both general and special, which are a lien but not yet due and payable.

Grantor covenants with Grantee that the Property is free from all encumbrances made by Grantor except as herein provided.

Grantor will warrant and defend the Property with the appurtenances thereunto belonging unto Grantee forever against the lawful claims and demands of all persons claiming by, through or under Grantor, but against none other.

IN WITNESS WHEREOF, the Grantor has hereunto set Grantor's hand, as of December 21, 2021.

Grantor: W&B Horton Family Limited Partnership

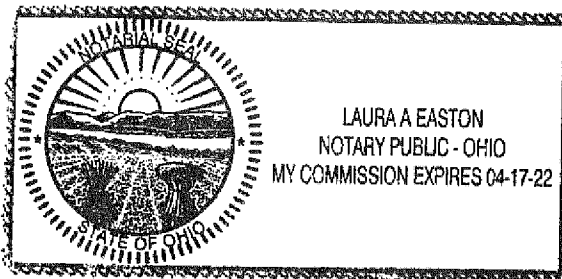
By: Beverly Horton

County of Cuyahoga         )  
  ) SS.  
State of Ohio                 )

The foregoing document was acknowledged before me this 21 of December, 2021, by Beverly Horton the Agent of W&B Horton Family Limited Partnership, an Ohio limited partnership on behalf of such entity.

Laura A Easton  
Notary Public  
My commission expires 4-17-2022

This Instrument Was Prepared By:  
Christopher E. Soukup, Esq.  
Ziegler Metzger LLP  
1111 Superior Avenue, Suite 1000  
Cleveland, Ohio 44114  
216.781.5470  
fax: 216.781.0714  
[ces@zieglermetzger.com](mailto:ces@zieglermetzger.com)



**Exhibit "A"**  
**Property Description**

PERMANENT PARCEL NO. 57-101650

Situated in the Township of Southington, County of Trumbull and State of Ohio:  
And known as being part of Sections 14 and 23 in the original survey of said township and is more fully bounded and described as follows:

Beginning at a point in the original centerline of Warren-Burton Road at its intersection with the centerline of Phalanx Mills- Herner Road, said centerline being also the west line of Section 23.

Thence S. 43° 15' 50" E., along the original centerline of Warren-Burton Road, 407.40 feet to a point which is the true point of beginning of the parcel herein described, said point being S. 5° 00' 10" W., 178.22 feet from an iron pin in the north line of the road;

Thence N. 5° 00' 10" E. 794.17 feet to an iron pin in the South line of lands now or formerly owned by Frank Piecuch;

Thence S. 85° 25' 40" E., along Piecuch's south line 1347.68 feet to an iron pin at an angle in Piecuch's line;

Thence S. 4° 55' W., along Piecuch's west line 504.00 feet to an iron pin in the line between Sections 14 and 23 and at the north west corner of lands now or formerly owned by Bernard Fleck;

Thence S. 4° 52' W., along Fleck's west line 1516.63 feet to a point in the original centerline of Warren-Burton Road, said point being S. 4° 52' W., 180.50 feet from an iron pin in the north line of the road;

Thence N, 42° 35' 50" W., along the original centerline of Warren-Burton Road, 413.05 feet to a point of curve in said centerline said point being S. 47° 24' 10" W., 133.00 feet from a monument in the north line of the road;

Thence northwesterly continuing along the centerline of the road, on a curve to the left having a radius of 42,880.06 feet and a chord bearing N. 42° 55' 50" W., 498.96 feet, an arc distance of 498.96 feet to a point, said point being S. 46° 44' 10" E., 133.00 feet from a monument in the north line of the road;

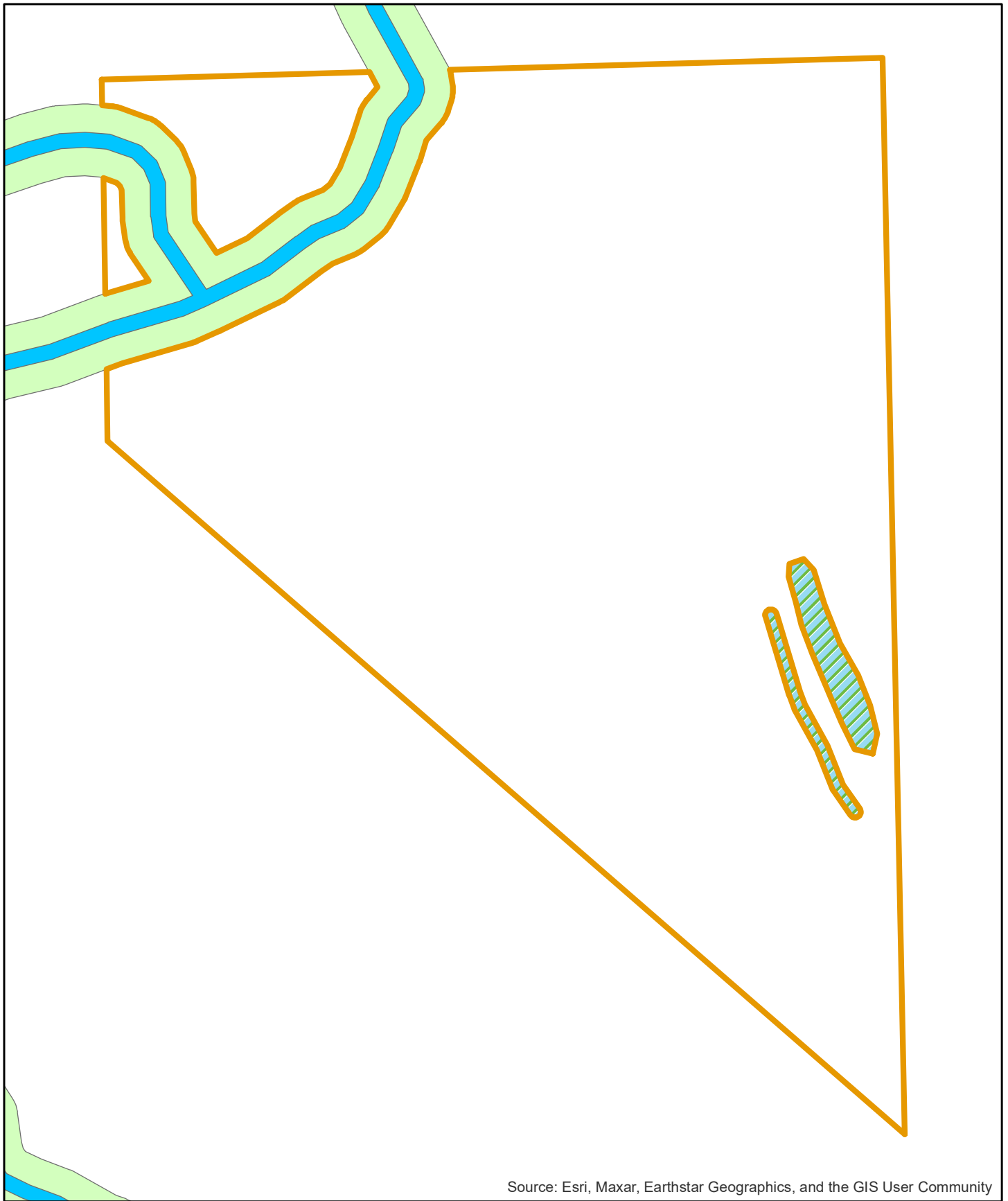
Thence N. 43° 15' 50" W., along the centerline of the road, 906.63 feet to the point of



beginning,

Containing within said bound 43.467 acres as survey by Kenneth A. Lynn & Associates,  
Registered Surveyors, October 1969, be the same more or less, but subject to all legal highways.

Project Area Map




Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



## Southington Forest Preserve Project Area

0 0.035 0.07  
Miles

-  Project Area Boundary
-  Streams
-  Riparian Setbacks
-  Wetlands



# Regional Area Map




Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



# Southington Forest Preserve Regional Area

0 2 4  
Miles

 location\_star

 Eastgate Regional Council of Governments



## Preservation Commitment

202404030005319

Page: 1 of 5 RF SIMPLIF

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Trumbull County Recorder Tod Latell

## DECLARATION OF DEVELOPMENT RESTRICTIONS

Declarant: West Creek Conservancy

Beneficiary: City Forest Credits  
PO Box 20396 Seattle, WA 98102

Legal Description: ATTACHED AS EXHIBIT A

AND DEPICTED ON EXHIBIT B ATTACHED HERETO (“Property”)

Assessor’s Tax Parcel Identification No(s): 57-101650

Reference No. of Related Documents: PRIOR DEED REF.: 202112280029800

THIS DECLARATION OF DEVELOPMENT RESTRICTIONS (“**Declaration**”) is made as of March 29, 2024 by West Creek Conservancy, an Ohio nonprofit corporation, (“**Declarant**”), for the purpose of clarifying the development restrictions on the Property.

### RECITALS

A. Declarant is the owner of the Property.

B. Declarant recognizes the value of the Property’s mature forest as a climate asset. The trees on the Property store CO<sub>2</sub>, reduce storm water runoff, improve air quality, provide energy savings from cooling and heating effects, and improve human health by providing cleaner air and a place for recreation, exercise and the public health benefits of exposure to nature. Clearing of the trees for other uses, such as parking lots, playfields or other uses would seriously impair the climate value of the Property.

C. Declarant intends to enroll the Property with City Forest Credits to develop a forest carbon program, whereby the Declarant will preserve forested stands and earn carbon credits for those preserved trees. City Forest Credits, a non-profit carbon registry, has developed carbon protocols and issues.

D. Credits for qualifying tree-preservation and tree-planting projects in and around urban areas.

E. Declarant intends by this Declaration to preserve the trees on the Property for a period of no less than 40 years (“**Term**”). It understands that this Declaration will bar the clearing or removing of trees for parking lots, picnic shelters, playfields, visitor centers, or any reason other than forest health, hazard, disease, fire, and small, non-motorized recreational trails.

## DECLARATION

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

1. Removal of Trees. Declarant shall not cut down, destroy, or remove trees located on the Property, except as necessary to control or prevent hazard, disease or fire or to improve forest health, Recreational non-motor-use trails have negligible or de minimis impacts on biomass and carbon stock and are permissible.

2. Run with land. The covenants and restrictions declared, granted, conveyed and established under this Declaration shall run with the land and inure to the benefit of, and be binding upon, Declarant and Declarant’s successors and assigns, and all future owners of the Property during the Term.

3. Term and modification. The covenants and restrictions declared, granted, conveyed and established under this Declaration shall remain in effect as long during the Term as it is needed to satisfy the requirements of any applicable carbon protocol under which carbon credits may be issued for the carbon preserved in the trees on the Property.

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

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

6. Enforcement.

a. City Forest Credits, the permitting authority in the locality where the Property is located, and members of the general public are express third party beneficiaries of this



Declaration (individually, a “Beneficiary”, and collectively, the “Beneficiaries”), and shall have the power and right but not the obligation to enforce the terms and conditions of this Declaration by any applicable legal or equitable remedies, including, without limitation, injunctive relief and specific performance. All remedies available under this Declaration shall be in addition to any and all remedies at law or in equity. Enforcement of the terms of this Declaration shall be at the discretion of the Beneficiaries, and any forbearance, delay or omission to exercise its rights under this Declaration in the event of a breach of any term of this Declaration is not a waiver by any Beneficiary of such term or of any subsequent breach of such term, or any other term in this Declarant, or of any rights of any Beneficiary under this Declaration.

b. In addition, City Forest Credits shall have the right to assign the rights described in this Section 6 to any other person or entity with an interest in preserving the trees on the Property and such party shall be deemed a Beneficiary for the purposes set forth above.

c. Declarant shall be responsible for all costs associated with implementation of this Declaration. Further, Declarant shall be obligated to pay for the Beneficiaries’ or such other enforcing party’s costs to process a request for any modification or termination of this Declaration and any approval required by this Declaration.

Declarant: West Creek Conservancy

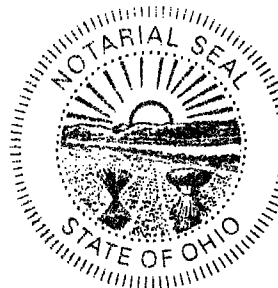
By: [Signature]  
Derek Schafer, Executive Director

STATE OF OHIO )  
 ) SS.  
COUNTY OF CUYAHOGA )

The foregoing instrument was acknowledged before me this 29 day of March, 2024, by Derek Schafer, Executive Director of West Creek Conservancy, an Ohio nonprofit corporation, on behalf of the corporation.

[Signature]  
Notary Public  
My Commission Expires 04-13-2027

This instrument prepared by:  
Christopher E. Soukup, Esq.  
Soukup Law, LLC  
[ces@soukup-law.com](mailto:ces@soukup-law.com)  
216.533.9085



JACOB R. SMILEY  
NOTARY PUBLIC  
STATE OF OHIO  
Comm. Expires  
04-13-2027  
Recorded in  
Cuyahoga County

## LEGAL DESCRIPTION OF PROPERTY

PERMANENT PARCEL NO. 57-101650

Situated in the Township of Southington, County of Trumbull and State of Ohio:

And known as being part of Sections 14 and 23 in the original survey of said township and is more fully bounded and described as follows:

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Thence S. 4° 55' W., along Piecuch's west line 504.00 feet to an iron pin in the line between Sections 14 and 23 and at the north west corner of lands now or formerly owned by Bernard Fleck;

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Thence northwesterly continuing along the centerline of the road, on a curve to the left having a radius of 42,880.06 feet and a chord bearing N. 42° 55' 50" W., 498.96 feet, an arc distance of 498.96 feet to a point, said point being S. 46° 44' 10" E., 133.00 feet from a monument in the north line of the road;

Thence N. 43° 15' 50" W., along the centerline of the road, 906.63 feet to the point of beginning,

Containing within said bound 43.467 acres as survey by Kenneth A. Lynn & Associates, Registered Surveyors, October 1969, be the same more or less, but subject to all legal highways.

EXHIBIT A

DEPICTION OF PROPERTY

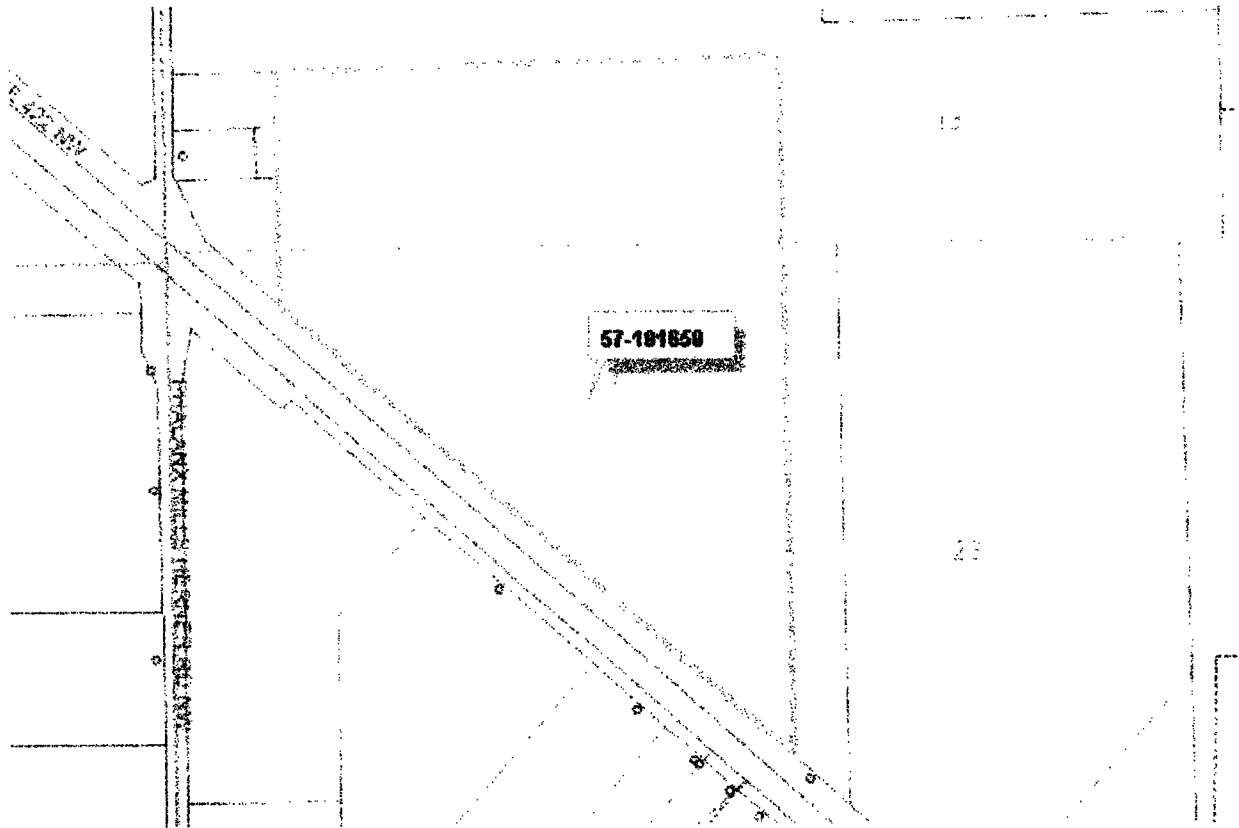
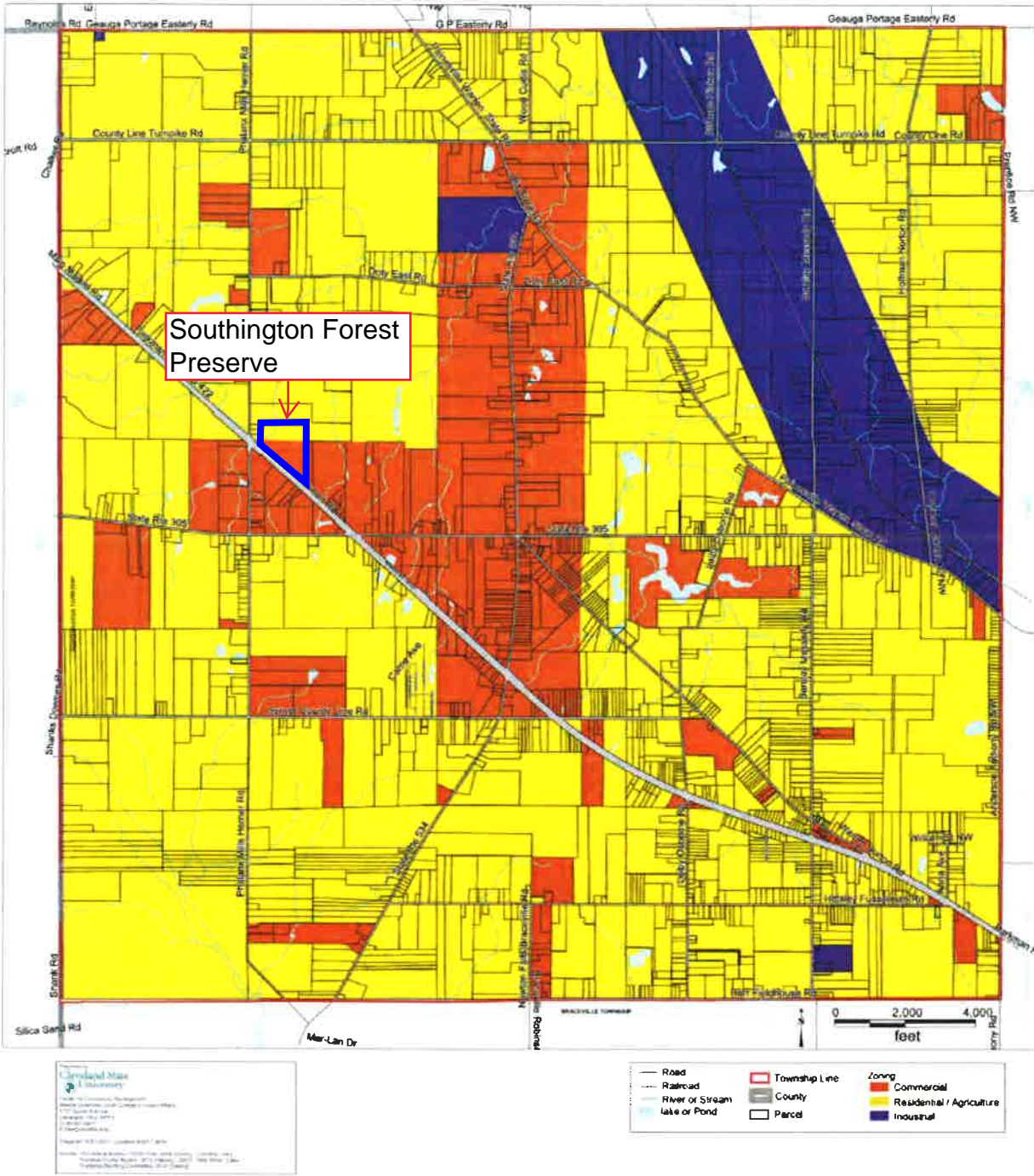


EXHIBIT B

WCC.Horton.Declar.Restrict.03.19.24

# Zoning Maps

## Southington Township Comprehensive Plan - Vision 2060 Map 2 Existing Zoning Districts



## Zoning Description(s)

### **TOWNSHIP ZONING COMMISSION**

The Board of Southington Township Trustees shall create and establish a Township Zoning Commission. The Commission shall be composed of five members who reside in the unincorporated area of the township, to be appointed by the board, and terms of the members shall be of such length and so arranged that the term of one member shall expire each year. Where there is a county or regional planning commission, the board may appoint qualified members of such commission to serve on the township zoning commission. Each member shall serve until his successor is appointed and qualified. Members of the zoning commission may be removed for nonperformance of duty, misconduct in office, or other cause by the board, upon written charges being filed with the board, and after a copy of the charges has been served upon the member so charged, at least ten days prior to the hearing, either personally, by registered mail, or by leaving such copy at his usual place of residence. The member shall be given an opportunity to be heard and answer such charges. Vacancies shall be filled by the board of trustees and shall be for the unexpired term.

Neither the Southington Township Zoning Inspector nor any Assistant Zoning Inspector, nor Clerk shall, during the term of his or her office, be employed or engaged directly or indirectly, in any building construction for others or for furnishing materials, plans, specifications or equipment for others. Nor shall any duly licensed Real Estate Broker or Salesman be appointed as the Township Zoning Inspector, Assistant Zoning Inspector or Clerk.

### **ZONING RESOLUTION**

A Resolution providing for the zoning of the Southington Township by regulating the location, size, and use of buildings and structures, the area and dimensions of lots and yards, and the use of lands, and for such purposes dividing the township into zones and districts of such number, size and shapes as are deemed best suited to carry out said purposes and providing a method of administration and enforcement of this resolution.

WHEREAS, the Board of Trustees of Southington Township deems it in the interest of the public health, safety, morals, comfort, and general welfare of said township and its residents, to establish a general Zoning plan for the area of Southington Township.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Southington Township:

#### **Section 1: Purpose**

For the purpose of promoting health, safety, morals, comfort, and general welfare; to conserve and protect property and property values; to secure the most appropriate use of land; and to

facilitate adequate, but economical provisions of public improvements, all in accordance with a comprehensive plan, the Board of Trustees of Southington Township find it necessary and advisable to regulate the location and size of buildings and other structures, including tents, cabins, and mobile homes, percentage of lot areas which may be occupied, set back building lines, size of yards, courts and other open spaces, the uses of buildings and other structures, including tents, cabins, and mobile homes, and the uses of land for commerce, industry, residence, recreation or other purposes divides the area of the township into districts or zones.

## **Section 2: Districts**

For the purposes of carrying out the provisions of this resolution, the area of the township is hereby divided into the following districts:

### **R Residential.**

RA Residential apartments.

MH Mobile Home Park.

### **B Business and commercial.**

I Industrial and manufacturing.

P.U.D. Planned Unit Development

The location and boundaries of the districts shall be shown on the map entitled Southington Township Zoning map. A certified copy of this map is on file in the office of the Board of Southington Township Trustees and said map and all notations, dimensions, and designations shown thereon are hereby declared to be a part of this Resolution and Ordinance. Also, adoption of Township Maps to identify whole and partial parcels in Zoning Districts are available to be viewed by contacting the Zoning Inspector.

## **SOUTHINGTON TOWNSHIP INDUSTRIAL ZONE**

Consisting of two parcels of land along Baltimore and Ohio Railroad extending from the Southington – Champion Township line on the east to the Southington – Farmington Township line on the north and being bounded on the south by State Route 305 and County Highway 306 and on the west by a line drawn parallel and 2,000 feet westerly from the B&O Railroad and on the north and east by a line drawn parallel and 2,000 feet northerly and easterly from the B&O Railroad.

## **Section 3: Agriculture**

1. Agriculture includes farming; ranching; aquaculture; horticulture; viticulture; animal husbandry including but not limited to the care and raising of livestock, equine, and fur bearing animals; poultry husbandry and the production of poultry products; dairy production; the production of field crops, tobacco, fruits, vegetables, nursery stock, ornamental shrubs, ornamental trees, flowers, sod or mushrooms; timber, pasturage; any combination of the foregoing; and the processing, drying, storage and marketing of agricultural products when those activities are conducted in conjunction with but are secondary to such husbandry or production.
2. Land in any district may be used for agriculture purposes when located on lots greater than five (5) acres. However, a zoning certificate with a Declaration of Agriculture Use Exemption must be obtained prior to the location, construction or erection of any structure or building. If it is determined by the Zoning Inspector that the use of the structure is for agricultural use, no fee will be charged for the zoning certificate. Any change of use of the structure or building to a non-agricultural use,



after the issuance of the original zoning certificate with Declaration of Agriculture Use Exemption, will require the applicant to reapply for a new zoning certificate to insure that the structure or building is in compliance with the zoning requirements of the district.

3. Pursuant to R.C. 519.21 agricultural use and buildings or structures incident to the use of land for agricultural purposes on lands as specified in R.C. 519.21 and amendments thereto, consisting of platted subdivisions and fifteen (15) or more contiguous lots, are subject to the following:
  - a. On lots of one (1) acre or less, agriculture is a conditionally permitted use in residential districts and subject to the requirements of residential districts. Additional setback requirements may be imposed by the Board of Zoning Appeals, when considering the application, to insure that any agricultural use does not interfere with the adjoining property owners.
  - b. On lots greater than one (1) acre but less than five (5) acres, agricultural use is permitted. However, all buildings or structures incidental to the use of land for agricultural purposes:
    - i. Must comply with the required building setback lines, height and size regulations for any accessory building applicable to the district in which the use is located: and
    - ii. Must be located at least one hundred (100) feet from any building used for human habitation, other than the residence of the property owner on which the agriculture use is located, if the building and structures incidental to the use of land for agricultural purposes is used to confine or house animals: and
    - iii. Must be issued a zoning certificate by the zoning inspector.
4. Notwithstanding any of the sections stated above, the keeping and raising of horses, dog kennels, dairying, animal and poultry husbandry, other than the keeping and raising of household pets, is prohibited in any residential district in platted subdivisions and the lots as designed in R.C. 519.21 and amendments thereto, when at least thirty-five (35) percent of the lots are developed with at least one building, structure or improvement that is subject to real property taxation or that is subject to the tax on manufactured and mobile homes under R.C. 4503.06

#### **Section 4 Classifications of Uses**

##### **R District Residential**

The following uses and no other shall be deemed class R uses and permitted in all R districts.

- A. Single and two family dwellings for residence purposes and buildings accessory thereto, but excluding tents, cabins, mobile homes, and camping trailers.
- B. The taking of boarders or leasing of rooms by a resident family provided the total number of boarders or roomers does not exceed two, in addition to the members of the family, in a dwelling containing one bathroom and a maximum of four boarders or roomers for each additional bathroom in the dwelling. A maximum of four boarders shall be permitted in any dwelling.

- C. Church, Schools, colleges, universities, public library, public museum, community center, fire station, township hall, publicly owned park, publicly owned playground, Y.M.C.A., Y.W.C.A.
- D. Any person may maintain an office or may carry on a customary home occupation in the dwelling house used by him as his private residence providing such does not involve any extension or modification of said dwelling which will alter its appearance as a dwelling and providing such use does not involve any outward evidence of such use except not more than one sign as authorized in other sections of this resolution.

Home Occupation: an occupation conducted in a dwelling unit or small garage provided that:

- a. No more than 2 persons other than members of the family residing on the premises shall be engaged in such occupation conducted entirely in the dwelling unit, or garages containing 600 square feet or less.
  - b. The use of the dwelling unit of the home occupation shall be clearly incidental and subordinate to its use for residential purposes by its occupants, and not more than 25% of the total floor area of the dwelling unit shall be used in the conduct of the home occupation.
  - c. There shall be no change in the outside appearance of the building or premises or other visible evidence of conduct of such home occupation other than one sign as permitted elsewhere in this resolution.
  - d. Sufficient off-street parking shall be provided based on the type of home occupation and such occupation shall not create traffic, parking, sewage, or water use in excess of what is normal in a residential neighborhood.
  - e. No equipment or process shall be used in such occupation which creates noise, vibration, glare, fumes, odors, or electrical interference detectable to the normal senses off the lot, if the occupation is conducted in a single family residence, or outside the dwelling unit if conducted in other than a single family residence.
- E. Garage sales are limited to two sales per year, each not exceeding more than 10 days. No permit is required.

The above uses shall conform to the following regulations.

1. All residences must have a continuous permanent foundation, and meet the minimum standards of Trumbull County Building Department.
2. All single family dwellings shall have a space designed and used for living quarters exclusive of basements, porches, garages and breezeways, of at least the following minimum square footage.
  - a. Single story houses must be a minimum of 1200 square feet.
  - b. One and one half-story houses and two story houses must have a minimum 800 square feet on the first floor and a total 1200 square feet.
  - c. Split level houses must have minimum combined living space of the upper two levels totaling 1200 square feet.

3. No duplex dwelling shall have floor space designed and used for living quarters of less than eight hundred (800) square feet per family unit; exclusive of basements, porches, garages and breezeways.
4. Hospital, sanitarium, or rest home, providing that any such hospital, sanitarium or rest home shall have a lot area of not less than five (5) acres and a frontage on a public thoroughfare of not less than five hundred (500) feet and providing that any such hospital, sanitarium, or rest home caring for contagious disease or mental cases also shall have a lot area of not less than one (1) acre per bed additional to the other requirements set forth herein. Set back of the building shall be two hundred (200) feet and adequate parking in the rear. A minimum side lot clearance on each side of said building of not less than 50% of the distance constituting the frontage of the structure.
5. Roadside stands consisting of structures used for the display and sale of agricultural products provided:
  - a. Such stands are not in the road right-of-way.
  - b. Such stands are at least twenty (20) feet back from the traveled portion of the road.
  - c. Adequate facilities are maintained for off the road parking of customer's vehicles.
  - d. More than 50% of the products sold at such roadside stands are agricultural products raised on the premises.
  - e. That such roadside stands be so designed and constructed that it can be removed when not in use, and the same shall be removed from the roadside when not in use for a period of thirty (30) days, or more.
6. A fence or a wall shall be considered a structure (as defined) in this resolution and shall not exceed a height of more than four (4) feet from ground level in the area between the minimum setback building lines and the right-of-way side line from a road or street. In the case of a corner lot, this provision also applies to the line from a road or street. No fences, walls or shrubbery, shall be maintained near a street or intersection so as to interfere with traffic visibility, around a corner.
7. Outdoor residential swimming pools.
  - a. For the purpose of this zoning resolution, an outdoor residential swimming pool is a structure, as defined in the definitions of this zoning resolution; and is here in after referred to as, "pool".
  - b. A zoning permit shall be required for all types of pools that are three hundred (300) square feet or more in area with a depth at any point of two (2) feet or more.
  - c. All types of pools shall be constructed to meet the dimensional requirements of any section of this zoning resolution, and a plot plan showing the size of the pool and its location on the premises shall be submitted upon application for zoning permit. Pool area and location measurements are to be taken from the inside edge of the pool structure.
  - d. All pools of the below ground level type shall be completely enclosed by a fence erected around the periphery of the pool.

The fence shall be at least five (5) feet high and all points of entry shall be equipped with gates of the same height. All gates shall be equipped with self-closing or self-latching devices placed at the top of the gates and made inaccessible to small children. Pools of the above ground level type need not be enclosed by a fence;

however, they must have some type of folding gate, steps, or platform, which makes the pool inaccessible to small children.

- e. The use of a pool prior to the installation of the protective fencing and equipment required therein IS HEREBY PROHIBITED. Use includes the act of filling the pool for any reason.
- 8. No outside privies shall be permitted.
- 9. Rubbish shall not be permitted to accumulate on the premises.
- 10. All residents shall display in a prominent location, so as to be seen from the highway, a house number assigned by the Southington Township Zoning Inspector. All new or replacement numbers shall be reflective.

The above uses shall be permitted only providing such is not noxious, dangerous, or offensive by reason of emission of odor, dust, smoke, gas fumes, noise, flame, or vibration, and adequate facilities for the storage of refuse, waste, junk, objects to be repaired and disposed of are provided and the same are screened from view.

#### **RA District Residential Apartment**

The following uses, and no other, shall be deemed class RA uses and permitted in all "RA" districts.

- A. Any use permitted in an R district shall be permitted in a RA district.
- B. Apartment houses and multiple dwellings of all types.

The above uses shall conform to the following regulations.

1. A zoning permit, issued by the zoning inspector, shall be secured for the land use of each separate apartment building. As a prerequisite to the issuance of a zoning permit, the owner or his representative must submit a plot plan to the zoning inspector, which plot plan shall indicate the final location of each apartment building as surveyed. The plot shall be designed to clearly indicate the owner's compliance with height and bulk requirements set forth below.
2. The minimum requirement of 800 square feet per family unit, with two (2) parking spots of at least two hundred (200) square feet for each apartment and sufficient parking for visitors.
3. Rear yard. There shall be a minimum rear yard of not less than forty (40) feet in depth on every lot. For every building more than twenty (20) feet in height, the rear shall be increased in depth one (1) foot for each one (1) foot of height of the building over twenty (20) feet from the established grade level.
4. Side yard. There shall be a side yard on each side of every main building. The minimum width of each side yard shall be thirty (30) feet. If any building exceeded twenty (20) feet in height, the width of each side yard shall be increased by one (1) foot for each one (1) foot of height of the building over twenty (20) feet from the established grade level.

5. In order to satisfy the minimum requirements of square footage per family, each apartment building, must be constructed on a separate lot as defined in this resolution, whose dimensions satisfy the square footage minimum requirements and allowing for height and bulk requirements.
6. As a further condition of the issuance of a zoning permit for the land use of apartment buildings, the zoning inspector shall require the owner or his representative to file a proposed plot plan with Trumbull County Recorder in accordance with the procedure established by law for the recording of plot plans.
7. Upon discovery of any variation from the plot plan submitted, the Zoning Inspector shall commence a lawsuit in the appropriate court to enjoin the land use, which is in violation of these requirements.
8. The owner or his representative, as evidence of his good faith, shall notify the Zoning Inspector when construction commences on each building after the issuance of a zoning permit.
9. A fence or a wall shall be considered a structure as defined in this resolution and shall not exceed a height of more than four (4) feet from ground level in the area between the set back building line and the right-of-way side line for a road or street. In the case of a corner lot, this provision also applies to the line for a road or street, no fence, wall or shrubbery shall be maintained near a street or intersection so as to interfere with traffic visibility around a corner.
10. Outdoor residential swimming pools. The location and construction of pools in an RA district shall be governed by the same regulations set forth under paragraph 7 of R districts.

Other buildings constructed in RA districts shall be subject to the rest of the provisions of the Southington Township Zoning Resolution, including minimum lot widths, composition of buildings, minimum floor space, minimum lot area per family, setback building lines, corner lots, rear houses, parking facilities, zoning permits, zoning amendments, definitions, validity and in Board of Appeals action.

#### **MH District Mobile Home Parks**

The following uses and no other shall be deemed MH district uses and shall be permitted in all MH districts:

- A. All uses permitted in R and RA districts subject to regulations applicable thereto.
- B. Mobile Home Parks and accessory uses.

The above uses shall conform to the following regulations.

1. No Mobile Home Park classification shall be granted for a tract of land having a total area of less than twenty (20) acres.
2. The maximum number of Mobile Homes permitted on a tract of land classified as a MH district Mobile Home Parks shall be six (6) units per acre, exclusive of land area required and used for streets, walks, recreation, common parking and sales displays, resident management, etc.

3. A minimum of eight percent of the total area of the Mobile Home Park shall be reserved for recreation area for the use of the residents within the park, and generally provided in a central location. No recreation area shall contain less than five thousand (5000) square feet of area with practical dimensions.
4. No Mobile Home lot shall be less than six thousand (6000) square feet in area; and no mobile home shall be placed on such a lot until and appropriate concrete pad is constructed. Tie-downs shall be able to sustain a minimum load of forty eight hundred (4800) pounds.
5. Each mobile home lot shall have a minimum width at the set back line of forty (40) feet.
6. Set back building lines shall be at least ten (10) feet from any street right-of-way. In the case of a corner lot, a minimum of at least ten (10) feet from any street right-of-way.
7. No mobile home or accessory building thereto, shall be placed closer than five (5) feet to any side lot and there shall be a minimum distance of ten (10) feet between mobile homes.
8. No mobile home or accessory building thereto, shall be placed closer than five (5) feet to any rear lot line.
9. No mobile home shall be permitted in the mobile home park if it has less than five hundred (500) square feet of living area.
10. At least one (1) paved access way of not less than thirty six (36) feet in width shall be provided as a means of ingress and egress to the mobile home park from a public thoroughfare.
11. All mobile homes shall be located at least fifty (50) feet from any public road or street right-of-way, and at least fifteen (15) feet from all other mobile home park boundary lines. A mobile home park located adjacent to industrial or commercial land uses shall provide screening such as fences or natural growth along the mobile home park boundary line.
12. All streets within the mobile home park shall be paved and shall be at least twenty four (24) feet in width.
13. No parking shall be permitted on road and streets within the mobile home park.
14. Parking for visitors and residents shall be provided at various convenient locations throughout the mobile home park. A minimum of two (2) parking spaces is required for each mobile home unit. All spaces are to be nine (9) feet wide and twenty (20) feet long.
15. The following accessory uses and buildings shall be permitted within the mobile home park.

- a. A permanent dwelling for one (1) family, office and maintenance facilities for management of the mobile home park.
  - b. Mobile homes offered for sale by the operator of the mobile home park; provided no more than three (3) mobile homes are displayed, in a designated sales display area.
  - c. Recreation facilities for the residents of the mobile home park as provided in item b, paragraph 3 above.
16. Each mobile home park shall provide an adequate, safe and potable supply of water for each mobile home, which has been approved by local health authorities. The water supply system shall be capable of providing a minimum of one hundred fifty (150) gallons per day to each mobile home.
  17. A common walk system shall be provided and maintained by the mobile park owner between locations where pedestrian traffic is concentrated. Such common walks shall be paved and have a minimum width of three and one half (3-1/2) feet.
  18. An adequate and safe sewage system shall be provided in all mobile home parks for the conveying and disposing of all sewage, and shall be constructed and maintained under the supervision of local health and sanitation authorities, subject to county or state regulations.
  19. An adequate method of handling surface and storm water shall be provided in all mobile home parks so as to reasonably eliminate the possibility of flooding, subject to county or state regulations.
  20. The collection, storage and disposal of refuse, in the mobile home park shall be conducted in such a manner as to prevent health hazards, rodent harborage, insect breeding area, accident or fire hazards, or air pollution, and shall be maintained under the supervision of local health and sanitation authorities, subject to county or state regulations.
- C. The person, corporation, partnership or other legal entity, and their heirs, devisees, successors, or assigns, to whom a zoning permit has been issued under this use classification, shall provide adequate supervision to maintain the mobile home park, its grounds, facilities and equipment in good repair and in a clean and sanitary condition. They shall notify all residents in writing of the regulations set forth in this ordinance together with their duties and responsibilities hereunder.
  - D. The enlargement of any mobile home park, which was in existence as a nonconforming use at the time of the enactment of this supplement to the Southington Township Zoning Resolution, shall be subject to the provisions of this use classification wherever applicable.
  - E. No person, corporation, partnership or other legal entity shall begin construction on, or alteration of, a tract of land classified as MH DISTRICT unless a valid zoning permit has been issued by the Southington Township Zoning Inspector. A zoning permit application must contain the following information:
    1. Name and address of owner, and legal capacity of person filing the application.

2. Location and legal description of the proposed Mobile Home Park, or enlargement or alteration of existing park.
3. Complete engineering plans and specifications of the proposed Mobile Home Park, alteration or enlargement, indicating the following:
  - (a) The area and dimensions of the tract of land.
  - (b) The number, location and size of all mobile home lots.
  - (c) The location and width of streets and walkways.
  - (d) The location and dimensions of recreation area, public parking areas, the resident management area, and the sales display area.
  - (e) Working drawings showing the location of sanitary and surface water sewer lines, water supply lines and risers.
  - (f) The plans and specifications of all buildings to be constructed within the mobile home park.
  - (g) The location and details of lighting and electrical systems.
  - (h) The names of all streets within the park and the proposed method, if any, of numbering of the mobile home lots on such streets for location in case of fire or other emergency.
- F. Transfer of ownership of an individual mobile home lot from a tract of land zoned as MH DISTRICT (Mobile Home Park) shall cause the zoning use classification of the transferred lot to revert to R DISTRICT (Residential), and there after, the transferred lot shall be subject to all regulations of this Ordinance pertaining to R DISTRICT residential use. The existence of a mobile home, mobile home pad, or other facility designed to serve a mobile home, on such a transferred lot, shall not constitute a nonconforming use for the intent and purpose of this paragraph.

**B District (Business and Commercial)**

The following uses and no other shall be deemed class B uses and permitted in all B districts.

1. Any use permitted in an R district or RA district shall be permitted in a B district.
2. Apartment house, rooming house, hotel, living quarters over a business establishment, restaurants, lunch rooms, garage, tavern, or motel.
3. Retail stores or shop, repair shop, beauty shop or beauty parlor, barbershop, funeral home, office or office building, mercantile establishment, or studio.
4. Dairy plant, dairy store or roadside stand.



5. Lodge hall.
6. Gasoline filling and service station providing storage tanks are underground and covered with earth and conform to State code.
7. Indoor theater, bowling alley, dance hall, and roller rink.
8. Job printing, newspaper printing plants.
9. Builders supply, plumbing and heating supply.
10. All buildings designated or contemplated for commercial or industrial uses must be constructed in accordance with the State Building Code covering these types of construction.

All buildings in commercial districts must conform to a setback line of fifty (50) feet minimum to permit for future street widening.

Commercial building to be completed in two (2) years.

The above uses shall be permitted only providing such is not noxious, dangerous or offensive by reason of emission of odor, dust, smoke, gas fumes, noise, flame or vibration, and adequate facilities for the storage of refuse, waste, junk, objects to be repaired and disposed of are provided and the same are screened from view.

### **I District Industrial and Manufacturing**

The following uses and no other shall be deemed class (I) uses and permitted in all (I) District:

- A. Any use permitted in an (R) District, and (RA) District or a (B) District shall be permitted in an (I) District.
- B. All new industry, manufacturing plants or new expansions must have a building setback of fifty (50) feet minimum from any street, and conform to the State Building Code.
- C. Any normal industrial or manufacturing use, providing such use is not noxious, dangerous or offensive by reason of emitting odor, dust, smoke, gas, noise, fumes, flame or vibration, except uses specifically prohibited in these resolutions.

The following uses are prohibited in all (I) Districts:

1. Dumping, storing, burying, reducing, disposing of, or burning garbage, refuse, scrap metal, rubbish, offal or dead animals, except such as result from normal use of premises, shall be prohibited, unless such dumping is done at a place provided by the township trustees for such specific purposes.
2. Junk yards and automobile graveyards.
3. Places for the collection of scrap metal, paper, rags glass, rubber, used construction materials or equipment and any other used or salvaged material shall be permitted only in (I) Districts, providing, however, and located upon the same property occupied by the plant using said items. That further they shall be properly concealed from public view

securely fenced for public safety and located a minimum distance of two hundred (200) feet from any road right-of-way.

3. Business and industries which are a public nuisance or undesirable shall not be permitted, such as:
  - a. Metallic powder works.
  - b. Chemical Plant.
  - c. Distilling of bones, fat, or glue, or gelatin manufacturing.
  - d. Outdoor theaters.

### **Section 5: Prohibited Uses**

The following uses shall be deemed to constitute a nuisance and shall not be permitted in any (R), (RA), (B), or (I) District:

1. Amusement park.
2. Aviation field.
3. Brewery.
4. Cellar dwellings
5. Commercial zoos or Zoological parks.
6. Dangerous pets.
7. Massage parlors, or any sauna establishment.
8. Outdoor privies.
9. Slaughter houses.
10. Sawmills on a particular site for more than 6 months.
11. Bulk petroleum station with tanks above ground; distilling or cracking plants or plants used in refining gasoline and oil products.
12. Distilling of bones, fat or glue, glue or gelatin manufacturing.
13. Manufacturing or storage of explosives, gun powder or fire works.
14. Dumping, storing, burying, reducing, disposing of or burning garbage, refuse, scrap, metal, rubbish, offal, dead animals, or any other unsightly or unsanitary materials. (This section shall not be applicable to the normal care of individual lawns or gardens or pursuits incidental to agricultural purposes.)
15. Junk yards and automobile graveyards.
16. Places for the collection or sale of scrap metal, salvaged automobile parts, paper, rags, glass, rubber, tires, used construction materials or equipment, and any other used or salvaged material shall be permitted only in (I) Districts, providing, however, and located upon the same property occupied by the plant using said items. That further they shall be properly concealed from public view securely fenced for public safety and located a minimum distance of two hundred (200) feet from any road right-of-way.
17. Trailer or mobile homes except as provided for elsewhere in these resolutions. However, under no circumstances shall the axle, tongue, or any other conveyance apparatus be removed from the mobile home nor shall the title to the trailer or mobile home vehicle be modified in any way.
18. The parking or storing of an abandoned, dismantled, wrecked, inoperable, unused and or unlicensed motor vehicle, trailer, aircraft, or piece of farm equipment, or any accumulation or combination thereof, unless parked or stored in a garage, barn, or other structure, and not exposed to public view.
19. Group homes, halfway houses, or structures for the purpose of housing persons for penal purposes, including, but not limited to drug and alcohol rehabilitation programs.

20. The spreading, disposing, placing, burying or otherwise processing or handling of human, animal, business, or industrial waste or waste products except for farm procedures using only locally produced farm waste.
21. Any business engaged in the dissemination or display of pornographic materials as defined by local community standards.
22. Any activity considered by the trustees as being offensive or a nuisance to the well being or pertaining to the safety of the community.

#### **Section 6: Nonconforming uses**

1. A nonconforming use existing at the time this resolution takes effect may be continued, except that if it is voluntarily discontinued for one (1) year or more, it shall then be deemed abandoned, and further use must be in conformity with the uses permitted in such district.
2. Any building or structure, existing as a nonconforming use at the time this resolution takes effect, which is destroyed by fire or the elements, may be reconstructed and restored providing the same is done in conformity with the zoning resolution within one (1) year from the date of destruction.
3. A building or structure devoted to a nonconforming use at the time this resolution takes effect may not be altered or enlarged so as to extend said nonconforming use more than 10% in area, and is limited to one alteration or enlargement.
4. When a nonconforming use has been changed to a more restricted use or to a conforming use, such use shall not thereafter be changed to less restricted or nonconforming use.
5. Trailer parks which are a nonconforming use hereunder, shall be treated as follows: existing trailer parks which have no existing pads and separate sanitary facilities for each trailer coach shall not permit a vacated trailer spot to be filled until such facilities are installed.
6. When a nonconforming house or trailer or mobile home use has been removed from a parcel of land or lot where it was stationed, no other house trailer or mobile home shall be permitted to be stationed upon such land or lot, unless there is a replacement and continued use of such house trailer or mobile home space upon the same land or lot by the same owner of said land and house trailer or mobile home, and then only if such new trailer or mobile home is of equal or more value than the replaced house trailer or mobile home. This section shall not apply to mobile home parks.
7. In any area where house trailers are permitted, there shall be no more than one (1) house trailer situated on any one lot. All house trailers and other movable enclosures must conform to the building setback line requirements.
8. For any renewal, reconstruction, enlargement or other change of any nonconforming use, the owner of the premises must make an application to the Township Zoning Inspector for a Zoning permit.

**Section 8: PUBLIC UTILITIES AND RAILROADS**

This resolution shall not apply to public utilities or railroads.

**Section 9: MINIMUM LOT AREA PER FAMILY**

1. No single family dwelling shall be erected or building altered to accommodate one family as a residence on less than 100' x 200' lot area unless such lot is designated on a recorded plot or separately owned at the time this resolution took effect and cannot practically be enlarged to conform with this requirement.
2. No two family or multiple dwelling shall be erected or building altered for dwelling purposes to accommodate more than one (1) family on less than 1/2 acre of lot area per family.
3. No apartment house or living quarters over a business establishment shall be erected or building altered into apartments to accommodate more than one family for each 14,000 square feet of lot area.
4. In computing the lot area, property within the road or street right-of-way may not be included, in spite of the fact that lot owner holds title to the same.
5. In all instances covered in this section wherein a septic tank is installed, county and state health codes regarding land area requirements must be met.

**Section 10: MINIMUM LOT WIDTH**

No dwelling shall be erected in any district on a lot having a width of less than one hundred (100) feet unless such lot was designated on a recorded plot or separately owned at the time this resolution took effect and cannot practically be enlarged to comply with this requirement. All lot width is defined as frontage on a dedicated road as per current zoning resolution. Minimum corner lot size shall be two hundred (200) feet by two hundred (200) feet. No minimum lot width shall be required in a "B" or "I" District for uses other than to dwellings except such as is necessary for yard and lot area or parking facilities.

**Section 11: SETBACK BUILDING LINES**

Minimum Setback Building Lines. No building, structure, or any portion thereof, except steps, fences and uncovered porches less than ten (10) feet in width shall be erected within 50 feet of the right of way of the road or street. If there is no established right-of-way for any street or road, said line shall be deemed to be thirty (30) feet from the center of the road. Property owners, whose houses set further from the road than the minimum setback line, can build structures between the minimum setback building and the building line. Structures in this area are not limited to the fence height restriction. See drawing next page.

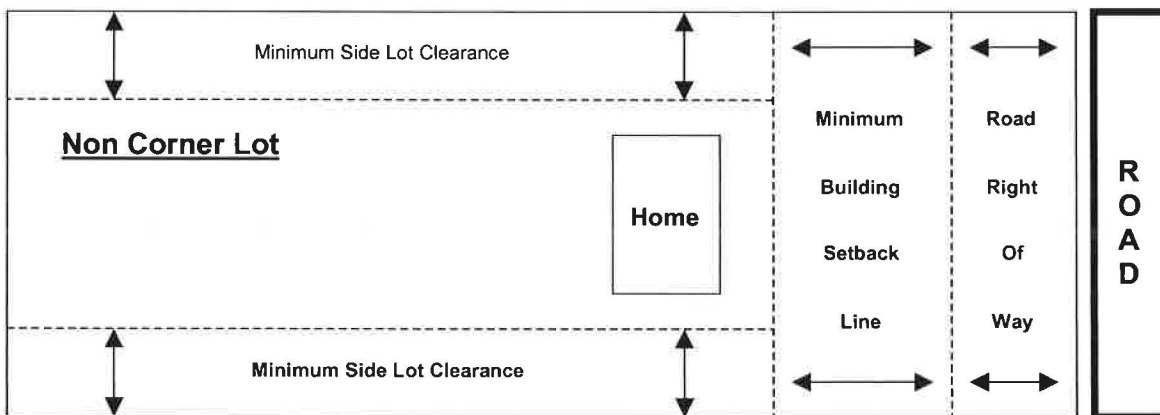
**Section 12: SIDE YARDS**

For every building erected in an "R" District or any dwelling erected in any district there shall be a minimum side lot clearance of not less than ten (10) feet, which space shall remain open

and unoccupied by any building or structure, excluding fences which must have a minimum of two (2) feet clearance for the purpose of maintenance. Attached garages or accessory buildings connected with the main building by a breezeway or other permanently constructed connection shall be construed to be a part of the main building for the purposes of this section.

Provided, however, that an accessory building located twenty (20) or more feet to the rear of the main building may be erected not less than ten (10) feet from the side lot line, except on corner lots provided it will be not less than twenty (20) feet distance from an existing residence on adjacent property. An accessory building is a subordinate building customarily incidental to and located on the same lot with main building.

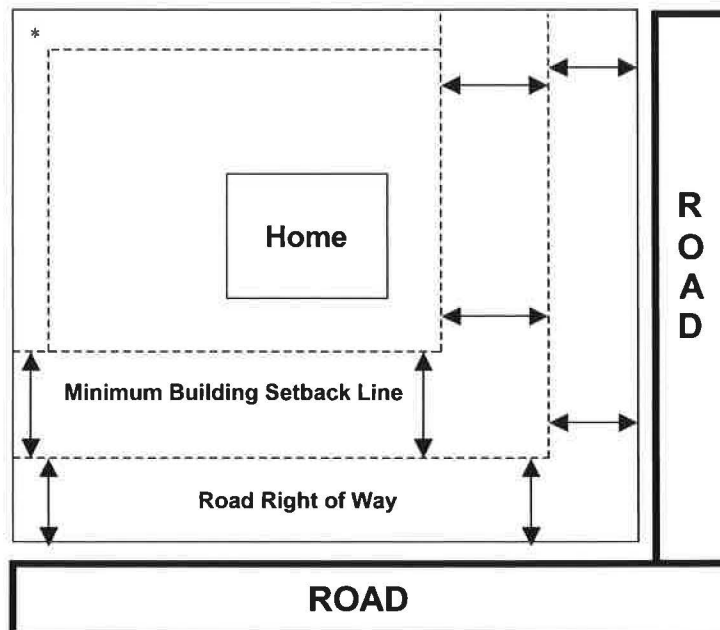
No side yard clearance shall be required for commercial or industrial building in "B" or "I" District; provided however, that such buildings abutting residential districts or residential dwellings, side yard clearance as set forth above in this section shall be applicable to such buildings. (Except any building used to house domesticated animals must be forty (40) feet from any lot line or dwelling.)



**Section 13: CORNER LOTS**

In the case of corner lots, no building, structure or any portion there of, except steps, fences and uncovered porches less than 10 feet in width, shall be created within 50 feet of the right-of-way of the main road or street, or within 50 feet of the right-of-way side of a side road or street. If there is no established right-of-way for a road or street, said line shall be deemed to be 30 feet from the center of the road.

\* = Minimum Side Lot Clearance



**Section 14: REAR YARDS**

For every building erected in an "R" District and for every dwelling erected in any district, there shall be a minimum rear lot clearance at the rear of said building of at least ten (10) feet which space shall remain open and unoccupied by any building or structure, excluding fences which must have a minimum of two (2) feet clearance for the purpose of maintenance.

**Section 15: REAR HOUSES**

No dwelling or apartment house shall be erected or altered or used if located to the rear of another dwelling on the same lot and has no immediate street frontage.

**Section 16: COMPOSITION OF BUILDING**

- A. All structures in "R", "RA", "MH", "B" and "I" Districts, except dwellings, shall be constructed in accordance with the Ohio State Building Code and/or the Trumbull County Building Codes requirements for the structure and evidence of State or County approval of plans must be submitted with the request for a Zoning Permit.
- B. A residence shall be covered with a conventional type of siding, of a good grade of material, which shall exclude an asphalt base shingle, tarpaper and rolled asphalt base imitation brick and stone siding. Finished exterior shall be of good workmanship. Chimney or flue must be constructed as to conform to the recommendations of the Underwriters Laboratory, Inc., or the National Board of Fire Underwriters for the type of heating unit or units connected to the chimney or flue.
- C. A building or structure moved upon a parcel of land in Southington Township shall be considered the same as a building originally constructed thereon, and shall meet all the requirements in this ordinance before said structure is occupied or used. Any structure 12' X 12' or larger shall require a zoning permit.
- D. No Zoning permit for structures, which require a sanitary permit from the Trumbull County Health Department, may be issued until proof is presented to the Southington Township Zoning Inspector that the applicant has obtained a sanitary permit from the Trumbull County Health Department.

**Section 17: PARKING FACILITIES**

1. Any dwelling and apartment houses shall provide parking space with means of ingress and egress thereto, for not less than two (2) motor vehicle per dwelling unit or apartment. No less than two hundred (200) square feet area shall be deemed necessary for each such vehicle.
2. All Class "B" uses shall provide parking off the road or street outside the public right-of-way and not more than three hundred (300) feet distant from an entrance to said establishment of an area of not less than two hundred (200) square feet for each one hundred (100) square feet of area of the first floor establishments which it serves.
3. Every theater, auditorium, stadium, arena, building or grounds used for the assembling of

persons to attend theatrical performances, shows, exhibitions, contests, concerts, lectures, entertainment and similar activities, shall provide off the street or road and outside of the public right-of-way not less than two hundred (200) square feet of space, suitable for parking automobiles and other vehicles, for every four (4) persons to be accommodated. Such parking space shall be within four hundred (400) feet of the main entrance to such use, shall provide adequate means of ingress and egress and shall be available for the use of such patrons.

4. All class "B" and "I" uses shall provide adequate parking spaces off the road or street and outside of the public right-of-way for vehicles delivering to, unloading or taking away for said user; goods, material, supplies, or waste in connection with said business or use.

#### **Section 18: BOARD OF ZONING APPEALS (ORC 519.14)**

The Board of Township Trustees shall appoint a Township Board of Zoning Appeals of five members who shall be residents of the unincorporated territory in the Township included in the area zoned. The terms of all members shall be of such length and so arranged that the term of one member will expire each year. Each member shall serve until his successor is appointed and qualified. Members shall be removable for the same causes and in the same manner as provided by section 519.04 of the Revised Code. Vacancies shall be filled by the Board of Township Trustees and shall be for the unexpired term.

The Board of Zoning Appeals may within the limits of the monies appropriated by the Board of Township Trustees for the purpose, employ such executives, professional, technical, and other assistants as it deems necessary.

The Township Board of Zoning Appeals may:

- A. Hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by an administrative official in the enforcement of Sections 519.02 to 519.25 of the Revised Code, or of any resolution adopted pursuant thereto:
- B. Authorize, upon appeal, in specific cases, such variance from the terms of these Zoning Resolutions as will not be contrary to the public interest, where, owing to special conditions, a literal enforcement of the resolution will result in unnecessary hardship, and so that the spirit of the Resolution shall be observed and substantial justice done.
- C. Grant Conditional Zoning Certificates for the use of land, buildings, or other structures if such certificates of specific uses are provided for in the Zoning Resolution. Since a Conditional Zoning Certificate is not one of hardship, but a convenience to the person or persons filing the appeal, a two hundred and fifty (\$250) dollar fee shall be paid upon filing. It may be in the form of cash, bank check, money order or certified check. Such Conditional Zoning Certificate will be granted for a period of time not exceed (two) 2 years.
- D. Revoke an authorized variance or Conditional Zoning Certificate, if any condition of the variance or Certificate is violated. The Board shall notify the holder of the variance or Certificate by certified mail of its intent to revoke the variance or Certificate under

Amended: July 8,  
2021

# Trumbull County Subdivision Regulations



Prepared by the:  
Trumbull County Planning Commission



## **ARTICLE 7**

### **ENVIRONMENTAL AND RESOURCE PROTECTION**

#### **700.00 FLOODPLAIN AREAS**

Review of floodplain areas falls under the jurisdiction of the Trumbull County Floodplain Administrator. The Planning Commission shall consider the recommendation of the Trumbull County Floodplain Administrator on matters pertaining to floodplains. All construction and improvements within a proposed subdivision shall comply with the provisions of the Trumbull County Floodplain Regulations on file in the Planning Commission office.

The Planning Commission may require a developer to obtain a Standard Flood Hazard Determination from the Trumbull County Floodplain Administrator, if existing conditions in a proposed subdivision suggest the likely presence of floodplain areas that may require adjustments in design.

The determination shall identify any areas where permits or other approvals of activity are required to be obtained by the developer from the Trumbull County Floodplain Administrator. Evidence of said permits or other approvals shall be provided by the developer prior to approval of improvement plans by the County Engineer.

If any portion of land in a proposed subdivision is located within the floodway or one hundred (100) year flood zone as indicated on the Federal Emergency Management Agency - Flood Insurance Rate Maps or determined by the Trumbull County Floodplain Administrator, the limits of the floodway and one hundred (100) year floodplain boundary shall be shown on the Improvement Plans and Final Plat, including permit or other approval numbers.

A proposed subdivision may be denied if access to the subdivision is periodically blocked by floodwaters.

#### **701.00 RIPARIAN BUFFER AREAS**

It is hereby determined that the system of rivers, streams and other natural watercourses within the county contribute to the health, safety and general welfare of the residents of the County. The following requirements protect these services by providing reasonable controls governing uses in riparian areas. In addition, the specific purpose and intent of this Section is to regulate uses and developments within the riparian buffer area that would impair the ability of the riparian area to:

- Reduce flood impacts by absorbing peak flows, slowing the velocity of floodwaters and regulating base flow.
- Stabilize the banks of watercourses to reduce bank erosion and the downstream transport of sediments eroded from watercourse banks.

- Reduce pollutants in watercourses by filtering, settling and transforming pollutants in runoff before they enter watercourses.
- Provide high quality watercourse habitats with shade and food.
- Provide habitat to a wide array of wildlife by maintaining diverse and connected riparian vegetation.
- Benefit the community economically by minimizing encroachment on watercourse channels and the need for costly engineered solutions such as dams, retention basins and rip rap to protect structures and reduce property damage and threats to the safety of watershed residents; and by contributing to the scenic beauty and environment of the County, and thereby preserving the character of the County, the quality of life of the residents of the County and corresponding property values.

### **701.10 Establishment of Riparian Buffer Areas**

1. The Riparian Buffer Area shall apply to all streams or surface water courses as herein defined and are indicated on one of the following maps:
  - a. Unites States Geological Survey (USGS) topographical maps.
  - b. Soils maps located in the Soil Survey for Trumbull County, Ohio.

Streams or surface water courses: Those with a well-defined bed and bank, either natural or artificial, which confines and conducts continuous or periodical flowing water in such a way that terrestrial vegetation cannot establish roots within the channel.

2. Width of the Riparian Buffer Area shall be measured in a horizontal direction outward from the ordinary high water mark on each side of the stream and shall be established as follows:
  - a. A minimum of 65 feet on either side of all streams draining an area greater than ½ square mile.
  - b. A minimum of 25 feet on either side of all watercourses draining an area less than ½ square mile with a defined bed and bank as determined by the County.
3. Where the 100-year floodplain is wider than the Riparian Buffer Area on either or both sides of the watercourse, the Riparian Buffer Area shall be extended to the outer edge of the 100-year floodplain. The 100-year floodplain shall be defined by FEMA or a site-specific floodplain delineation in conformance with standard engineering practices and approved by the County.
4. Where wetlands are identified within the Riparian Buffer Area, a 50-foot minimum buffer shall be established from the outer boundary of the wetlands and around the entire wetland area. Wetlands shall be delineated by a qualified professional under guidelines established by the U.S. Army Corps of Engineers and the Ohio Protection Agency and the delineation approved by the appropriate agencies.

5. When slopes in excess of 15 percent (being 15 foot change in elevation in a 100-foot horizontal distance) are located within the Riparian Buffer Area, the Riparian Buffer Area shall be extended an additional distance equal to one half the vertical distance of the slope located within the Riparian Buffer Area but shall not be less than 10 feet.
6. The following are exempt from the terms and provisions of this Section: grassy swales, roadside ditches, drainage ditches created at the time of a subdivision to convey stormwater to another system, tile drainage systems and stream culverts.

### **701.20 Conditions**

The following conditions shall apply to the Riparian Buffer Area:

1. It is encouraged to preserve the Riparian Buffer Area in its natural state. Modifications to the vegetation and trees in the Riparian Buffer Area may be permitted for the purpose of landscaping that will increase the aesthetic value of the subdivision. Any modifications shall require approval via preliminary plan approval as outlined in Article 3.
2. The developer, applicant or designated representative shall be responsible for delineating the Riparian Buffer Area, including any expansions or modifications as required by this Section, and identifying this area on all subdivision, land development plans, and/or building permit applications submitted to the County. This delineation shall be done through a metes and bounds survey and shall be subject to review and approval by the County. As the result of this review, the County may require further studies from the developer, applicant or designated representative.
3. Prior to land clearing, grading or grubbing, the Riparian Buffer Area shall be delineated by the landowner on the construction site by silt fences, snow fences, or other similar device as approved by the County, and such delineation shall be maintained throughout construction.
4. Upon completion of an approved subdivision, land development or other improvement, the Riparian Buffer Area shall be permanently recorded on the plat records for the County.

### **702.00 WETLAND AREAS**

Review of Wetlands falls under the jurisdiction of the applicable District (Buffalo, New York, or Pittsburgh, Pennsylvania) of the U.S. Army Corps of Engineers and/or the Ohio Environmental Protection Agency. The Planning Commission shall consider the recommendation of the U.S. Army Corps of Engineers and/or the Ohio Environmental Protection Agency on matters pertaining to wetlands.

The Planning Commission may require a developer to submit a wetland study for a proposed subdivision where, as determined by the U.S. Army Corps of Engineers and/or the Ohio Environmental Protection Agency, existing conditions in a proposed subdivision suggest the likely presence of wetlands that may require adjustments in design. The study shall be performed by a person qualified, as determined by the U.S. Army Corps of Engineers and/or the Ohio Environmental Protection Agency, to gather such information.

The study shall identify any areas where the developer is required to obtain permits or other approvals of activity from the U.S. Army Corps of Engineers and/or the Ohio Environmental Protection Agency. Evidence of said permits or other approvals shall be provided by the developer prior to approval of improvement plans by the County Engineer.

If any wetland areas are located within a proposed subdivision as determined by the U.S. Army Corps of Engineers, the Ohio Environmental Protection Agency and/or the wetland study, the areas shall be identified on the Improvement Plans and Final Plat including permit or other approval numbers.

### **703.00 SOIL EROSION AND SEDIMENT CONTROL**

As part of submitting Improvement Plans, the developer shall prepare an Erosion and Sediment Control Plan according to the format and principles described in the Ohio Environmental Protection Agency's general permit for storm water discharges associated with construction activity under the National Pollutant Discharge Elimination System (NPDES). Such plan shall be submitted to the Soil and Water Conservation District and the County Engineer as part of the Improvement Plan. Sediment control shall follow the standards and specifications in RAINWATER AND LAND DEVELOPMENT (Ohio Department of Natural Resources, USDA Natural Resources Conservation Service, Ohio Environmental Protection Agency).

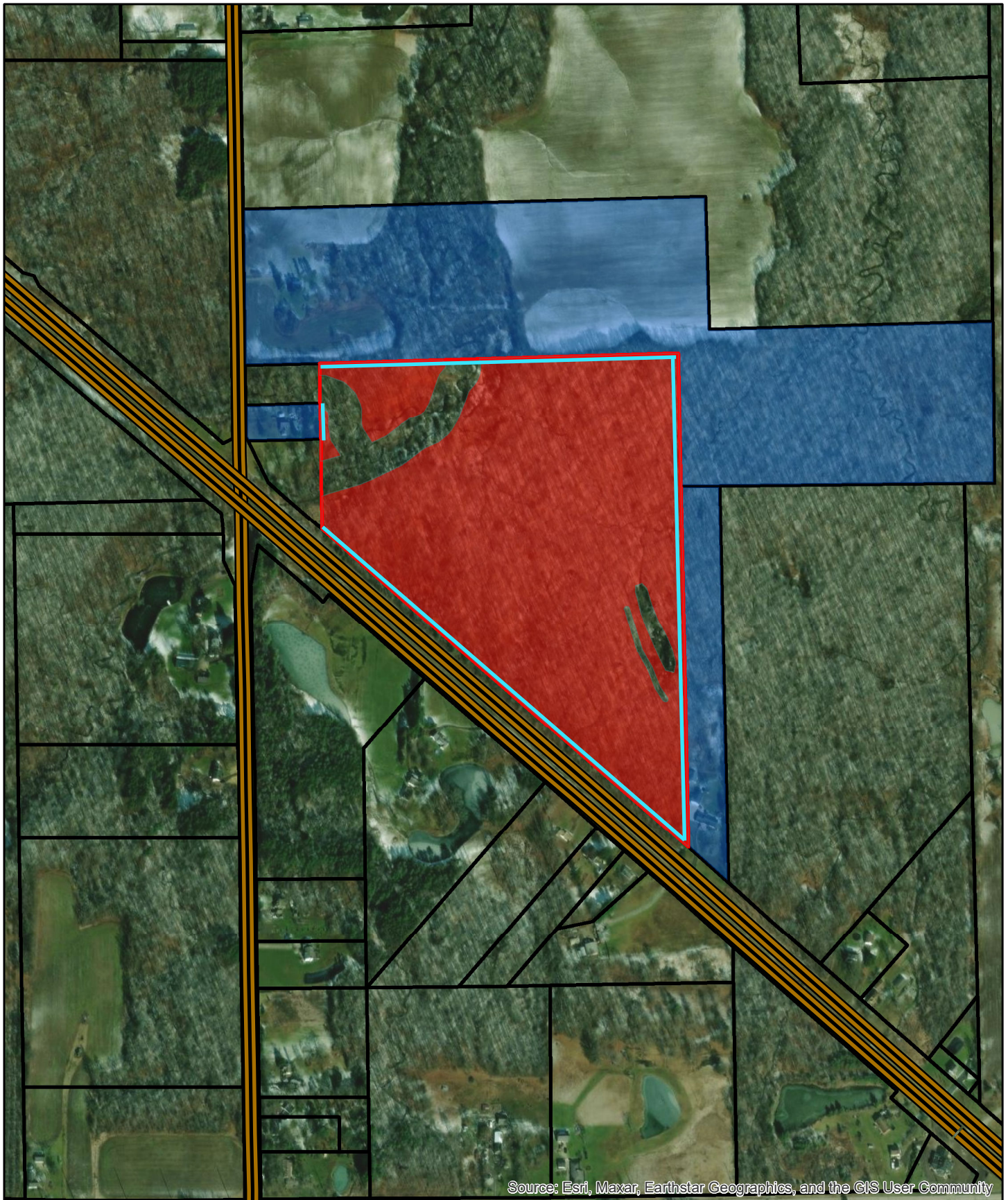
When a proposed development area consists of one (1) or more acres of earth disturbing activity, the owner of record shall prepare and submit an Erosion and Sediment Control Plan. When a proposed development area involves less than one (1) acre, it is not necessary to submit an Erosion and Sediment Control Plan. However, the developer shall comply with the standards and specifications in RAINWATER AND LAND DEVELOPMENT (ODNR, NRCS, OEPA).

The following items provide a checklist for what shall be included in the Erosion and Sediment Control Plans:

#### **703.10 Site Description**

1. A description of the nature and type of the construction activity.
2. Total area of the site and area that is expected to undergo excavation, filling, or grading.
3. Calculation of the runoff coefficients for both pre and post

## Threat of Loss Demonstration



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



## Southington Forest Preserve Developed Perimeter (79.8%)

0 0.05 0.1  
Miles

-  Roads
-  Project Area
-  Southington\_Parcel
-  Adjacent Developed Parcels
-  Parcels
-  Developed Perimeter



**Attestation of No Double Counting and No Net Harm**



## Southington Forest Preserve Attestation of No Double Counting of Credits & No Net Harm

I am the Executive Director of West Creek Conservancy and make this attestation regarding the no double counting of credits and no net harm from this tree preservation project, Southington Forest Preserve.

### 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

West Creek Conservancy has not and 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

West Creek Conservancy has not and 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. West Creek Conservancy checked the location of the Project Area against the Registry-provided geospatial database, which contains geospatial data on the project areas of all registered urban forest carbon preservation projects to date. Project Operator has determined that there is no overlap of Project Area or Project Trees with any registered urban forest carbon preservation project.

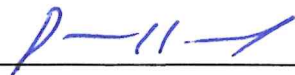
### 4. No Net Harm

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

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

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

Signed on April 1, in 2024, by Derek Schafer, Executive Director for West Creek Conservancy.

  
\_\_\_\_\_  
Signature

440-915-2940  
\_\_\_\_\_  
Phone  
dschafer@westcreek.org







Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



# Southington Forest Preserve No Double Counting

0 2 4 Miles

A horizontal scale bar with markings at 0, 2, and 4 miles.

-  Southington Forest Preserve
-  10mi\_radius
-  Existng Preservation Projects



**Attestation of Additionality**




## Southington Forest Preserve Attestation of Additionality

I am the Executive Director of West Creek Conservancy and make this attestation regarding additionality from this tree preservation project, Southington Forest Preserve.

- Project Description
  - The Project that is the subject of this attestation is described more fully in the Application and the Project Design Document (PDD), both of which are incorporated into this attestation.
- Prior to the start of the project, the trees in the Project Area were not protected via easement or recorded encumbrance or in a protected zoning status that preserves the trees
- The zoning in the Project Area currently allows for a non-forest use
- The trees in the Project Area face a threat or risk of removal or conversion out of forest
- West Creek Conservancy recorded in the public land records an easement, covenant, or deed restriction specifically protecting the trees for the project duration of 40 years.
- Additionality is also embedded in the quantification methodology that our project followed. Projects cannot receive, and the project will not receive, credits for trees that would have remained had development occurred, nor can they receive soil carbon credits for soil that would have been undisturbed had development occurred. The project also had to apply a discount to credited carbon for potential displaced development due to the project.
- Project Implementation Agreement for Project Duration
  - West Creek Conservancy signed a Project Implementation Agreement with City Forest Credits for 40 years.
- The revenue from the sale of carbon credits will play a material role in the successful and durable preservation of the Project Area's carbon stock by providing funding for stewardship and maintenance that ensure the forest's long-term health and resilience. Revenue generated from the sale of carbon credits will support West Creek Conservancy's ongoing stewardship and management of the property, as well as protection of additional forested carbon resources within the conservation organization's service area.
- West Creek Conservancy became aware of carbon crediting as a potential source of revenue for projects through the success that another conservation organization in Northeast Ohio, Western Reserve Land Conservancy, had in securing carbon credits to fund ongoing stewardship of protected forested properties in the region. West Creek Conservancy became aware of the work of City Forest Credits in the same manner. West Creek Conservancy first engaged City Forest Credits in January of 2023, and Southington Forest Preserve was identified as a potentially viable property for carbon crediting in February.

Signed on April 1, in 2024, by Derek Schafer, Executive Director for West Creek Conservancy.

  
\_\_\_\_\_  
Signature

Derek Schafer  
\_\_\_\_\_  
Printed Name

440-915-2940  
\_\_\_\_\_  
Phone

d.schafer@westcreek.org  
\_\_\_\_\_  
Email

# Carbon Quantification Tool

# City Forest Credits - Preservation Protocol Carbon Quantification Calculator

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**Project Operator** West Creek Conservancy  
**Project Name** Southington Preserve  
**Project Location** Southington Township, Trumbull County, OH  
**Date** 1/26/2024

Carbon Quantification Summary	Protocol Section	Supplemental information/notes
34.9 Total Project Area Acres		include project area for all parcels enrolled in carbon project
49.94 Biomass tC/ac	11.1.B	A complete inventory was performed on all trees within the project area that had a diameter at breast height of 5 inches or more, corresponding to method 11.1.B , include i-Tree eco results
183.10 Biomass tCO2e/ac	11.1.B	
6,390 Accounting Stock, tCO2e	11.1.B	
90% Fraction at risk of tree removal	11.2	Based on zoning - see 11.2 in preservation protocol
5,751 Avoided Biomass Emissions, tCO2e	11.2	
76% Avoided impervious surface, percent	11.3	Based on zoning - see 11.3 in preservation protocol
26 Avoided impervious surface, acres	11.4	
3,167 Avoided Soil Carbon Emissions, tCO2e	11.4	
18.3% Displacement	11.5	Fraction of avoided development that cannot be served by development or re-development of existing non-treed properties within the urban area
1,052 Displaced Biomass Emissions, tCO2e		
960 Displaced Soil Emissions		Assumes that redevelopment causes increase in impervious surface on redeveloped parcels
4,699 Credits from Avoided Biomass Emissions, tCO2e		
2,207 Credits from Avoided Soil Emissions, tCO2e		
6,906 Total Credits attributed to the project, tCO2e		
691 Registry Reversal Pool Account (10%), tCO2e		
<b>6,216 Total credits issued to the project, tCO2e</b>		186,480
<b>178 Total credits issued to the project, tCO2e/acre</b>		

Year	Credits Issued This Year	Credits Issued	Buffer Credits Issued
1	6,216	6,216	691
2	-	6,216	0
3	-	6,216	0
4	-	6,216	0
5	-	6,216	0

	US ton	metric ton	SE	Percent SE	Area (acres)	Biomass tC/acre
Total Area	2135.34	1937.15	194.36	0.10033296	34.9	49.93667622

# Fraction at Risk & Impervious Surface Worksheet - Residential Zoning

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## Fraction at Risk of Tree Removal

### Residential

**If minimum lot size is smaller than 2.25 acres, use 90%**

Per Zoning Code Section 9, minimum lot area for a SF dwelling is 100' x 200' or 20,000 sqft, which is 0.46 acres. So per Protocol Section 11.2.B.ii, 90% is used.

**OR if minimum lot size is larger than 2.25 acres:**

- 50 Project Area (acres)
- 0.459 Minimum lot size (acres: 20000 sqft)
- 108.00 Max potential dwelling units
- 216.00 Clearing estimated at 2 acres/unit
- 16.60 Clearing estimated at 10% of remaining area
- 199.4 Total potentially cleared area
- 398.80% Fraction at risk of tree removal**
- 90.00% Since above is greater than 90%.

### Commercial

Per Protocol Section 11.2.A, for commercial zoning 90% deduction is used (Zoning code does not specify landscaping requirements)

## Impervious Surface

### Residential

**The Zoning Code does not specify maximum lot coverage but specifies minimum yard setbacks**

- 12.5 Project Area (acres)
- 20000.00 Minimum lot size (sqft/unit)
- 100.00 Minimum lot width (feet)
- 200.00 Estimated lot length (feet)
- 50 Front yard setback (ft)
- 5,000 Estimated front yard setback (sqft)
- 10 Rear yard setback (ft)
- 1,000 Estimated rear yard setback (sqft)
- 10 Side yard setback
- 2,800 Estimated side yard setbacks (sqft/unit)
- 8,800 All setbacks per unit (sqft/unit)

**56% Avoided impervious surface**

**CHECK: if greater than 50%, the standard deduction for residential use should be used. If less than 50%, use this number instead.**

Since this is greater than 50%, to be conservative, 50% is used.

### Commercial

Per Protocol Section 11.3.A, for commercial zoning 90% deduction is used (Zoning code does not specify maximum impervious surface)

Zoning Type	Acreage	% Avoided	Acres Avoided
Residential	12.5	0.5	6.27
Commercial	22.4	0.9	20.115
<b>Total</b>			<b>0.7562</b>



## Tree Plot Map

# Southington Forest Preserve West Creek Conservancy

Trumbull County, OH



0 180 360 720 Feet

Map Created On: 11/24/2023



## Legend

— Property Boundary

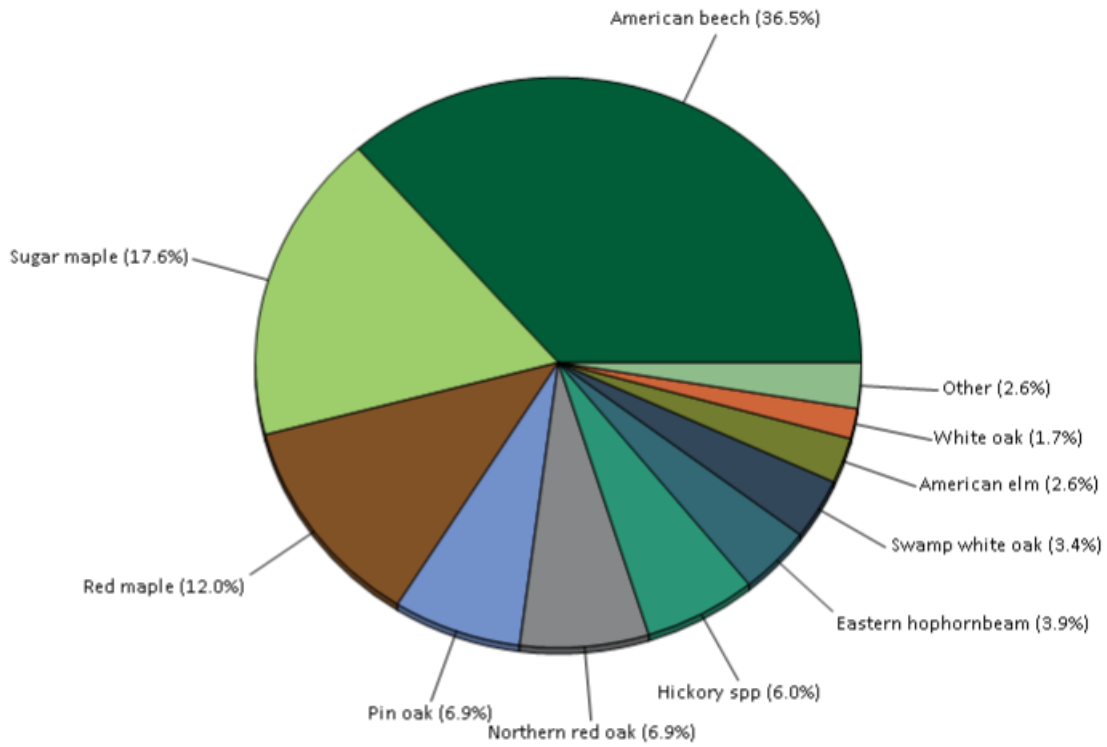
● Plot Sample Site

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Tree Characteristics Chart(s)

# I. Tree Characteristics of the Urban Forest

The urban forest of SouthingtonForestPreserve\_Carbon has an estimated 4,066 trees with a tree cover of 98.0 percent. The three most common species are American beech (36.5 percent), Sugar maple (17.6 percent), and Red maple (12.0 percent).



**Figure 1. Tree species composition in SouthingtonForestPreserve\_Carbon**

The overall tree density in SouthingtonForestPreserve\_Carbon is 288 trees/hectare (see Appendix III for comparable values from other cities).

iTree Eco Raw Data & Carbon Biomass Report

Plot number	Sp	Common Name	Scientific Name	Dbh	Crown condition
3	QUAL	White Oak	Quercus alba	16	92
3	ACSA2	Sugar Maple	Acer saccharum	19	72
3	FAGR	American Beech	Fagus grandifolia	8	72
3	ACSA2	Sugar Maple	Acer saccharum	7	72
3	CA1	Hickory spp	Carya	9	52
3	QURU	Northern Red Oak	Quercus rubra	27	92
3	CA1	Hickory spp	Carya	10	72
3	QURU	Northern Red Oak	Quercus rubra	27	92
3	QURU	Northern Red Oak	Quercus rubra	8	72
3	QURU	Northern Red Oak	Quercus rubra	16	72
3	FAGR	American Beech	Fagus grandifolia	10	72
4	ACSA2	Sugar Maple	Acer saccharum	8	72
4	FAGR	American Beech	Fagus grandifolia	5	92
4	FAGR	American Beech	Fagus grandifolia	5	92
4	FAGR	American Beech	Fagus grandifolia	7	72
4	FAGR	American Beech	Fagus grandifolia	6	72
4	ACSA2	Sugar Maple	Acer saccharum	7	92
4	OSVI	Eastern hophornbeam	Ostrya virginiana	6	72
4	ULAM	American Elm	Ulmus americana	7	72
4	ACSA2	Sugar Maple	Acer saccharum	12	72
6	FAGR	American Beech	Fagus grandifolia	6	92
6	OSVI	Eastern hophornbeam	Ostrya virginiana	7	72
6	PRSE1	Black cherry	Prunus serotina	22	92
6	OSVI	Eastern hophornbeam	Ostrya virginiana	5	72
6	FAGR	American Beech	Fagus grandifolia	5	72
6	OSVI	Eastern hophornbeam	Ostrya virginiana	7	72
6	FAGR	American Beech	Fagus grandifolia	8	72
6	OSVI	Eastern hophornbeam	Ostrya virginiana	5	72
6	OSVI	Eastern hophornbeam	Ostrya virginiana	5	72
6	QUAL	White Oak	Quercus alba	31	92
6	QURU	Northern Red Oak	Quercus rubra	30	92
6	CA1	Hickory spp	Carya	5	52
6	QURU	Northern Red Oak	Quercus rubra	33	92
6	FAGR	American Beech	Fagus grandifolia	7	92
6	ACSA2	Sugar Maple	Acer saccharum	5	72
6	ACSA2	Sugar Maple	Acer saccharum	6	72
7	ULAM	American Elm	Ulmus americana	6	52
7	ACSA2	Sugar Maple	Acer saccharum	25	92
7	ACSA2	Sugar Maple	Acer saccharum	22	92
7	ULAM	American Elm	Ulmus americana	8	72
7	ACSA2	Sugar Maple	Acer saccharum	7	72
8	ACRU	Red maple	Acer rubrum	19	52
8	FAGR	American Beech	Fagus grandifolia	6	72
8	FAGR	American Beech	Fagus grandifolia	10	72
8	FAGR	American Beech	Fagus grandifolia	7	72
8	FAGR	American Beech	Fagus grandifolia	14	72

8	FAGR	American Beech	Fagus grandifolia	8	72
8	FAGR	American Beech	Fagus grandifolia	6	72
8	FAGR	American Beech	Fagus grandifolia	7	72
8	ACRU	Red maple	Acer rubrum	35	92
8	FAGR	American Beech	Fagus grandifolia	8	72
8	CA1	Hickory spp	Carya	7	72
8	FAGR	American Beech	Fagus grandifolia	9	72
8	ACSA2	Sugar Maple	Acer saccharum	16	72
9	QUAL	White Oak	Quercus alba	7	72
9	CA1	Hickory spp	Carya	7	72
9	ACSA2	Sugar Maple	Acer saccharum	7	72
9	FAGR	American Beech	Fagus grandifolia	13	92
9	FAGR	American Beech	Fagus grandifolia	10	72
9	QUAL	White Oak	Quercus alba	27	92
9	FAGR	American Beech	Fagus grandifolia	9	72
9	ACRU	Red maple	Acer rubrum	22	92
9	FAGR	American Beech	Fagus grandifolia	14	92
9	FAGR	American Beech	Fagus grandifolia	11	72
9	FAGR	American Beech	Fagus grandifolia	6	72
9	FAGR	American Beech	Fagus grandifolia	11	72
10	ACSA2	Sugar Maple	Acer saccharum	6	92
10	QUPA	Pin oak	Quercus palustris	14	92
10	QUPA	Pin oak	Quercus palustris	13	92
10	ACSA2	Sugar Maple	Acer saccharum	9	72
10	ACSA2	Sugar Maple	Acer saccharum	5	72
10	ACSA2	Sugar Maple	Acer saccharum	5	72
10	ACSA2	Sugar Maple	Acer saccharum	6	72
10	ACSA2	Sugar Maple	Acer saccharum	6	72
10	PRSE1	Black cherry	Prunus serotina	5	52
10	ACSA2	Sugar Maple	Acer saccharum	18	72
10	ACSA2	Sugar Maple	Acer saccharum	6	72
10	QUPA	Pin oak	Quercus palustris	5	72
10	ACRU	Red maple	Acer rubrum	8	92
10	PRSE1	Black cherry	Prunus serotina	5	52
10	QUPA	Pin oak	Quercus palustris	12	92
10	AMAR	Downy serviceberry	Amelanchier arbore	9	52
10	ACSA2	Sugar Maple	Acer saccharum	5	72
10	ACSA2	Sugar Maple	Acer saccharum	5	72
10	QUPA	Pin oak	Quercus palustris	9	92
10	QUPA	Pin oak	Quercus palustris	11	92
11	ULAM	American Elm	Ulmus americana	10	92
11	ACRU	Red maple	Acer rubrum	26	92
11	QUPA	Pin oak	Quercus palustris	11	72
11	ACRU	Red maple	Acer rubrum	5	72
11	ACSA2	Sugar Maple	Acer saccharum	7	72
11	ACSA2	Sugar Maple	Acer saccharum	7	72
11	ACRU	Red maple	Acer rubrum	10	72

11	ACSA2	Sugar Maple	Acer saccharum	8	72
12	ACSA2	Sugar Maple	Acer saccharum	9	72
12	ACSA2	Sugar Maple	Acer saccharum	25	92
12	CA1	Hickory spp	Carya	22	92
12	CA1	Hickory spp	Carya	18	92
12	CA1	Hickory spp	Carya	6	72
12	OSVI	Eastern hophornbeam	Ostrya virginiana	6	72
12	ACSA2	Sugar Maple	Acer saccharum	6	72
13	ACSA2	Sugar Maple	Acer saccharum	10	72
13	ACSA2	Sugar Maple	Acer saccharum	9	72
13	ACRU	Red maple	Acer rubrum	7	72
13	FAGR	American Beech	Fagus grandifolia	5	72
13	FAGR	American Beech	Fagus grandifolia	19	92
13	FAGR	American Beech	Fagus grandifolia	18	92
13	FAGR	American Beech	Fagus grandifolia	22	92
13	FAGR	American Beech	Fagus grandifolia	18	52
14	FAGR	American Beech	Fagus grandifolia	7	72
14	FAGR	American Beech	Fagus grandifolia	15	92
14	ACRU	Red maple	Acer rubrum	26	92
14	FAGR	American Beech	Fagus grandifolia	6	72
14	FAGR	American Beech	Fagus grandifolia	10	72
14	ACRU	Red maple	Acer rubrum	24	92
14	ACSA2	Sugar Maple	Acer saccharum	12	92
14	FAGR	American Beech	Fagus grandifolia	11	72
14	ACSA2	Sugar Maple	Acer saccharum	12	92
15	ULAM	American Elm	Ulmus americana	8	72
15	FAGR	American Beech	Fagus grandifolia	16	92
15	FAGR	American Beech	Fagus grandifolia	9	72
15	FAGR	American Beech	Fagus grandifolia	16	72
15	FAGR	American Beech	Fagus grandifolia	16	72
15	FAGR	American Beech	Fagus grandifolia	5	72
15	QURU	Northern Red Oak	Quercus rubra	29	92
15	FAGR	American Beech	Fagus grandifolia	9	72
15	FAGR	American Beech	Fagus grandifolia	9	72
15	CA1	Hickory spp	Carya	21	92
15	FAGR	American Beech	Fagus grandifolia	7	72
15	FAGR	American Beech	Fagus grandifolia	5	7
15	QUPA	Pin oak	Quercus palustris	8	72
15	QUPA	Pin oak	Quercus palustris	23	72
16	FAGR	American Beech	Fagus grandifolia	12	72
16	FAGR	American Beech	Fagus grandifolia	8	72
16	ACRU	Red maple	Acer rubrum	34	92
16	QURU	Northern Red Oak	Quercus rubra	10	72
16	FAGR	American Beech	Fagus grandifolia	8	72
16	FAGR	American Beech	Fagus grandifolia	14	72
16	FAGR	American Beech	Fagus grandifolia	7	72
16	FAGR	American Beech	Fagus grandifolia	5	52



16	ACSA2	Sugar Maple	Acer saccharum	22	92
16	FAGR	American Beech	Fagus grandifolia	6	92
16	ACSA2	Sugar Maple	Acer saccharum	23	92
16	ACSA2	Sugar Maple	Acer saccharum	23	92
17	QURU	Northern Red Oak	Quercus rubra	5	52
17	FAGR	American Beech	Fagus grandifolia	16	72
17	FAGR	American Beech	Fagus grandifolia	11	72
17	FAGR	American Beech	Fagus grandifolia	11	72
17	FAGR	American Beech	Fagus grandifolia	18	92
17	FAGR	American Beech	Fagus grandifolia	9	72
17	FAGR	American Beech	Fagus grandifolia	9	72
17	FAGR	American Beech	Fagus grandifolia	8	72
18	ACRU	Red maple	Acer rubrum	21	92
18	ACRU	Red maple	Acer rubrum	10	72
18	ACRU	Red maple	Acer rubrum	8	72
18	ACSA2	Sugar Maple	Acer saccharum	6	72
18	CA1	Hickory spp	Carya	14	92
18	FAGR	American Beech	Fagus grandifolia	8	72
18	QURU	Northern Red Oak	Quercus rubra	12	72
18	ACRU	Red maple	Acer rubrum	6	72
18	FAGR	American Beech	Fagus grandifolia	5	72
18	ACRU	Red maple	Acer rubrum	8	72
18	FAGR	American Beech	Fagus grandifolia	10	92
18	FAGR	American Beech	Fagus grandifolia	5	72
19	ACRU	Red maple	Acer rubrum	14	72
19	ACRU	Red maple	Acer rubrum	10	72
19	QUPA	Pin oak	Quercus palustris	32	92
19	ACRU	Red maple	Acer rubrum	15	72
19	FAGR	American Beech	Fagus grandifolia	8	72
19	CA1	Hickory spp	Carya	5	72
19	QUPA	Pin oak	Quercus palustris	16	72
19	CA1	Hickory spp	Carya	12	92
19	ULAM	American Elm	Ulmus americana	14	72
19	CA1	Hickory spp	Carya	5	72
19	ACRU	Red maple	Acer rubrum	10	72
19	QUPA	Pin oak	Quercus palustris	25	92
19	CA1	Hickory spp	Carya	16	92
19	QUPA	Pin oak	Quercus palustris	11	72
20	FAGR	American Beech	Fagus grandifolia	13	92
20	FAGR	American Beech	Fagus grandifolia	16	92
20	ACRU	Red maple	Acer rubrum	14	72
20	FAGR	American Beech	Fagus grandifolia	11	72
20	ACSA2	Sugar Maple	Acer saccharum	24	72
20	FAGR	American Beech	Fagus grandifolia	13	72
20	FAGR	American Beech	Fagus grandifolia	6	72
20	FAGR	American Beech	Fagus grandifolia	10	72
20	FAGR	American Beech	Fagus grandifolia	8	72

20	FAGR	American Beech	Fagus grandifolia	15	92
20	FAGR	American Beech	Fagus grandifolia	18	92
21	ACRU	Red maple	Acer rubrum	5	72
21	QUBI	Swamp white oak	Quercus bicolor	13	92
21	QUBI	Swamp white oak	Quercus bicolor	13	92
21	ACRU	Red maple	Acer rubrum	5	72
21	QURU	Northern Red Oak	Quercus rubra	25	92
21	QUBI	Swamp white oak	Quercus bicolor	19	92
21	ACRU	Red maple	Acer rubrum	9	52
21	ACRU	Red maple	Acer rubrum	7	72
21	QUBI	Swamp white oak	Quercus bicolor	19	92
21	QUBI	Swamp white oak	Quercus bicolor	14	72
21	QUBI	Swamp white oak	Quercus bicolor	14	72
21	NYSY	Black tupelo	Nyssa sylvatica	6	72
21	ACRU	Red maple	Acer rubrum	7	72
21	NYSY	Black tupelo	Nyssa sylvatica	11	72
21	QUPA	Pin oak	Quercus palustris	8	72
21	QUPA	Pin oak	Quercus palustris	12	72
21	QUPA	Pin oak	Quercus palustris	14	72
21	ACRU	Red maple	Acer rubrum	5	72
21	ACRU	Red maple	Acer rubrum	5	72
21	QUBI	Swamp white oak	Quercus bicolor	6	72
21	QUBI	Swamp white oak	Quercus bicolor	5	72
21	FAGR	American Beech	Fagus grandifolia	17	92
22	ACSA2	Sugar Maple	Acer saccharum	24	92
22	ACSA2	Sugar Maple	Acer saccharum	26	92
22	FAGR	American Beech	Fagus grandifolia	6	72
22	QURU	Northern Red Oak	Quercus rubra	25	92
22	QURU	Northern Red Oak	Quercus rubra	33	92
22	QURU	Northern Red Oak	Quercus rubra	12	72
22	QURU	Northern Red Oak	Quercus rubra	21	92
23	FAGR	American Beech	Fagus grandifolia	9	72
23	ACSA2	Sugar Maple	Acer saccharum	10	72
23	OSVI	Eastern hophornbeam	Ostrya virginiana	6	72
23	FAGR	American Beech	Fagus grandifolia	6	72
23	FAGR	American Beech	Fagus grandifolia	14	92
23	OSVI	Eastern hophornbeam	Ostrya virginiana	24	52
23	QURU	Northern Red Oak	Quercus rubra	6	72
23	ACSA2	Sugar Maple	Acer saccharum	31	92
23	FAGR	American Beech	Fagus grandifolia	11	72
23	FAGR	American Beech	Fagus grandifolia	19	92
23	FAGR	American Beech	Fagus grandifolia	9	72
23	FAGR	American Beech	Fagus grandifolia	9	72
23	FAGR	American Beech	Fagus grandifolia	7	72
23	FAGR	American Beech	Fagus grandifolia	14	72
23	FAGR	American Beech	Fagus grandifolia	6	72

Code	Common Name	Scientific Name
QUAL	White Oak	<i>Quercus alba</i>
ACSA2	Sugar Maple	<i>Acer saccharum</i>
FAGR	American Beech	<i>Fagus grandifolia</i>
CA1	Hickory spp	<i>Carya</i>
QURU	Northern Red Oa	<i>Quercus rubra</i>
OSVI	Eastern hophornl	<i>Ostrya virginiana</i>
ULAM	American Elm	<i>Ulmus americana</i>
PRSE1	Black cherry	<i>Prunus serotina</i>
ACRU	Red maple	<i>Acer rubrum</i>
QUPA	Pin oak	<i>Quercus palustris</i>
AMAR	Downy servicebe	<i>Amelanchier arborea</i>
QUBI	Swamp white oal	<i>Quercus bicolor</i>
NYSY	Black tupelo	<i>Nyssa sylvatica</i>

## Benefits Summary of Trees by Species

Location: Southington township, Trumbull, Ohio, United States of America

Project: SouthingtonForestPreserve\_Carbon, Series: SouthingtonForestPreserve\_Carbon, Year: 2023

Generated: 12/19/2023



Species	Trees		Carbon Storage	
	Number	SE	(metric ton)	SE
Red maple	489	±148	325.55	±106.92
Sugar maple	715	±164	394.34	±102.27
Downy serviceberry	17	±17	2.75	±2.67
Hickory spp	244	±86	93.97	±43.24
American beech	1,483	±266	408.92	±97.49
Black tupelo	35	±34	4.09	±3.97
Eastern hophornbeam	157	±90	25.44	±20.14
Black cherry	52	±37	23.83	±21.94
White oak	70	±40	94.86	±57.84
Swamp white oak	140	±136	61.55	±59.76
Pin oak	279	±127	138.53	±74.68
Northern red oak	279	±94	351.67	±147.57
American elm	105	±43	11.65	±5.54
<b>Total</b>	<b>4,066</b>	<b>±331</b>	<b>1,937.15</b>	<b>±194.36</b>

Biomass tC/acre calculation: A plot sample forest assessment adhering to the standards set in CFC Tree Preservation Protocol Section 11.1.B was conducted. The sample established 20 sample plots sized at 1/10th acre. Within every plot, each live tree at least 5" in diameter at 4.5' above the ground where the height above the ground is measured on the uphill side of the tree was inventoried. Species, diameter, and overall tree condition were recorded for each tree. i-Tree Eco was utilized to input the sample plot data to determine the carbon storage.

Carbon quantification is based on the sample plots. The metric tons of Carbon is 1,937.15. The standard error is 194.36.

Biomass tC/acre = (metric tons of carbon - standard error)/project area acres  
 (1937.15-194.36/34.9 = 49.94) (cell B11 on carbon calculator)

# iTree Canopy Report

Id	Cover Clas	Description	Latitude	Longitude
1	Tree/Shrub		41.31717	-80.9789
2	Tree/Shrub		41.31683	-80.9813
3	Tree/Shrub		41.31536	-80.979
4	Tree/Shrub		41.31483	-80.9799
5	Tree/Shrub		41.31589	-80.9798
6	Tree/Shrub		41.31652	-80.9782
7	Tree/Shrub		41.31372	-80.9784
8	Tree/Shrub		41.31501	-80.9802
9	Tree/Shrub		41.31423	-80.9795
10	Tree/Shrub		41.31681	-80.9818
11	Tree/Shrub		41.31707	-80.9792
12	Tree/Shrub		41.31532	-80.9784
13	Tree/Shrub		41.31489	-80.9804
14	Tree/Shrub		41.31584	-80.9782
15	Tree/Shrub		41.31664	-80.9812
16	Tree/Shrub		41.31718	-80.9783
17	Tree/Shrub		41.31666	-80.9799
18	Tree/Shrub		41.31681	-80.9785
19	Tree/Shrub		41.31643	-80.9783
20	Tree/Shrub		41.31597	-80.9778
21	Tree/Shrub		41.31425	-80.9806
22	Tree/Shrub		41.31523	-80.9791
23	Tree/Shrub		41.31546	-80.9783
24	Tree/Shrub		41.31531	-80.9778
25	Tree/Shrub		41.31531	-80.9808
26	Tree/Shrub		41.31622	-80.9809
27	Tree/Shrub		41.31716	-80.9812
28	Tree/Shrub		41.31608	-80.9805
29	Tree/Shrub		41.31518	-80.9794
30	Tree/Shrub		41.31702	-80.9807
31	Tree/Shrub		41.31561	-80.981
32	Tree/Shrub		41.31385	-80.9795
33	Tree/Shrub		41.31517	-80.9785
34	Tree/Shrub		41.31423	-80.9794
35	Tree/Shrub		41.31643	-80.9801
36	Tree/Shrub		41.3129	-80.9778
37	Tree/Shrub		41.31487	-80.9793
38	Tree/Shrub		41.31675	-80.9793
39	Tree/Shrub		41.31422	-80.9802
40	Tree/Shrub		41.31447	-80.9784
41	Tree/Shrub		41.31272	-80.9776
42	Tree/Shrub		41.31564	-80.9808
43	Tree/Shrub		41.31385	-80.9791

44 Tree/Shrub	41.31694	-80.9799
45 Tree/Shrub	41.31543	-80.9788
46 Tree/Shrub	41.31578	-80.9782
47 Tree/Shrub	41.31611	-80.9793
48 Tree/Shrub	41.31581	-80.98
49 Tree/Shrub	41.31416	-80.9796
50 Tree/Shrub	41.31542	-80.9797
51 Tree/Shrub	41.3133	-80.9777
52 Tree/Shrub	41.31513	-80.9778
53 Tree/Shrub	41.31312	-80.9787
54 Tree/Shrub	41.31687	-80.9795
55 Tree/Shrub	41.31498	-80.9797
56 Tree/Shrub	41.31316	-80.9778
57 Tree/Shrub	41.31635	-80.9802
58 Tree/Shrub	41.31561	-80.9816
59 Tree/Shrub	41.31585	-80.9782
60 Tree/Shrub	41.31603	-80.9798
61 Grass/Herbaceous	41.31453	-80.979
62 Tree/Shrub	41.31682	-80.9779
63 Tree/Shrub	41.316	-80.9792
64 Tree/Shrub	41.31482	-80.9794
65 Tree/Shrub	41.31573	-80.9786
66 Tree/Shrub	41.31676	-80.9792
67 Tree/Shrub	41.31558	-80.978
68 Tree/Shrub	41.31338	-80.9779
69 Tree/Shrub	41.31304	-80.9776
70 Tree/Shrub	41.31352	-80.979
71 Tree/Shrub	41.31609	-80.9799
72 Tree/Shrub	41.31658	-80.9811
73 Tree/Shrub	41.31437	-80.9796
74 Tree/Shrub	41.31566	-80.9793
75 Tree/Shrub	41.31686	-80.9781
76 Tree/Shrub	41.31387	-80.9777
77 Tree/Shrub	41.31413	-80.9796
78 Tree/Shrub	41.31667	-80.9779
79 Tree/Shrub	41.31714	-80.9795
80 Tree/Shrub	41.3141	-80.9786
81 Tree/Shrub	41.31456	-80.9792
82 Tree/Shrub	41.31372	-80.9792
83 Tree/Shrub	41.31515	-80.9794
84 Tree/Shrub	41.31537	-80.9776
85 Tree/Shrub	41.3133	-80.9786
86 Tree/Shrub	41.31432	-80.9806
87 Tree/Shrub	41.31611	-80.9791

88 Tree/Shrub	41.31505	-80.9808
89 Tree/Shrub	41.3167	-80.9791
90 Tree/Shrub	41.31661	-80.9818
91 Tree/Shrub	41.31545	-80.9808
92 Tree/Shrub	41.31418	-80.9799
93 Tree/Shrub	41.31506	-80.9807
94 Tree/Shrub	41.31488	-80.9807
95 Tree/Shrub	41.31546	-80.978
96 Tree/Shrub	41.31355	-80.9788
97 Tree/Shrub	41.31598	-80.9778
98 Tree/Shrub	41.3143	-80.9782
99 Tree/Shrub	41.31391	-80.9798
100 Tree/Shrub	41.31367	-80.9795
101 Tree/Shrub	41.31681	-80.9798
102 Tree/Shrub	41.31663	-80.9794
103 Tree/Shrub	41.3155	-80.9792
104 Tree/Shrub	41.31534	-80.9809
105 Tree/Shrub	41.31366	-80.9791
106 Tree/Shrub	41.31574	-80.9817
107 Tree/Shrub	41.31544	-80.9784
108 Tree/Shrub	41.31501	-80.9795
109 Tree/Shrub	41.31544	-80.9792
110 Tree/Shrub	41.31498	-80.9803
111 Tree/Shrub	41.31556	-80.9817
112 Tree/Shrub	41.31448	-80.9803
113 Tree/Shrub	41.31488	-80.9793
114 Tree/Shrub	41.31523	-80.9798
115 Tree/Shrub	41.31572	-80.9818
116 Tree/Shrub	41.31488	-80.9789
117 Tree/Shrub	41.31608	-80.9798
118 Tree/Shrub	41.31584	-80.9786
119 Grass/Herbaceous	41.31535	-80.9804
120 Tree/Shrub	41.31505	-80.9815
121 Tree/Shrub	41.31395	-80.9791
122 Tree/Shrub	41.3142	-80.9802
123 Tree/Shrub	41.31283	-80.9777
124 Tree/Shrub	41.31648	-80.9815
125 Tree/Shrub	41.31501	-80.9793
126 Tree/Shrub	41.31311	-80.978
127 Grass/Herbaceous	41.31244	-80.9775
128 Tree/Shrub	41.31417	-80.9798
129 Tree/Shrub	41.31586	-80.9815
130 Tree/Shrub	41.31451	-80.9799
131 Tree/Shrub	41.3152	-80.9809



132 Tree/Shrub	41.31414	-80.9795
133 Tree/Shrub	41.31455	-80.9806
134 Tree/Shrub	41.31363	-80.9795
135 Grass/Herbaceous	41.31456	-80.9791
136 Tree/Shrub	41.31663	-80.9792
137 Tree/Shrub	41.3143	-80.9788
138 Tree/Shrub	41.31428	-80.9782
139 Tree/Shrub	41.31585	-80.9787
140 Grass/Herbaceous	41.31612	-80.9811
141 Tree/Shrub	41.31428	-80.9784
142 Tree/Shrub	41.31576	-80.9823
143 Tree/Shrub	41.31451	-80.9799
144 Tree/Shrub	41.31603	-80.9778
145 Tree/Shrub	41.31412	-80.9781
146 Grass/Herbaceous	41.31602	-80.9812
147 Tree/Shrub	41.31465	-80.9794
148 Tree/Shrub	41.31412	-80.9798
149 Tree/Shrub	41.31526	-80.9812
150 Tree/Shrub	41.31469	-80.9793
151 Tree/Shrub	41.3135	-80.9785
152 Tree/Shrub	41.31486	-80.9779
153 Tree/Shrub	41.31666	-80.9789
154 Tree/Shrub	41.31658	-80.9812
155 Tree/Shrub	41.31659	-80.9791
156 Tree/Shrub	41.31418	-80.979
157 Tree/Shrub	41.31656	-80.9792
158 Tree/Shrub	41.3157	-80.978
159 Tree/Shrub	41.31527	-80.9784
160 Tree/Shrub	41.31519	-80.9781
161 Tree/Shrub	41.31532	-80.9777
162 Tree/Shrub	41.31455	-80.98
163 Tree/Shrub	41.31496	-80.9802
164 Tree/Shrub	41.31342	-80.9778
165 Tree/Shrub	41.31527	-80.9787
166 Tree/Shrub	41.3131	-80.9782
167 Tree/Shrub	41.31446	-80.9802
168 Tree/Shrub	41.31549	-80.9802
169 Tree/Shrub	41.31575	-80.9787
170 Tree/Shrub	41.31461	-80.9809
171 Tree/Shrub	41.31541	-80.9785
172 Tree/Shrub	41.31542	-80.9791
173 Tree/Shrub	41.31616	-80.9787
174 Tree/Shrub	41.31495	-80.9809
175 Tree/Shrub	41.31398	-80.9801

176 Tree/Shrub	41.3152	-80.9785
177 Tree/Shrub	41.31459	-80.9811
178 Tree/Shrub	41.31544	-80.9778
179 Tree/Shrub	41.31512	-80.9785
180 Tree/Shrub	41.31246	-80.9778
181 Tree/Shrub	41.3133	-80.978
182 Tree/Shrub	41.31604	-80.978
183 Tree/Shrub	41.31705	-80.9792
184 Tree/Shrub	41.31533	-80.9785
185 Tree/Shrub	41.31589	-80.9802
186 Tree/Shrub	41.31545	-80.978
187 Tree/Shrub	41.31526	-80.9814
188 Grass/Herbaceous	41.31595	-80.9804
189 Tree/Shrub	41.31476	-80.9795
190 Tree/Shrub	41.3146	-80.9797
191 Tree/Shrub	41.31451	-80.9807
192 Tree/Shrub	41.31521	-80.979
193 Tree/Shrub	41.31658	-80.9815
194 Tree/Shrub	41.31392	-80.9786
195 Tree/Shrub	41.31454	-80.9801
196 Tree/Shrub	41.31396	-80.9792
197 Tree/Shrub	41.31253	-80.9777
198 Tree/Shrub	41.31567	-80.9791
199 Tree/Shrub	41.31535	-80.9816
200 Tree/Shrub	41.31516	-80.9785

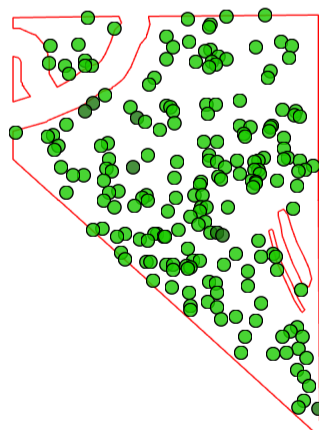
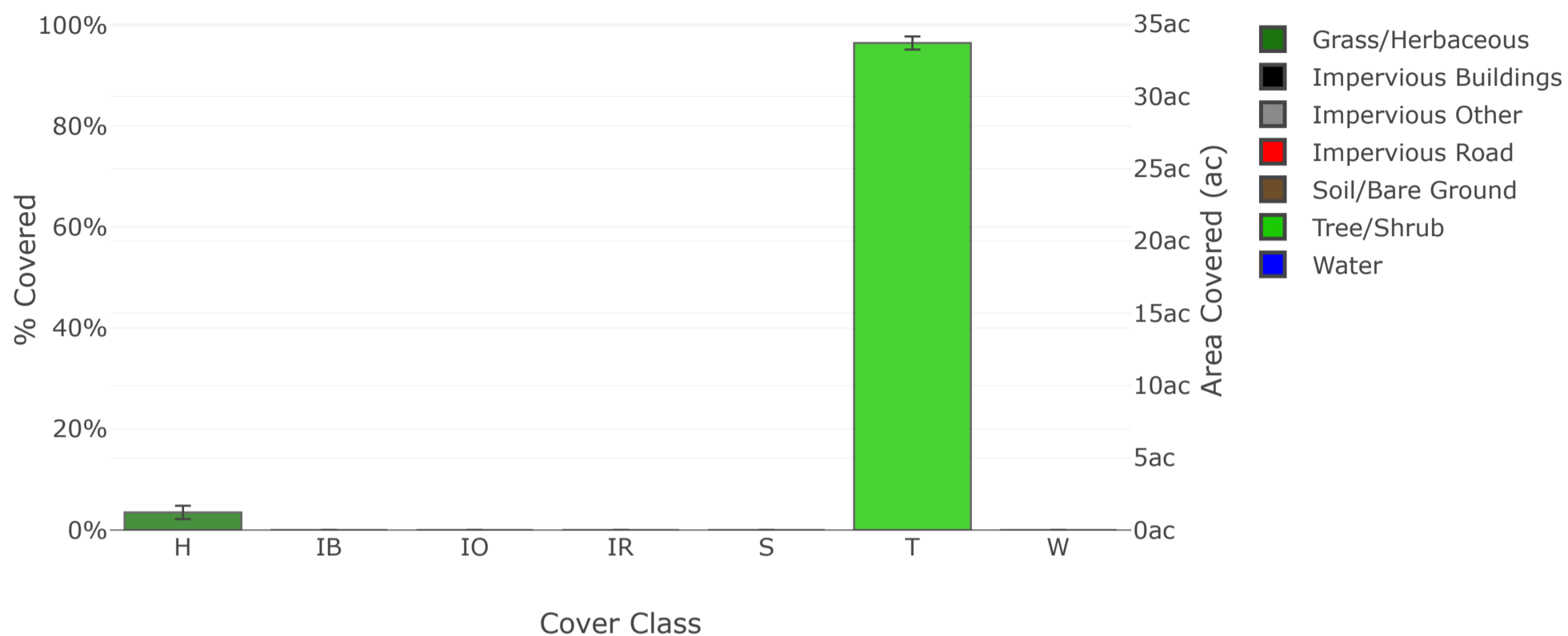
# i-Tree Canopy

## Cover Assessment and Tree Benefits Report

Estimated using random sampling statistics on 12/14/2023



### Land Cover



Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (ac) ± SE
H	Grass/Herbaceous		7	3.50 ± 1.32	1.22 ± 0.46
IB	Impervious Buildings		0	0.00 ± 0.00	0.00 ± 0.00
IO	Impervious Other		0	0.00 ± 0.00	0.00 ± 0.00
IR	Impervious Road		0	0.00 ± 0.00	0.00 ± 0.00
S	Soil/Bare Ground		0	0.00 ± 0.00	0.00 ± 0.00
T	Tree/Shrub		193	96.50 ± 1.30	33.70 ± 0.45
W	Water		0	0.00 ± 0.00	0.00 ± 0.00
<b>Total</b>			<b>200</b>	<b>100.00</b>	<b>34.93</b>

### Tree Benefit Estimates: Carbon (English units)

Description	Carbon (T)	±SE	CO <sub>2</sub> Equiv. (T)	±SE	Value (USD)	±SE
Sequestered annually in trees	37.29	±0.50	136.72	±1.84	\$6,359	±86
Stored in trees (Note: this benefit is not an annual rate)	1,155.39	±15.56	4,236.44	±57.05	\$197,053	±2,654

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Amount sequestered is based on 1.106 T of Carbon, or 4.056 T of CO<sub>2</sub>, per ac/yr and rounded. Amount stored is based on 34.281 T of Carbon, or 125.697 T of CO<sub>2</sub>, per ac and rounded. Value (USD) is based on \$170.55/T of Carbon, or \$46.51/T of CO<sub>2</sub> and rounded. (English units: T = tons (2,000 pounds), ac = acres)

### Tree Benefit Estimates: Air Pollution (English units)

Abbr.	Description	Amount (lb)	±SE	Value (USD)	±SE
CO	Carbon Monoxide removed annually	35.50	±0.48	\$4	±0
NO <sub>2</sub>	Nitrogen Dioxide removed annually	209.19	±2.82	\$9	±0
O <sub>3</sub>	Ozone removed annually	1,408.38	±18.97	\$442	±6
SO <sub>2</sub>	Sulfur Dioxide removed annually	105.86	±1.43	\$2	±0
PM <sub>2.5</sub>	Particulate Matter less than 2.5 microns removed annually	98.22	±1.32	\$1,245	±17
PM <sub>10</sub> *	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	276.84	±3.73	\$160	±2
<b>Total</b>		<b>2,133.98</b>	<b>±28.74</b>	<b>\$1,861</b>	<b>±25</b>

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in lb/ac/yr @ \$/lb/yr and rounded: CO 1.053 @ \$0.12 | NO<sub>2</sub> 6.207 @ \$0.04 | O<sub>3</sub> 41.787 @ \$0.31 | SO<sub>2</sub> 3.141 @ \$0.01 | PM<sub>2.5</sub> 2.914 @ \$12.67 | PM<sub>10</sub>\* 8.214 @ \$0.58 (English units: lb = pounds, ac = acres)

### Tree Benefit Estimates: Hydrological (English units)

Abbr.	Benefit	Amount (Kgal)	±SE	Value (USD)	±SE
AVRO	Avoided Runoff	107.70	±1.45	\$962	±13
E	Evaporation	2,398.03	±32.29	N/A	N/A
I	Interception	2,413.77	±32.51	N/A	N/A
T	Transpiration	3,795.38	±51.11	N/A	N/A
PE	Potential Evaporation	18,578.78	±250.19	N/A	N/A
PET	Potential Evapotranspiration	12,969.21	±174.65	N/A	N/A

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in Kgal/ac/yr @ \$/Kgal/yr and rounded: AVRO 3.195 @ \$8.94 | E 71.151 @ N/A | I 71.618 @ N/A | T 112.611 @ N/A | PE 551.242 @ N/A | PET 384.803 @ N/A (English units: Kgal = thousands of gallons, ac = acres)

#### About i-Tree Canopy

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

#### Limitations of i-Tree Canopy

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



Additional support provided by:



# Cobenefit Calculator

### City Forest Preservation Co-Benefits Quantification Tool for the Northeast Climate Zone

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The analyst can use this method to calculate the amount of co-benefits estimated to be produced by existing tree canopy. The tool uses information you provide on tree canopy cover (deciduous and coniferous), and estimates annual co-benefits in Resource Units and \$ per year. Transfer functions (i.e., kWh of electricity per m<sup>2</sup> of tree canopy) were calculated as the average of values for the large, medium and small trees in the deciduous and coniferous life forms. Resource units for the dbh corresponding to a 25-year old tree were used, along with the crown projection area of the representative species for each tree-type. Energy effects are reduced to 20% of values in the i-Tree Streets source data because preserved areas generally have fewer nearby buildings affected by climate and shade effects than areas with street trees. Local prices were from i-Tree Streets.

#### Steps

1) Use i-Tree Canopy, or another tool, to estimate the amount of area that is covered by deciduous and coniferous tree cover. In Table 1 enter the area (acres) in deciduous and coniferous tree cover in the project area. Also, enter the non-tree cover area.

2) Table 2 automatically provides estimates of co-benefits for the current canopy in Resource Units (e.g., kWh) per year and \$ per year. Values are adapted from i-Tree Streets results for this climate zone and assume that the deciduous and coniferous canopy is evenly distributed among large, medium and small tree types.

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Light yellow background denotes an input cell ->



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

Table 1. Tree Cover

	Deciduous Tree Cover	Coniferous Tree Cover	Total Tree Cover	Non-Tree	Total Project Area
Percent (%)	98%	0%	98%	2%	100%
Area (sq miles)	0.053	0.000	0.053	0.001	0.05
Area (m2)	138,401	0	138,401	2,833	141,234
Area (acres)	34.2	0.00	34.20	0.70	34.90

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

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

Ecosystem Services	Resource Units Totals	Total \$
Rain Interception (m3/yr)	17,491.5	\$36,970.07
Air Quality (t/yr)		
O3	0.6078	\$1,265.35
NOx	0.2604	\$542.09
PM10	0.2986	\$1,125.50
Net VOCs	0.0400	\$41.94
Air Quality Total	1.2068	\$2,974.89
Energy (kWh/yr & kBtu/yr)		
Cooling - Elec.	53,113	\$7,441.11
Heating - Nat. Gas	2,198,600	\$30,750.26
Energy Total (\$/yr)		\$38,191.36
Grand Total (\$/yr)		\$78,136.32



**Social Impacts**

# City Forest Carbon Project Social Impacts



## *UN Sustainable Development Goals*

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

## *Instructions*

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

## SDG 3 - Good Health and Well Being

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

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

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

The mature upland hardwood forest of the Southington Forest Preserve provides essential ecosystem services to the surrounding community, including slowing and filtering stormwater runoff by intercepting an estimated 17,491 cubic meters of rainfall annually, and intercepting and absorbing an estimated 1.2 tons of air pollutants including ozone (O<sub>3</sub>), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM<sub>10</sub>) and volatile organic compounds (VOCs), per year. In addition to preserving these ecosystem services in perpetuity, West Creek Conservancy's conservation of the Southington Forest Preserve property also preserves biodiversity in a community with a pervasive pattern of timbering forested natural areas, and creates an opportunity for nature experiences and education. West Creek Conservancy will integrate the property into the organization's guided nature hike series to provide public access and promote appreciation for the area's natural resources.

## SDG 6 - Clean Water and Sanitation

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

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

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

The Southington Forest Preserve is located within the Grand River Headwaters subwatershed, and the northwest portion of the property contains an ephemeral headwater stream that eventually feeds into Dead Branch, a main tributary to the Grand River. Preservation of the mature upland forest on the property, intercepting an estimated 17,491 cubic meters of rainfall each year, will thus protect an important buffer to the headwaters of the State Wild and Scenic Grand River – an important part of the natural heritage of Northeast Ohio. Additionally, as a tributary to Lake Erie, preservation of water quality in the Grand River watershed has greater implications for the health of this tremendous freshwater resource, which is the primary drinking water supply for approximately 11 million people.

## SDG 8 - Decent Work and Economic Growth

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

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

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

N/A

## SDG 10 - Reduced Inequalities

Goal: Reduce inequalities within and among countries

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

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

N/A

## SDG 11 - Sustainable Cities and Communities

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

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

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

West Creek Conservancy will integrate the Southington Forest Preserve into the organization's guided nature hike series to provide public access, nature experiences, and educational opportunities to foster deeper appreciation for the importance of preserving the region's natural habitats. In addition, the Southington Forest Preserve provides essential ecosystem services to the surrounding community, including intercepting and absorbing an estimated 1.2 tons of air pollutants annually.

## SDG 12 - Responsible Production and Consumption

Goal: Ensure sustainable consumption and production patterns

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

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

N/A



## SDG 13 - Climate Action

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

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

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

Permanent conservation of the Southington Forest Preserve will preserve the ecosystem services that this forested natural area provides to the surrounding community, and to the Grand River Watershed more broadly. Educational opportunities including guided nature hikes hosted by West Creek Conservancy and its conservation partners will provide opportunities for the community to engage with the project and learn about the importance of conservation in the context of climate change and environmental degradation as specifically experienced in Northeast Ohio and the Great Lakes region. The Southington Forest Preserve property also provides habitat for a globally listed species – the West Virginia white butterfly – which has been identified on the property.

## SDG 14 - Life Below Water

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

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

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

The Southington Forest Preserve is located within the Grand River Headwaters subwatershed, and the northwest portion of the property contains an ephemeral headwater stream that eventually feeds into Dead Branch, a main tributary to the Grand River. Preservation of the mature upland forest on the property, intercepting an estimated 17,491 cubic meters of rainfall each year, will thus protect an important buffer to the headwaters of the Grand River. The Grand River is one of only three rivers in the state of Ohio to be designated as both Wild and Scenic. As a tributary to Lake Erie, preservation of water quality in the Grand River watershed has greater implications for the region's aquatic biodiversity and the health of this tremendous freshwater resource, which is threatened by agricultural runoff in the watershed. West Creek Conservancy's conservation of the Southington Forest Preserve property permanently preserves a forested buffer to a headwater stream to the Grand River, in an area with heavy agricultural land use.

## SDG 15 - Life on Land

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

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

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

The Southington Forest Preserve provides habitat for a globally listed species, the West Virginia white butterfly (*Pieris virginiensis*), which has been identified on the property. The West Virginia white butterfly relies on forested understory flowers for laying its eggs – permanent protection of this forested tract will therefore preserve necessary habitat for this vulnerable species.

## SDG 17 - Partnerships for the Goals

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

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

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

West Creek Conservancy will integrate the Southington Forest Preserve into the organization's guided nature hike series to provide public access, nature experiences, and educational opportunities to foster deeper appreciation for the importance of preserving the region's natural habitats. West Creek Conservancy will continue to build relationships with property owners in the area surrounding the Southington Forest Preserve, to instill the importance of preservation of high-quality forested areas and to remain aware of future opportunities for additional conservation of forested natural areas.

## Summary of Project Social Impacts



Permanent conservation of the Southington Forest Preserve will preserve the ecosystem services that this forested natural area provides to the surrounding community, and to the Grand River Watershed more broadly. Educational opportunities including guided nature hikes hosted by West Creek Conservancy and its conservation partners will provide opportunities for the community to engage with the project and learn about the importance of conservation in the context of climate change and environmental degradation as specifically experienced in Northeast Ohio and the Great Lakes region. The Southington Forest Preserve property also provides habitat for a globally listed species – the West Virginia white butterfly – which has been identified on the property.



The Southington Forest Preserve is located within the Grand River Headwaters subwatershed, and the northwest portion of the property contains an ephemeral headwater stream that eventually feeds into Dead Branch, a main tributary to the Grand River. Preservation of the mature upland forest on the property, intercepting an estimated 17,491 cubic meters of rainfall each year, will thus protect an important buffer to the headwaters of the Grand River. The Grand River is one of only three rivers in the state of Ohio to be designated as both Wild and Scenic. As a tributary to Lake Erie, preservation of water quality in the Grand River watershed has greater implications for the region’s aquatic biodiversity and the health of this tremendous freshwater resource, which is threatened by agricultural runoff in the watershed. West Creek Conservancy’s conservation of the Southington Forest Preserve property permanently preserves a forested buffer to a headwater stream to the Grand River, in an area with heavy agricultural land use.



The Southington Forest Preserve provides habitat for a globally listed species, the West Virginia white butterfly (*Pieris virginiensis*), which has been identified on the property. The West Virginia white butterfly relies on forested understory flowers for laying its eggs – permanent protection of this forested tract will therefore preserve necessary habitat for this vulnerable species.

