



RESEARCH ARTICLE

Analysis of Tree Ordinances in Cuyahoga County, Ohio, and Recommendations for a Countywide Policy to Protect Trees

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Submitted April 19, 2024 Accepted July 29, 2024 Published October 10, 2024 <https://doi.org/10.18061/ojph.v6i2.9848>

ABSTRACT

Background: Trees and urban forests have significant public health benefits as well as providing both climate mitigation and adaptation impacts. The tree canopy in Cuyahoga County, Ohio, had suffered a 6% decline between 2010 and 2017, and some cities in the county had suffered as much as an 11% decrease by 2023.

Methods: All current county tree ordinances were analyzed. A review and analysis of the relevant scientific literature and similar ordinances of other cities and counties were completed. The most suitable sections of the tree ordinances were determined by selecting components that had the strongest attributes and compiling these to make a single, robust model ordinance.

Results: The results of this study recommended that an ideal tree ordinance must address or mention permitting for the removal of otherwise healthy trees, while allowing for the lawful removal of trees that are diseased or pose a threat to persons or property. Balancing the interests of private landowners with that of the general public health interests would be key to the success and implementation of such an ordinance.

Conclusion: The study found that by compiling different sections of various existing tree ordinances and providing suggestions for improvements, a model city ordinance was both feasible and scalable. This model tree ordinance would then be used by future lawmakers of Cuyahoga County, Ohio, or its constituent municipalities in order to effectively protect tree canopy.

Keywords: Tree canopy; Climate change; Public health benefits; Model tree ordinance

INTRODUCTION

The Earth is experiencing warmer global temperatures, primarily due to the extraction, processing, and release of greenhouse gas emissions into the atmosphere¹ which are responsible for climate change.² Trees are important in the strategy in both mitigating and

adapting to climate change by improving human and ecosystem health,³ by reducing greenhouse gases, and lowering atmospheric temperatures.⁴ This occurs through the process of photosynthesis, which absorbs carbon dioxide (CO₂) and other solid particles, including soot and heavy metals, and stores the carbon in tree tissues and soils and releases oxygen into the atmosphere.⁴





Trees also play a large role in the physical and mental health of a community and can improve overall public health.⁵ The public health benefits are biophysical benefits (those pertaining to observable, ecological relationships) and nonbiophysical benefits (those pertaining to social and psychological relationships).⁶ Biophysical benefits of trees include 4 main facets: carbon sequestration, stormwater management, energy savings, and reduction of climate change.⁷ In relation to nonbiophysical benefits trees provide improvements in physiological and psychological health.⁸ For example, tree cover in parks or forests provides suitable, outdoor sites for exercise and has shown to improve cardiovascular health and to decrease disease levels.⁹

In July 2017, Cuyahoga County, Ohio, joined the Global Covenant of Mayors for Climate and Energy, an international alliance of cities and local governments to promote and support voluntary action to combat climate change. Cuyahoga County developed a climate change action plan to reduce greenhouse gas emissions, implement and track actions to meet targets, and to address climate change mitigation and adaptations. As a preliminary, first step, and due to the importance of trees in combating climate impacts, an updated tree canopy survey was undertaken from 2010 to 2017. It found a 6% decrease of tree canopy. These results were published in May 2019 in the newly released Cuyahoga County Climate Change Action Plan (CCCCAP).¹⁰

In order to restore lost canopy and provide climate mitigation and adaptation strategies, the Healthy Urban Tree Canopy (HUTC) grant program was created from the CCCCAP document. The HUTC program was funded with \$950 000 a year for 5 years. The first round of the competitive grant was approved in 2019 and is currently in its fifth and final year (2024-2025), as it was paused for 2020 due to the COVID-19 outbreak.

Numerous building projects in Cuyahoga County continued to clear-cut trees, where all vegetation is removed and the land is graded to form a completely bare, flat, beige mineral soil (Appendix A). In some cases, as much as 30 acres of tree canopy is cleared per site. As providing HUTC funds to plant and grow trees was in direct conflict with adjacent clear-cutting, a revision of city tree ordinances was started in 2020 by the HUTC Cuyahoga County committee member, with the aim of providing advice and suggestions to create a Cuyahoga County policy and ordinance to protect trees, public and ecosystem health, and provide more sustainable land use practices.

The city tree ordinances in Cuyahoga County had been compiled in 2010, organized by watersheds, by the Soil and Water Conservation District with the assistance of the West Creek Land Conservancy (personal communication, Jared Bartlett, and Peter Bode, 2021). The tree ordinances were compiled in an Excel spreadsheet with interactive links which listed the 10 watersheds.

While reviewing the Excel spreadsheet of the 10 county watersheds, it was found that numerous links to the city ordinances no

longer worked, and many of the city tree ordinances were outdated, some having been written in 1965. None of the ordinances included the need for mitigation and adaptation to climate change, making an updated, in-depth revision necessary to account for climate impacts and large-scale development clear-cutting.

A review was undertaken in 2021-2022 as a capstone project for completion of a master of public health (MPH) degree.¹¹ The aim of the study was to highlight the importance of trees as a contributor to the improvement of public health while attempting to answer the following questions:

1. Why should more trees be planted in urban areas?
2. What benefits do trees provide from a health and legislation standpoint?
3. How can trees benefit areas in Cuyahoga County and, more specifically, the City of Cleveland, Ohio?

METHODS

The materials for the project included files containing the tree ordinances of 59 cities throughout Cuyahoga County that belong to the 10 watersheds (Big Creek, West Creek, Chippewa Creek, Doan Brook, Dugway Creek, Nine Mile Creek, Euclid Creek, Mill Creek, Rocky River, and Tinkers Creek), an Excel spreadsheet created by the Soil and Water Conservation District in 2012 used for editing and making revisions to the tree ordinances, and maps of Cuyahoga County that represent the effect of different variables within different areas such as the number of trees in a specific area of Cuyahoga County.

The project commenced with the review and analysis of the relevant scientific literature and similar ordinances of other cities and counties to evaluate the current ordinances for improvement. All the current tree ordinances were analyzed for completeness and gaps that may be present. Twenty-two sections were analyzed in each ordinance (Appendix B). The spreadsheet was edited to ensure that the collected ordinance data was up to date. There were frequent check-ins with the HUTC committee and other departments of Cuyahoga County to provide updates of tree ordinance analysis and research. The most suitable sections of the 59 tree ordinances were determined by selecting components that had the strongest attributes and compiling these to make a single, robust model ordinance (Appendix C).

RESULTS

The project had 2 major deliverables: (1) suggestions to improve current tree ordinances and 2) the creation of a model tree ordinance.

Updating the Soil and Water Conservation District Spreadsheet and Providing Suggestions

The watershed spreadsheet of city tree ordinances was last edited in 2012. After a thorough review and analysis of the tree ordinances, suggestions and recommendations were created. The



recommendations consisted of a detailed revision of gaps in the ordinances and determining what could be done to fix or improve them. Additionally, the spreadsheet was edited to ensure that all data and information in this ordinance were up to date and accurate. The Mill Creek Watershed was selected to demonstrate the process of updating the tree ordinance spreadsheet database, as it had numerous existing tree ordinances which could be improved.

After thorough analysis of the Cuyahoga Heights tree ordinance, it was observed that the presence of an arborist would improve the enforcing of rules and regulations surrounding trees.¹² In addition, it was noted that the portion on the restoration of the understory was lacking. Cuyahoga Heights is an increasing suburban development and, thus, is clear-cutting more trees, resulting in canopy loss. Consequently, it is important to stress the restoration of canopy, and it should be outlined in greater detail in the ordinance.

Other examples in the Mill Creek Watershed that required edits, were the Maple Heights and North Randall municipalities. Both municipalities' ordinances were similar in the layout and context in which they were written. After thoroughly reviewing the ordinances, it was determined that both required a party that would properly execute the guidelines and regulations established within the tree ordinance. Neither ordinance had a tree commission, which is imperative in making decisions regarding trees, shrubs, and bushes. These suggestions were made for all ordinances in the 10 watersheds, which should be used to improve the existing ordinances and have greater success to protect trees.

Resulting Ideal Tree Ordinance Model

The model ordinance was compiled to aid in the creation of future ordinances that can be implemented by Cuyahoga County to reduce canopy loss and have improved health outcomes for its citizens by implementing the strongest ordinances possible to protect trees and canopy. The initial conception of the ordinance was countywide. Following feedback and discussions from policymakers it was determined that it would be more advantageous to approach individual municipalities and generate interest and momentum for increased participation. Drawing from existing ordinances around the United States allowed Cuyahoga County Board of Health (CCBH) to explore the most current and innovative tools being employed in real time by municipalities facing similar concerns.

The model ordinance has several main concepts. A permit structure is envisioned to mitigate the wholesale removal of otherwise healthy trees without adequate replanting. Trees with a diameter breast height (DBH) of 6 inches and below are exempted as well as dead trees and those that pose an imminent threat of harm. In other words, the permitting structure anticipates and respects private property rights and strives to find a balance between enhancing tree canopy and allowing property owners to enjoy their land for their own purposes.

Incentivizing tree retention through economic means leverages traditional market-economy measures in the presence of externalities. Indeed, the use of tax incentives has traditionally been an effective and tested means of inflecting desired outcomes.¹³ The model ordinance intends to reward property owners who maintain a predetermined tree density with a modest reduction in local taxes, thereby encouraging tree planting on lots below the threshold and encouraging tree retention in areas already in attainment.

Lastly, citizen participation in the ordinance's policy outcomes is both practical and democratic. The model ordinance creates a Tree Commission, staffed by members of the community, where implementation strategies and tree policy can be developed at a grassroots level.

DISCUSSION

To provide a pragmatic action for tree conservation, the biophysical benefits of trees (carbon sequestration, stormwater management, energy savings, and reduction of climate change) needs to be explained and quantified to mayors, city managers, engineers, and legislators. Carbon sequestration (removal of carbon from the atmosphere during photosynthesis) aids in climate mitigation. A mature tree (approximately 40 years old) can absorb 21.8 kilograms (48 pounds) of carbon dioxide per year,¹⁴ which reduces net pollution produced by combustion and also improves air quality by absorbing soot and other particulate matter. The average vehicle produces about 6.8 kilograms (15 pounds) of carbon dioxide while in motion.¹⁵

In urban areas, stormwater runoff is due to the large amount of impervious surfaces; roads, parking lots, roofs, and sidewalks. This also increases stream and riverbank erosion and reduces water quality. Trees also serve as green, stormwater infrastructure and aid in stormwater management; the architecture of the trees branches, twigs, and leaves retain rain and slow down water release and are effective stormwater runoff mitigation techniques.¹⁶ Trees are a crucial part in the urban hydrologic cycle for the uptake and purification of rain. Climate change, with increasing energy available in the atmosphere, results in more frequent and violent storms, in turn resulting in more stormwater runoff and more frequent flooding,¹⁷ demonstrating trees are a part of a natural-based infrastructure to help reduce stormwater runoff.

Trees also cool the air, increase humidity, and aid in saving costs related to air conditioning usage and insulation as well as reducing indoor and outdoor temperatures.¹⁸ Electricity demand in urban areas increases by roughly 1%-9% for each 2 °F increase in temperature, exacerbated by the urban heat island effect.¹⁹ Additional air conditioning usage contributes to approximately 5%-10% of this electricity demand, which results in excess energy expenditure. Through alleviation of these heat islands it is estimated that, nationally, approximately \$10 billion in energy usage can be saved.²⁰ Due to cooling effects of trees, the urban heat island effect is reduced by evapotranspiration (the process by



which trees respire, releasing water vapor and oxygen) while also reducing the canopy and ground temperatures by providing shade.¹⁸

These benefits improve the health of the urban and suburban population,²¹ while also saving energy costs. By providing scientific data to quantify the beneficial biophysical factors, lawmakers will be better able to create a tree policy and related environmental laws to protect and preserve trees.

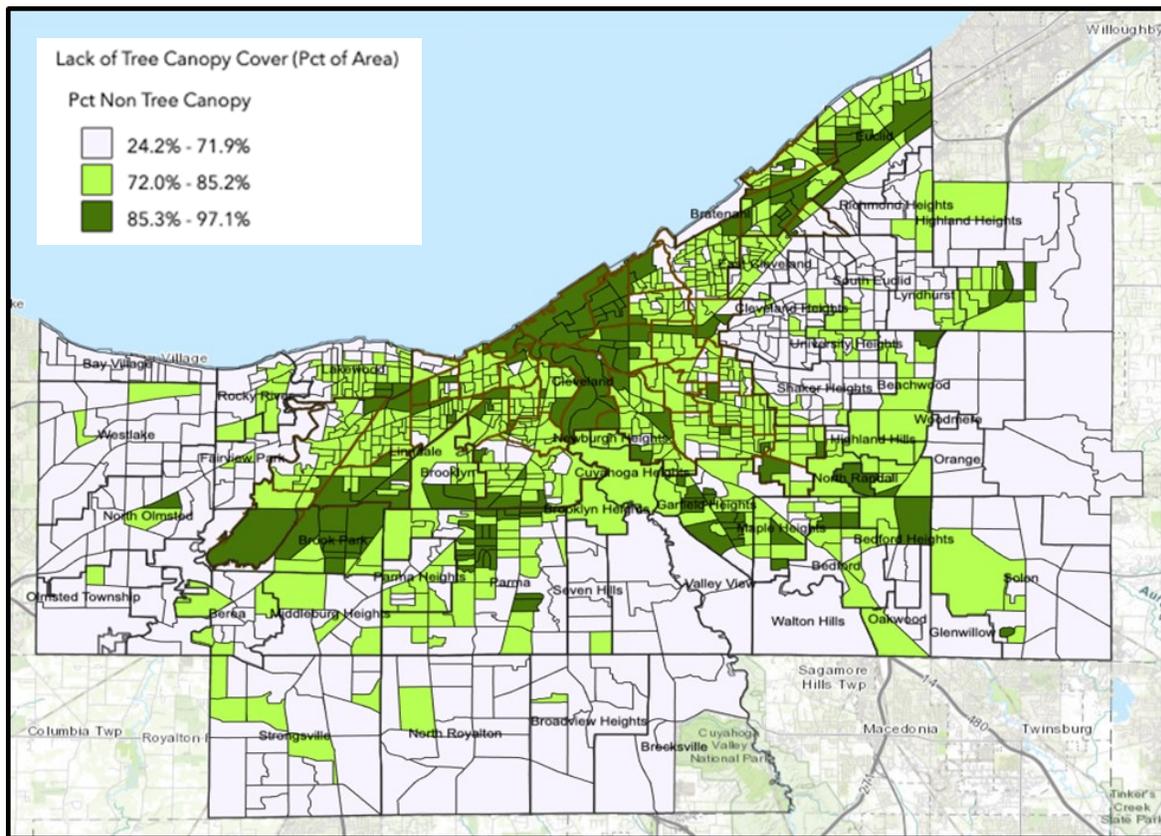
Additional benefits of tree ordinances are essential in cities as they establish a standard for the upkeep of trees and cutting of mature trees. Additionally, trees aid in the maintenance of clean air and water quality. In a study conducted in the Atlanta metropolitan area, the effectiveness of zoning clauses and tree ordinances was analyzed.²² Projects tied to the execution of a tree ordinance significantly improved canopy preservation. It was noted that the ordinances additionally had economic benefits for the area they served. A metropolitan city with an effective tree ordinance policy and plan of execution can expect to save approximately \$10 million to \$15 million annually, with a majority of these savings coming from the green infrastructure benefits that trees provide in terms of stormwater management.²²

It is important to consider variables within Cuyahoga County and how they could influence public health. While there is scarce di-

rect data linking public health and climate change impacts with canopy cover throughout Cuyahoga County, there are associative data showing relations between canopy cover and determinants of health and climate change. Social determinants of health are factors distinct from the medical care that an individual receives that can influence their health.²³ Factors that influence climate change, such as the heat island effect, can be analyzed similarly.²⁴ By looking at such determinants, it is possible to make assumptions regarding how canopy cover influences health and climate change in areas of Cuyahoga County.

Figure 1 shows the lack of canopy cover throughout Cuyahoga County. It is evident that canopy cover is very sparse in urban, city areas. Areas surrounding Cleveland, Parma, Lakewood, and Euclid have a lack of canopy coverage ranging from 85.3% to 97.1%, shown by the dark green in Figure 1.

Taking into account the population in these areas, there is an association between an increased population and a decreased canopy coverage; Cleveland with a population of 361 607 people, Parma at 79 358, Lakewood at 49 658 and Euclid with 48 496 were among the highest in Cuyahoga County as of 2020.²⁵ As the canopy cover is diminished in these areas of such large population density, a majority of the individuals that live in Cuyahoga County will be unable to experience the positive health benefits of trees and



Abbreviations: PCT—percentage

Figure 1. Climate Change Action Plan Climate Change Vulnerability Assessment Map Showing Lack of Canopy Cover in Cuyahoga County, Ohio



will be at a greater risk than those that live in more sparsely populated areas with more canopy cover.

Socioeconomic status is also a large indicator of the health of the individual and is an influential social determinant of health.²⁶ Socioeconomic status affects the lifestyle of an individual and consequently may impact psychological and physical health. Socioeconomic status has a significant positive relationship with physical health, which demonstrates that those of higher socioeconomic status typically have improved health outcomes as compared to those of lower socioeconomic status.²⁷ Research shows that people in higher earning jobs generally work in less manual labor and with more autonomy, which could lead to better public health. In Figure 2, the heavily populated areas surrounding Cleveland and Bratenahl show a high positive correlation between those above poverty level and lack of canopy cover.

Heat islands are generally formed in urban areas and are caused by absorption and emission of heat (infrared radiation) by structures such as buildings, roads, and other dark infrastructure. This process increases the average near-surface temperature of that locale.²⁴ This warming contributes to the effects of global warming

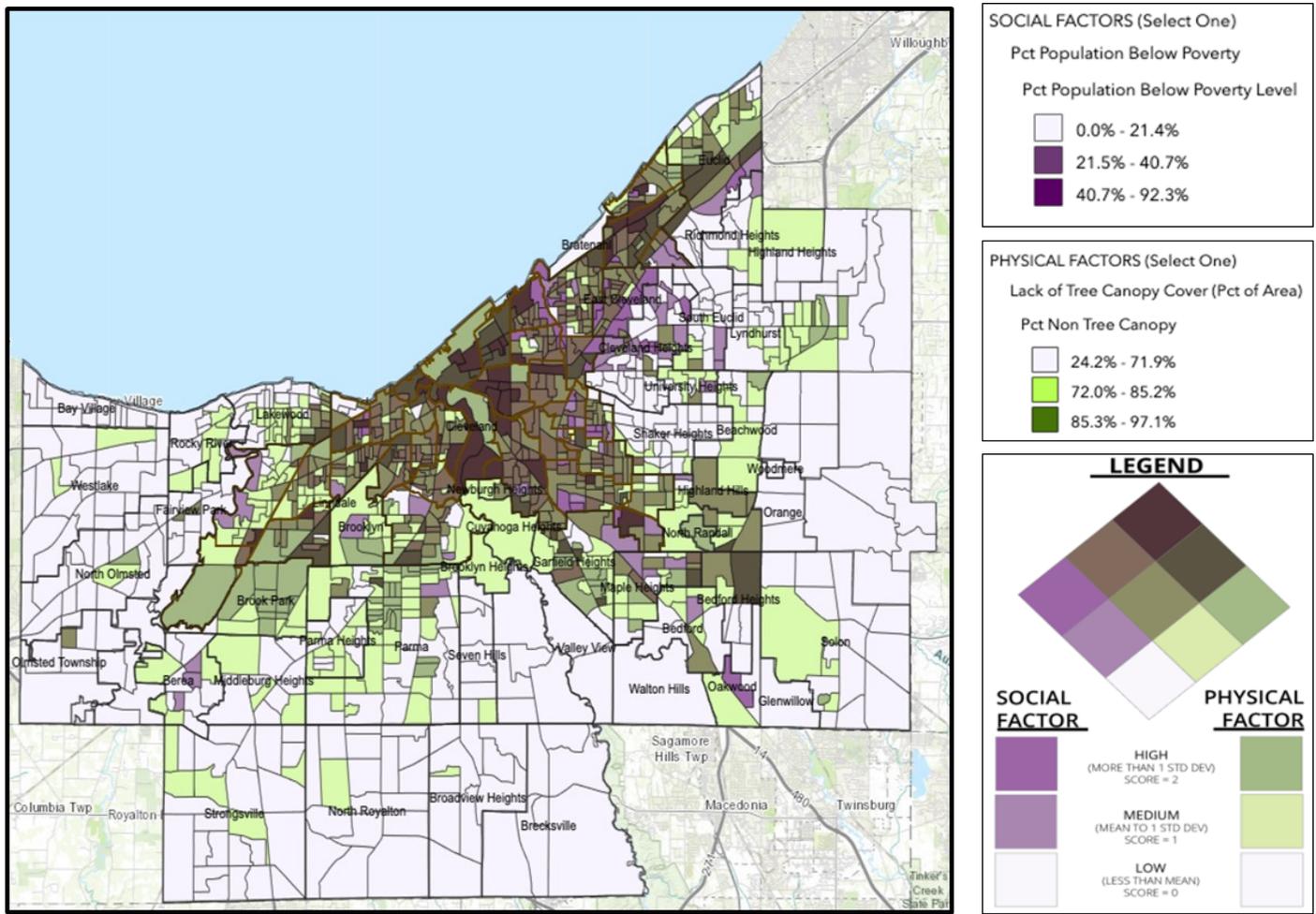
by increasing energy consumption and elevating air pollutants and greenhouse gases as the population and urbanization rates increase.

In Figure 3, areas with minimal canopy cover such as Cleveland, Parma, Lakewood, and Euclid contribute to the urban heat island effect, where the local temperature is increased by an average of 1.6 °C (2 °F). Concurrently, these same areas also have maximal impervious surface area, which is another factor that adds to the urban heat island effect and absorbs heat from the sun (Figure 4). Planting and protecting trees in such areas will provide shade and reflect radiation from the sun, to help in mitigating the effects of global warming.²⁸

PUBLIC HEALTH IMPLICATIONS

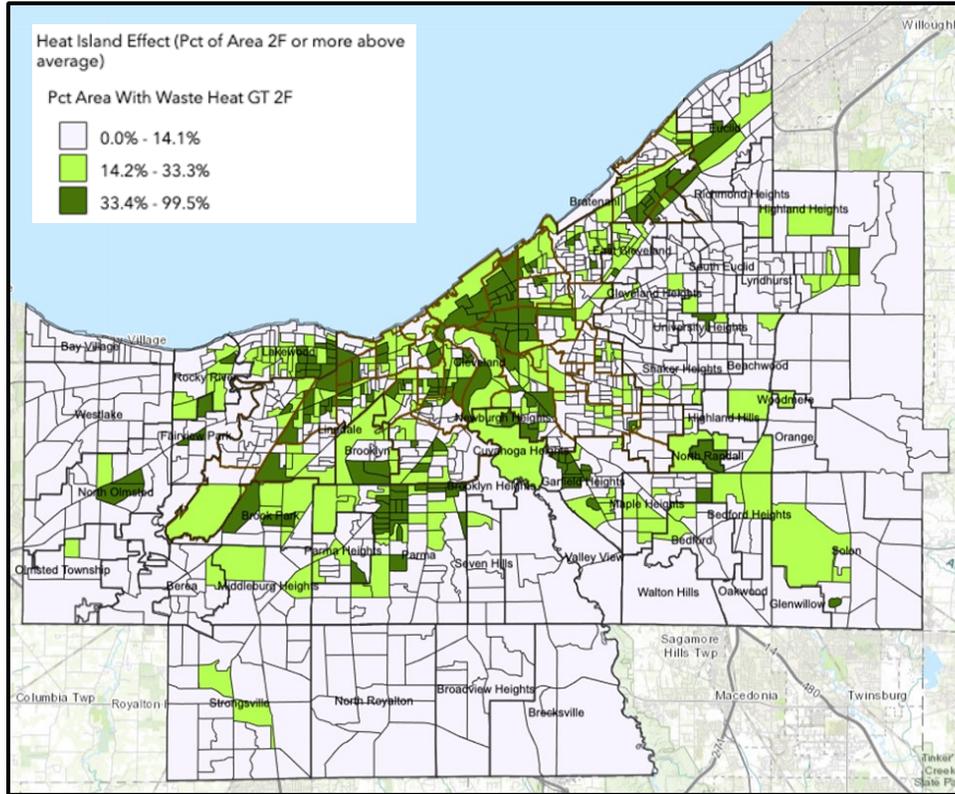
It can be concluded that many of the areas with a high population are primarily impacted by the effects of social determinants of health and climate change. The need to improve tree ordinances is evident, especially in urban and densely populated areas.

For this study to have more effect in Cuyahoga County, it is important to identify objectives and provide management with



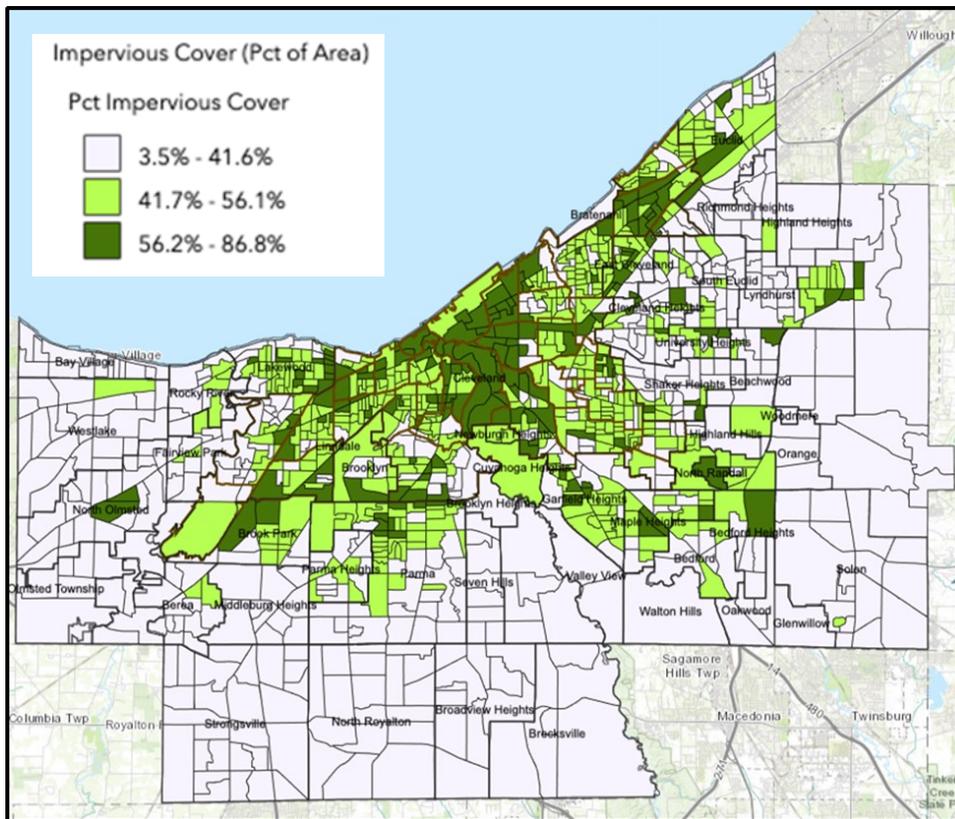
Abbreviations: PCT—percentage

Figure 2. Climate Change Action Plan Climate Change Vulnerability Assessment Map Showing Association Between Areas of Lack of Tree Canopy Cover and Percentage of Population Below Poverty Level



Abbreviations: PCT—percentage, 2F—2 °Fahrenheit; GT—greater than.

Figure 3. Climate Change Action Plan Climate Change Vulnerability Assessment Map Showing Heat Island Effect (percentage of area 2 °F or more above average) in Cuyahoga County, Ohio



Abbreviations: PCT—percentage

Figure 4. Climate Change Action Plan Climate Change Vulnerability Assessment Map Showing Impervious Surface Area in Cuyahoga County, Ohio



suggestions as how best to implement them. These objectives are listed below.

Make the ideal ordinance public knowledge. This would entail having conversations with lawmakers throughout Cuyahoga County and informing them of what could be added to a general ordinance in order for it to adequately protect trees.

Establish contact with all municipalities to update their tree ordinances. As gaps in older ordinances were identified in the smaller municipalities, it would be helpful to offer suggestions about their current ordinances and provide them with options from a suggested 'ideal ordinance.'

Analyze the relationship between presence of trees and health of individuals in specific areas. Research may be conducted on the effects of the relationship between trees and tree policy in localities in Cuyahoga County. This could include more specific analyses of the effects of trees in a highly urbanized setting, such as the City of Cleveland, and how increased tree canopy coverage would benefit the community.

Highlight the importance of what doing nothing and maintaining status quo would eventuate, or show what would be the beneficial effects to protect and increase tree canopy. Taking into account how a loss of tree canopy could potentially affect the public and ecosystem health of the individuals and ecosystem services and functions, increasing canopy would provide data to show how much of an effect the addition of trees could have.

Put the ideal ordinance to work. Translating a model ordinance into city law requires constant evaluation and adjustment to the needs of a particular community—the "open source" structure of the ordinance allows policymakers to edit, remove, or expand its concepts without undermining the effect of the whole. The ideal ordinance must allow a determination of whether it is truly adequate for tree protection and aided in the improvement of public health in the community where it is implemented.

ACKNOWLEDGMENTS

This project was completed with assistance and reference to the Healthy Urban Tree Canopy (HUTC) grant committee, with some portions in person, at individual meetings and some portions remote, with several HUTC grant committee members. The HUTC grant committee is composed of individuals from the Cuyahoga County Department of Sustainability, the Cuyahoga County Planning Commission, the Soil & Water Conservation District, and the Cuyahoga County Board of Health. I would like to thank the CCBH for starting this study and allowing us to further our research, and for the HUTC grant committee for considering these suggestions made to existing tree ordinances and providing ongoing funding to plant and grow more trees to replace the Cuyahoga canopy.

The authors would like to thank Dan Meaney of Cuyahoga County Planning Commission for providing relevant information and data to produce the maps shown as Figures 1, 2, 3, and 4 for the study. These maps are found on the Planning Commissions website via the Vulnerability Assessment Maps Toolkit.

The authors would like to thank Jared Bartley, Soil and Water Conservation District, and Peter Bode, formally of Western Creek Land Conservan-

cy, for their prior work in compiling the 2010 Excel watershed data spreadsheet. We would also like to thank John Mills, Esq., legal counsel for Cuyahoga County Board of Health (CCBH), for his edits, legal details, and suggestions to create the model tree ordinance (Appendix C) for Cuyahoga County. All photographs in Appendix A are courtesy of Robert Brand.

Author Contribution

In October 2022, the results of the study (Venancius, 2022),¹¹ was used to establish a collaboration between the Case Western Reserve University Environmental Law Clinic and the CCBH Legal Counsel to compile the legal framework for a Cuyahoga Tree Ordinance. A 'best practice' draft policy has been compiled and written using legal language suitable for an ordinance. As Ohio is a 'home rule' state, in 2023 and 2024, the Cuyahoga draft tree ordinance was modified to make it suitable for 4 cities (Avon Lake, Euclid, Beachwood and Maple Heights) in Cuyahoga County (personal communication; John Mills, Robert Brand).

Jenish Venancius: Substantial contributions to the conception and design of the work; the acquisition, analysis, and interpretation of data for the work; AND drafting the work for important intellectual content; all authors made substantial contributions to the conception and design of the work, provided final approval of the version to be published, and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Jenish Venancius drafted the work for important intellectual content. Jenish Venancius and Robert Brand were responsible for acquisition and interpretation of data for the work; Karen Mulloy contributed to interpretation of data for the work. Robert Brand, Andrew Morris, and Karen Mulloy critically reviewed the work for important intellectual content.

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APPENDIX A—Clear-cutting

Appendix A. Photographs taken in Broadview Heights, Cuyahoga County, Ohio. Shown is the current land use practice of clear-cutting, resulting in the loss of all ecosystem services and functions, while creating novel habitat for invasive plants and animals. Photographs 1 to 8 show the stages in ‘development’ of a site for housing and illustrate the motivation responsible for the creation of the Cuyahoga Tree Ordinance.



Photographs: 1) Healthy indigenous forest showing good species composition with mature trees, saplings, and protected leaf-covered forest floor. 2) Clear-cutting process starts by removing all trees and understory vegetation, exposing soils to moisture, nutrient and carbon loss, increasing erosion. 3) Mature 100-year-old-plus trees cut while all other trees and vegetation become waste. 4) Water pooling in the foreground, showing clear-cut forest losing all stormwater retention benefits that trees provide, with runoff increasing flooding. 5) Clear-cutting almost completed, requiring stump and waste-tree removal in preparation for grading. 6) Graded site with compacted earth exposing sterile mineral soil. 7) Stormwater retention pond created to replace natural, extensive forest-floor wetlands, habitat for ephemerals. 8) Final phase of development creating black, impervious surfaces, increasing albedo, surface temperatures, stormwater runoff, eliminating seed stocks, indigenous biodiversity, and all ecosystem services and functions. All photographs in Appendix A are courtesy of Robert Brand.



APPENDIX B—Review of Existing Tree Ordinances

A review of the existing tree ordinances, with comments on the 2012 watershed tree ordinance spreadsheet which includes a detailed list of each city's tree ordinances.

Part 1 of 2 (continued on next page)

Watershed(s)	County	Municipality	Tree City?	Tree Commission?	Arborist?	Riparian Setback?	Wetland Setback?	Forest/Tree Regulations?	Tree Size Regulations?	Tree Planting & Management Schedules?	Residential Tree Density Regulations?	Commercial Tree Density (parking lots) Regulations?
Navigation Channel Lower Cuyahoga River Mill Creek	Cuyahoga	Cuyahoga Heights	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Mill Creek Lower Cuyahoga River Cuyahoga River CVNP	Cuyahoga	Garfield Heights	YES	MENTIONED	<u>YES, Ch. 907.02 Trees and hedges (Powers of Parks and Recreation Director)</u>	<u>YES, Ch. 1161 Riparian setbacks</u>	<u>YES, Ch. 1161.04c4 Riparian setbacks (Establishment of designated water-course and riparian setbacks)</u>	<u>Yes, Ch. 907 Trees and Hedges</u>	<u>QUASI, Ch 907.03 Trees and Hedges (Permit required to plant, prune or remove on public property)</u>	NO	<u>Yes, Ch. 907.21 Trees and Hedges (Tree planting required: Fee)</u>	NO
Mill Creek Tinkers Creek	Cuyahoga	Highland Hills	NO	<u>QUASI, Ch. 905 Shade tree commission</u>	<u>YES, Ch. 909.01h Municipal Forestry Program (Definitions)</u>	<u>YES, Ch 1357.08 Construction Site Soil Erosion, Sediment, and Other Wastes and Stormwater Runoff (Construction Site Conservation Plan)</u>	<u>YES, Ch 1357.08 Construction Site Soil Erosion, Sediment, and Other Wastes and Stormwater Runoff (Construction Site Conservation Plan)</u>	<u>YES, Ch. 909 Municipal Forestry</u>	<u>YES, Ch. 905.07 Shade Tree Commission (Street trees species to be planted)</u>	Yes, Ch. 913 <u>Tree planting program</u>	<u>YES, Ch. 901.04 Trees generally (Location of trees)</u>	<u>YES, Ch 1119.12 Residential Townhouse District R-2 (Off-street parking and loading)</u>
Tinkers Creek Mill Creek Lower Cuyahoga River	Cuyahoga	Maple Heights	NO	NO	YES, Ch. 1028.02 Trees (Authority of Director of Service)	YES, Ch. 1224.09a1A Water management and Soil Conservation Regulations (Performance standards)	YES, Ch. 1224.08 Water management and Soil Conservation Regulations (Comprehensive storm water management plans)	<u>Yes, Ch. 1028 Trees</u>	YES, Ch. 1028.14f Trees (Trees planted where there is new construction)	YES, Ch. 1028.04 Trees (Contents of permits for planting; Master Street Tree Plan; substitution)	YES, Ch. 1028.04 Trees (Contents of permits for planting; Master Street Tree Plan; substitution)	YES, Ch. 1294.11B Bufferyard and landscaping (Minimum landscape requirements)
Tinkers Creek Mill Creek	Cuyahoga	North Randall not available online	NO	NO	YES Ch. 1026.02 Trees (Power of Inspector of Buildings)	DEFINED, Ch. 1273.02 EE Comprehensive Stormwater Management (Definitions)	DEFINED, Ch. 1273.02 EE Comprehensive Stormwater Management (Definitions)	YES, Ch. 1026 Trees	YES, Ch. 1255.11 Landscaping (Landscaping Materials)	YES, Ch. 1255.07d3B Landscaping (Minimum Landscape Requirements; Additional Landscaping Requirements)	YES, Ch 1255.09a1C Landscaping (Street Tree and Public Tree Requirements; Requirements for Trees Located on Village-owned Public Property)	YES, Ch. 1255.07b Landscaping (Minimum Landscaping Requirements; Interior Landscaping for Vehicular Uses)



Part 2 of 2 (continued from previous page)

Commercial Tree Density (screening) Regulations?	Street Tree Regulations?	Tree Removal? (public)	Tree Removal? (private)	Protection of Trees, Roots, & Soil?	Tree Replacement?	Restoration of Understory?	Destruction of Trees or Shrubs?	Landscaping	Date of last Entry	JSV comments (11/8/2021)
NO	YES, Ch. 1483.05 (31) Telecommunications and Utility Systems and Facilities (Design and construction requirements; street and other public improvements; technical standards; tree trimming)	NO	<u>YES, Ch. 248.06 Service department (Tree trimming and tree removal service for residents of the Village)</u>	<u>YES, Ch. 1405.03a5B Grading, Filling, or Changing the Topography of Land (Alteration of topography; permit required)</u>	NO	NO	YES, Ch. 642.04 Offenses relating to property (injuring vines, bushes, trees or crops)	NO	2/7/12	Won't an arborist be necessary for any city along with the commission? Add some parts about the restoration of understory as Cuyahoga Heights is an area mainly with increasing suburban population, which may lead to more deforestation.
<u>YES, Ch. 1155.08 Fences, Landscaping and Screening Requirements (Landscaping and screening requirements)</u>	<u>MENTIONED, Ch. 907.21 Trees and hedges (Tree planting required: Fee)</u>	<u>YES, Ch. 907.03 Trees and Hedges (Permit required to plant, prune or remove on public property)</u>	<u>YES, Ch. 907.12 Trees and Hedges (Director's power to trim or remove trees on private property)</u>	<u>YES, Ch. 907.04 Trees and Hedges (Placing Deleterious Substances Near Trees)</u>	<u>YES, Ch. 907.09 Trees and Hedges (Moving of trees)</u>	<u>YES, Ch. 908.07a Use of Public Rights-of-Way by Service Providers (Construction permit and standards)</u>	<u>YES, Ch. 541.06 Property Offenses (Destruction of shrubs, trees or crops)</u>	<u>YES, Ch. 1155.08 Fences, Landscaping and Screening Requirements (Landscaping and screening requirements)</u>	2/7/12	Very in depth, no edits required.
<u>YES, Ch. 1131.05 landscaping, Screening, and Buffering Requirements for All Districts Except R-1 Districts (Screening and buffering)</u>	<u>YES, Ch. 1131.03 Landscaping, Screening and Buffering Requirements for All Districts Except R-1 Districts (Street planted strip)</u>	<u>YES, Ch. 909.08 Municipal forestry (Removal of a tree)</u>	<u>YES, Ch. 905.14 Shade Tree Commission (Pruning, corner clearance)</u>	<u>YES, Ch. 905.19 Shade Tree Commission (Removal or mutation of trees)</u>	<u>YES, Ch. 909.08 Municipal forestry (Removal of a tree)</u>	NO	<u>YES, Ch. 541.06 Property Offenses (Destruction of trees, shrubs, and crops)</u>	<u>YES, Ch. 1131.02 Landscaping, Screening and Buffering, Requirements for All Districts Except R-1 Districts (general landscaping)</u>	2/6/12	May add part about restoration of understory, but may not be required as slightly touched on earlier in the ordinance.
YES, Ch. 1294.07B Bufferyard and landscaping (Screening and buffering)	YES, Ch. 1294.13 Bufferyard and landscaping (Street tree planting requirements)	YES, Ch. 1028.10 Trees (Preservation and removal of trees on public property)	YES, Ch. 1028.08 Trees (Trimming of trees on public and private property)	YES, Ch. 1028.05 Trees (Placing deleterious substances near trees)	YES, Ch. 1028.07 Trees (Moving of trees)	YES, Ch. 884.01 Topsoil removal (Removal; permit required; application)	YES, Ch. 642.06 Offenses relating to property (injuring vines, bushes, trees or crops)	YES, Ch. 1294.11 Bufferyard and landscaping (Minimum landscape requirements)	2/13/12	Maple Heights and North Randall have very similar ordinances. It is evident that the two may require some more detail with regards to leadership of the area.
YES, Ch. 1255.07A Landscaping (Minimum Landscaping Requirements; Perimeter Buffer Landscaping Requirements)	YES, Ch. 1255.09 Landscaping (Street Tree and Public Tree Requirements)	YES, Ch. 1026.12 Trees (Inspector's Power to Trim or Remove Trees on Public Property)	YES, CH. 1026.13 Trees (Village to Treat or Remove Diseased Trees on Private Property)	Yes, Ch. 1026.04 Trees (Placing Deleterious Substances Near Trees)	YES, Ch. 1255.09h Landscaping (Street Trees and Public Tree Requirements; Removal, replating, and replacement in public places)	NO	YES, Ch. 642.04 General Offenses (injuring vines, bushes, trees or crops)	YES, Ch. 1255 Landscaping	3/5/12	Maple Heights and North Randall have very similar ordinances. It is evident that the two may require some more detail with regards to leadership of the area.



APPENDIX C—Model Tree Ordinance Spreadsheet and Cuyahoga County Board of Health (CCBH) Model Tree Ordinance

A Model Tree Ordinance created for Cuyahoga County based on selection of the most suitable sections of the original, existing 59 tree ordinances.

Sections	Ordinance to Fulfill	Watershed(s)	Reasoning
Definitions	Cleveland Heights, "Chapter 1335.02- Definitions"	Doan Brook, Dugway Creek, Nine Mile Creek, Green Creek	Cleveland Heights has a very extensive definitions section, which is important for individuals to understand certain terms in the ordinance.
Member of Tree City USA	-	-	Becoming a part of Tree City USA aids in developing a program for tree conservation that is sustainable and healthy.
Tree Commission	Cleveland, "Chapter 163- Tree Commission"	Big Creek, Mill Creek, Euclid Creek, Lake Erie Drainage, Nine Mile Creek, Dugway Brook, Green Creek, Lower Cuyahoga River	The Cleveland Tree Commission is large, consisting of 19 members to make recommendations to the Director of Parks, Recreation, and Activities, for improvement in tree cover. Additionally, the duties of the tree commission are outlined thoroughly.
Arborist or Consultant	University Heights, "Chapter 1072.02- Tree Control Vested In Director"	Dugway Creek, Nine Mile Creek, Green Creek	The Service Director serves as the arborist. Having an arborist is beneficial as it aids in the direction and supervision of trees in the area.
Riparian Setbacks and Wetland Setbacks	Beachwood, "Chapter 1157- Riparian and Wetland Setbacks"	Euclid Creek, Mill Creek, Tinkers Creek, Doan Brook, Pepper/ Luce Creek	The applicability of the Riparian and Wetland setbacks are explained along with how to establish these types of setbacks.
Forest / Tree Regulations	South Euclid, "Chapter 907- Trees"	Euclid Creek, Dugway, Nine Mile Creek	This section is extensive and additionally adds the aspect of obstructing materials/ nuisances and how to prevent them.
Tree Size Regulations	Cleveland, "Chapter 352.11- Table Containing Screening Intensity"	Big Creek, Mill Creek, Euclid Creek, Lake Erie Drainage, Nine Mile Creek, Dugway Brook, Green Creek, Lower Cuyahoga River	This table demonstrates the requirements for classifications of different types of trees to be considered either light, medium, heavy, or maximum.
Tree Planting & Management Schedules	South Euclid, "Chapter 771.50- Landscape Schedules and Tables"	Euclid Creek, Dugway, Nine Mile Creek	Very extensive list of schedules and species of trees. The species of trees are accompanied by descriptions as to where to plant them alongside their heights, which allows for ease of understanding.
Residential Tree Density Regulations	Bay Village, "Chapter 547.04- Approval to Plant Trees in Public Streets"	Cahoon Creek, Porter Creek	The approval process to plant trees seems extensive, as it is run by numerous individuals in higher power first.
Commercial Tree Density (parking lots) Regulations	Shaker Heights, "Chapter 1253.08- Parking Lot Landscaping and Screening"	Doan Brook, Dugway, Nine Mile Creek, Green Creek	The commercial tree density (parking lots) is outlined in detail with diagrams representing parking lots and necessary landscaping. The visuals aid in the explanation of how trees are to be structured within a parking lot.
Commercial Tree Density (screening) Regulations	Shaker Heights, "Chapter 1253.09- Landscape Buffers and Screening"	Doan Brook, Dugway, Nine Mile Creek, Green Creek	The commercial tree density (screening) provides tables with landscape buffer regulations, which makes it simple to understand.
Prohibited Trees and Areas of Planting	University Heights, "Chapter 1072.12- Certain Trees Prohibited"	Dugway Creek, Nine Mile Creek, Green Creek	Prohibiting certain trees in specific areas and allowing them in others allows the trees to thrive in environments that would allow for their maximal growth.
Street Tree Regulations	Cuyahoga Heights, "Chapter 1483.05- Design and Construction Requirements; Street and other Public Improvements; Technical Standards; Tree Trimming"	Navigation Channel, Lower Cuyahoga River, Mill Creek	This section contains more than just street tree regulations; it contains items such as construction limits, hazardous substances, and installation of electronic equipment, which can strengthen the regulations for street trees.
Tree Removal (public and private)	University Heights, "Chapter 1072.10 and 1072.11- Trimming Trees on Public Property, Trimming Trees on Private Property"	Dugway Creek, Nine Mile Creek, Green Creek	These two sections outline the specific regulations for tree maintenance on public and private property. By selecting both sections from the same ordinance, it is possible to observe the exact differences and similarities in both types of tree removal.
Protection of Trees, Roots & Soil	Shaker Heights, "Chapter 47.01- Injury to Trees and Shrubs"	Doan Brook, Dugway, Nine Mile Creek, Green Creek	The specificity in prohibited substances and actions near trees aids in the reasoning for adding this section.
Tree Replacement	Euclid, "Chapter 1311.17- Landscaping"	Euclid Creek, Euclid City/Lake County, Dugway Creek, Nine Mile Creek, Green Creek	This section takes into account the prior existence of trees in the area to determine which should or which should not be replaced.
Restoration of Understory	Brecksville, "Chapter 1190.043e7- Restoration Plan"	Chippewa Creek, Central County Tribes, Furnace Run	The process for restoration in case of damage is outlined thoroughly and proves to be an adequate process for preventing any further damage.
Destruction of Trees or Shrubs	University Heights, "Chapter 642.04- Injuring Vines, Bushes Trees, or Crops"	Dugway Creek, Nine Mile Creek, Green Creek	The punishments for injuring trees and shrubs are specifically outlined in this section, with no room for alternate interpretation.
Landscaping	Garfield Heights, "Chapter 155.08- Landscaping and Screening Requirements"	Mill Creek, Lower Cuyahoga River	Many of the standard terms are defined in this section to ensure adequate care is taken when assessing whether a tree can or cannot be planted in an area. For example, 'standard plant,' 'standard shrub,' and 'standard tree' are among those defined.
Tree Pathogens and Arthropod Pests	University Heights, "1072.13,14- Dutch Elm Disease, Rights of Director"	Dugway Creek, Nine Mile Creek, Green Creek	It is necessary to state the required actions for when a tree becomes diseased with a certain pathogen, to prevent other flora and fauna from being affected. This section should be rewritten for other pathogens and arthropods (eg, oak wilt disease, spotted lantern fly) based on the pests that are present in each municipality.



Cuyahoga County Board of Health (CCBH) Model Tree Ordinance

ORDINANCE NO. 2024-XX

INTRODUCED BY:

MOTION FOR ADOPTION BY:

CO-SPONSORED BY:

AN ORDINANCE ENACTING NEW SECTION xxx THROUGH xxx TO CHAPTER xxx TO PROVIDE MINIMUM STANDARDS TO PROTECT, MAINTAIN, AND AUGMENT TREES AND TREE CANOPY CITYWIDE, AND DECLARING AN EMERGENCY.

WHEREAS, in accordance with Article X of the Ohio Constitution, the [City] adopted its own charter, thereby asserting home rule authority. Under this Charter, the legislative power of the City, including the power to introduce, enact and amend ordinances and resolutions relating to all matters within the legislative power, is vested in the City Council; and

WHEREAS, the City Council may exercise all powers specifically conferred by the Charter or that the Constitution and laws of Ohio grant or do not prohibit. This includes the concurrent exercise by the City of all or any powers vested in municipalities by the Ohio Constitution or by general law; and

WHEREAS, the urban tree canopy of both Cuyahoga County is in decline, at 37.3%; and

WHEREAS, Council finds that people are healthier and happier when they live with trees, and living with trees reduces stress-related diseases and depression, lung disease, and asthma, and that trees remove contaminants from both air and soil; and

WHEREAS, living with trees enhances people's lives in many ways, including more stable neighborhoods, increased property values, and better quality of life. This proposed Ordinance seeks to preserve and protect these health outcomes by promoting minimum standards for retention of existing trees, and augmentation of the future tree canopy; and

WHEREAS, this Ordinance recognizes that trees are keystone species to the overall health and stability of the local and global environment, and are essential to combat Climate Change and Biodiversity Collapse; and

WHEREAS, trees sequester carbon; provide cooling shade decreasing urban heat island effect and accompanying ground-level ozone; provide food and shelter for humans and other species; this proposed Ordinance encourages urgent and prolonged support of County, municipal, NGOs, and citizen groups focused on retention and augmentation of the tree canopy;

WHEREAS, the unnecessary removal of healthy trees degrades the City's tree canopy, creates nuisance, and is detrimental to the aesthetic and cultural values of the City; and

WHEREAS, the City Council desires to better protect and preserve the City's trees with these measures.

NOW, THEREFORE, BE IT ORDAINED by the council of the [City], county of Cuyahoga, state of Ohio that:

Section 1. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

"Definitions

- (a) Wildlife snag means a dead or dying tree left in place to decompose naturally and to provide a habitat for the forest biome.
- (b) Canopy means the high, overarching covering provided by trees in leaf.
- (c) Critical Areas means any area that is subject to natural hazards or a land feature that supports unique, fragile, or valuable natural resources including fish, wildlife, or other organisms or their habitats or such resources that carry, hold, or purify water in their natural state. Critical Areas includes associated buffers of perennial or intermittent wetlands and hydraulically connected steep slopes.
- (d) DBH means diameter at breast height, or 4.5 feet from the ground.
- (e) Exceptional Tree means a tree with historic or cultural value or that by reason of age, rarity, location, size, aesthetic quality, or endemic status is designated by the City Tree Commission to be worthy of preservation.
- (f) Field Check means a survey of existing conditions conducted on site.
- (g) Forest Management Plan means a written plan prepared and signed by a Qualified Tree Professional that prescribes measures to optimize production, utilization, regeneration, and harvest of timber, including schedule and timetables for the various silviculture practices used on forestlands, to maximum of 20 years.
- (h) Grubbing means the removal of understory vegetation from a site.
- (i) Hazard Tree means a tree which meets all of the following: 1) structural defects and/or disease which makes it subject to a high probability of failure; 2) in proximity to persons or property that can be damaged by tree failure; 3) a high to extreme risk rating



using the International Society of Arborists Tree Risk Assessment Qualification (TRAQ) method in its most current form; and 4) the condition of the tree cannot be remedied with reasonable and proper arboricultural practices.

- (j) Healthy Tree means a tree with a minimum of 30% live crown, a full complement of needles, or dark green foliage, appropriate for the species, with little to no evidence of insects or disease.
- (k) ISA means the International Society of Arboriculture.
- (l) Land Use Permit means a permit issued by a public authority such as the Cuyahoga County Zoning Commission.
- (m) Large Tree means a tree attaining a height of more than seventy (70) feet with a mature spread of thirty-five (35) feet or more.
- (n) Medium Tree means a tree attaining a height of between thirty (30) and seventy (70) feet with a mature spread of twenty-five (25) feet or more.
- (o) Municipal Arborist means an advanced qualification for an ISA Certified Arborist that focuses on the special needs of urban trees.
- (p) Property Line means the outer edge of a street or highway right-of-way.
- (q) Public Places means all lands explicitly designated for public use.
- (r) Public Tree means a tree growing within a Treelawn or on any public land where otherwise indicated.
- (s) Qualified Tree Professional means a tree care professional with an ISA TRAQ credential.
- (t) Remove or Removal means to do away with or eliminate a tree by digging it up, cutting it down, or damaging it to the point it is unable to survive.
- (u) Replacement Tree means a newly planted tree in the site where a previously standing tree was removed and is a minimum size of six (6) feet in height measured from top of the root flare, with a minimum trunk diameter of one (1) inch measured at four (4) inches above the top of the root.
- (v) Small Tree means a tree attaining a height of between fifteen (15) and thirty (30) feet with a mature spread of fifteen (15) feet or more.
- (w) Transplant means to relocate a living tree to a new location and replant it.
- (x) Tree Preservation Plan means a document that details actions to prevent damage or removal of existing trees.
- (y) Tree Replacement Plan means a document that identifies locations, species, and size for planting replacement trees.
- (z) Treelawn means the part of a street or highway not covered by sidewalk or other paving, lying between the property line and the edge of the street.
- (aa) Tree Topping means the practice of removing whole tops of trees or large branches and trunks from the tops of trees, leaving stubs or lateral branches that are too small to assume the role of a central leader.
- (bb) Urban Forest means the shrubs, trees, vegetation and associated natural features that collectively make up the City canopy and its growing zone.
- (cc) Invasive species means any species of tree identified in OAC 901:5-30-01.”

Section 2. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Urban Tree Canopy Protection Program

There is hereby created the Urban Tree Canopy Protection Program to provide minimum standards for retention of existing trees and to restore lost tree canopy. Practicing arboriculture to these standards will ensure a healthy and attractive community; increase the overall tree canopy in an equitable manner that ensures all residents have access to the benefits that trees provide; maintain a positive community image; enhance the quality of life of City residents; protect and enhance property values; increase privacy between and within residential zones; increase compatibility between different land uses; increase carbon sequestration; promote retention and protection of existing noninvasive tree species; reduce the impacts of development on stormwater drainage systems and natural habitats; absorb wind and noise; enhance air quality; conserve valuable water resources; provide benefits of green stormwater infrastructure; and provide both mitigation and adaptation for impacts of Climate Change and biodiversity collapse by, among other things:

- (a) Providing visual relief from large expanses of parking areas and reduction of perceived building scale;
- (b) Providing physical separation between residential and nonresidential areas;
- (c) Providing visual screens and barriers as a transition between differing land uses;
- (d) Retaining existing vegetation by incorporating them into site designs;
- (e) Promoting water-efficient landscaping by using appropriate native or climate-adapted trees and vegetation, which, once established, typically require less water;
- (f) Protecting trees during construction activities from damage to tree roots, trunks, and branches;
- (g) Preventing the introduction of noxious tree species in landscaping that may damage surrounding habitats over time;
- (h) Absorbing greenhouse gas emissions,
- (i) Reducing air pollution by removing dangerous particulate matter, nitrogen oxides, sulfur dioxide, and deterring the formation of ozone, known to aggravate asthma;
- (j) Providing wildlife and pollinator food and habitat;
- (k) Maintaining and increasing tree canopy equitably within the City and County;
- (l) Mitigating the impacts of the urban heat island effect by increasing shade, thereby lowering the ambient temperature and reducing energy consumption necessary to cool buildings;
- (m) Providing increased areas of permeable surfaces to increase infiltration of surface water into groundwater resources to reduce the quantity of stormwater discharge; reduce sediment runoff;
- (n) act to bioaccumulate toxic substances, e.g. heavy metals, PCBs and PFAS; and
- (o) improve the quality of stormwater discharge.”



Section 3. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Applicability, Permitting, and Exemptions

- (a) The regulations of this Section shall apply to all lands in the City except as stated herein.
- (1) No permit shall be issued for the construction, alteration or addition to a building or the grading or alteration of the land surface without conformance to the provisions of this Section. The regulations shall specifically apply to the following:
 - (A) All development plans and new construction shall comply with the requirements of this Section.
 - (B) All single-family subdivisions and development shall comply with this Section.
 - (2) No tree with a DBH of six (6) inches or greater shall be cleared or removed without a tree removal permit issued by the City Arborist, unless otherwise exempt as stated herein.
 - (A) No tree removal permit shall be issued for any parcel of land or development which requires a site approval plan until a Tree Preservation Plan is approved by the City Arborist.
 - (B) The City Tree Commission may adopt preservation and protection guidelines to further the purposes of the Urban Tree Canopy Protection Program. The guidelines may include, but are not limited to:
 - i. Phasing of tree removal and replanting;
 - ii. Tree preservation, protection, replacement, and planting standards and procedures;
 - iii. Recommended species and varieties of Replacement Trees.
 - (C) The City Arborist may seek independent review of any land use application that involves tree removal or land clearing at the City Arborist’s sole discretion by an independent qualified tree professional, at the applicant’s expense.
- (b) The following activities and uses are exempt from this Section:
- (1) Lands owned by the County of Cuyahoga, Ohio, the Cuyahoga County Land Reutilization Corp., or the State of Ohio, including its administrative agencies, departments, and commissions.
 - (2) The removal of dead trees;
 - (3) Removal of trees below six (6) inches DBH;
 - (4) The removal of trees necessary for the construction, operation, and maintenance of sanitary and storm sewers;
 - (5) Removal of trees by the City for any governmental function, or by emergency responders in situations involving danger to life or property, fire hazards, or interruption of traffic;
 - (6) Trees located in Critical Areas;
 - (7) Any land upon which a bona fide agricultural or commercial nursery or tree farm exists;
 - (8) The removal of trees required for the installation, maintenance, and repair of underground and overhead public or private utilities.
 - (9) The removal of invasive species;
 - (10) Timber harvesting operations which qualify as forestry land management practices or agricultural operations not incidental to development, on tracts which are zoned for or used for forestry, silvicultural, or agricultural purposes, and
 - (11) Tree removal required by other federal, state, or local laws.
- (c) If a tree removal permit cannot be obtained before commencement of work, a remedial permit must be submitted to the City Arborist within fourteen (14) calendar days following tree removal unless the tree removal is exempt under this Section.”

Section 4. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“City Tree Commission

- (a) There is hereby created and established a City Tree Commission. The City Tree Commission consists of five (5) members, citizens, and residents of Cuyahoga County, at least three (3) of whom must be residents of the City. All members will be appointed by the Mayor with the approval of the Council, and serve at the pleasure of the Mayor.
- (b) At least three (3) members shall be experienced in or have extensive knowledge of the care of trees through documented certification and/or education including training through the Ohio Department of Natural Resources Division of Forestry known as the Tree Commission Academy, or other silviculture organizations.
- (c) In addition, a member of the Council and the Director of Service shall serve as *ex officio* members of the Commission. These officials or their designees shall attend all meetings of the Commission.
- (d) The term of persons appointed to the City Tree Commission shall be three (3) years.
- (e) Members of the City Tree Commission shall serve without compensation.
- (f) The duties of the Tree Commission are:
- (1) To assist the properly constituted officials of the City as well as citizen and community groups, in the dissemination of news and information regarding the selection, planting, and maintenance of trees within the corporate limits of the City, whether they be on private or public property.
 - (2) To study the Urban Forest including problems involving the tree population and distribution of the City, determine needs, compose, and review annually a tree plan and seek ways to implement it.
 - (3) To provide regular and special meetings at which the subject of the Urban Forest may be discussed by the citizens of the City.
 - (4) Determine, as resources allow, areas where appropriate trees could exist but are absent.
 - (5) To represent the City and its residents in public forums and before public bodies.
 - (6) To seek and apply for grants or public funding to further the objectives of the Urban Tree Canopy Protection Program.
 - (7) To approve and maintain a current list of Exceptional Trees within the City.
- (8) (g) Within a reasonable amount of time after the appointment of the City Tree Commission, the Commission shall meet and



- organize by the election of a chairman, vice-chairman, determine committees, and standing committee chairs as needed.
- (h) The City Tree Commission shall provide for the adoption of rules and procedures and for the holding of regular and special meetings as said Commission shall deem advisable and necessary in order to perform the duties set forth. A journal of proceedings and activities is to be recorded.
- (i) A majority of voting members shall constitute a quorum for the transaction of business.
- (j) The City Tree Commission may engage in any other lawful activity in pursuit of the mission of this commission which may benefit the Urban Forest including:
- (1) Apply for Tree City USA status with the National Arbor Day Foundation.
 - (2) Conduct seminars and public education programs.
 - (3) Review applications for tree plantings.
 - (4) Organize tree plantings and care activities.”

Section 5. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“City Arborist

- (a) There shall be one City Arborist, appointed by the Building Commissioner after certification by the Civil Service Commission of the City in accordance with its rules and regulations and in further compliance with the civil service statutes of the State.
- (b) The City Arborist shall, where possible, be a person skilled or trained in forestry, ISA certified with addition credentials of Municipal Arborist and Tree Risk Assessment Qualified.
- (c) Subject to the provisions of this Section, the City Arborist shall establish guidelines for the planting, maintenance, and removal of trees on both the public and private lands within the City; maintain a City-wide tree inventory of trees with a DBH of greater than six (6) inches, revised at least annually; attend all meetings of the Tree Commission and provide its members with professional recommendations, as needed.
- (d) The City Arborist shall have the authority to issue, deny, or revoke permits under Section xxx to regulate the planting, maintenance, and removal of trees on public and privately owned properties to preserve the integrity of the Urban Forest, and to create such applications and forms for public use.
- (e) The City Arborist shall have the authority to affix reasonable conditions any permit issued in accordance with Section xxx, including requirements for the replacement of trees being removed.”

Section 6. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Exceptional Trees

- (a) Removal of an Exceptional Tree shall not occur before the issuance of a major tree removal permit pursuant under the following conditions:
- (1) On an undeveloped lot, Exceptional Trees shall not be removed unless:
 - (A) The tree(s) is determined to meet the criteria of a Hazard Tree by a Qualified Tree Professional; or
 - (B) The tree(s) poses an imminent risk to an inhabited structure.
 - (2) On a proposed development site, Exceptional Trees shall not be removed unless:
 - (A) They are determined to meet the criteria of a Hazard Tree by a Qualified Tree Professional; or
 - (B) A Qualified Tree Professional determines the tree does not meet the definition of a Healthy Tree; or
 - (C) If retention will limit the constructible building coverage to less than eighty-five (85) percent of the maximum building coverage area allowed; or
 - (D) For a single-family residence, building coverage may be increased by twenty (20) percent or a reduction of the front setback by up to ten (10) feet.
- (b) Exceptional Trees shall be protected during all permitted construction with concrete “K” barriers placed at three (3) times the diameter from the trunk.”

Section 7. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Permits

- (a) No person may clear land of trees nor remove any tree with a DBH of six inches (6”) or greater without having first obtained a permit pursuant to the provisions of Section xxx unless otherwise exempted.
- (1) A Major Tree Removal Permit is required for the removal of a large tree or exceptional tree.
 - (2) A Tree Removal Permit is required for the removal of a medium tree or small tree.
 - (3) A Transplant Permit is required for the transplant of a medium tree, large tree, or exceptional tree.
- (b) Any person wishing to obtain a permit to remove, cause to be removed, or relocate a tree with a DBH of six (6) inches or greater, must make an application to the City Arborist and paying a fee as is established herein.
- (c) Where an application for a major tree removal permit as required by this Section has been submitted, no such permit may be issued until a Tree Preservation Plan for the lot or parcel has been reviewed and approved by the City Arborist. The Tree Preservation Plan must show the following information sufficient to enable the determination of matters required under these regulations:
- (1) The shape and dimensions of the lot or parcel, together with the existing and proposed locations of all structures, improvements, and utilities if any.
 - (2) The location of all existing trees with a trunk diameter of six inches (6”) or more DBH, identified by common or botanical name. Any trees proposed to be transplanted or removed must be separately marked. Groups of trees in close proximity, three-to-five foot (3-5’) spacing or closer, may be designated as a “copse” of trees, and the predominant species, estimated



number and average size must be listed.

- (3) A statement showing how trees not proposed for removal are to be protected during land clearing and construction, e.g., a protective barrier.
 - (4) The location and dimensions of all setbacks and easements.
 - (5) Statements as to grade changes proposed for the lot or parcel.
 - (6) Any proposed Replacement Trees, pursuant to Section xxx.
 - (7) All trees and wildlife snags to be retained shall be conspicuously identified by some method, such as painting or flagging, prior to field inspection. Where protective barriers are necessary to prevent damage to a tree that is not to be removed, such barriers shall be erected, distanced three (3) times the diameter of the tree.
 - (8) A topographical survey sealed by a registered engineer or registered surveyor, which shows the information set forth in subsections (c)(1) through (7) above. A Tree Preservation Plan may substitute an aerial or satellite image of suitable quality (minimum 1" equals 200'), to facilitate plan review.
- (d) If there are no trees greater than six inches (6") DBH located on the site to be developed which are required to be protected under the provisions of this Chapter, the applicant shall so state in the application for a "No Tree Verification." If substantiated by the City Arborist, the applicant shall be relieved of the necessity of complying with the provisions of this Chapter in regard to the removal of trees.
- (e) Any permit issued under this Section are valid for up to one (1) year from the date of issuance.
- (f) Land clearing on an undeveloped lot for the purpose of future development is prohibited."

Section 8. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

"Permit Procedure

- (a) Removal or transplant of trees must be field-checked by the City Arborist prior to the issuance of a permit. The City Arborist may request a recommendation concerning the application from other City departments. The City Arborist must conduct field checks within ten (10) business days of receipt of an application submitted under Section xxx.
- (b) Each applicant, at the time the application is filed, shall pay a nonrefundable permit fee of one hundred dollars (\$100.00) for each single-family residential lot and a nonrefundable permit fee of one hundred fifty dollars (\$150.00) for each lot other than a single-family residential lot.
- (c) The City may withhold the issuance of any permit, building permit, or certificate of occupancy, on any property until the provisions of this Chapter, including conditions of any permits issued under Section xxx, have been fully met.
- (d) Any person adversely affected by a decision of the City Arborist or any other City employee in the enforcement or interpretation of any of the terms or provisions of this Ordinance may appeal such decision to the Board of Zoning Appeals.
- (e) Once a permit is issued, the applicant must display it continuously on site while trees are being removed, transplanted, or replaced and for ten (10) days thereafter. As a condition to the issuance of a permit, the applicant must agree in writing to allow entry onto the property by representatives of the City to inspect the permit during normal business hours and at any time that work is being performed. Failure to allow such entry is unlawful, constitutes a violation of Section xxx, and immediately voids any permit previously issued.
- (f) At the time of application, the applicant shall deposit with the City an amount of five hundred dollars (\$500.00) to ensure compliance with the provisions of this Chapter. After construction or development is completed, the City Arborist shall conduct an inspection. If the inspection shows that the applicant has complied with all of the provisions of this Chapter and any permit conditions, the five hundred dollars (\$500.00) shall be returned to the applicant. If the inspection shows that the applicant has failed to comply with all of the provisions of this Chapter or the permit conditions, in addition to the penalties and provisions set out in this Chapter, the applicant shall forfeit to the City the portion of the five hundred dollars (\$500.00) necessary to remedy the noncompliance.
- (g) All permit applications pursuant to Section xxx must be submitted in a form as prescribed by City Arborist and with all required fees. All such applications must include, at a minimum, the following:
 - (1) A written statement of the reason for the removal or transplant;
 - (2) A basic site plan or image showing the approximate location of large and Exceptional Trees on the site, including their size, species, condition, and clearly designating which tree(s) will be removed and which tree(s) will be retained. The application must also show all existing structures, driveways, and other impervious surfaces on the site.
 - (3) Verification that tree(s) proposed for removal or transplant are not in a Critical Area and an acknowledgment that tree removal will not result in a lot losing attainment under Section xxx.
 - (4) For replacement trees, a Tree Replacement Plan showing the location, size, species, and quantity of new trees in accordance with standards set forth in this Chapter
- (h) The City Arborist may request additional information as needed to allow adequate review of the proposal, but the City Arborist must approve, approve with conditions, or deny an application for permit within 30 calendar days.
- (i) Where it appears that this Chapter is being or is about to be violated, the chief legal officer of the Municipality may bring an action to enjoin the violation. This action is an additional remedy not dependent on the adequacy of the remedy at law."

Section 9. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

"Exceptional Tree Tax Deduction Incentive

- (a) In an effort to incentivize the preservation of Exceptional Trees on private lands, City residents may deduct up to three thousand dollars (\$3,000) per Exceptional Tree for qualified expenditures made during the taxable year to maintain the trees on private properties pursuant to these guidelines:
- (b) The tree must be designated as an Exceptional Tree by the City Tree Commission.



- (c) Qualified expenditures are reasonably necessary expenses incurred to maintain the Exceptional Tree (excluding interest).
- (d) No deduction is allowed in more than one (1) taxable year out of every three (3) consecutive taxable years. The deduction is allowed for amounts paid in taxable years beginning after January 1, 2023.
- (e) To apply for the tax deduction, an affidavit signed by a Qualified Tree Professional of the City Tree Commission stating that the amount of expenditures is deemed reasonably necessary must be attached to an applicant’s most recent tax return. The affidavit also must include the following information: (1) type of tree, (2) location of tree, and (3) description and amount of expenditures made to maintain the tree. The affidavit must be notarized.”

Section 10. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Tree Credits

(a) Properties with sufficient numbers of trees contribute to the health of the Urban Forest. To incentivize tree planting and retention, and to disincentivize unnecessary tree removal, there is created the Tree Credit program, subject to the requirements of this Chapter.

- (1) A property that meets the required minimum tree credit density is in attainment.
- (2) Subject to the provisions of Chapter 890 and state law, a lawful owner of a property in attainment for the purposes of this Section may claim a deduction of two percent (2%) on municipal income tax otherwise due and owing to the City, per calendar year.
- (3) Any lot that in its current condition is not in attainment must be brought into attainment by the planting of new trees when the following thresholds are met, unless attainment will limit the developable area to less than eighty-five (85) percent of the maximum buildable area:
 - (A) Construction of a new structure that is five hundred (500) square feet or larger; or
 - (B) Construction of an addition to an existing structure where the addition is five hundred (500) square feet or larger.
- (4) The Tree Credit program is voluntary; no penalty is incurred for a property not in attainment.

(b) Only properties in attainment are eligible to receive a Tree Credit deduction. A minimum tree credit density must be maintained at all times on each lot as specified in the table below, regardless of development status. Trees may consist of existing small, medium, large, exceptional trees, or a combination. Only Healthy Trees can be used to satisfy the required minimum tree credit density.

Table 1: Minimum tree credit density

Land Use Type	Required minimum trees per 1000 square feet of developable area
Single-family development (detached dwellings, ADUs and DADUs) and townhouses on individual lots.	1
Multi-family development (attached dwellings including townhouse apartments and cottage housing).	1
Commercial, industrial, or nonresidential lots.	0.15

(c) The minimum tree credit density is applied to the property’s developable area. Developable area excludes Critical Areas, public street rights-of-way, private streets, shared driveways, and public trails. Fractions may be rounded to the next whole number. For example: If a single-family lot has a developable area of 5,400 square feet, the minimum required tree credits would be five (5) ($5,400/1,000 = 5.4$ rounded down to 5), which can be attained with one tree worth five credits, five trees worth one credit, or any combination thereof.

(d) Lots in excess of 10,000 square feet must have a minimum of fifty percent (50%) trees with a DBH of less than six inches (i.e., newly planted trees) to qualify for a tree credit deduction.

(e) If a lot is to be subdivided, the required minimum tree credits density shall be applied to the developable area of the short plat or subdivision. Additionally, each individual lot requires a minimum of two tree credits per lot. As an example, if a lot had 10,000 square feet of developable area, it would require ten tree credits for the entire property ($10,000/1,000 = 10$). If the parcel was divided into four (4) lots of equal size, each of the lots would require a minimum of two tree credits, for a total of eight tree credits (4 lots x 2 credits per lot = 8 tree credits). The remaining two tree credits (10 credits - 8 credits = 2) can be obtained on any combination of lots. Trees located within a Critical Area may not count towards that lot’s required minimum tree credits.

(f) Trees growing on a Property Line shall count as half (1/2) of the tree credits listed in the table below.

Table 2: Tree credits

Tree Diameter at DBH	Credits per tree
< 6 inches	1
6-10 inches	2
10.01-14 inches	3
14.01-18 inches	4
18.01-22 inches	5
22.01-26 inches	6
26.01-30 inches	7
30 or more inches	9



Section 11. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Forest Management Plan

(a) The City Tree Commission and City Arborist will jointly develop a Forest Management Plan to manage a forested City over an extended period of time and avoid inconsistent practices that can lead to the degradation of the Urban Forest. Consistent with this Chapter, the Forest Management Plan will allow for allows for lawful tree removal, pruning, and overall vegetation management of a property. A Forest Management Plan must be approved by a Qualified Tree Professional before implementation. The plan will identify current Urban Forest conditions and considerations for management over a minimum of ten(10) years.

(b)The Forest Management Plan may include the following:

- (1) A description of the purpose of the plan including goals that are strategic, measurable, ambitious, realistic, time-bound, inclusive, and equitable;
- (2) Mapping of current conditions including Critical Areas;
- (3) A description of the forest health including pests, pathogens, and noxious species;
- (4) Urban Forest inventory including a map and list of all Large and Exceptional Trees proposed for management;
- (5) Photos of trees and understory composition;
- (6) A description of wildlife habitat;
- (7) A description of existing structures and utilities;
- (8) Forest management policy recommendations.”

Section 12. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Replacement Trees

(a) Replacement Trees must be planted on a property from which medium, large, or exceptional trees are removed, whether or not pursuant to a permit. The City Arborist must make an individualized assessment of the impact of tree removal, including environmental degradation and mitigating factors, before determining the appropriate number of replacement trees and documenting the findings in a Tree Replacement Plan. Any Tree Replacement Plan must be roughly proportional to the impact of the removal, must be replaced in accordance with this Section, and follow the following standards.

- (1) An exceptional, healthy tree lawfully removed by permit requires replacement at a ratio of up to three (3) trees for each tree removed.
- (2) A Large, healthy tree lawfully removed by permit requires replacement at a ratio of up to two (2) trees for each tree removed.
- (3) All other trees lawfully removed by permit require replacement at a ratio of one (1) tree for each tree removed.

(b) To the greatest extent possible, all Replacement Trees should be planted:

- (1) Where removed trees previously existed;
- (2) Within Critical Areas; or buffers if recommended by the City Arborist
- (3) In locations appropriate to the species’ growth habit and horticultural requirements;
- (4) Away from areas where infrastructure damage is likely to occur, including utility easements;
- (5) To provide screening of the development from adjacent properties, where appropriate;
- (6) In areas that connect or are adjacent to sensitive areas or other open spaces, where appropriate; and
- (7) With consideration of the trees’ maturation and maintenance requirements, especially for those to be planted next to or under overhead utility lines.
- (8) To promote the community benefits identified in Section xxx.
- (9) Using accepted silviculture principles to create the right place for the right tree.

(c) Replacement Trees must be native to Ohio or climate-adapted, and planted with the following requirements, unless the City Arborist has approved alternative specifications:

- (1) Soil shall be loosened within the planting hole three (3) times the widest dimension of the root ball;
- (2) The top of the root ball shall be placed at finished grade and a four (4) inch high soil or berm shall be constructed around the root ball edge;
- (3) The root ball shall be placed on existing or compacted soil to prevent settling;
- (4) Four (4) inches of woodchip or bark mulch shall be placed over the loosened soil, tapering so no woodchip or bark mulch touches the tree trunk; and
- (5) Organic matter or fertilizer shall be incorporated with native soils as needed according to best management practices.

(d) Neither invasive species nor Prohibited Trees, as defined in Schedule B may be Replacement Trees.

(e) Installation of Replacement Trees must comply with all material terms and conditions of a Tree Preservation Plan, or any other permit duly authorized by this Chapter.

(f) Subject to the requirements of Section xxx, a property owner must replace an illegally removed tree pursuant to the following table:

Table 3: Tree Replacement for Illegal Removal of Trees

Diameter at standard height of tree removed	Number of required Replacement Trees
6-10 inches	1
10.01-14 inches	Up to 2
14.01-18	Up to 3
18.01-22	Up to 4
22.01-26	Up to 5
26.01-30	Up to 6
Greater than 30 inches	Up to 7



(g) At the sole discretion of the City Arborist, a tree replacement fee-in-lieu may be requested by a person subject to this Section, to pay a fee in the amount of one hundred dollars (\$100) for any replacement tree that is otherwise required to be planted.”

Section 13. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Tree maintenance

- (a) Any tree that is Topped, unless recommended by a licensed and Qualified Tree Professional for the tree’s structural stability and longevity, is considered to be removed and requires a tree permit. The assessment shall be conducted prior to topping. Removal without a permit is subject to tree replacement and code enforcement provisions for illegal removal. Trimming under and around utility lines is exempt.
- (b) Except for wildlife snags intentionally retained to provide wildlife habitat, other dead, diseased, damaged, or stolen trees must be replaced within three (3) months or during the next planting season if the loss does not occur in a planting season. Removal of a wildlife snag containing cavities or other obvious signs of state or federally protected bird, or animal habitation is considered to be tree removal and is subject to tree replacement and code enforcement provisions for illegal removal unless determined to pose a risk using the ISA Tree Risk Assessment process by a Qualified Tree Professional.
- (c) Trees or portions of trees that obstruct or hinder the use of any public right-of-way or designated trail, encroaching eight (8) feet or less above a pedestrian walkway or sidewalk and fourteen (14) feet or less above a paved street, must be trimmed.
- (d) At its own expense, the City may trim or remove trees or portions of trees that obstruct or hinder the use of the public street right-of-way, city-owned property, or a designated trail without providing notice to the affected property owner.
- (e) Before any large or Exceptional Tree has more than twenty-five (25) percent of the live tree canopy removed a qualified tree risk assessment report must be submitted by a Qualified Tree Professional in conjunction with a minor or major tree removal permit. Removal or pruning of more than twenty-five (25) percent of the live tree canopy without a permit is considered to be removed. Removal without a permit is subject to tree replacement and code enforcement provisions for illegal removal.
- (f) Any tree that causes physical damage to a structure may be removed without a permit provided the problems associated with the tree cannot be corrected by reasonable practices, including but not limited to: pruning of the crown or roots of the tree, bracing, cabling, routine maintenance or cleaning of the structure, or construction modification. The property/owner or developer shall have a report prepared by a Qualified Tree Professional documenting the damage and mitigation options, which will be submitted to the City in conjunction with the permit.

Section 14. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Nuisance

- (a) The removal of trees contrary to the provisions of this Chapter is declared a nuisance and unlawful.”

Section 15. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Inspections

- (a) The City Arborist shall have site access wherever an active permit has been applied for or issued to perform an on-site review and to ensure the accuracy of a permit application and permit compliance. The applicant shall request an inspection before any tree removal. Upon completion of planting, the applicant shall request a final tree inspection to ensure proper installation. Upon completion of the three (3) year maintenance period, the applicant shall request an inspection to ensure the survival of planted and retained trees and the release of associated bonds.
- (b) Upon completion of construction activities and before issuance of the certificate of occupancy, the applicant shall request an inspection of all protected significant and Exceptional Trees. Any tree found to be irreparably damaged, dying, or a high risk shall be replaced consistent with Article xxx and subject to fines determined by the city and presented in Table xxx, if it is determined the damage was likely caused by construction activities.
- (c) Whenever the City Arborist believes that a violation of this Ordinance has been or is being committed for which no active permit has been issued, the City Arborist may inspect the site pursuant to Section 16 below.
- (d) Before any inspection, the Arborist shall present identification credentials, state the reason for the inspection, and request entry. If the property or any building or structure on the property is unoccupied, the City Arborist shall make a reasonable effort to locate the owner or an individual having charge or control of the property or portions of the property and request entry, before entering.”

Section 16. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Enforcement

- (a) For any violation of this Ordinance, the City may pursue remedial enforcement and penalties in accordance with general law and this subsection. Where there is a conflict, this subsection shall prevail.
- (1) General Requirements. This section applies to all trees on private property. Enforcement shall be in accordance with procedures set forth in this Ordinance.
- (2) Authority. It shall be the duty of the applicable department Director to administer the provisions of this section.
- (b) It is unlawful to remove or damage trees in violation of these tree regulations. Tree removal includes the removal of a tree, directly or indirectly.
- (1) Any person who aids or abets in the violation shall be considered to have committed a violation for purposes of fines. This includes the arborist or company pruning or removing the tree.
- (2) Violations include, but are not limited to, the removal or damage to tree(s)



- (A) Before final tree retention plan approval or the issuance of a minor or major tree removal permit;
- (B) That are shown, or would be shown, to be retained on an approved tree retention plan or any other violation of an approved tree retention plan; or
- (C) In violation of the terms and conditions of an issued City permit, which will require compliance with American National Standards Institute (ANSI) A300 pruning standards.”

Section 17. The following new Section xxx is hereby enacted as part of the Streets, Utilities, and Public Services Code, to read as follows:

“Severability

(a) Should a court of competent jurisdiction find any section, paragraph, sentence, clause, or phrase of this Chapter, or its application to any person or circumstance, unconstitutional or otherwise invalid for any reason, or should any portion of this Chapter be pre-empted by state or federal law or regulation, such decision or pre-emption does not affect the validity of the remaining portions of this Chapter or its application to other persons or circumstances.”

Section 18. It is necessary that this Ordinance becomes immediately effective for the usual daily operation of the City; the preservation of public peace, health, or safety of the City; and any additional reason set forth in the preamble.

Section 19. It is found and determined that all formal actions of this Council relating to the adoption of this Ordinance were adopted in an open meeting of the Council and that all deliberation of this Council and of any of its committees that resulted in such formal action were in meetings open to the public, in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

Yeas:

Nays:

_____ Council President _____ Date

_____ Mayor

_____ Clerk of Council _____ Date

First Reading/Referred to Committee:
Committee(s) Assigned:

**EXHIBIT A
USER GUIDE**

This section is intended to provide an overview of the tree regulations contained in this chapter.

1. Generally, these regulations apply to private property outside of Critical Areas, Associated Buffers, and Shoreline Management Areas.
2. Tree removal not associated with development. If the tree is being removed for reasons other than development (for example, so a Property Owner can install solar panels), then a minor tree removal permit (see Section 15) is required in the following situations:
 - A. For tree removal exceeding the allowed limit of significant tree removal per year(s), see Table 3;
 - B. For any removal of Exceptional Trees; or
 - C. When the removal of trees would result in a lot falling below the required number of minimum tree credits per Table 2.
3. Tree removal associated with development.
 - A. If the tree is being removed as part of a development (for example, to allow for the construction of a new home), a major tree removal permit is required, and:
 - B. All applications shall be accompanied by a Tree Replacement Plan pursuant to Section 1(y) if the required minimum tree credits are not met by existing Significant and Exceptional Trees.
4. Tree removal on an undeveloped lot. All significant and Exceptional Trees on an undeveloped lot shall be retained. Tree removal or land clearing on an undeveloped lot for the purpose of future development is prohibited unless a Land Use Permit is approved by the City.

**EXHIBIT B
PROHIBITED TREES**

1. AppleFruit objectionable on street; insect pests, disease- prone
2. BirchSusceptible to disease
3. Black LocustInsect pests
4. Box ElderBreakage and insect pests
5. CatalpaCoarse; insect pests
6. Moline ElmBreakage
7. Siberian Elm (Chinese Elm)Breakage



- 8. European Mountain AshSusceptible to being blown over by wind
- 9. EvergreensCause obstructions to vision of traffic and signs
- 10. Horse ChestnutLeaf blight; messy
- 11. MulberryFruit objectionably on street
- 12. PoplarsBreakage; insect pests, disease-prone; root system
Trees that clog sewers and pipes
- 13. Silver MapleBreakage; root system clogs sewers and pipes
- 14. Tree of HeavenCoarse; breakage
- 15. Tulip TreeInsect pests; leaves drop during dry periods
- 16. WillowsBreakage; insect and disease prone; root system clogs sewers and pipes
- 17. Pear (Cleveland, Bradford, and Callery)Breakage

18. ANY OTHER TYPE OF TREE HAVING SIMILAR PROBLEMS AS LISTED ABOVE

For species not specifically described as permitted or prohibited, verification as to its acceptability may be necessary. Such verification may be done by contacting a reputable plant nursery or by contacting the Ohio Department of Natural Resources, Division of Forestry, 777 Columbus Avenue, Lebanon, Ohio 45036. Telephone: (513) 932-6836