



*Beatrice, NE*

# Urban Forestry Management Plan

Spring 2025

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# Executive Summary



# EXECUTIVE SUMMARY

## Overview

**This plan was developed to support the City of Beatrice in managing its urban forest through informed budgeting and long-term planning. Trees provide a range of benefits to communities, and effective management ensures these benefits are maximized. While the current data indicates that approximately 1% of city-owned trees may be affected by the emerald ash borer (EAB), proactive planning is still essential. EAB, an invasive insect from Eastern Asia transported via wood shipping materials, is known to kill all ash tree species except mountain ash. Even with a small percentage at risk, early intervention can help reduce long-term costs and public safety concerns by spreading removal and treatment efforts over time.**

## Inventory and Results

In 2025, JEO conducted a complete inventory of city-owned property and park trees. Below are some key findings of the 2,695 trees inventoried.

- Beatrice trees provide \$400,803 of benefits annually, an average of \$149 per tree.
- There are over 90 species of trees.
- The top three genera are: Oak 25%, Maple 11%, and Pine 11%.
- 27% of trees need some type of management.
- 117 trees should be removed.

## Recommendations

- Our core recommendations are outlined in the Recommendations section, which includes management priorities and suggestions for future action. A few key recommendations are highlighted below.
- Out of the 117 trees needing removal, 23 trees are over 24 inches in diameter at 4.5 ft and must be addressed immediately. [\\*City ownership of the trees recommended for removal should be verified prior to any removal.\\*](#)
- 30 of the 37 ash trees should be carefully examined, as they have one or more symptoms that could be related to an EAB infestation.
- All trees should be pruned on a routine schedule: one third of the city-owned properties every other year.
- Plant a diverse mix of trees that do not include: ash, maple, cottonwood, poplar, box elder, Chinese elm, evergreen, willow or black walnut.
- Conduct an annual visual inspection of all trees to assess canopy health.
- With the current budget it could take 2 years to remove the city's ash trees. We suggest that city officials request a budget increase and apply for grants for additional removals and to plant replacement trees.



# Introduction



# INTRODUCTION



This plan was developed to assist Beatrice with managing, budgeting, and future planning of their urban forest. Across the state, forestry budgets continue to decrease as a higher percentage of the budgets are devoted to tree removal. With the anticipated arrival of Emerald Ash Borer (EAB), an invasive pest that kills native ash trees, it is time to prepare for the increased costs of tree removal, treatment, and replacement planting. With proper planning and management of the current canopy in Beatrice, these costs can be spread out over the years and public safety issues from dead and dying ash trees can be mitigated.

Trees are an important part of Beatrice’s infrastructure and one of the city’s greatest assets. The benefits of trees are immense. Trees improve air quality, intercept stormwater runoff, conserve energy, lower traffic speeds, increase property values, reduce crime, improve mental health, and create a desirable place to live, to name just a few. Good urban forestry management will maintain these important benefits for the people of Beatrice and future generations.

Urban forestry management sets goals and develops management strategies to achieve them. To develop management strategies, a comprehensive public tree inventory must be conducted. The inventory informs maintenance, removal schedules, tree planting, and budgeting. Aligning management actions with the tree inventory results will help meet Beatrice’s urban forestry goals.



**Assist Beatrice with Managing its Urban Forest**



**Inform on the Benefits of a Healthy Urban Forest**



**Establish Preventative Treatment for Emerald Ash Borer**



**Develop Efficient City Tree Management Techniques**



**Mitigate Public Safety Issues**

# Findings



## INVENTORY

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In 2025, JEO conducted a tree inventory that included 100% of the city-owned trees on both city-owned property and parks. The team collected tree data using a handheld Global Positioning System (GPS) receiver. The data collector gives Geographic Information Systems (GIS) coordinates with an accuracy of 3 meters, which can be used in Arc GIS as an active GIS data layer. Because the inventory is a digital document, the data can be updated with new information and become a working document.

The data collectors' programming was written to be compatible with a state-of-the-art software suite called i-Tree. i-Tree was developed by the United States Department of Agriculture (USDA) Forest Service to quantify the structure of community trees and the environmental services that trees provide. The i-Tree suite is a public domain which can be accessed for free.

To quantify the urban forest structure and benefits, specific data is collected for each tree. This data includes: location, land use, species, diameter at 4.5 ft, recommended maintenance, priority of that maintenance, leaf health, and wood condition. Additionally, for all ash trees, the team notes signs and symptoms associated with EAB including canopy dieback, epicormic shoots, bark splitting, D-shaped borer exit holes, and woodpecker damage.

## INVENTORY RESULTS

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JEO entered the data collected for the 2,695 city trees into the USDA Forest Service program Street Tree Resource Analysis Tool for Urban Forestry Management as part of the i-Tree suite. Following are results from the i-Tree ECO analysis.

## ANNUAL BENEFITS

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### Annual Energy Benefits

Trees conserve energy by shading buildings and blocking wind. Beatrice's trees reduce energy-related costs by approximately \$107,999 annually (Appendix A, Table 1). These savings are both in electricity (513.4 MWh) and in natural gas (70,444.1 Therms).

### Annual Stormwater Benefits

Beatrice's trees intercept about 5,513,910 gallons of rainfall or snow melt per year (Appendix A, Table 2). This interception provides \$149,427 in benefit to the city.



## Annual Air Quality Benefits

Air quality is a persistent public health issue in the United States. The urban forest improves air quality by removing pollutants, lowering air temperature, and reducing energy consumption, which in turn reduces emissions from power plants, and lessens emissions of volatile organic matter (ozone). In Beatrice, it is estimated that trees remove 6,320 lbs of air pollution (ozone (O3), particulate matter less than 10 microns (PM10), carbon monoxide (CO), nitrogen dioxide (NO2), and sulfur dioxide (SO2)) per year with a net value of \$17,577 (Appendix A, Table 3).

## Annual Carbon Benefits

Carbon sequestration and storage reduce the amount of carbon in the atmosphere, mitigating climate change. In Beatrice, trees sequester about 1,077,554 lbs of carbon per year with an associated value of \$8,082 (Appendix A, Table 5). In addition, the trees store 17,989,098 lbs of carbon, with a yearly benefit of \$13,849 (Appendix A, Table 4).

## Annual Aesthetics Benefits

The social benefits of trees are hard to capture. The i-Tree analysis does have a calculation for this area that includes aesthetic value, property values, lowered rates of mental illness and crime, city livability and much more. Beatrice receives \$111,952 in annual social benefits from trees (Appendix A, Table 6).

## Financial Summary of All Benefits

According to the USDA Forest Service i-Tree ECO analysis, Beatrice’s trees provide \$400,803 of benefits annually. Benefits of individual trees vary based on size, species, health and location, but on average each of the 2,695 trees in Beatrice provide approximately \$149 annually (Appendix A, Table 7).

ENERGY	STORMWATER	AIR QUALITY	CARBON	AESTHETICS	SUMMARY
<ul style="list-style-type: none"> <li>Reduce energy cost by <b>\$107,999</b></li> </ul>	<ul style="list-style-type: none"> <li>Intercept <b>5,513,910 gallons</b></li> <li>Provides <b>\$149,427</b> benefit</li> </ul>	<ul style="list-style-type: none"> <li>Remove <b>6,320 lbs</b> of pollution</li> <li>Net value of <b>\$17,577</b></li> </ul>	<ul style="list-style-type: none"> <li>Sequester <b>1,077,554 lbs</b></li> <li>Value of <b>\$8,082</b></li> <li>Store <b>17,989,098 lbs</b></li> <li>Net value of <b>\$13,849</b></li> </ul>	<ul style="list-style-type: none"> <li><b>\$111,952</b> in social benefits</li> </ul>	<ul style="list-style-type: none"> <li><b>\$400,803</b> annual benefits</li> <li>Each tree provides <b>\$149</b> annually</li> </ul>



# FOREST STRUCTURE

## Species Distribution

Beatrice has over 90 different tree species along city property and parks (Appendix A, Figure 1).

The distribution of trees by genera is as follows:

Oak	682	25%	Locust	61	2%
Maple	307	11%	Basswood/Linden	40	1%
Pine	293	11%	Ash	37	1%
Hackberry	222	8%	Coffee	26	<1%
Spruce	212	8%	Sycamore	24	<1%
Walnut	165	6%	Birch	21	<1%
Other Deciduous	145	5%	Fir	19	<1%
Apple	124	4%	Mulberry	19	<1%
Cottonwood	114	3%	Baldcypress	16	<1%
Cedar	70	3%	Ginkgo	15	<1%
Elm	70	3%	Catalpa	13	<1%

## Age Class

Most of Beatrice’s trees (21%) are between 12 and 18 inches in diameter at 4.5 ft (Appendix A, Figure 2).

To prepare for natural mortality and to maintain canopy cover, most trees should be in the smallest size category (a downward slope), indicating youth. Beatrice’s size curve is on the smaller side, indicating a younger than average stand.

## Condition: Wood and Foliage

Both wood condition and leaf condition are good indicators of the urban forest’s overall health. The foliage condition results for Beatrice indicate that 92% of the trees are in good health, with only 8% of the foliage in poor health, dead, or dying (Appendix A, Figure 3). Similarly, 87% of Beatrice’s trees are in good health for wood condition (Appendix A, Figure 4). Thirteen percent of the tree population’s wood condition is in poor health, dead, or dying. This 13% is an estimate of trees that need management follow up.



## Management Needs

The following outlines the specific management needs of the city property and park trees by number of trees and percent of canopy (Appendix B, Figure 2).

Action	Number of Trees	Percentage
Crown Cleaning	502	19%
Tree Removal	117	4%
Crown Raising	73	3%
Tree Staking	39	1%
Crown Reduction	10	>1%

## Canopy Cover

The total canopy of trees inventoried is roughly 1.18% of total land area of Beatrice. The canopy cover included in the Beatrice inventory includes approximately 57 acres (Appendix A, Figure 4). The city’s canopy goal is to increase canopy by 5% in 30 years. To achieve this goal, it is estimated that 5 trees need to be planted annually on public and private lands.

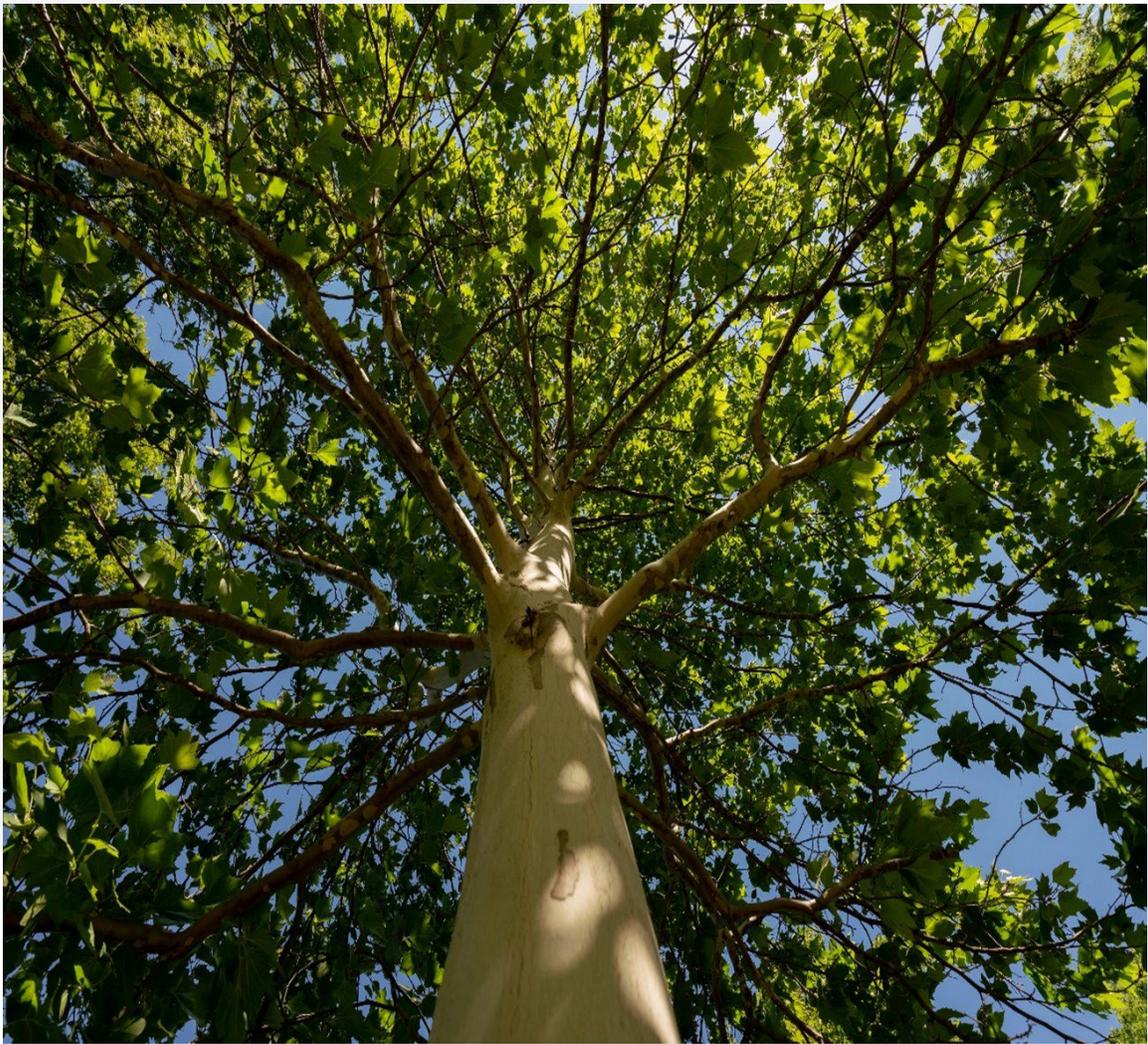
## Land Use and Location

The tree inventory covered all city-owned properties and parks within Beatrice. For future updates and a more comprehensive understanding of the urban forest, it would be beneficial to expand the inventory to include trees located in planting strips within single-family residential neighborhoods, commercial zones, and areas within the city’s right-of-way. (Appendix A, Figure 6 & Appendix A, Figure 7). The following describes the land use and locations for the city-owned property and park trees.

Land Use	Percentage
Park/City-Owned Properties	100%
Single Family Residential	0%
Industrial/Large Commercial	0%
Small Commercial	0%
Multifamily Residential	0%



# Recommendations



## RECOMMENDATIONS

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### Risk Management

Hazardous trees can be a significant threat to both people and property. Trees that are dead, dying, or have large issues such as trunk cracks longer than 18 inches should be removed. Broken branches and branches that interfere with motorists' vision of pedestrians, vehicles, traffic signs and signals should be removed.

#### HAZARDOUS TREES

Beatrice has 6 critical concern trees that need immediate removal. These trees can be seen on the Maintenance Needs/Priority Task Map (Appendix B, Figure 2). We recommend starting with the large-diameter, critical concern trees first. There are 3 trees over 18 inches in diameter at 4.5 ft that should be addressed immediately. Please refer to the Six-Year Maintenance Plan at the end of this section. Once all critical concern trees have been addressed, attention should shift to the trees identified as needing maintenance. These trees have been flagged for non-urgent issues—such as pruning, structural support, or monitoring—that still require timely action to ensure overall tree health and public safety. Refer to the included maps for the specific locations and maintenance needs of these trees.

#### POOR TREE SPECIES

After removing the critical concern trees, ash trees in poor health should be assessed for removal. Of the 117 removals, 17 are ash trees. There are a total of 37 ash trees, and 30 of those have signs and symptoms that have been associated with EAB. In addition, there are 18 trees that are in poor health. [\\*City ownership of the trees recommended for removal should be verified prior to any removal.\\*](#)

### Pruning Cycle

Proper pruning can extend the life and good health of trees, as well as reduce public safety issues. In the Management Needs section of the Findings there are four main maintenance issues to be addressed: routine pruning, crown cleaning, crown raising, and crown reduction. Crown cleaning removes dead, diseased, and damaged limbs. Crown raising removes lower branches that are two inches in diameter or larger to provide clearance for pedestrians or vehicles. Crown reduction removes individual limbs from structures or utility wires. We recommend that all trees be pruned on a routine schedule every five to seven years. Please refer to the Six-Year Maintenance Plan for further information.

### Planting

Most of the planting over the next five years will replace the trees that are removed. We recommend planting 1 to 2 trees for every tree removed, since survival rates will not be 100%. It is not essential that the new trees be planted in the same location of the trees being removed.



However, maintaining the same number of trees helps ensure continuation of the benefits of the existing urban forest of Beatrice.

It is important to plant a diverse mix of species in the urban forest to maintain canopy health, since most insects and diseases target a genus (ash) or species (green ash) of trees. Current diversity recommendations advise that a genus (i.e. maple, oak) not make up more than 20% of the urban forest and a single species (i.e. silver maple, sugar maple, white oak, bur oak) not make up more than 10% of the total urban forest. Presently, the forest is heavily planted with oak (25%) (Appendix A, Figure 1). Oaks should not be planted until this percentage can be lowered. Also, ash trees have not been recommended since 2002, due to the threat of EAB. Other species to avoid because they are public nuisances include: All poplars, non-approved elms, buckeye, silver maple, pecan, horse chestnut, pin oak, mulberry, cypress, pear, Russian olive, willows, cottonwoods, birch, tree of heaven, evergreens, walnut, box elder as outlined in section 25-5 of the city ordinance (Appendix C). All trees planted must meet the restrictions in city ordinance 25-5 (Appendix C).

### Continual Monitoring

Due to the threat of EAB, it is important to continuously check the health of ash trees. We recommend that ash trees be checked with a visual survey every year for tree decline and for the following signs and symptoms: canopy dieback, epicormic shoots, bark splitting, D-shaped borer exit holes, and woodpecker damage.

## EMERALD ASH BORER PLAN

### Ash Tree Removal

We recommend prioritizing the removal of dead, dying, or hazardous trees first, followed by ash trees that exhibit signs or symptoms of emerald ash borer (EAB) infestation.

*\*City ownership of the tree recommended for removal should be verified prior to any removal. \**

### Treatment of Ash Trees

Chemical treatment can be an effective tool for communities to spread removal costs of infected ash trees out over several years while allowing trees to continue providing benefits. However, treatment is not recommended if EAB is more than 15 miles away from the community. For more information on the cost of treatment strategies visit

<http://extension.entm.purdue.edu/treecomputer/>



## EAB Quarantines

EAB is an extremely destructive plant pest and it is responsible for the death and decline of millions of ash trees. Ash in both forested and urban settings constitute a significant portion of the canopy cover in the United States. Current tools to detect, control, suppress and eradicate this pest are not as robust as the USDA would desire. In order to stay ahead of this hard to detect beetle, the USDA is attempting to contain the beetle before it spreads beyond its known positions by regulating articles.

A regulated article under the USDA's quarantine includes any of the following items:

- Emerald ash borer.
- Firewood of all hardwood species (for example ash, oak, maple and hickory).
- Nursery stock and green lumber of ash.
- Any other ash material, whether living, dead, cut or fallen, including logs, stumps, roots, branches, as well as composted and not composted chips of the genus ash (mountain ash is not included).

In addition, any other article, product, or means of conveyance not listed above may be designated as a regulated article if a USDA inspector determines that it presents a risk of spreading EAB once a quarantine is in effect for your county.

## Wood Disposal

A very important aspect of planning is determining how wood infested with EAB will be handled, keeping in mind that quarantines will restrict its movement. Consider who will cut and haul the dead and dying trees? Is there an accessible, secured site big enough to store and sort the hundreds of trees and the associated brush and chips? How will wood be disposed of or utilized? Do you have equipment capable of handling the amount and size of ash trees your tree inventory has identified? Once your county is under quarantine for EAB, contact USDA-APHIS-PPQ at 515-251-4083 or visit the website <https://www.aphis.usda.gov/plant-pests-diseases/eab> Wood waste can be normally disposed of if your county is not part of a quarantine.

## Canopy Replacement

As budget permits, all removed trees should be replaced. All trees will meet the restrictions in city ordinance 25-5, 25-6 (Appendix C). The city council shall adopt by resolution a "List of Tree Species To Be Planted" for the city, showing thereon the genus, species and variety of street trees which are recommended to be in or upon any street, sidewalk space, or other public way within the city. A current copy of such list shall be made available for inspection by the public in the office of the city clerk.



## Postponed Work

As resources—including funding, staffing, and equipment—are concentrated on managing ash trees, routine tree services may experience delays. Removal requests for tree species other than ash will be addressed only if they present a hazard or require emergency attention.

## Monitoring

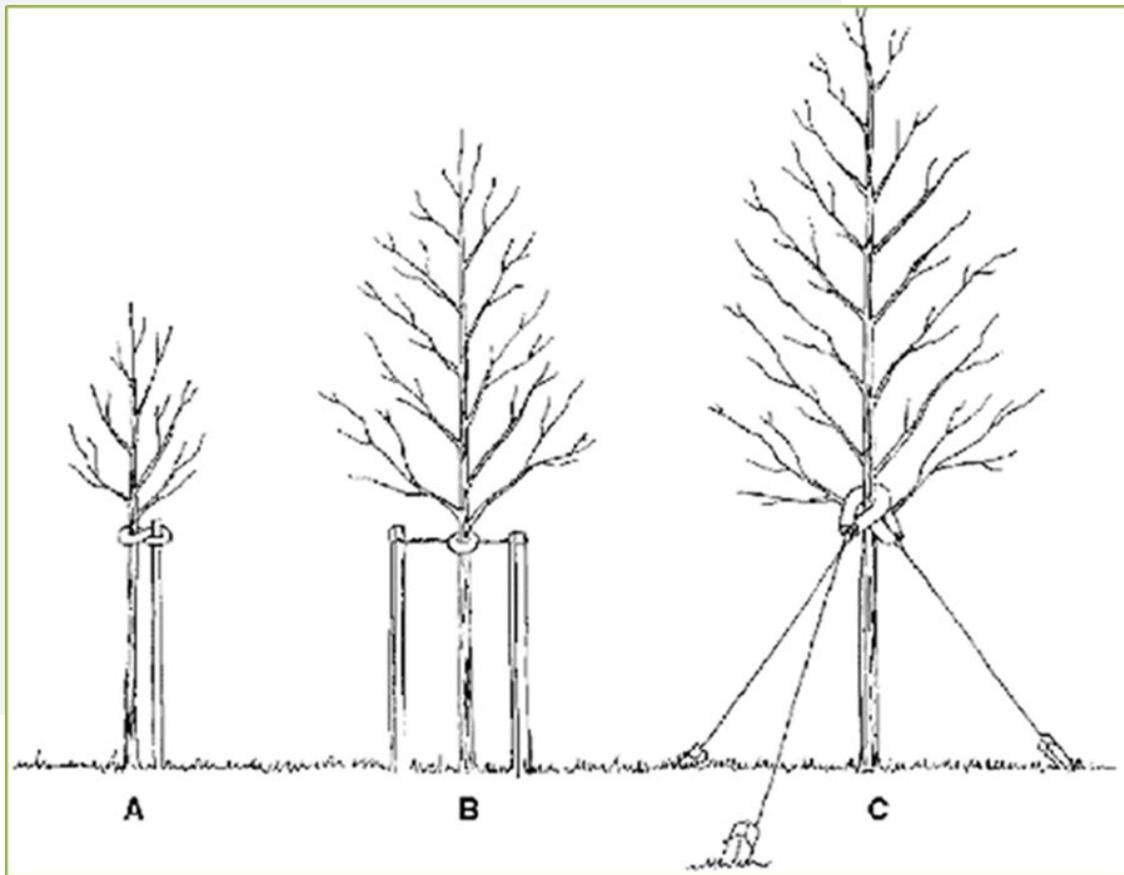
It is recommended that ash trees be checked with a visual survey every year for tree death and for EAB signs and symptoms including canopy dieback, epicormic shoots, bark splitting, D-shaped borer exit holes, and woodpecker damage.

## Diseased and Dead Trees

It is strongly recommended that private property owners start removing dead or diseased trees on their property for safety and upon arrival of EAB if preventative treatments are not being used. City Code 25-36 states “The owner or occupant of any lot or piece of ground in the city or within two (2) miles of the corporate limits of the city is hereby required to keep the lots and pieces of ground and the adjoining streets and alleys free of any infected, dead, dying, or structurally weak tree”.



# Schedule & Budget



## PROPOSED WORK SCHEDULE & BUDGET

Budget Allowance of \$11,500/Year – (Based off Reported Yearly Tree Budget)

YEAR 1	Est. Cost	YEAR 4	Est. Cost
Remove 6 trees recommended for immediate removal	\$4,800	Remove 8 trees in poor condition	\$6,400
Remove 6 ash tree in poor condition	\$4,800	Plant 18 trees in open locations	\$2,700
Plant 12 trees in open locations	\$1,800	Maintenance of city-owned trees	\$2,350
Visual survey of EAB signs/symptoms	n/a	Visual survey of EAB signs/symptoms	n/a
<b>TOTAL</b>	<b>\$11,400</b>	<b>TOTAL</b>	<b>\$11,450</b>

YEAR 2	Est. Cost	YEAR 5	Est. Cost
Remove 8 trees recommended for immediate removal	\$6,400	Remove 11 trees in poor condition	\$8,800
Plant 18 trees in open locations	\$2,700	Plant 18 trees in open locations	\$2,700
Maintenance of city-owned trees	\$2,350	Visual survey of EAB signs/symptoms	n/a
Visual survey of EAB signs/symptoms	n/a	<b>TOTAL</b>	<b>\$11,500</b>
<b>TOTAL</b>	<b>\$11,450</b>		

YEAR 3	Est. Cost	YEAR 6	Est. Cost
Remove 6 tree recommended for immediate removal	\$4,800	Remove 8 trees in poor condition	\$6,400
Remove 6 ash trees in poor condition	\$4,800	Plant 18 trees in open locations	\$2,700
Plant 12 trees in open locations	\$1,800	Maintenance of city-owned trees	\$2,350
Visual survey of EAB signs/symptoms	n/a	Visual survey of EAB signs/symptoms	n/a
<b>TOTAL</b>	<b>\$11,400</b>	<b>TOTAL</b>	<b>\$11,450</b>

*Estimated costs based on average costs of \$800/tree for removal, \$150/tree for planting and maintenance, and \$20/tree for pruning.*



## PROPOSED WORK SCHEDULE WITH INCREASED BUDGET

Budget Allowance of \$70,000/Remainder of grant funding – (Budget Increase Suggested to Best Manage City Trees)

<b>YEAR 1</b>	<b>Est. Cost</b>
Remove 16 trees recommended for immediate removal	\$12,800
Remove 8 ash trees in poor condition	\$6,400
Plant 27 trees in open locations	\$4,050
Visual survey of EAB signs/symptoms	n/a
<b>TOTAL</b>	<b>\$23,250</b>
<b>YEAR 2</b>	<b>Est. Cost</b>
Remove 20 trees in poor condition	\$16,000
Plant 26 trees in open locations	\$3,900
Maintenance of city-owned trees	\$3,430
Visual survey of EAB signs/symptoms	n/a
<b>TOTAL</b>	<b>\$23,330</b>
<b>YEAR 3</b>	<b>Est. Cost</b>
Remove 25 trees in poor condition	\$20,000
Plant 22 trees in open locations	\$3,300
Visual survey of EAB signs/symptoms	n/a
<b>TOTAL</b>	<b>\$23,300</b>



### Purposed Budget Increase

EAB could potentially kill all ash trees in Beatrice within four years of its arrival. To remove all ash trees Beatrice would need to have \$30,000 budget for all 37 ash trees to be removed. If the budget were increased to \$15,000 per year all ash could be removed within 2 years. Additionally, we recommend that Beatrice apply for grants to fund replacement trees. Utility Company grants are usually between \$500 and \$10,000 for community-based, tree-planting projects that include parks, gateways, cemeteries, nature trails, libraries, nursing homes, and schools.

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# | Appendices



## APPENDIX A: i-TREE DATA

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**Table 1: Annual Energy Benefits**

**Table 2: Annual Stormwater Benefits**

**Table 3: Annual Air Quality Benefits**

**Table 4: Annual Carbon Stored**

**Table 5: Annual Carbon Sequestered**

**Table 6: Annual Social and Aesthetic Benefits**

**Table 7: Summary of Benefits in Dollars**

**Figure 1: Species Distribution**

**Figure 2: Relative Age Class**

**Figure 3: Foliage Condition**

**Figure 4: Wood Condition**

**Figure 5: Canopy Cover in Acres**

**Figure 6: Land Use of City/Park Trees**



# Beatrice

## Annual Energy Benefits of Public Trees

5/19/2025

Species	Total Electricity (MWh)	Electricity (\$)	Total Natural Gas (Therms)	Natural Gas (\$)	Total Standard (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Bur oak	92.4	7,015	12,686.3	12,433	19,447	(N/A)	13.4	18.0	53.87
Northern hackberry	65.6	4,981	9,400.0	9,212	14,193	(N/A)	8.2	13.1	63.93
Black walnut	37.0	2,808	4,893.5	4,796	7,604	(N/A)	6.1	7.0	46.08
Silver maple	52.1	3,954	6,891.0	6,753	10,707	(N/A)	6.0	9.9	65.69
Eastern white pine	16.0	1,211	2,034.3	1,994	3,205	(N/A)	5.3	3.0	22.25
Spruce	5.5	419	799.2	783	1,203	(N/A)	4.8	1.1	9.32
Apple	14.8	1,123	2,209.2	2,165	3,288	(N/A)	4.6	3.0	26.52
Eastern cottonwood	39.4	2,988	5,419.3	5,311	8,299	(N/A)	4.2	7.7	72.80
Northern red oak	16.0	1,214	2,163.1	2,120	3,334	(N/A)	4.2	3.1	29.25
Ponderosa pine	12.2	923	1,517.6	1,487	2,411	(N/A)	3.5	2.2	25.38
Eastern red cedar	6.7	511	1,006.2	986	1,497	(N/A)	2.6	1.4	21.39
Red maple	8.4	634	1,148.2	1,125	1,759	(N/A)	2.6	1.6	25.50
Blue spruce	3.6	270	503.6	493	764	(N/A)	2.3	0.7	12.52
Honeylocust	18.5	1,401	2,431.4	2,383	3,784	(N/A)	2.2	3.5	63.06
White oak	7.2	547	912.3	894	1,441	(N/A)	2.0	1.3	26.68
Siberian elm	15.8	1,200	2,152.8	2,110	3,310	(N/A)	2.0	3.1	62.46
Pin oak	14.4	1,096	1,942.6	1,904	2,999	(N/A)	1.7	2.8	63.82
Norway maple	8.4	641	1,207.9	1,184	1,824	(N/A)	1.7	1.7	39.66
Swamp white oak	5.6	424	789.0	773	1,197	(N/A)	1.7	1.1	26.61
Red pine	3.6	275	445.7	437	712	(N/A)	1.0	0.7	26.38
Kentucky coffeetree	2.6	200	358.9	352	552	(N/A)	1.0	0.5	21.22
American sycamore	6.9	523	956.8	938	1,460	(N/A)	0.9	1.4	60.85
American basswood	4.9	375	725.6	711	1,086	(N/A)	0.9	1.0	45.24
Shingle oak	4.9	374	671.2	658	1,032	(N/A)	0.9	1.0	44.87
Ash	5.0	379	720.0	706	1,085	(N/A)	0.8	1.0	49.32
Norway spruce	2.1	159	289.9	284	443	(N/A)	0.8	0.4	20.16
Sawtooth oak	3.5	262	495.1	485	747	(N/A)	0.7	0.7	37.36
Sugar maple	2.5	193	332.9	326	519	(N/A)	0.7	0.5	27.32
Mulberry	2.2	169	346.9	340	509	(N/A)	0.7	0.5	26.80
Austrian pine	2.3	174	296.0	290	464	(N/A)	0.6	0.4	27.31
American elm	1.7	131	242.0	237	369	(N/A)	0.6	0.3	23.04
Callery pear	3.0	230	457.0	448	678	(N/A)	0.6	0.6	42.35
Baldcypress	1.6	119	202.5	198	318	(N/A)	0.6	0.3	19.85
Littleleaf linden	0.9	69	132.8	130	199	(N/A)	0.6	0.2	12.45
Douglas fir	1.3	98	177.5	174	272	(N/A)	0.6	0.3	18.16
Eastern redbud	0.9	69	143.4	141	210	(N/A)	0.6	0.2	13.98
Ginkgo	0.7	53	90.8	89	142	(N/A)	0.6	0.1	9.49
Green ash	3.0	225	389.7	382	607	(N/A)	0.5	0.6	46.67
Northern catalpa	2.7	207	375.4	368	575	(N/A)	0.5	0.5	44.19
River birch	2.9	218	400.6	393	610	(N/A)	0.4	0.6	55.48
Birch	0.9	67	133.0	130	197	(N/A)	0.4	0.2	19.69
Cherry plum	0.3	20	42.3	41	61	(N/A)	0.3	0.1	7.66
Sweetgum	0.3	25	39.9	39	64	(N/A)	0.3	0.1	8.04
Eastern hophornbeam	0.3	22	51.1	50	73	(N/A)	0.3	0.1	9.07
Lilac	0.2	13	29.9	29	42	(N/A)	0.3	0.0	5.30
Ohio buckeye	0.6	46	86.3	85	131	(N/A)	0.3	0.1	18.72
Magnolia	0.4	34	67.6	66	100	(N/A)	0.2	0.1	16.67
Oak	0.5	41	70.2	69	109	(N/A)	0.2	0.1	18.22
Yellowwood	0.7	54	101.5	100	153	(N/A)	0.2	0.1	25.55
Tree of Heaven	1.6	120	235.4	231	351	(N/A)	0.2	0.3	58.50
Tulip tree	0.4	28	45.8	45	73	(N/A)	0.2	0.1	12.11
Pine	0.1	10	22.3	22	32	(N/A)	0.2	0.0	6.40
Black cherry	0.6	42	74.6	73	115	(N/A)	0.1	0.1	28.82
Black maple	0.1	11	20.9	20	31	(N/A)	0.1	0.0	7.85
Serviceberry	0.1	4	8.6	8	12	(N/A)	0.1	0.0	3.07
Jack pine	0.3	26	45.4	45	71	(N/A)	0.1	0.1	17.69

# Annual Energy Benefits of Public Trees

5/19/2025

Species	Total Electricity (MWh)	Electricity (\$)	Total Natural Gas (Therms)	Natural Gas (\$)	Total Standard (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Amur maple	0.5	35	66.0	65	100	(N/A)	0.1	0.1	24.96
Chinkapin oak	0.3	23	47.3	46	70	(N/A)	0.1	0.1	17.47
Fir	0.2	15	31.8	31	46	(N/A)	0.1	0.0	11.51
Japanese zelkova	0.3	26	47.1	46	72	(N/A)	0.1	0.1	24.12
Dogwood	0.0	1	1.9	2	3	(N/A)	0.1	0.0	0.87
Broadleaf Deciduous Medium	0.4	33	65.1	64	96	(N/A)	0.1	0.1	32.14
Beech	0.2	19	31.1	30	49	(N/A)	0.1	0.0	16.33
English oak	0.6	45	87.8	86	131	(N/A)	0.1	0.1	43.54
Nicker	0.0	1	2.4	2	3	(N/A)	0.1	0.0	1.10
Willow	0.8	58	108.6	106	164	(N/A)	0.1	0.2	54.72
Alder	0.3	20	37.5	37	56	(N/A)	0.1	0.1	28.16
Hickory	0.0	2	4.2	4	6	(N/A)	0.1	0.0	3.24
Black oak	0.0	3	7.0	7	10	(N/A)	0.1	0.0	5.04
Pawpaw	0.1	11	23.0	23	33	(N/A)	0.1	0.0	16.73
White ash	0.8	64	105.1	103	167	(N/A)	0.1	0.2	83.29
Osage orange	0.6	49	94.8	93	142	(N/A)	0.1	0.1	70.84
Mohr oak	0.1	8	17.6	17	26	(N/A)	0.1	0.0	12.79
Sumac	0.0	1	1.2	1	2	(N/A)	0.1	0.0	0.87
CES OTHER	0.1	9	17.1	17	25	(N/A)	0.1	0.0	12.75
Black poplar	0.2	14	27.5	27	41	(N/A)	0.1	0.0	20.64
Goldenrain tree	0.0	1	1.6	2	2	(N/A)	0.1	0.0	1.10
Pecan	0.0	0	0.8	1	1	(N/A)	0.0	0.0	1.10
Maple	0.0	3	5.2	5	8	(N/A)	0.0	0.0	7.85
Common persimmon	0.0	0	0.8	1	1	(N/A)	0.0	0.0	1.10
Broadleaf Deciduous Large	0.4	29	53.7	53	82	(N/A)	0.0	0.1	82.02
American hazelnut	0.2	18	29.5	29	47	(N/A)	0.0	0.0	46.78
Black locust	0.3	24	47.4	46	71	(N/A)	0.0	0.1	70.84
Broadleaf Deciduous Small	0.0	0	0.6	1	1	(N/A)	0.0	0.0	0.87
Pear	0.1	6	12.8	13	18	(N/A)	0.0	0.0	18.19
Japanese maple	0.0	0	0.6	1	1	(N/A)	0.0	0.0	0.87
Scotch pine	0.1	10	14.6	14	24	(N/A)	0.0	0.0	24.14
Quaking aspen	0.0	2	3.7	4	6	(N/A)	0.0	0.0	5.82
Boxelder	0.0	1	1.3	1	2	(N/A)	0.0	0.0	1.86
Plum	0.1	6	12.8	13	18	(N/A)	0.0	0.0	18.19
Elm	0.0	0	0.5	0	1	(N/A)	0.0	0.0	0.66
Shumard oak	0.0	0	0.8	1	1	(N/A)	0.0	0.0	1.10
<b>Total</b>	<b>513.4</b>	<b>38,964</b>	<b>70,444.1</b>	<b>69,035</b>	<b>107,999</b>	<b>(N/A)</b>	<b>100.0</b>	<b>100.0</b>	<b>40.07</b>

## Annual Stormwater Benefits of Public Trees

5/19/2025

Species	Total rainfall interception (Gal)	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Bur oak	1,032,245	27,974	(N/A)	13.4	18.7	77.49
Northern hackberry	565,608	15,328	(N/A)	8.2	10.3	69.04
Black walnut	329,853	8,939	(N/A)	6.1	6.0	54.18
Silver maple	714,907	19,374	(N/A)	6.0	13.0	118.86
Eastern white pine	278,405	7,545	(N/A)	5.3	5.0	52.39
Spruce	64,535	1,749	(N/A)	4.8	1.2	13.56
Apple	64,569	1,750	(N/A)	4.6	1.2	14.11
Eastern cottonwood	526,312	14,263	(N/A)	4.2	9.5	125.11
Northern red oak	134,603	3,648	(N/A)	4.2	2.4	32.00
Ponderosa pine	196,597	5,328	(N/A)	3.5	3.6	56.08
Eastern red cedar	97,837	2,651	(N/A)	2.6	1.8	37.88
Red maple	67,134	1,819	(N/A)	2.6	1.2	26.37
Blue spruce	44,611	1,209	(N/A)	2.3	0.8	19.82
Honeylocust	207,312	5,618	(N/A)	2.2	3.8	93.64
White oak	54,799	1,485	(N/A)	2.0	1.0	27.50
Siberian elm	162,060	4,392	(N/A)	2.0	2.9	82.86
Pin oak	158,704	4,301	(N/A)	1.7	2.9	91.51
Norway maple	68,832	1,865	(N/A)	1.7	1.2	40.55
Swamp white oak	38,828	1,052	(N/A)	1.7	0.7	23.38
Red pine	56,541	1,532	(N/A)	1.0	1.0	56.75
Kentucky coffeetree	20,393	553	(N/A)	1.0	0.4	21.26
American sycamore	89,132	2,415	(N/A)	0.9	1.6	100.65
American basswood	48,378	1,311	(N/A)	0.9	0.9	54.63
Shingle oak	37,607	1,019	(N/A)	0.9	0.7	44.31
Ash	42,512	1,152	(N/A)	0.8	0.8	52.37
Norway spruce	32,573	883	(N/A)	0.8	0.6	40.12
Sawtooth oak	26,671	723	(N/A)	0.7	0.5	36.14
Sugar maple	22,583	612	(N/A)	0.7	0.4	32.21
Mulberry	10,710	290	(N/A)	0.7	0.2	15.28
Austrian pine	32,854	890	(N/A)	0.6	0.6	52.37
American elm	15,117	410	(N/A)	0.6	0.3	25.60
Callery pear	26,022	705	(N/A)	0.6	0.5	44.07
Baldcypress	14,921	404	(N/A)	0.6	0.3	25.27
Littleleaf linden	6,058	164	(N/A)	0.6	0.1	10.26
Douglas fir	15,566	422	(N/A)	0.6	0.3	28.12
Eastern redbud	3,217	87	(N/A)	0.6	0.1	5.81
Ginkgo	3,424	93	(N/A)	0.6	0.1	6.19
Green ash	27,273	739	(N/A)	0.5	0.5	56.85
Northern catalpa	27,639	749	(N/A)	0.5	0.5	57.62
River birch	24,491	664	(N/A)	0.4	0.4	60.34
Birch	4,961	134	(N/A)	0.4	0.1	13.45
Cherry plum	1,349	37	(N/A)	0.3	0.0	4.57
Sweetgum	2,052	56	(N/A)	0.3	0.0	6.95
Eastern hophornbeam	1,014	27	(N/A)	0.3	0.0	3.44
Lilac	561	15	(N/A)	0.3	0.0	1.90
Ohio buckeye	5,385	146	(N/A)	0.3	0.1	20.85
Magnolia	4,277	116	(N/A)	0.2	0.1	19.32
Oak	4,282	116	(N/A)	0.2	0.1	19.34
Yellowwood	5,947	161	(N/A)	0.2	0.1	26.86

# Annual Stormwater Benefits of Public Trees

5/19/2025

Species	Total rainfall interception (Gal)	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Tree of Heaven	17,699	480	(N/A)	0.2	0.3	79.94
Tulip tree	2,299	62	(N/A)	0.2	0.0	10.38
Pine	1,345	36	(N/A)	0.2	0.0	7.29
Black cherry	2,007	54	(N/A)	0.1	0.0	13.60
Black maple	549	15	(N/A)	0.1	0.0	3.72
Serviceberry	199	5	(N/A)	0.1	0.0	1.35
Jack pine	4,101	111	(N/A)	0.1	0.1	27.78
Amur maple	1,666	45	(N/A)	0.1	0.0	11.29
Chinkapin oak	2,666	72	(N/A)	0.1	0.0	18.06
Fir	2,304	62	(N/A)	0.1	0.0	15.61
Japanese zelkova	2,007	54	(N/A)	0.1	0.0	18.13
Dogwood	22	1	(N/A)	0.1	0.0	0.20
Broadleaf Deciduous Medium	4,363	118	(N/A)	0.1	0.1	39.41
Beech	1,434	39	(N/A)	0.1	0.0	12.95
English oak	6,256	170	(N/A)	0.1	0.1	56.51
Nicker	37	1	(N/A)	0.1	0.0	0.33
Willow	6,368	173	(N/A)	0.1	0.1	57.52
Alder	931	25	(N/A)	0.1	0.0	12.62
Hickory	190	5	(N/A)	0.1	0.0	2.57
Black oak	175	5	(N/A)	0.1	0.0	2.37
Pawpaw	749	20	(N/A)	0.1	0.0	10.14
White ash	11,108	301	(N/A)	0.1	0.2	150.51
Osage orange	7,529	204	(N/A)	0.1	0.1	102.01
Mohr oak	598	16	(N/A)	0.1	0.0	8.11
Sumac	15	0	(N/A)	0.1	0.0	0.20
CES OTHER	1,659	45	(N/A)	0.1	0.0	22.48
Black poplar	1,216	33	(N/A)	0.1	0.0	16.47
Goldenrain tree	24	1	(N/A)	0.1	0.0	0.33
Pecan	12	0	(N/A)	0.0	0.0	0.33
Maple	137	4	(N/A)	0.0	0.0	3.72
Common persimmon	12	0	(N/A)	0.0	0.0	0.33
Broadleaf Deciduous Large	5,491	149	(N/A)	0.0	0.1	148.79
American hazelnut	1,409	38	(N/A)	0.0	0.0	38.19
Black locust	3,764	102	(N/A)	0.0	0.1	102.01
Broadleaf Deciduous Small	7	0	(N/A)	0.0	0.0	0.20
Pear	264	7	(N/A)	0.0	0.0	7.17
Japanese maple	7	0	(N/A)	0.0	0.0	0.20
Scotch pine	1,539	42	(N/A)	0.0	0.0	41.70
Quaking aspen	172	5	(N/A)	0.0	0.0	4.65
Boxelder	25	1	(N/A)	0.0	0.0	0.67
Plum	264	7	(N/A)	0.0	0.0	7.17
Elm	18	0	(N/A)	0.0	0.0	0.48
Shumard oak	12	0	(N/A)	0.0	0.0	0.33
Citywide total	5,513,910	149,427	(N/A)	100.0	100.0	55.45

# Annual Air Quality Benefits of Public Trees

5/19/2025

Species	Deposition (lb)				Total Depos. (\$)	Avoided (lb)				Total Avoided (\$)	BVOC Emissions (lb)	BVOC Emissions (\$)	Total (lb)	Total Standard (\$) Error	% of Total Trees	Avg. \$/tree
	O <sub>3</sub>	NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>		NO <sub>2</sub>	PM <sub>10</sub>	VOC	SO <sub>2</sub>							
Bur oak	130.0	20.8	61.9	5.8	691	441.6	64.3	61.3	418.9	2,750	0.0	0	1,204.5	3,441 (N/A)	13.4	9.53
Northern hackberry	80.3	13.9	42.3	3.6	442	317.6	45.9	43.7	297.7	1,968	0.0	0	845.0	2,411 (N/A)	8.2	10.86
Black walnut	34.3	5.5	17.7	1.5	186	175.1	25.6	24.4	167.7	1,095	0.0	0	451.8	1,281 (N/A)	6.1	7.76
Silver maple	119.3	20.2	59.1	5.3	645	245.9	36.0	34.3	235.7	1,538	-62.6	-235	693.2	1,948 (N/A)	6.0	11.95
Eastern white pine	32.1	6.4	26.4	3.9	212	74.7	11.0	10.5	72.3	469	-134.3	-504	102.9	177 (N/A)	5.3	1.23
Spruce	6.0	1.2	5.7	0.7	42	26.7	3.9	3.7	25.0	166	-21.4	-80	51.6	127 (N/A)	4.8	0.99
Apple	20.4	3.4	9.6	0.9	109	72.3	10.4	9.9	67.0	446	-0.1	0	193.8	554 (N/A)	4.6	4.47
Eastern cottonwood	79.2	12.7	36.0	3.5	416	188.3	27.4	26.1	178.4	1,172	0.0	0	551.5	1,588 (N/A)	4.2	13.93
Northern red oak	26.5	4.6	13.2	1.2	144	76.0	11.1	10.6	72.5	474	-37.5	-141	178.2	478 (N/A)	4.2	4.19
Ponderosa pine	22.4	4.4	18.6	2.8	148	56.6	8.3	8.0	55.1	356	-86.3	-324	89.9	181 (N/A)	3.5	1.90
Eastern red cedar	19.3	3.8	15.3	2.4	126	32.8	4.7	4.5	30.5	203	-53.8	-202	59.5	126 (N/A)	2.6	1.80
Red maple	15.3	2.6	7.3	0.7	82	39.9	5.8	5.5	37.8	248	-5.2	-19	109.7	311 (N/A)	2.6	4.50
Blue spruce	5.3	1.0	4.6	0.6	36	17.1	2.5	2.4	16.1	106	-15.4	-58	34.3	84 (N/A)	2.3	1.38
Honeylocust	40.5	6.7	18.5	1.8	214	87.1	12.7	12.2	83.5	545	-31.6	-118	231.5	640 (N/A)	2.2	10.67
White oak	4.8	0.8	2.7	0.2	26	33.7	5.0	4.7	32.7	212	0.0	0	84.5	238 (N/A)	2.0	4.41
Siberian elm	25.9	4.4	12.8	1.1	140	75.4	11.0	10.5	71.6	470	0.0	0	212.7	610 (N/A)	2.0	11.50
Pin oak	27.7	4.9	14.3	1.2	152	68.5	10.0	9.5	65.4	428	-51.6	-194	149.9	386 (N/A)	1.7	8.22
Norway maple	12.8	2.2	6.5	0.6	70	40.8	5.9	5.6	38.3	253	-3.1	-12	109.7	311 (N/A)	1.7	6.77
Swamp white oak	6.3	1.1	3.3	0.3	35	26.9	3.9	3.7	25.4	167	-1.6	-6	69.4	196 (N/A)	1.7	4.36
Red pine	6.4	1.3	5.4	0.8	43	16.8	2.5	2.4	16.4	106	-24.2	-91	27.8	58 (N/A)	1.0	2.15
Kentucky coffeetree	1.6	0.3	0.9	0.1	9	12.6	1.8	1.7	11.9	78	0.0	0	31.0	87 (N/A)	1.0	3.36
American sycamore	12.2	1.9	5.6	0.5	64	33.0	4.8	4.6	31.2	205	0.0	0	93.9	269 (N/A)	0.9	11.23
American basswood	5.9	1.0	3.0	0.3	32	24.1	3.5	3.3	22.4	149	-5.3	-20	58.2	161 (N/A)	0.9	6.72
Shingle oak	6.9	1.2	3.5	0.3	37	23.6	3.4	3.3	22.4	147	-1.7	-6	62.8	178 (N/A)	0.9	7.74
Ash	8.1	1.4	4.1	0.4	44	24.2	3.5	3.3	22.7	150	-2.0	-7	65.7	187 (N/A)	0.8	8.49
Norway spruce	3.6	0.7	3.1	0.4	24	10.0	1.5	1.4	9.5	62	-14.5	-54	15.7	32 (N/A)	0.8	1.46
Sawtooth oak	4.7	0.8	2.4	0.2	26	16.7	2.4	2.3	15.7	104	-1.2	-4	44.1	125 (N/A)	0.7	6.25
Sugar maple	2.7	0.5	1.4	0.1	15	12.0	1.8	1.7	11.5	75	-2.2	-8	29.4	82 (N/A)	0.7	4.29
Mulberry	3.5	0.6	1.6	0.2	18	11.0	1.6	1.5	10.1	68	0.0	0	30.0	86 (N/A)	0.7	4.53
Austrian pine	4.7	0.9	3.9	0.6	31	10.8	1.6	1.5	10.4	68	-12.3	-46	22.1	53 (N/A)	0.6	3.10
American elm	1.8	0.3	1.0	0.1	10	8.3	1.2	1.1	7.8	52	0.0	0	21.7	62 (N/A)	0.6	3.85
Callery pear	4.9	0.8	2.5	0.2	26	14.9	2.1	2.0	13.7	92	-1.2	-4	39.9	114 (N/A)	0.6	7.10
Baldcypress	1.7	0.3	1.7	0.2	12	7.3	1.1	1.0	7.0	46	-4.0	-15	16.5	43 (N/A)	0.6	2.70
Littleleaf linden	0.7	0.1	0.4	0.0	4	4.4	0.6	0.6	4.1	27	-0.4	-1	10.7	30 (N/A)	0.6	1.87
Douglas fir	1.7	0.3	1.5	0.2	12	6.2	0.9	0.9	5.9	38	-5.3	-20	12.3	30 (N/A)	0.6	2.02

# Annual Air Quality Benefits of Public Trees

5/19/2025

Species	Deposition (lb)				Total Depos. (\$)	Avoided (lb)				Total Avoided (\$)	BVOC Emissions (lb)	BVOC Emissions (\$)	Total (lb)	Total Standard (\$) Error	% of Total Trees	Avg. \$/tree
	O <sub>3</sub>	NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>		NO <sub>2</sub>	PM <sub>10</sub>	VOC	SO <sub>2</sub>							
Eastern redbud	0.7	0.1	0.4	0.0	4	4.5	0.6	0.6	4.1	28	0.0	0	11.1	32 (N/A)	0.6	2.10
Ginkgo	0.6	0.1	0.3	0.0	3	3.3	0.5	0.5	3.2	21	-0.2	-1	8.3	23 (N/A)	0.6	1.55
Green ash	2.9	0.5	1.5	0.1	16	14.0	2.0	2.0	13.4	88	0.0	0	36.4	103 (N/A)	0.5	7.95
Northern catalpa	3.1	0.5	1.5	0.1	17	13.0	1.9	1.8	12.3	81	0.0	0	34.3	98 (N/A)	0.5	7.51
River birch	4.8	0.8	2.4	0.2	26	13.8	2.0	1.9	13.0	86	-1.1	-4	37.8	107 (N/A)	0.4	9.76
Birch	0.6	0.1	0.3	0.0	3	4.3	0.6	0.6	4.0	27	-0.2	-1	10.4	29 (N/A)	0.4	2.91
Cherry plum	0.4	0.1	0.2	0.0	2	1.3	0.2	0.2	1.2	8	0.0	0	3.6	10 (N/A)	0.3	1.29
Sweetgum	0.1	0.0	0.1	0.0	1	1.5	0.2	0.2	1.5	10	0.0	0	3.7	10 (N/A)	0.3	1.30
Eastern hophornbeam	0.1	0.0	0.1	0.0	1	1.5	0.2	0.2	1.3	9	0.0	0	3.5	10 (N/A)	0.3	1.25
Lilac	0.1	0.0	0.0	0.0	0	0.9	0.1	0.1	0.8	5	0.0	0	2.0	6 (N/A)	0.3	0.71
Ohio buckeye	1.1	0.2	0.5	0.0	6	3.0	0.4	0.4	2.8	18	-0.3	-1	8.2	23 (N/A)	0.3	3.32
Magnolia	0.9	0.2	0.4	0.0	5	2.2	0.3	0.3	2.0	13	-0.2	-1	6.1	17 (N/A)	0.2	2.91
Oak	0.4	0.1	0.2	0.0	2	2.5	0.4	0.4	2.4	16	0.0	0	6.3	18 (N/A)	0.2	2.98
Yellowwood	1.1	0.2	0.6	0.1	6	3.4	0.5	0.5	3.2	21	-0.3	-1	9.3	26 (N/A)	0.2	4.41
Tree of Heaven	4.0	0.7	1.9	0.2	21	7.7	1.1	1.1	7.2	48	-0.9	-3	22.9	66 (N/A)	0.2	10.95
Tulip tree	0.1	0.0	0.1	0.0	1	1.7	0.3	0.2	1.7	11	0.0	0	4.1	12 (N/A)	0.2	1.92
Pine	0.1	0.0	0.1	0.0	1	0.7	0.1	0.1	0.6	4	-0.4	-1	1.3	3 (N/A)	0.2	0.68
Black cherry	0.6	0.1	0.3	0.0	3	2.6	0.4	0.4	2.5	16	0.0	0	7.0	20 (N/A)	0.1	4.94
Black maple	0.0	0.0	0.0	0.0	0	0.7	0.1	0.1	0.7	4	0.0	0	1.6	4 (N/A)	0.1	1.12
Serviceberry	0.0	0.0	0.0	0.0	0	0.3	0.0	0.0	0.2	2	0.0	0	0.6	2 (N/A)	0.1	0.41
Jack pine	0.5	0.1	0.4	0.1	3	1.6	0.2	0.2	1.6	10	-1.4	-5	3.3	8 (N/A)	0.1	2.02
Amur maple	0.5	0.1	0.2	0.0	2	2.2	0.3	0.3	2.1	14	0.0	0	5.8	16 (N/A)	0.1	4.09
Chinkapin oak	0.5	0.1	0.3	0.0	3	1.5	0.2	0.2	1.4	9	-0.1	0	4.1	12 (N/A)	0.1	2.91
Fir	0.2	0.0	0.2	0.0	1	1.0	0.1	0.1	0.9	6	-0.7	-3	1.9	5 (N/A)	0.1	1.20
Japanese zelkova	0.3	0.0	0.2	0.0	2	1.6	0.2	0.2	1.6	10	-0.1	0	4.1	12 (N/A)	0.1	3.84
Dogwood	0.0	0.0	0.0	0.0	0	0.1	0.0	0.0	0.0	0	0.0	0	0.1	0 (N/A)	0.1	0.11
Broadleaf Deciduous Medium	0.9	0.2	0.5	0.0	5	2.1	0.3	0.3	2.0	13	-0.2	-1	6.0	17 (N/A)	0.1	5.73
Beech	0.2	0.0	0.1	0.0	1	1.1	0.2	0.2	1.1	7	-0.1	0	2.9	8 (N/A)	0.1	2.73
English oak	1.4	0.2	0.7	0.1	7	2.9	0.4	0.4	2.7	18	-0.3	-1	8.3	24 (N/A)	0.1	7.96
Nicker	0.0	0.0	0.0	0.0	0	0.1	0.0	0.0	0.1	0	0.0	0	0.1	0 (N/A)	0.1	0.14
Willow	1.2	0.2	0.6	0.1	7	3.7	0.5	0.5	3.4	23	-0.3	-1	9.9	28 (N/A)	0.1	9.41
Alder	0.3	0.0	0.1	0.0	1	1.3	0.2	0.2	1.2	8	0.0	0	3.2	9 (N/A)	0.1	4.55
Hickory	0.0	0.0	0.0	0.0	0	0.1	0.0	0.0	0.1	1	0.0	0	0.3	1 (N/A)	0.1	0.48
Black oak	0.0	0.0	0.0	0.0	0	0.2	0.0	0.0	0.2	1	0.0	0	0.5	1 (N/A)	0.1	0.67
Pawpaw	0.1	0.0	0.0	0.0	0	0.7	0.1	0.1	0.7	4	0.0	0	1.7	5 (N/A)	0.1	2.34

# Annual Air Quality Benefits of Public Trees

5/19/2025

Species	Deposition (lb)				Total Depos. (\$)	Avoided (lb)				Total Avoided (\$)	BVOC Emissions (lb)	BVOC Emissions (\$)	Total (lb)	Total Standard (\$ Error)	% of Total Trees	Avg. \$/tree
	O <sub>3</sub>	NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>		NO <sub>2</sub>	PM <sub>10</sub>	VOC	SO <sub>2</sub>							
White ash	2.3	0.4	1.0	0.1	12	3.9	0.6	0.5	3.8	25	0.0	0	12.6	37 (N/A)	0.1	18.28
Osage orange	1.7	0.3	0.8	0.1	9	3.1	0.5	0.4	2.9	19	-0.4	-1	9.5	27 (N/A)	0.1	13.58
Mohr oak	0.1	0.0	0.0	0.0	0	0.5	0.1	0.1	0.5	3	0.0	0	1.3	4 (N/A)	0.1	1.80
Sumac	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.1	0 (N/A)	0.1	0.11
CES OTHER	0.3	0.1	0.3	0.0	2	0.6	0.1	0.1	0.5	3	-0.9	-3	1.1	2 (N/A)	0.1	1.14
Black poplar	0.0	0.0	0.0	0.0	0	0.9	0.1	0.1	0.9	6	0.0	0	2.1	6 (N/A)	0.1	2.99
Goldenrain tree	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.1	0 (N/A)	0.1	0.14
Pecan	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0 (N/A)	0.0	0.14
Maple	0.0	0.0	0.0	0.0	0	0.2	0.0	0.0	0.2	1	0.0	0	0.4	1 (N/A)	0.0	1.12
Common persimmon	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0 (N/A)	0.0	0.14
Broadleaf Deciduous Large	0.8	0.1	0.4	0.0	4	1.9	0.3	0.3	1.8	12	0.0	0	5.5	16 (N/A)	0.0	15.71
American hazelnut	0.2	0.0	0.1	0.0	1	1.1	0.2	0.2	1.1	7	-0.1	0	2.8	8 (N/A)	0.0	7.92
Black locust	0.9	0.1	0.4	0.0	5	1.6	0.2	0.2	1.5	10	-0.2	-1	4.7	14 (N/A)	0.0	13.58
Broadleaf Deciduous Small	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0 (N/A)	0.0	0.11
Pear	0.0	0.0	0.0	0.0	0	0.4	0.1	0.1	0.3	2	0.0	0	0.9	3 (N/A)	0.0	2.55
Japanese maple	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0 (N/A)	0.0	0.11
Scotch pine	0.2	0.0	0.1	0.0	1	0.6	0.1	0.1	0.6	4	-0.5	-2	1.2	3 (N/A)	0.0	2.82
Quaking aspen	0.0	0.0	0.0	0.0	0	0.1	0.0	0.0	0.1	1	0.0	0	0.3	1 (N/A)	0.0	0.87
Boxelder	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.1	0 (N/A)	0.0	0.25
Plum	0.0	0.0	0.0	0.0	0	0.4	0.1	0.1	0.3	2	0.0	0	0.9	3 (N/A)	0.0	2.55
Elm	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0 (N/A)	0.0	0.08
Shumard oak	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0 (N/A)	0.0	0.14
<b>Citywide total</b>	<b>813.9</b>	<b>138.8</b>	<b>435.4</b>	<b>44.6</b>	<b>4,510</b>	<b>2,451.5</b>	<b>356.9</b>	<b>340.2</b>	<b>2,326.2</b>	<b>15,269</b>	<b>-587.5</b>	<b>-2,203</b>	<b>6,319.9</b>	<b>17,577 (N/A)</b>	<b>100.0</b>	<b>6.52</b>

# Beatrice

## Stored CO2 Benefits of Public Trees

5/19/2025

Species	Total Stored CO2 (lbs)	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Bur oak	4,254,472	31,909	(N/A)	13.4	23.7	88.39
Northern hackberry	1,159,346	8,695	(N/A)	8.2	6.4	39.17
Black walnut	1,125,136	8,439	(N/A)	6.1	6.3	51.14
Silver maple	2,656,776	19,926	(N/A)	6.0	14.8	122.24
Eastern white pine	326,325	2,447	(N/A)	5.3	1.8	17.00
Spruce	39,268	295	(N/A)	4.8	0.2	2.28
Apple	317,932	2,384	(N/A)	4.6	1.8	19.23
Eastern cottonwood	2,652,455	19,893	(N/A)	4.2	14.7	174.50
Northern red oak	538,070	4,036	(N/A)	4.2	3.0	35.40
Ponderosa pine	203,800	1,529	(N/A)	3.5	1.1	16.09
Eastern red cedar	63,121	473	(N/A)	2.6	0.4	6.76
Red maple	169,702	1,273	(N/A)	2.6	0.9	18.45
Blue spruce	31,916	239	(N/A)	2.3	0.2	3.92
Honeylocust	521,384	3,910	(N/A)	2.2	2.9	65.17
White oak	159,166	1,194	(N/A)	2.0	0.9	22.11
Siberian elm	629,843	4,724	(N/A)	2.0	3.5	89.13
Pin oak	726,363	5,448	(N/A)	1.7	4.0	115.91
Norway maple	213,248	1,599	(N/A)	1.7	1.2	34.77
Swamp white oak	106,019	795	(N/A)	1.7	0.6	17.67
Red pine	56,555	424	(N/A)	1.0	0.3	15.71
Kentucky coffeetree	54,864	411	(N/A)	1.0	0.3	15.83
American sycamore	399,568	2,997	(N/A)	0.9	2.2	124.87
American basswood	213,682	1,603	(N/A)	0.9	1.2	66.78
Shingle oak	113,129	848	(N/A)	0.9	0.6	36.89
Ash	133,651	1,002	(N/A)	0.8	0.7	45.56
Norway spruce	33,722	253	(N/A)	0.8	0.2	11.50
Sawtooth oak	77,729	583	(N/A)	0.7	0.4	29.15
Sugar maple	77,245	579	(N/A)	0.7	0.4	30.49
Mulberry	54,996	412	(N/A)	0.7	0.3	21.71
Austrian pine	34,275	257	(N/A)	0.6	0.2	15.12
American elm	45,482	341	(N/A)	0.6	0.3	21.32
Callery pear	80,716	605	(N/A)	0.6	0.4	37.84
Baldcypress	21,288	160	(N/A)	0.6	0.1	9.98
Littleleaf linden	17,081	128	(N/A)	0.6	0.1	8.01
Douglas fir	9,026	68	(N/A)	0.6	0.1	4.51
Eastern redbud	12,274	92	(N/A)	0.6	0.1	6.14
Ginkgo	8,843	66	(N/A)	0.6	0.0	4.42
Green ash	95,018	713	(N/A)	0.5	0.5	54.82
Northern catalpa	100,081	751	(N/A)	0.5	0.6	57.74
River birch	78,462	588	(N/A)	0.4	0.4	53.50
Birch	10,279	77	(N/A)	0.4	0.1	7.71
Cherry plum	7,167	54	(N/A)	0.3	0.0	6.72
Sweetgum	4,277	32	(N/A)	0.3	0.0	4.01
Eastern hophornbeam	3,285	25	(N/A)	0.3	0.0	3.08
Lilac	1,660	12	(N/A)	0.3	0.0	1.56
Ohio buckeye	18,190	136	(N/A)	0.3	0.1	19.49
Magnolia	14,969	112	(N/A)	0.2	0.1	18.71
Oak	12,351	93	(N/A)	0.2	0.1	15.44
Yellowwood	19,257	144	(N/A)	0.2	0.1	24.07
Tree of Heaven	65,284	490	(N/A)	0.2	0.4	81.61
Tulip tree	4,928	37	(N/A)	0.2	0.0	6.16
Pine	374	3	(N/A)	0.2	0.0	0.56
Black cherry	9,125	68	(N/A)	0.1	0.1	17.11
Black maple	874	7	(N/A)	0.1	0.0	1.64
Serviceberry	269	2	(N/A)	0.1	0.0	0.50

The value of stored carbon dioxide is calculated as the total amount of carbon dioxide sequestered annually over the life of each tree, summed for the population. This value should not be added to the Replacement Value or double-counting of the carbon dioxide storage benefit will occur.

# Stored CO2 Benefits of Public Trees

5/19/2025

Species	Total Stored CO2 (lbs)	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Jack pine	2,564	19	(N/A)	0.1	0.0	4.81
Amur maple	7,160	54	(N/A)	0.1	0.0	13.43
Chinkapin oak	8,197	61	(N/A)	0.1	0.0	15.37
Fir	855	6	(N/A)	0.1	0.0	1.60
Japanese zelkova	4,742	36	(N/A)	0.1	0.0	11.85
Dogwood	41	0	(N/A)	0.1	0.0	0.10
Broadleaf Deciduous	15,398	115	(N/A)	0.1	0.1	38.49
Beech	3,658	27	(N/A)	0.1	0.0	9.14
English oak	22,242	167	(N/A)	0.1	0.1	55.61
Nicker	51	0	(N/A)	0.1	0.0	0.13
Willow	19,515	146	(N/A)	0.1	0.1	48.79
Alder	3,945	30	(N/A)	0.1	0.0	14.79
Hickory	198	1	(N/A)	0.1	0.0	0.74
Black oak	235	2	(N/A)	0.1	0.0	0.88
Pawpaw	1,319	10	(N/A)	0.1	0.0	4.95
White ash	34,401	258	(N/A)	0.1	0.2	129.00
Osage orange	28,560	214	(N/A)	0.1	0.2	107.10
Mohr oak	1,118	8	(N/A)	0.1	0.0	4.19
Sumac	28	0	(N/A)	0.1	0.0	0.10
CES OTHER	1,105	8	(N/A)	0.1	0.0	4.14
Black poplar	2,069	16	(N/A)	0.1	0.0	7.76
Goldenrain tree	34	0	(N/A)	0.1	0.0	0.13
Pecan	17	0	(N/A)	0.0	0.0	0.13
Maple	218	2	(N/A)	0.0	0.0	1.64
Common persimmon	17	0	(N/A)	0.0	0.0	0.13
Broadleaf Deciduous	25,943	195	(N/A)	0.0	0.1	194.57
American hazelnut	3,624	27	(N/A)	0.0	0.0	27.18
Black locust	14,280	107	(N/A)	0.0	0.1	107.10
Broadleaf Deciduous	14	0	(N/A)	0.0	0.0	0.10
Pear	908	7	(N/A)	0.0	0.0	6.81
Japanese maple	14	0	(N/A)	0.0	0.0	0.10
Scotch pine	1,170	9	(N/A)	0.0	0.0	8.78
Quaking aspen	185	1	(N/A)	0.0	0.0	1.39
Boxelder	17	0	(N/A)	0.0	0.0	0.13
Plum	908	7	(N/A)	0.0	0.0	6.81
Elm	12	0	(N/A)	0.0	0.0	0.09
Shumard oak	17	0	(N/A)	0.0	0.0	0.13
Citywide total	17,989,098	134,918	(N/A)	100.0	100.0	50.06

The value of stored carbon dioxide is calculated as the total amount of carbon dioxide sequestered annually over the life of each tree, summed for the population. This value should not be added to the Replacement Value or double-counting of the carbon dioxide storage benefit will occur.

Beatrice

**Annual CO Benefits of Public Trees**

5/19/2025

Species	Sequestered (lb)	Sequestered (\$)	Decomposition Release (lb)	Maintenance Release (lb)	Total Released (\$)	Avoided (lb)	Avoided (\$)	Net Total (lb)	Total Standard (\$ Error)	% of Total Trees	% of Total \$	Avg. \$/tree
Bur oak	218,244	1,637	-20,422	-980	-161	155,024	1,163	351,867	2,639 (N/A)	13.4	19.1	7.31
Northern hackberry	77,071	578	-5,566	-599	-46	110,083	826	180,989	1,357 (N/A)	8.2	9.8	6.11
Black walnut	82,673	620	-5,401	-367	-43	62,058	465	138,963	1,042 (N/A)	6.1	7.5	6.32
Silver maple	206,898	1,552	-12,753	-564	-100	87,380	655	280,962	2,107 (N/A)	6.0	15.2	12.93
Eastern white pine	17,479	131	-1,567	-282	-14	26,763	201	42,394	318 (N/A)	5.3	2.3	2.21
Spruce	5,133	38	-189	-109	-2	9,270	70	14,105	106 (N/A)	4.8	0.8	0.82
Apple	25,114	188	-1,527	-193	-13	24,815	186	48,209	362 (N/A)	4.6	2.6	2.92
Eastern cottonwood	85,919	644	-12,732	-436	-99	66,038	495	138,789	1,041 (N/A)	4.2	7.5	9.13
Northern red oak	21,410	161	-2,583	-196	-21	26,835	201	45,465	341 (N/A)	4.2	2.5	2.99
Ponderosa pine	12,922	97	-978	-208	-9	20,408	153	32,144	241 (N/A)	3.5	1.7	2.54
Eastern red cedar	2,006	15	-303	-123	-3	11,296	85	12,876	97 (N/A)	2.6	0.7	1.38
Red maple	13,459	101	-815	-85	-7	14,016	105	26,575	199 (N/A)	2.6	1.4	2.89
Blue spruce	2,538	19	-153	-64	-2	5,972	45	8,292	62 (N/A)	2.3	0.4	1.02
Honeylocust	46,575	349	-2,504	-145	-20	30,963	232	74,889	562 (N/A)	2.2	4.1	9.36
White oak	15,294	115	-765	-73	-6	12,087	91	26,544	199 (N/A)	2.0	1.4	3.69
Siberian elm	30,012	225	-3,023	-167	-24	26,530	199	53,351	400 (N/A)	2.0	2.9	7.55
Pin oak	63,927	479	-3,487	-153	-27	24,213	182	84,501	634 (N/A)	1.7	4.6	13.48
Norway maple	13,630	102	-1,029	-86	-8	14,156	106	26,672	200 (N/A)	1.7	1.4	4.35
Swamp white oak	10,061	75	-514	-56	-4	9,370	70	18,860	141 (N/A)	1.7	1.0	3.14
Red pine	3,844	29	-271	-60	-2	6,087	46	9,599	72 (N/A)	1.0	0.5	2.67
Kentucky coffeetree	5,913	44	-264	-30	-2	4,422	33	10,041	75 (N/A)	1.0	0.5	2.90
American sycamore	16,628	125	-1,918	-76	-15	11,553	87	26,187	196 (N/A)	0.9	1.4	8.18
American basswood	13,588	102	-1,026	-58	-8	8,282	62	20,787	156 (N/A)	0.9	1.1	6.50
Shingle oak	8,051	60	-544	-46	-4	8,272	62	15,734	118 (N/A)	0.9	0.9	5.13
Ash	8,305	62	-642	-50	-5	8,385	63	15,999	120 (N/A)	0.8	0.9	5.45
Norway spruce	2,249	17	-162	-38	-2	3,520	26	5,568	42 (N/A)	0.8	0.3	1.90
Sawtooth oak	6,189	46	-375	-35	-3	5,791	43	11,570	87 (N/A)	0.7	0.6	4.34
Sugar maple	4,905	37	-371	-27	-3	4,259	32	8,766	66 (N/A)	0.7	0.5	3.46
Mulberry	2,519	19	-264	-34	-2	3,741	28	5,962	45 (N/A)	0.7	0.3	2.35
Austrian pine	2,019	15	-165	-40	-2	3,851	29	5,666	42 (N/A)	0.6	0.3	2.50
American elm	2,257	17	-220	-21	-2	2,904	22	4,921	37 (N/A)	0.6	0.3	2.31
Callery pear	5,267	40	-387	-32	-3	5,079	38	9,927	74 (N/A)	0.6	0.5	4.65

# Annual CO<sub>2</sub> Benefits of Public Trees

5/19/2025

Species	Sequestered (lb)	Sequestered (\$)	Decomposition Release (lb)	Maintenance Release (lb)	Total Released (\$)	Avoided (lb)	Avoided (\$)	Net Total (lb)	Total Standard (\$)	Total Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Baldcypress	1,284	10	-102	-17	-1	2,632	20	3,797	28 (N/A)		0.6	0.2	1.78
Littleleaf linden	2,627	20	-86	-14	-1	1,527	11	4,054	30 (N/A)		0.6	0.2	1.90
Douglas fir	865	6	-43	-22	0	2,175	16	2,975	22 (N/A)		0.6	0.2	1.49
Eastern redbud	1,396	10	-59	-14	-1	1,528	11	2,851	21 (N/A)		0.6	0.2	1.43
Ginkgo	645	5	-43	-11	0	1,180	9	1,772	13 (N/A)		0.6	0.1	0.89
Green ash	6,711	50	-456	-29	-4	4,968	37	11,193	84 (N/A)		0.5	0.6	6.46
Northern catalpa	6,563	49	-480	-29	-4	4,566	34	10,620	80 (N/A)		0.5	0.6	6.13
River birch	3,809	29	-377	-29	-3	4,812	36	8,216	62 (N/A)		0.4	0.4	5.60
Birch	1,746	13	-49	-10	0	1,472	11	3,159	24 (N/A)		0.4	0.2	2.37
Cherry plum	119	1	-35	-6	0	437	3	516	4 (N/A)		0.3	0.0	0.48
Sweetgum	678	5	-21	-4	0	556	4	1,209	9 (N/A)		0.3	0.1	1.13
Eastern hophornbeam	473	4	-16	-6	0	495	4	947	7 (N/A)		0.3	0.1	0.89
Lilac	292	2	-8	-4	0	290	2	569	4 (N/A)		0.3	0.0	0.53
Ohio buckeye	873	7	-88	-7	-1	1,027	8	1,805	14 (N/A)		0.3	0.1	1.93
Magnolia	298	2	-74	-6	-1	747	6	964	7 (N/A)		0.2	0.1	1.20
Oak	1,187	9	-59	-6	0	896	7	2,018	15 (N/A)		0.2	0.1	2.52
Yellowwood	1,086	8	-93	-8	-1	1,188	9	2,174	16 (N/A)		0.2	0.1	2.72
Tree of Heaven	936	7	-314	-20	-3	2,659	20	3,261	24 (N/A)		0.2	0.2	4.08
Tulip tree	736	6	-24	-4	0	613	5	1,321	10 (N/A)		0.2	0.1	1.65
Pine	66	0	-2	-3	0	224	2	285	2 (N/A)		0.2	0.0	0.43
Black cherry	812	6	-44	-6	0	931	7	1,693	13 (N/A)		0.1	0.1	3.17
Black maple	155	1	-4	-2	0	242	2	390	3 (N/A)		0.1	0.0	0.73
Serviceberry	112	1	-2	-1	0	86	1	195	1 (N/A)		0.1	0.0	0.36
Jack pine	232	2	-12	-6	0	580	4	794	6 (N/A)		0.1	0.0	1.49
Amur maple	687	5	-34	-6	0	778	6	1,425	11 (N/A)		0.1	0.1	2.67
Chinkapin oak	576	4	-40	-4	0	519	4	1,051	8 (N/A)		0.1	0.1	1.97
Fir	118	1	-4	-4	0	329	2	439	3 (N/A)		0.1	0.0	0.82
Japanese zelkova	615	5	-23	-3	0	578	4	1,167	9 (N/A)		0.1	0.1	2.92
Dogwood	26	0	0	-1	0	17	0	42	0 (N/A)		0.1	0.0	0.10
Broadleaf Deciduous Medi	599	4	-74	-5	-1	722	5	1,242	9 (N/A)		0.1	0.1	3.11
Beech	397	3	-18	-2	0	409	3	786	6 (N/A)		0.1	0.0	1.97
English oak	845	6	-107	-6	-1	986	7	1,718	13 (N/A)		0.1	0.1	4.29
Nicker	16	0	0	-1	0	22	0	37	0 (N/A)		0.1	0.0	0.09
Willow	1,326	10	-94	-7	-1	1,275	10	2,500	19 (N/A)		0.1	0.1	6.25
Alder	382	3	-19	-3	0	433	3	792	6 (N/A)		0.1	0.0	2.97

# Annual CO Benefits of Public Trees

5/19/2025

Species	Sequestered (lb)	Sequestered (\$)	Decomposition Release (lb)	Maintenance Release (lb)	Total Released (\$)	Avoided (lb)	Avoided (\$)	Net Total (lb)	Total Standard (\$ Error)	% of Total Trees	% of Total \$	Avg. \$/tree
Hickory	77	1	-1	-1	0	53	0	128	1 (N/A)	0.1	0.0	0.48
Black oak	101	1	-2	-1	0	72	1	170	1 (N/A)	0.1	0.0	0.64
Pawpaw	320	2	-7	-2	0	240	2	551	4 (N/A)	0.1	0.0	2.07
White ash	2,767	21	-165	-7	-1	1,404	11	4,000	30 (N/A)	0.1	0.2	15.00
Osage orange	370	3	-137	-8	-1	1,077	8	1,302	10 (N/A)	0.1	0.1	4.88
Mohr oak	229	2	-5	-1	0	183	1	406	3 (N/A)	0.1	0.0	1.52
Sumac	17	0	0	0	0	11	0	28	0 (N/A)	0.1	0.0	0.10
CES OTHER	1	0	-5	-2	0	193	1	186	1 (N/A)	0.1	0.0	0.70
Black poplar	418	3	-10	-2	0	318	2	723	5 (N/A)	0.1	0.0	2.71
Goldenrain tree	11	0	0	0	0	14	0	25	0 (N/A)	0.1	0.0	0.09
Pecan	5	0	0	0	0	7	0	12	0 (N/A)	0.0	0.0	0.09
Maple	39	0	-1	-1	0	60	0	97	1 (N/A)	0.0	0.0	0.73
Common persimmon	5	0	0	0	0	7	0	12	0 (N/A)	0.0	0.0	0.09
Broadleaf Deciduous Large	960	7	-125	-4	-1	650	5	1,481	11 (N/A)	0.0	0.1	11.11
American hazelnut	386	3	-17	-2	0	395	3	762	6 (N/A)	0.0	0.0	5.71
Black locust	0	0	-69	-4	-1	539	4	466	3 (N/A)	0.0	0.0	3.49
Broadleaf Deciduous Small	9	0	0	0	0	6	0	14	0 (N/A)	0.0	0.0	0.10
Pear	114	1	-4	-1	0	124	1	232	2 (N/A)	0.0	0.0	1.74
Japanese maple	9	0	0	0	0	6	0	14	0 (N/A)	0.0	0.0	0.10
Scotch pine	116	1	-6	-2	0	216	2	324	2 (N/A)	0.0	0.0	2.43
Quaking aspen	74	1	-1	-1	0	49	0	121	1 (N/A)	0.0	0.0	0.91
Boxelder	16	0	0	0	0	13	0	28	0 (N/A)	0.0	0.0	0.21
Plum	114	1	-4	-1	0	124	1	232	2 (N/A)	0.0	0.0	1.74
Elm	3	0	0	0	0	4	0	7	0 (N/A)	0.0	0.0	0.05
Shumard oak	5	0	0	0	0	7	0	12	0 (N/A)	0.0	0.0	0.09
Citywide total	1,077,554	8,082	-86,385	-5,779	-691	861,096	6,458	1,846,486	13,849 (N/A)	100.0	100.0	5.14

<b>Annual Aesthetic/Other Benefits of Public Trees</b>
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5/19/2025

Species	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Bur oak	18,218	(N/A)	13.4	16.3	50.47
Northern hackberry	11,126	(N/A)	8.2	9.9	50.12
Black walnut	7,732	(N/A)	6.1	6.9	46.86
Silver maple	16,471	(N/A)	6.0	14.7	101.05
Eastern white pine	3,987	(N/A)	5.3	3.6	27.69
Spruce	1,727	(N/A)	4.8	1.5	13.39
Apple	1,461	(N/A)	4.6	1.3	11.79
Eastern cottonwood	6,403	(N/A)	4.2	5.7	56.16
Northern red oak	1,779	(N/A)	4.2	1.6	15.60
Ponderosa pine	3,272	(N/A)	3.5	2.9	34.44
Eastern red cedar	787	(N/A)	2.6	0.7	11.24
Red maple	1,816	(N/A)	2.6	1.6	26.32
Blue spruce	936	(N/A)	2.3	0.8	15.34
Honeylocust	11,250	(N/A)	2.2	10.0	187.50
White oak	1,647	(N/A)	2.0	1.5	30.50
Siberian elm	2,200	(N/A)	2.0	2.0	41.51
Pin oak	4,967	(N/A)	1.7	4.4	105.69
Norway maple	1,373	(N/A)	1.7	1.2	29.84
Swamp white oak	1,065	(N/A)	1.7	1.0	23.67
Red pine	982	(N/A)	1.0	0.9	36.39
Kentucky coffeetree	695	(N/A)	1.0	0.6	26.72
American sycamore	1,279	(N/A)	0.9	1.1	53.29
American basswood	1,056	(N/A)	0.9	0.9	44.00
Shingle oak	793	(N/A)	0.9	0.7	34.46
Ash	805	(N/A)	0.8	0.7	36.58
Norway spruce	532	(N/A)	0.8	0.5	24.17
Sawtooth oak	620	(N/A)	0.7	0.6	31.00
Sugar maple	534	(N/A)	0.7	0.5	28.13
Mulberry	146	(N/A)	0.7	0.1	7.70
Austrian pine	378	(N/A)	0.6	0.3	22.22
American elm	347	(N/A)	0.6	0.3	21.72
Callery pear	527	(N/A)	0.6	0.5	32.94
Baldcypress	226	(N/A)	0.6	0.2	14.10
Littleleaf linden	335	(N/A)	0.6	0.3	20.97
Douglas fir	332	(N/A)	0.6	0.3	22.16
Eastern redbud	78	(N/A)	0.6	0.1	5.18
Ginkgo	61	(N/A)	0.6	0.1	4.08
Green ash	614	(N/A)	0.5	0.5	47.25
Northern catalpa	584	(N/A)	0.5	0.5	44.89
River birch	368	(N/A)	0.4	0.3	33.46
Birch	205	(N/A)	0.4	0.2	20.47
Cherry plum	4	(N/A)	0.3	0.0	0.54
Sweetgum	111	(N/A)	0.3	0.1	13.89
Eastern hophornbeam	25	(N/A)	0.3	0.0	3.18
Lilac	15	(N/A)	0.3	0.0	1.84
Ohio buckeye	94	(N/A)	0.3	0.1	13.49
Magnolia	44	(N/A)	0.2	0.0	7.36
Oak	134	(N/A)	0.2	0.1	22.34

# Annual Aesthetic/Other Benefits of Public Trees

5/19/2025

Species	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Yellowwood	115	(N/A)	0.2	0.1	19.20
Tree of Heaven	87	(N/A)	0.2	0.1	14.57
Tulip tree	105	(N/A)	0.2	0.1	17.49
Pine	56	(N/A)	0.2	0.0	11.15
Black cherry	46	(N/A)	0.1	0.0	11.62
Black maple	29	(N/A)	0.1	0.0	7.28
Serviceberry	21	(N/A)	0.1	0.0	5.27
Jack pine	84	(N/A)	0.1	0.1	20.96
Amur maple	39	(N/A)	0.1	0.0	9.86
Chinkapin oak	61	(N/A)	0.1	0.1	15.35
Fir	68	(N/A)	0.1	0.1	17.07
Japanese zelkova	68	(N/A)	0.1	0.1	22.71
Dogwood	0	(N/A)	0.1	0.0	0.03
Broadleaf Deciduous Medium	60	(N/A)	0.1	0.1	20.14
Beech	45	(N/A)	0.1	0.0	14.88
English oak	77	(N/A)	0.1	0.1	25.75
Nicker	8	(N/A)	0.1	0.0	2.74
Willow	125	(N/A)	0.1	0.1	41.75
Alder	22	(N/A)	0.1	0.0	10.94
Hickory	20	(N/A)	0.1	0.0	10.00
Black oak	16	(N/A)	0.1	0.0	7.81
Pawpaw	39	(N/A)	0.1	0.0	19.55
White ash	286	(N/A)	0.1	0.3	142.97
Osage orange	31	(N/A)	0.1	0.0	15.73
Mohr oak	29	(N/A)	0.1	0.0	14.48
Sumac	0	(N/A)	0.1	0.0	0.03
CES OTHER	4	(N/A)	0.1	0.0	2.14
Black poplar	57	(N/A)	0.1	0.1	28.56
Goldenrain tree	5	(N/A)	0.1	0.0	2.74
Pecan	3	(N/A)	0.0	0.0	2.74
Maple	7	(N/A)	0.0	0.0	7.28
Common persimmon	3	(N/A)	0.0	0.0	2.74
Broadleaf Deciduous Large	67	(N/A)	0.0	0.1	66.60
American hazelnut	39	(N/A)	0.0	0.0	39.16
Black locust	0	(N/A)	0.0	0.0	0.00
Broadleaf Deciduous Small	0	(N/A)	0.0	0.0	0.03
Pear	6	(N/A)	0.0	0.0	6.40
Japanese maple	0	(N/A)	0.0	0.0	0.03
Scotch pine	32	(N/A)	0.0	0.0	32.32
Quaking aspen	15	(N/A)	0.0	0.0	14.73
Boxelder	15	(N/A)	0.0	0.0	15.44
Plum	6	(N/A)	0.0	0.0	6.40
Elm	5	(N/A)	0.0	0.0	5.26
Shumard oak	3	(N/A)	0.0	0.0	2.74
Citywide total	111,952	(N/A)	100.0	100.0	41.54

Total Annual Benefits of Public Trees by Species (\$)							
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5/19/2025

Species	Energy	CO <sub>2</sub>	Air Quality	Stormwater	Aesthetic/Other	Total (\$)	Standard Error	% of Total \$
Bur oak	19,447	2,639	3,441	27,974	18,218	71,720	(N/A)	17.9
Northern hackberry	14,193	1,357	2,411	15,328	11,126	44,415	(N/A)	11.1
Black walnut	7,604	1,042	1,281	8,939	7,732	26,598	(N/A)	6.6
Silver maple	10,707	2,107	1,948	19,374	16,471	50,607	(N/A)	12.6
Eastern white pine	3,205	318	177	7,545	3,987	15,232	(N/A)	3.8
Spruce	1,203	106	127	1,749	1,727	4,911	(N/A)	1.2
Apple	3,288	362	554	1,750	1,461	7,415	(N/A)	1.9
Eastern cottonwood	8,299	1,041	1,588	14,263	6,403	31,594	(N/A)	7.9
Northern red oak	3,334	341	478	3,648	1,779	9,579	(N/A)	2.4
Ponderosa pine	2,411	241	181	5,328	3,272	11,432	(N/A)	2.9
Eastern red cedar	1,497	97	126	2,651	787	5,159	(N/A)	1.3
Red maple	1,759	199	311	1,819	1,816	5,905	(N/A)	1.5
Blue spruce	764	62	84	1,209	936	3,055	(N/A)	0.8
Honeylocust	3,784	562	640	5,618	11,250	21,854	(N/A)	5.5
White oak	1,441	199	238	1,485	1,647	5,010	(N/A)	1.3
Siberian elm	3,310	400	610	4,392	2,200	10,912	(N/A)	2.7
Pin oak	2,999	634	386	4,301	4,967	13,288	(N/A)	3.3
Norway maple	1,824	200	311	1,865	1,373	5,574	(N/A)	1.4
Swamp white oak	1,197	141	196	1,052	1,065	3,652	(N/A)	0.9
Red pine	712	72	58	1,532	982	3,357	(N/A)	0.8
Kentucky coffeetree	552	75	87	553	695	1,962	(N/A)	0.5
American sycamore	1,460	196	269	2,415	1,279	5,621	(N/A)	1.4
American basswood	1,086	156	161	1,311	1,056	3,770	(N/A)	0.9
Shingle oak	1,032	118	178	1,019	793	3,140	(N/A)	0.8
Ash	1,085	120	187	1,152	805	3,349	(N/A)	0.8
Norway spruce	443	42	32	883	532	1,932	(N/A)	0.5
Sawtooth oak	747	87	125	723	620	2,302	(N/A)	0.6
Sugar maple	519	66	82	612	534	1,813	(N/A)	0.5
Mulberry	509	45	86	290	146	1,077	(N/A)	0.3
Austrian pine	464	42	53	890	378	1,828	(N/A)	0.5
American elm	369	37	62	410	347	1,224	(N/A)	0.3
Callery pear	678	74	114	705	527	2,098	(N/A)	0.5
Baldcypress	318	28	43	404	226	1,019	(N/A)	0.3
Littleleaf linden	199	30	30	164	335	759	(N/A)	0.2
Douglas fir	272	22	30	422	332	1,079	(N/A)	0.3
Eastern redbud	210	21	32	87	78	427	(N/A)	0.1
Ginkgo	142	13	23	93	61	333	(N/A)	0.1
Green ash	607	84	103	739	614	2,147	(N/A)	0.5
Northern catalpa	575	80	98	749	584	2,084	(N/A)	0.5
River birch	610	62	107	664	368	1,811	(N/A)	0.5
Birch	197	24	29	134	205	589	(N/A)	0.1
Cherry plum	61	4	10	37	4	116	(N/A)	0.0
Sweetgum	64	9	10	56	111	250	(N/A)	0.1
Eastern hophornbeam	73	7	10	27	25	143	(N/A)	0.0
Lilac	42	4	6	15	15	82	(N/A)	0.0
Ohio buckeye	131	14	23	146	94	408	(N/A)	0.1
Magnolia	100	7	17	116	44	285	(N/A)	0.1
Oak	109	15	18	116	134	392	(N/A)	0.1

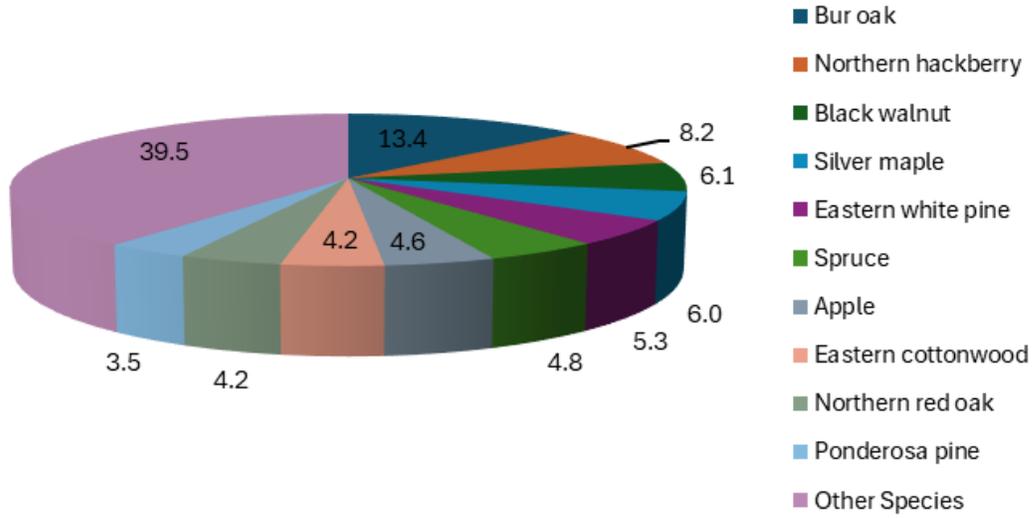
# Total Annual Benefits of Public Trees by Species (\$)

5/19/2025

Species	Energy	CO <sub>2</sub>	Air Quality	Stormwater	Aesthetic/Other	Total (\$)	Standard Error	% of Total \$
Yellowwood	153	16	26	161	115	472	(N/A)	0.1
Tree of Heaven	351	24	66	480	87	1,008	(N/A)	0.3
Tulip tree	73	10	12	62	105	261	(N/A)	0.1
Pine	32	2	3	36	56	130	(N/A)	0.0
Black cherry	115	13	20	54	46	249	(N/A)	0.1
Black maple	31	3	4	15	29	83	(N/A)	0.0
Serviceberry	12	1	2	5	21	42	(N/A)	0.0
Jack pine	71	6	8	111	84	280	(N/A)	0.1
Amur maple	100	11	16	45	39	211	(N/A)	0.1
Chinkapin oak	70	8	12	72	61	223	(N/A)	0.1
Fir	46	3	5	62	68	185	(N/A)	0.0
Japanese zelkova	72	9	12	54	68	215	(N/A)	0.1
Dogwood	3	0	0	1	0	4	(N/A)	0.0
Broadleaf Deciduous M	96	9	17	118	60	302	(N/A)	0.1
Beech	49	6	8	39	45	147	(N/A)	0.0
English oak	131	13	24	170	77	414	(N/A)	0.1
Nicker	3	0	0	1	8	13	(N/A)	0.0
Willow	164	19	28	173	125	509	(N/A)	0.1
Alder	56	6	9	25	22	118	(N/A)	0.0
Hickory	6	1	1	5	20	34	(N/A)	0.0
Black oak	10	1	1	5	16	33	(N/A)	0.0
Pawpaw	33	4	5	20	39	102	(N/A)	0.0
White ash	167	30	37	301	286	820	(N/A)	0.2
Osage orange	142	10	27	204	31	414	(N/A)	0.1
Mohr oak	26	3	4	16	29	77	(N/A)	0.0
Sumac	2	0	0	0	0	3	(N/A)	0.0
CES OTHER	25	1	2	45	4	78	(N/A)	0.0
Black poplar	41	5	6	33	57	143	(N/A)	0.0
Goldenrain tree	2	0	0	1	5	9	(N/A)	0.0
Pecan	1	0	0	0	3	4	(N/A)	0.0
Maple	8	1	1	4	7	21	(N/A)	0.0
Common persimmon	1	0	0	0	3	4	(N/A)	0.0
Broadleaf Deciduous La	82	11	16	149	67	324	(N/A)	0.1
American hazelnut	47	6	8	38	39	138	(N/A)	0.0
Black locust	71	3	14	102	0	190	(N/A)	0.0
Broadleaf Deciduous Sn	1	0	0	0	0	1	(N/A)	0.0
Pear	18	2	3	7	6	36	(N/A)	0.0
Japanese maple	1	0	0	0	0	1	(N/A)	0.0
Scotch pine	24	2	3	42	32	103	(N/A)	0.0
Quaking aspen	6	1	1	5	15	27	(N/A)	0.0
Boxelder	2	0	0	1	15	18	(N/A)	0.0
Plum	18	2	3	7	6	36	(N/A)	0.0
Elm	1	0	0	0	5	7	(N/A)	0.0
Shumard oak	1	0	0	0	3	4	(N/A)	0.0
<b>Citywide Total</b>	<b>107,999</b>	<b>13,849</b>	<b>17,577</b>	<b>149,427</b>	<b>111,952</b>	<b>400,803</b>	<b>(N/A)</b>	<b>100.0</b>

# Species Distribution of Public Trees

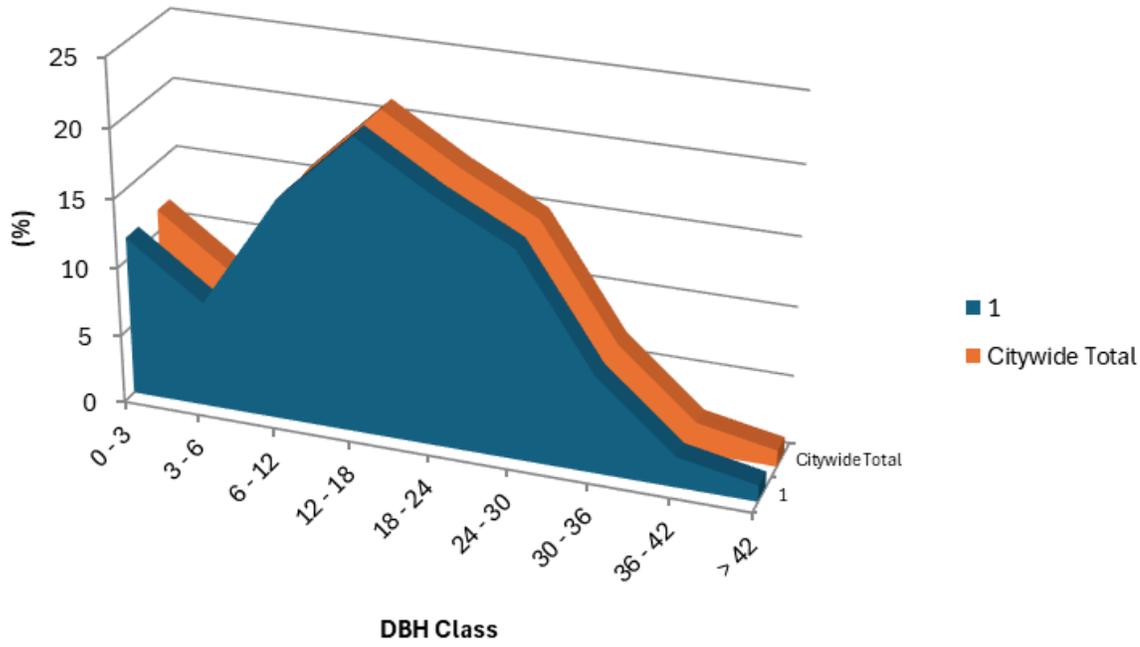
5/19/2025



Species	Percent
Bur oak	13.4
Northern hackberry	8.2
Black walnut	6.1
Silver maple	6.0
Eastern white pine	5.3
Spruce	4.8
Apple	4.6
Eastern cottonwood	4.2
Northern red oak	4.2
Ponderosa pine	3.5
Other Species	39.5
Total	100.0

**Relative Age Distribution of Public Trees (%)**

5/19/2025



Zone	DBH class (in)								
	0-3	3-6	6-12	12-18	18-24	24-30	30-36	36-42	> 42
1	11.61	7.68	15.99	21.26	17.92	15.10	7.01	2.23	1.19
Citywide Total	11.61	7.68	15.99	21.26	17.92	15.10	7.01	2.23	1.19

Figure 3: Foliage Condition

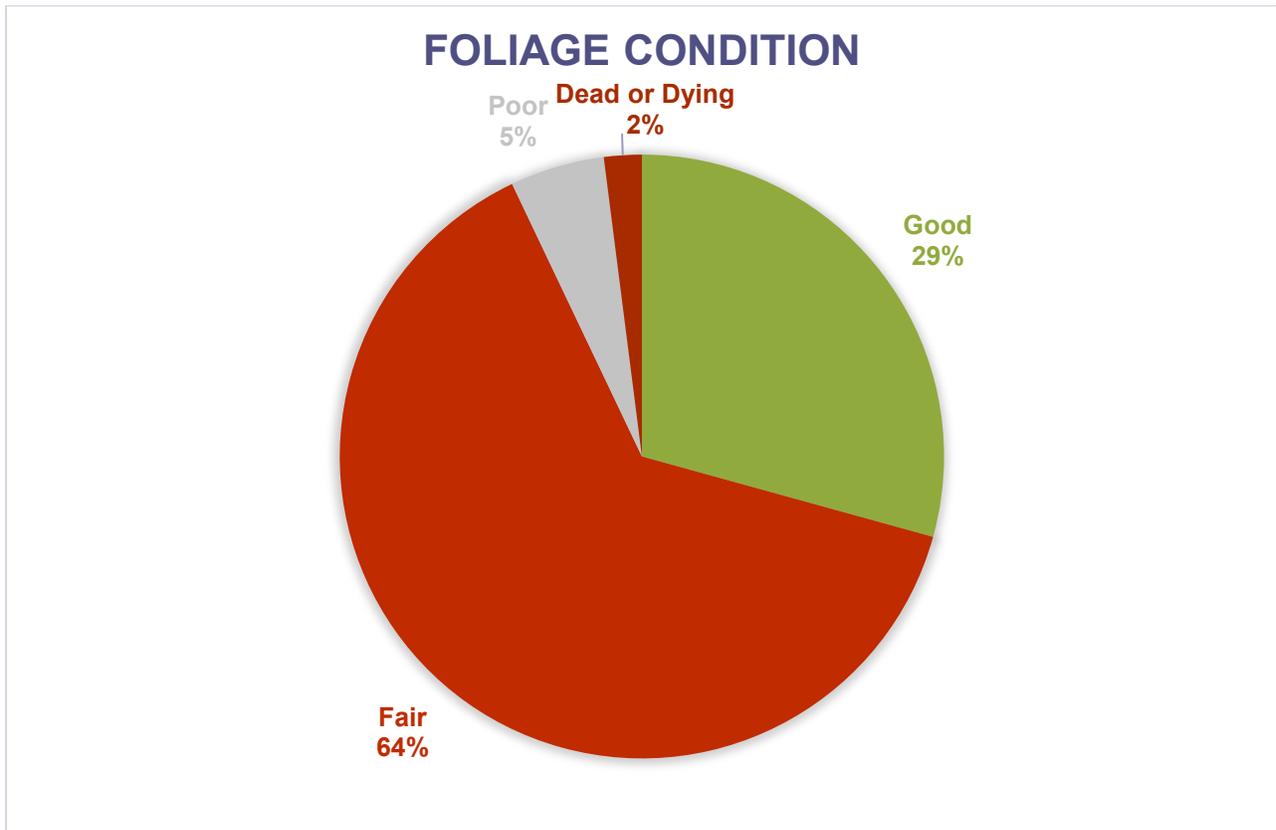
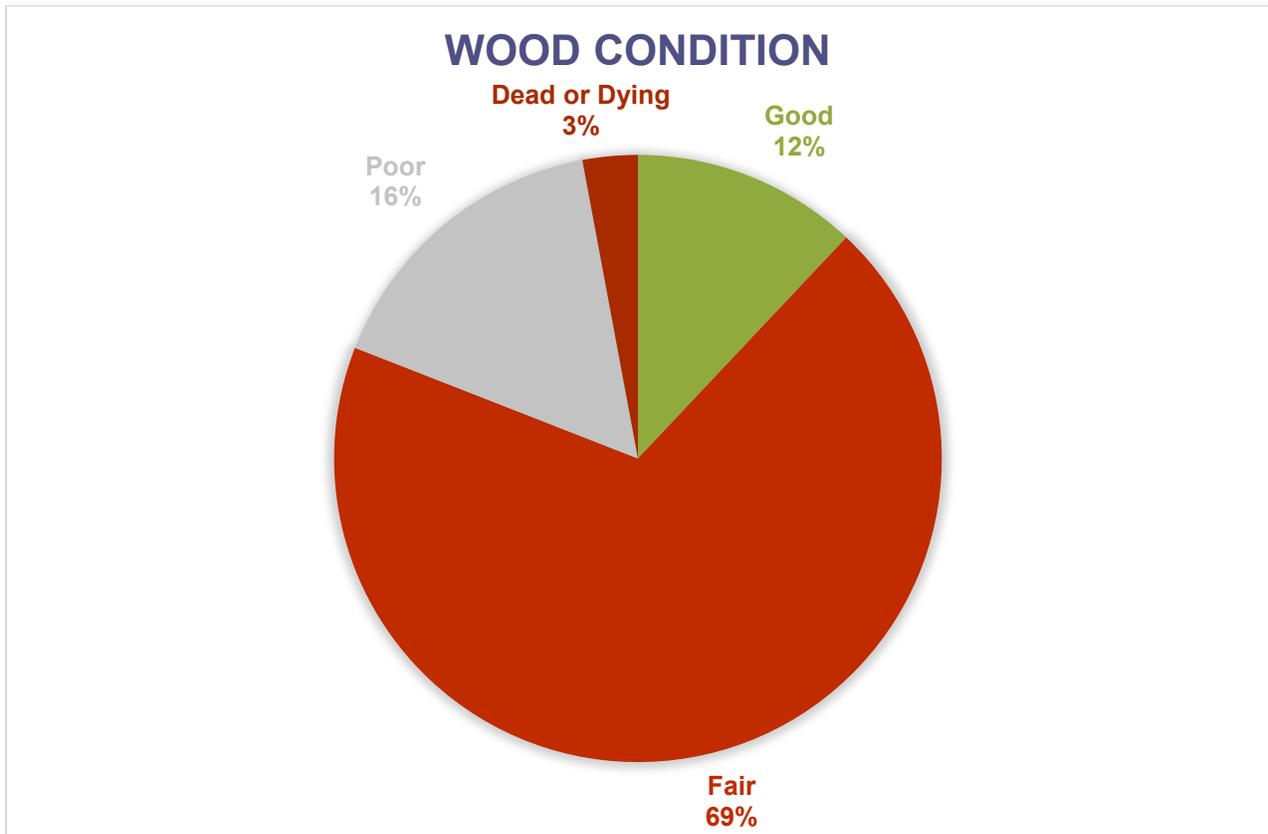


Figure 4: Wood Condition

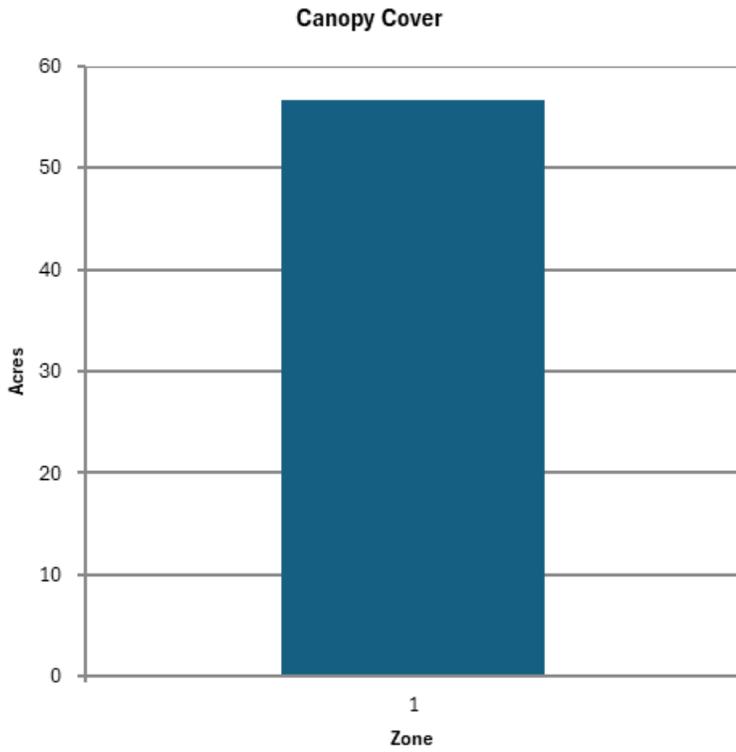


## Figure 5: Canopy Cover in Acres

The current park tree inventory contributes approximately 57 acres of canopy cover.

**Canopy Cover of Public Trees (Acres)**

5/19/2025



Zone	Acres	% of Total Canopy Cover
1	57	100.0
Citywide total	57	100.0

	Total Land Area	Total Street and Sidewalk Area	Total Canopy Cover	Canopy Cover as % of Total Land Area	Canopy Cover as % of Total Streets and Sidewalks
Citywide Total	4,800	0	57	1.18	0.00

**Figure 6: Land Use of City/Park Trees**



## APPENDIX B: ArcGIS MAPPING

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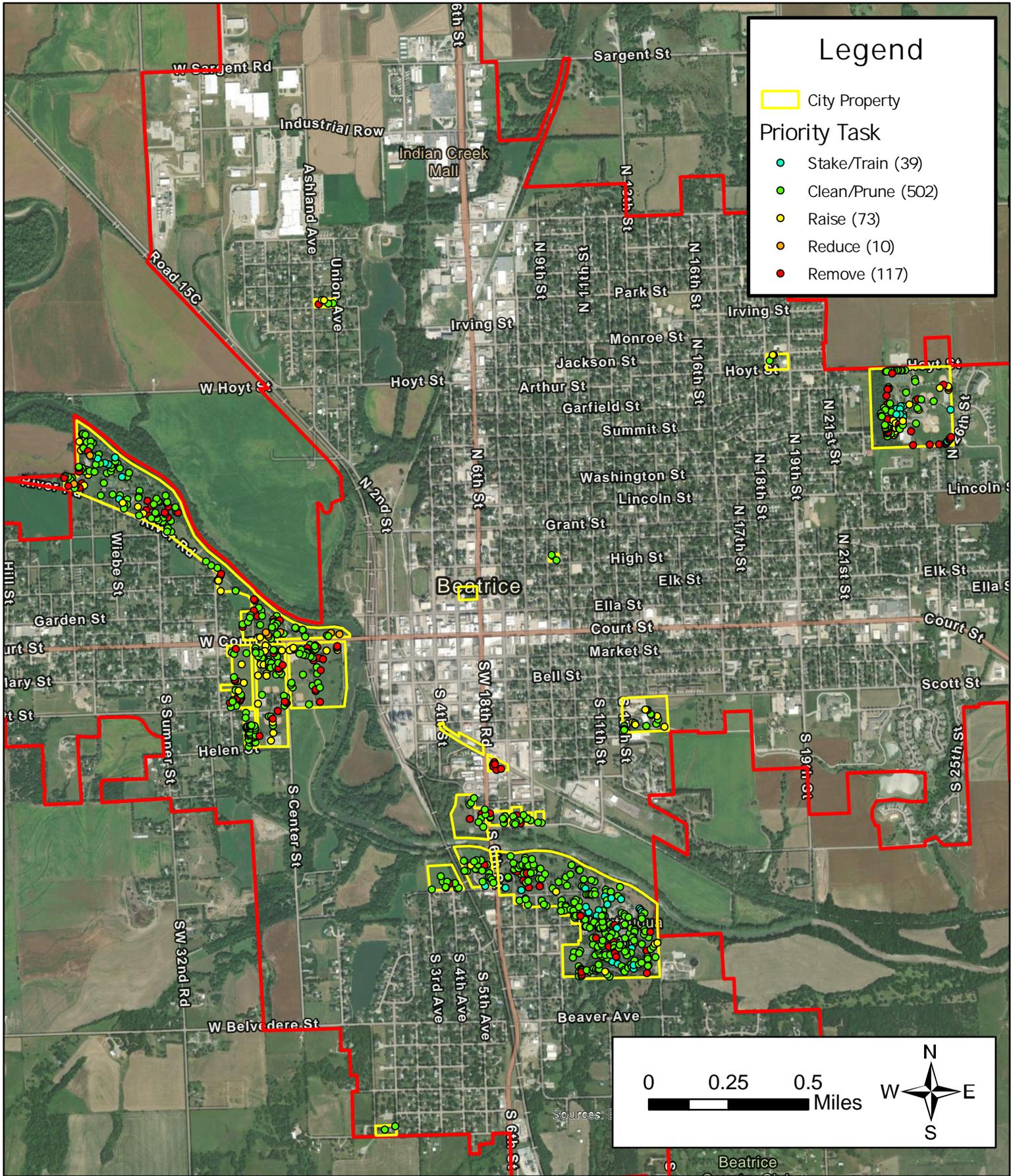
**Figure 1: Beatrice Tree Inventory**

**Figure 2: Maintenance Needs/Priority Task**

**Figure 3: Recommended Tree Removal**

\*City ownership of the trees recommended for removal should be verified prior to any removal. \*





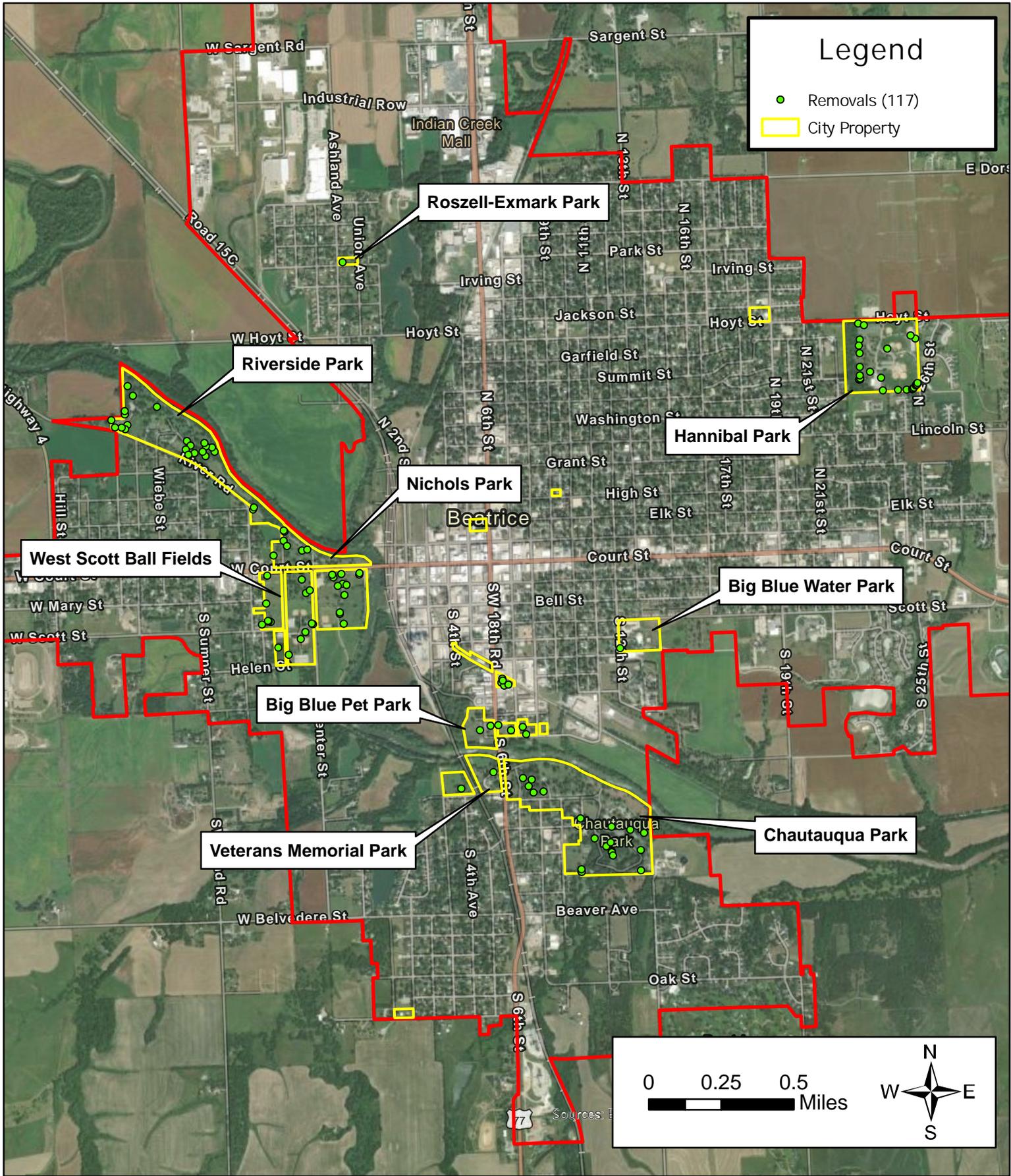
Created By: S. Anderson  
 Date: 5/19/2025  
 Software: ArcGIS Pro 3.5.0  
 File: Beatrice Tree Inv.aprx

## Beatrice Tree Inventory

Figure 2 - Maintenance Needs/Priority Task  
 Beatrice, NE

This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.



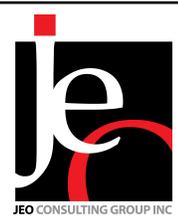


Created By: S. Anderson  
 Date: 5/19/2025  
 Software: ArcGIS Pro 3.4.3  
 File: Beatrice Tree Inv.aprx

## Beatrice Tree Inventory

Figure 3 - Recommended Tree Removal  
 Beatrice, NE

This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.



## APPENDIX C: BEATRICE TREE ORDINANCES

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### ARTICLE I. IN GENERAL

#### **Sec. 25-1. Reserved.**

Editor's note(s)—Ord. No. 18-037, § 3, adopted Nov. 5, 2018, repealed § 25-1 which pertained to planting on city property—permit required and derived from the 1971 Code, § 33-1; Ord. No. 85-42, § 33, adopted Jan. 6, 1986; Ord. No. 86-41, § 65, adopted Nov. 6, 1986; Ord. No. 87-42, § 1, Dec. 21, 1987.

#### **Sec. 25-2. Same—Conditions for issuance.**

The chief building inspector shall conduct an inspection of the proposed location of such street tree or agricultural crop and shall issue a permit only if such planting will comply with the requirements set forth in this article.

(Code 1971, § 33-2; Ord. No. 85-42, § 34, 1-6-86; Ord. No. 86-41, § 66, 10-6-86; Ord. No. 87-42, § 2, 12-21-87)

#### **Sec. 25-3. Removal of illegal plantings.**

Street trees planted after January 5, 1988, in violation of this article shall be removed by the person planting such street tree, if the city council determines it should be removed and the chief building inspector gives notice to the person who planted it or caused it to be planted. If the person so notified fails to remove the street tree within five (5) days, he or she shall be deemed guilty of a misdemeanor.

(Code 1971, § 33-3; Ord. No. 85-42, § 35, 1-6-86; Ord. No. 87-42, § 3, 12-21-87)

#### **Sec. 25-4. Definitions.**

The following words, terms and phrases, when used in this article, shall have the meanings respectively ascribed to them in this section, except where the context clearly indicates a different meaning:

*Street trees:* Trees, shrubs, bushes, and all other woody vegetation on land lying between the property lines on either side of all streets, avenues, alleys or ways within the city.

*Park trees:* Trees, shrubs, bushes, and all other woody vegetation in public parks having individual names, and all areas owned by the city or to which the public has free access as a park.

(Ord. No. 87-42, § 4, 12-21-87)

#### **Sec. 25-5. Tree species to be planted.**

The city council shall adopt by resolution a "List of Tree Species To Be Planted" for the city, showing thereon the genus, species and variety of street trees which are recommended to be in or upon any street, sidewalk space, or other public way within the city. A current copy of such list shall be made available for inspection by the public in the office of the city clerk.

(Ord. No. 87-42, § 5, 12-21-87)



**Sec. 25-6. Distances for planting.**

Except as permitted by sections 23-81 and 23-81.1, it shall be unlawful for any person to plant any street tree or agricultural crop closer than fifteen (15) feet to the back of any curb or closer than fifteen (15) feet to the road surface along streets having no curbs. Except as permitted by sections 23-81 and 23-81.1, street trees and agricultural crops shall not be planted closer than three (3) feet to the edge of any sidewalk. No street tree and agricultural crop shall be planted closer than thirty (30) feet from any street corner, measured from the point of the nearest intersection of curbs or curblines. Street trees and agricultural crops shall not be planted upon any alley.

(Ord. No. 87-42, § 6, 12-21-87; Ord. No. 92-56, § 3, 10-5-92)

**Sec. 25-7. Proximity to poles and utilities and hydrants.**

It shall be unlawful for any person to plant any street trees closer than ten (10) feet to any point on a line on the ground immediately below any overhead utility wire, closer than five (5) lateral feet to any underground water line, sewer line, transmission line or other utility, or closer than fifteen (15) feet to any fire hydrant.

(Ord. No. 87-42, § 7, 12-21-87)

**Sec. 25-8. Comprehensive city tree plan.**

The city council shall adopt by resolution a written plan for the care, preservation, pruning, planting, replanting, removal or disposition of street trees and park trees within the city. Such plan, upon approval by the city council, shall constitute the official comprehensive city tree plan for the city.

(Ord. No. 87-42, § 8, 12-21-87)

**Sec. 25-9. Public tree care.**

The city shall have the right to plant, prune, maintain and remove street trees within the right-of-way or bounds of all streets, alleys, sidewalk space, other public way and other public grounds, as may be necessary to ensure the public safety or to preserve or enhance the beauty of other public grounds.

(Ord. No. 87-42, § 9, 12-21-87)

**Secs. 25-10—25-15. Reserved.****ARTICLE II. REMOVAL OR DESTRUCTION****Sec. 25-16. Restricted, permit required.**

It shall be unlawful for any person, either for himself or another, to remove, destroy, or cause to be removed or destroyed, any tree, shrub or hedge on any street, alley, sidewalk space or other public way, without first having obtained a permit therefor, except where the removal is ordered by the board of public works or the city council when either shall determine that the tree, shrubs or hedges or any of them are traffic hazards or a public nuisance or necessary for the protection of city utilities.



(Code 1971, § 33-14; Ord. No. 87-42, § 10, 12-21-87)

### **Sec. 25-17. Application for permit.**

Any person desiring to remove or destroy any tree, shrub or hedge on any street, alley, sidewalk space or other public way shall first make written application to the community planning and inspection department for a permit to do so. The application shall provide such information as the chief building inspector may require.

(Code 1971, § 33-15; Ord. No. 85-42, § 36, 1-6-86; Ord. No. 87-42, § 11, 12-21-87)

### **Sec. 25-18. Protection of city.**

The applicant for a permit required by this article shall, at the time of making his application, agree in writing to in all respects save the city harmless and to protect the city and the public at all times in connection with the removing or destruction of any tree, shrub or hedge to be removed or destroyed under such permit.

(Code 1971, § 33-16)

### **Sec. 25-19. Conditions of issuance of permit.**

The board of public works shall establish regulations to be the basis of issuance or rejection of any application for a permit authorized by this article and shall take into consideration in establishing the regulations the development of a program for improvement and encouragement of tree planting consistent with public safety or traffic using the streets, the future development of use of streets and protection of city utilities and sidewalks and the policy on removal of trees shall have the same objectives. The health or condition of a tree shall also be taken into consideration where removal is requested.

(Code 1971, § 33-17)

### **Sec. 25-20. Replacement in event of unauthorized removal.**

In addition to other penalties provided for the violation of this article, any person who shall violate this article by removal or destruction of trees shall be required to replant or cause to be replanted such tree or trees as the board of public works may order.

(Code 1971, § 33-18)

### **Sec. 25-21. Requirements for removal.**

All shrubs and hedges being removed or destroyed shall be cut flush with the ground surface, so that a lawnmower can pass over the ground at any time. When a tree is being removed or destroyed, the stump shall also be removed. When a tree is being felled, it shall be felled away from the roadway or parallel with the roadway, when possible, and the sidewalk and street shall be guarded so as to protect pedestrians and vehicles. All trees, shrubs and hedges, including limbs and debris therefrom, shall be removed from the street, alley, sidewalk space or other public way within forty-eight (48) hours after being cut, and the ground shall be raked clean of all chips, branches and debris. All damages to curbs, sidewalks and other public property occurring in the performance of any such work shall be promptly and properly repaired at the permittee's expense.

(Ord. No. 87-42, § 12, 12-21-87)



**Secs. 25-22—25-35. Reserved.****ARTICLE III. DISEASED AND DEAD TREES<sup>1</sup>****Sec. 25-36. Diseased and dead trees; nuisance; abatement and collection; appeal; penalty.**

- (a) The owner or occupant of any lot or piece of ground in the city or within two (2) miles of the corporate limits of the city is hereby required to keep the lots and pieces of ground and the adjoining streets and alleys free of any infected, dead, dying, or structurally weak tree.
- (b) It shall be a nuisance to permit or maintain any infected, dead, dying or structurally weak tree(s) to grow or remain thereon. For purposes of this section, nuisance includes, but is not limited to:
  - (1) Trees of all species and varieties of elm, zelkova and planera infected with the fungus of *Ceratostomella Ulmi*;
  - (2) Trees, or parts thereof, of elm, zelkova or planera in a dead or dying condition that may serve as breeding places for the European Elm Bark Beetle, *Scolytus Multistriatus*; or
  - (3) Any dead tree, any dead part of a tree, or any totally diseased or structurally weak part of a tree which is a menace to public safety or which endangers any building or other property.
- (c) The City of Beatrice and its agents may enter upon private property at all reasonable hours for purposes of inspecting trees thereon, and may remove such specimens as are required for purposes of analysis to determine whether or not the same are infected.
- (d) It shall be unlawful for any person to prevent the city from entering on private property for purposes of carrying out its duties under this section, or to interfere with the city in the lawful performance of its duties under the provisions of this section.
- (e) The owner and occupant of a lot or piece of ground within the city or within two (2) miles of the corporate limits of the city shall be given notice by personal service or certified mail to abate and remove such nuisance. If notice by personal service or certified mail is unsuccessful, notice shall be given by publication in a newspaper of general circulation in the city or by conspicuously posting the notice on the lot or ground upon which the nuisance is to be abated and removed.
- (f) Within five (5) calendar days after receipt, posting, or publication of such notice, the owner or occupant of the lot or piece of ground may request a hearing with the city to appeal the decision to abate or remove a nuisance by filing a written appeal with the office of the city clerk. Requests for appeal hearings shall be accompanied by a filing fee in an amount established by resolution adopted by the city council. A hearing on the appeal shall be held within fourteen (14) calendar days after filing the appeal and shall be conducted by the city administrator or his or her designee. Requests for an appeal hearing that are not accompanied by the required filing fee or that are received after the expiration of the five-calendar-day period of compliance shall be considered invalid. The hearing officer shall render a decision on the appeal within five (5) business days after the conclusion of the hearing. If the appeal fails, the city or its agent(s) may enter upon such private property to have such work done. Within thirty (30) calendar days after receipt of such notice or publication or posting, whichever is applicable, if the owner or occupant of the lot or piece of ground has not requested an appeal hearing with the city as outlined above or fails to comply with the order to abate and

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<sup>1</sup>State law reference(s)—Plant diseases, R.R.S. 1943, § 2-1030 et seq.

remove the nuisance, the city or its agent(s) may enter upon such private property to have such work done may have such work done. The costs and expenses of any such work shall be paid by the owner.

- (g) If unpaid for two (2) months after such work is done, the city may either (i) levy and assess the costs and expenses of the work upon the lot or piece of ground so benefited in the same manner as other special taxes for improvements are levied and assessed or (ii) recover in a civil action the costs and expenses of the work upon the lot or piece of ground and the adjoining streets and alleys.
- (h) Any owner or occupant of a lot or piece of ground who shall fail or refuse to perform any duty set forth in this section shall be guilty of a misdemeanor and upon conviction thereof shall be subject to a maximum fine of one hundred dollars (\$100.00). Each day the violation of this section continues shall constitute separate and distinct offense and shall be punishable as such.

(Code 1971, § 33-38; Ord. No. 20-042, § 1, 12-7-20; Ord. No. 21-7, § 1, 2-15-21)

Editor's note(s)—Ord. No. 20-042, § 1, adopted Dec. 7, 2020, changed the title of § 25-36 from "Effects of penalty" to read as herein set out.

### **Sec. 25-37. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-37, which pertained to declaration of nuisance and derived from 1971 Code, § 33-29; and Ord. No. 87-42 § 14 adopted Dec. 21, 1987.

### **Sec. 25-38. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-38, which pertained to duty to remove and burn and derived from 1971 Code, § 33-30.

### **Sec. 25-39. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-39, which pertained to enforcement, right of entry and derived from 1971 Code, § 33-31.

### **Sec. 25-40. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-40, which pertained to notice to remove and burn and derived from 1971 Code, § 33-32; and Ord. No. 87-42 § 15 adopted Dec. 21, 1987.

### **Sec. 25-41. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-41, which pertained to service of notice and derived from 1971 Code, § 33-33.

### **Sec. 25-42. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-42, which pertained to abatement by city and derived from 1971 Code, § 33-34.

**Sec. 25-43. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-43, which pertained to assessment of abatement costs and derived from 1971 Code, § 33-35.

**Sec. 25-44. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-44, which pertained to collection of assessment and derived from 1971 Code, § 33-36.

**Sec. 25-45. Reserved.**

Editor's note(s)—Ord. No. 20-042, § 2, adopted Dec. 7, 2020, repealed § 25-45, which pertained to trees on public land and derived from 1971 Code, § 33-37.