



State of Urban Forest Report



Mauston urban forest consists of all the trees in the Right-of-Way (ROW), on city property and some private (those that have been treated for Emerald Ash Borer, (EAB)). Trees not only beautify an area, but they also provide shade, reduce levels of noise and dust, increase property values, reduce stormwater runoff, produce oxygen, absorb carbon dioxide, improve wellbeing, and provide habitat for wildlife. Mauston is a proud Tree City USA community, recognized nationally for its effort to sustain the urban forest. Mauston also recognizes the importance and value of the urban forest by maintaining a “living” inventory that manages information and is made available to the public online.

In order to effectively manage the urban forest, we first need to understand what we have. This State of the Urban Forest Report presents the results of inventories and assessments that describe the current state of Mauston’s urban forest. The purpose of this report is to establish the benchmark for measuring future change, setting goals, and informing the public. The report establishes a benchmark for Mauston’s urban forest by quantifying its distribution, structure, and some of the value it provides to our community. The findings in this report are based on inventory analyses completed in 2021 until the current “living inventory”.



"Our role in the natural world involves caring for it as gardeners, not ruling over or simply using it" (Dr. Alex Shigo)

Introduction

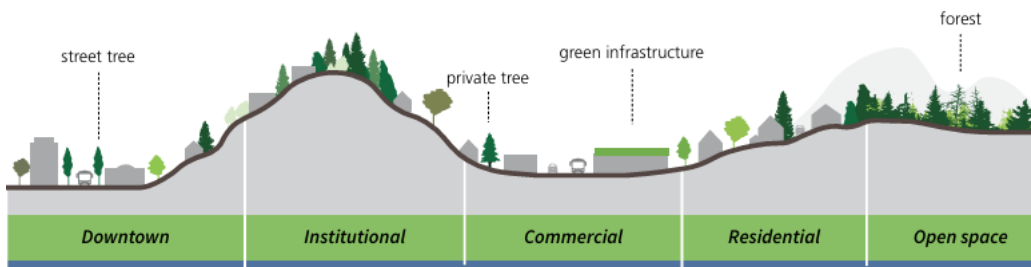
Learn about Mauston's urban forest in the following four sections:

1. Introduction - an overview of what an urban forest is and why Bellingham developed a state of the urban forest report
2. What is the urban forest? – presents the definition of the urban forest and highlights key benefits provided to the community.
3. The State of the urban forest – provides the current context of the urban forest resource in the living tree inventory, forest condition, size of trees, species diversity and ecosystem services of Mauston's urban forest.
4. Budget and Tree City USA – Explaining requirements to maintain Tree City USA status and how the budget supports it. Also highlighting the accomplishments of the urban forest.
5. Summary and conclusion – summarizes key findings of the State of the Urban Forest Report



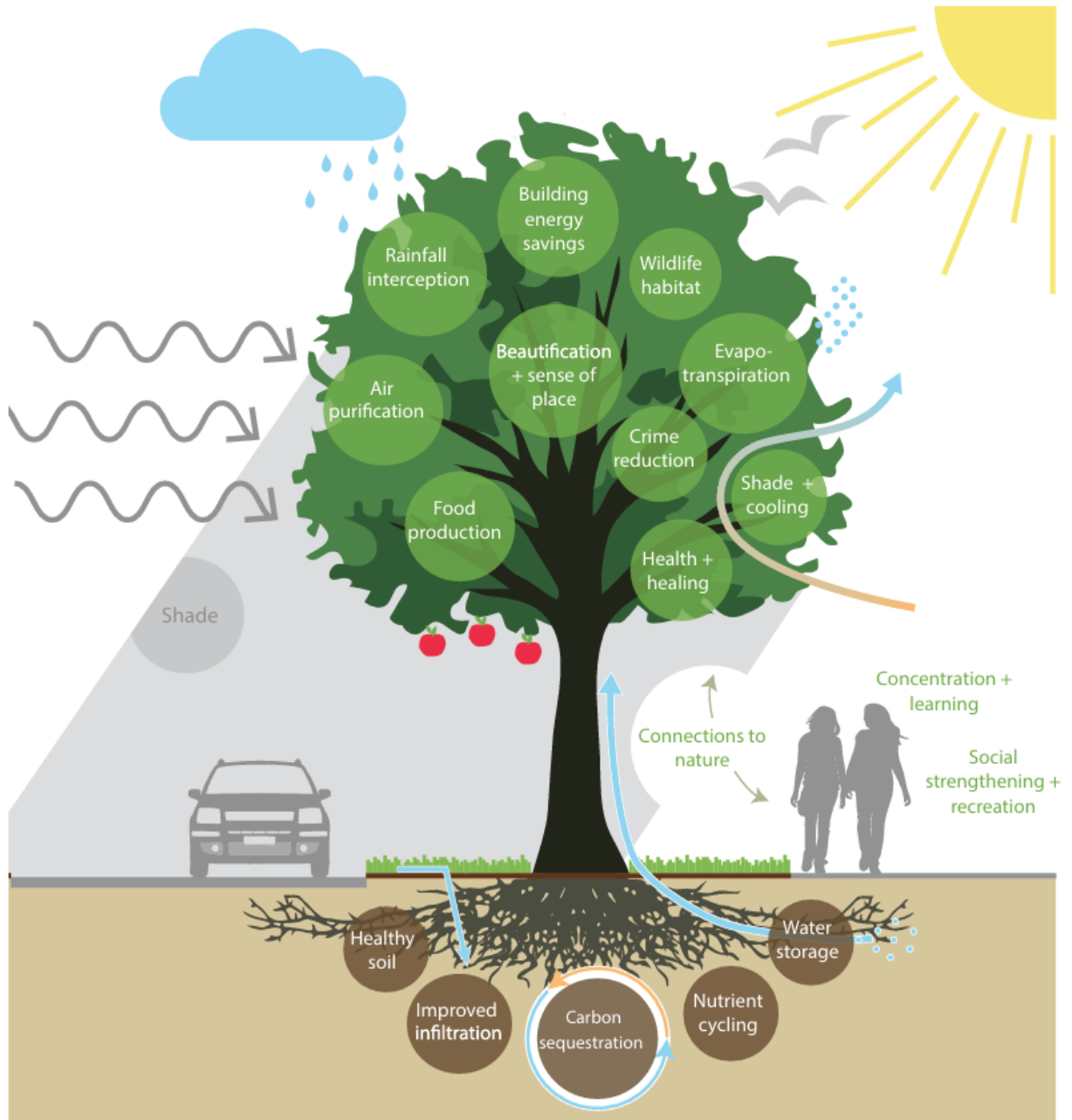
2. WHAT IS THE URBAN FOREST?

The urban forest includes all trees, vegetation, soils, associated natural processes, and cultural elements, found in towns, cities, and other communities where people reside. Mauston's urban forest spans both public and private property, and includes the street trees, park trees, forested open spaces, trees on institutional campuses and trees in many private ownership settings, from parking lots to backyards.



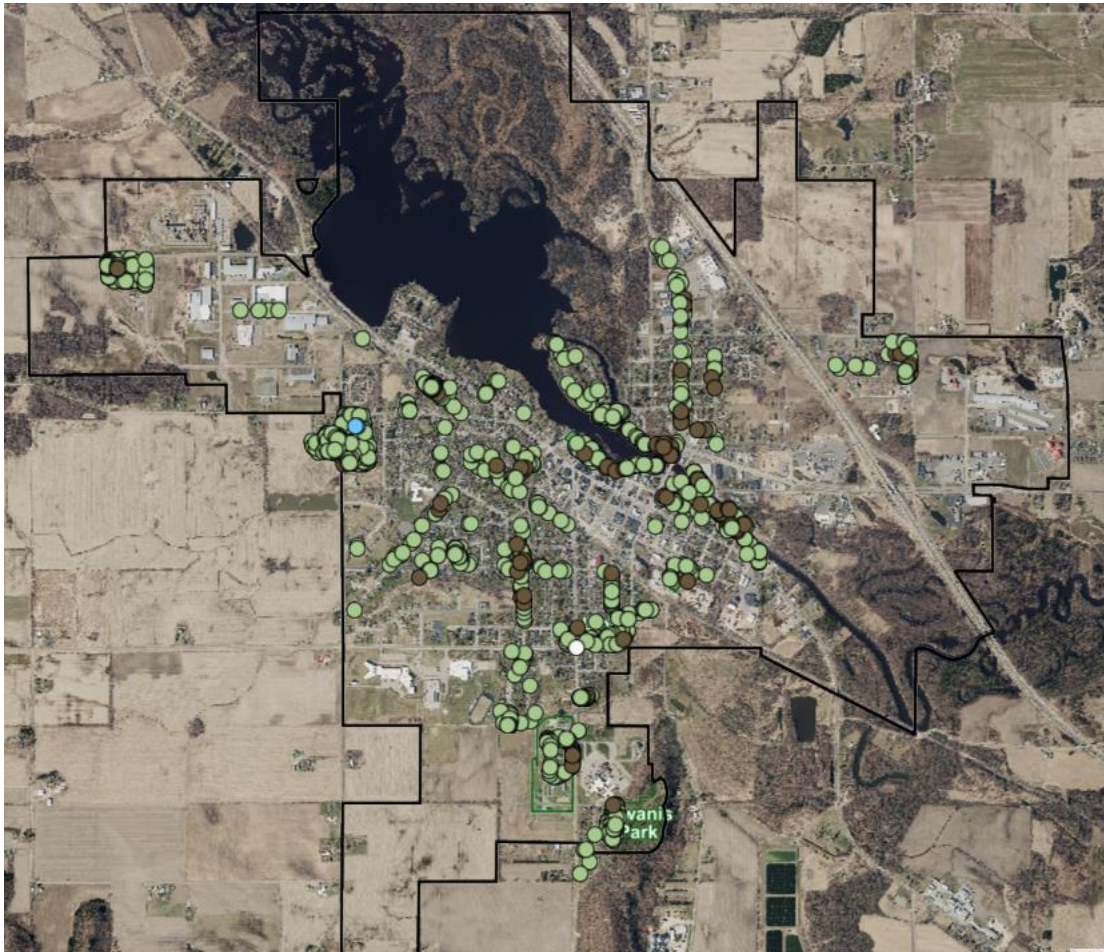
The urban forest provides significant benefits to our community and associated landscape. Trees provide important habitat for a variety of fish and wildlife. Trees are also the lungs of our cities, cleaning air pollutants, sequestering carbon from the atmosphere and producing oxygen. On hot summer days, trees shade and cool streets and buildings, lowering energy costs and reducing risk of heat related illness, especially for vulnerable populations. Trees stabilize steep slopes and capture stormwater from heavy rainfall events and snowmelt, reducing pressure on our stormwater systems and keeping waterways healthy.

Trees also help reduce stress, encourage physical activity, and foster cultural and spiritual connections with our natural environment. Our local economy benefits when trees reduce heating and cooling costs, encourage people to spend more time in local shopping streets and attract tourism to our city. Prioritizing a healthy urban forest also prioritizes the health, wellbeing, and resilience of our community.

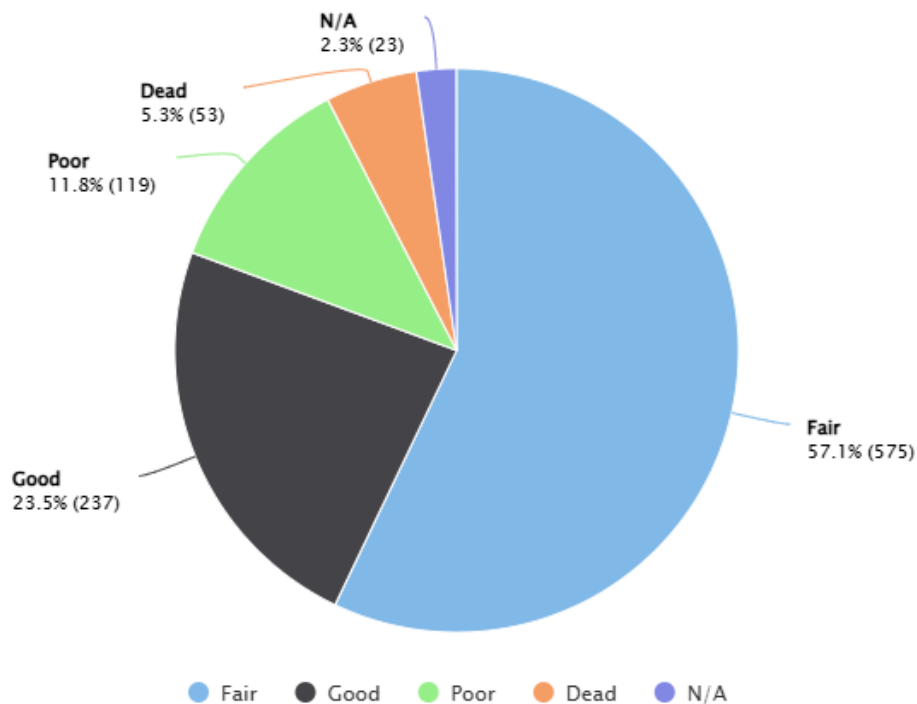


3. STATE OF THE URBAN FOREST

The living tree inventory for Mauston's urban forest has documented a total of 924 trees. This inventory is updated through annual or biannual site visits, ensuring that the information reflects the current condition of the forest. The results presented are based on analyses and data collected as of May 2026, highlighting key aspects such as forest condition, tree size, species diversity, and estimates of ecosystem services provided by the urban forest.



Condition of Forest

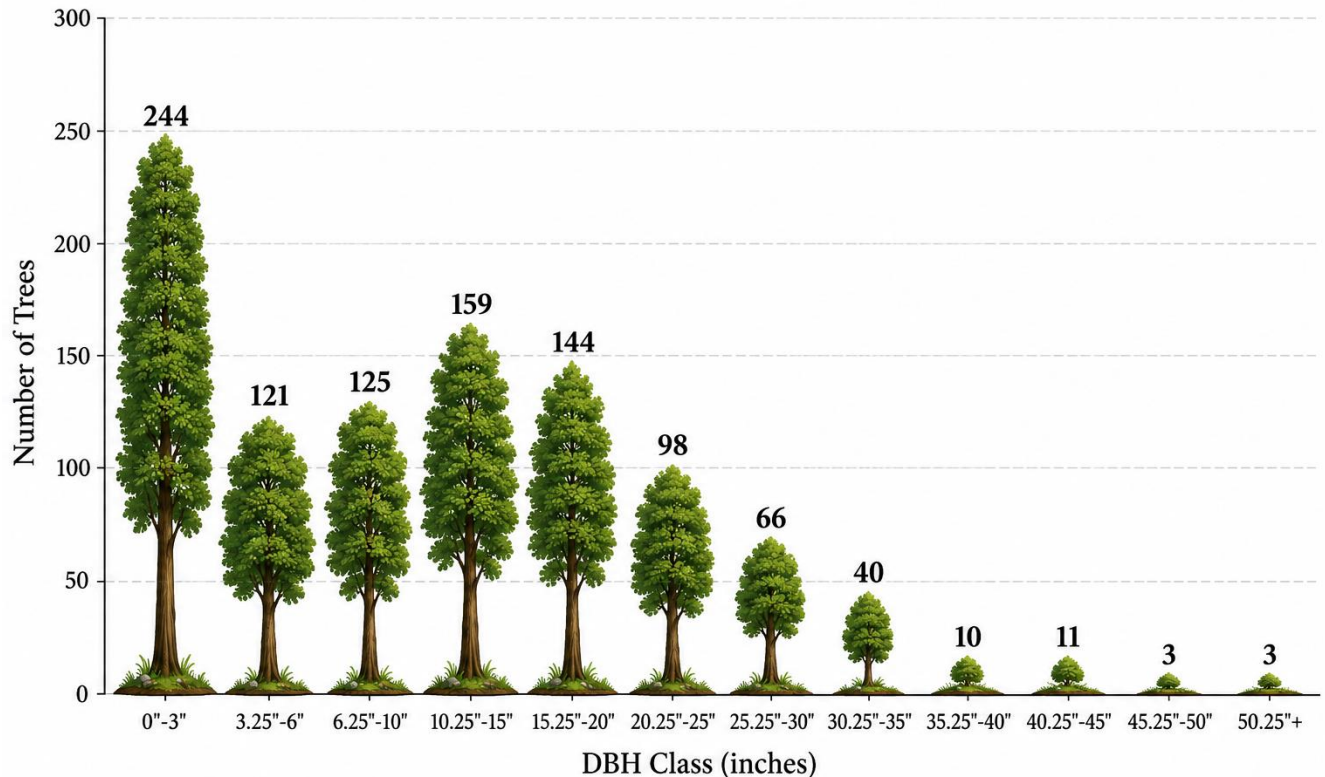


The chart indicates that over 75% of Mauston's trees are in good or fair condition, with only 5.3% classified as dead. The majority of dead trees are found within stands or consist of smaller trees that pose minimal risk to targets.

Additionally, trees marked as N/A in the inventory were not assessed during the 2024-2025 living inventory period due to the prioritization of other projects.

Size of our Forest

Diameter Breast Height (DBH)



Mauston's urban forest features a diverse range of tree sizes, with a significant presence of young trees that highlight the benefits of its Tree City USA designation and the presence of an International Society of Arboriculture Certified Arborist on staff, this is unique for a city the size of Mauston.

The median Diameter Breast Height (DBH) of trees is approximately 13 inches. Notably, the largest tree in the area is a silver maple located in the cemetery, boasting a remarkable DBH of 59 inches.

Also, between 2013 and 2016, The Emerald Ash Borer (EAB) began to appear in central Wisconsin, prompting Mauston's Tree Board to take action. They proactively treated healthy trees and removed heavily affected ones, which contributed to the decline in the number of mature trees. Mauston's forestry department currently is still treating 43 ash trees both public and private.



Species Diversity

Species diversity in an urban forest refers to the variety, distribution, and structural complexity of the tree population growing within a city's boundaries. It serves as a metric for measuring the ecological health, stability, and climate resilience of public and private city trees

Key Benefits:

1. Greater resilience to pests, diseases, and climate stress
2. Improved ecosystem services
3. Enhanced habitat and biodiversity
4. Aesthetic and cultural value
5. Reduced maintenance and economic risk

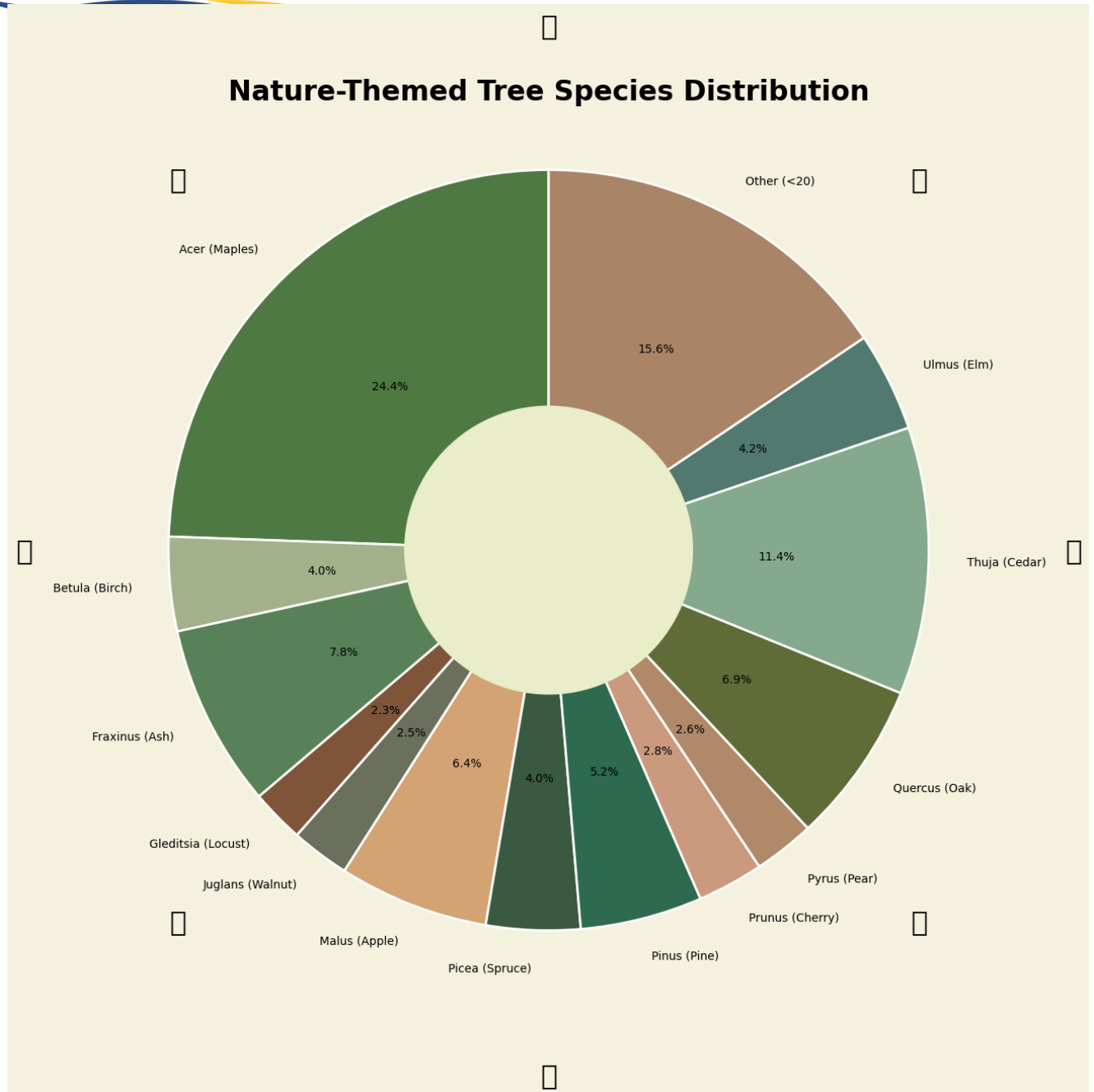
Mauston is home to 38 genera of trees, each containing various species. This diversity includes several common species within each genus, contributing to the rich ecological landscape of the area.

When looking at the species diversity component it measures the classification and identity of the tree population using two standard mathematical metrics:

- Species Richness: The total number of different tree species present in the urban landscape.
- Species Evenness: How evenly the individual trees are distributed across those different species.

To maintain healthy taxonomic balance, urban foresters use the 10-20-30 Rule as an industry standard. It dictates that an urban canopy should contain no more than:

- 10% of any single tree species
- 20% of any single tree genus
- 30% of any single tree family



The illustration indicates that the maples are near the 30% threshold, which raises concerns regarding potential negative impacts. If a heavy infestation of the Asian Longhorn beetle occurs or if Wisconsin establishes a breeding population of the Spotted Lanternfly, currently found in Illinois, it could significantly affect the health of these trees. Monitoring and preventive measures will be crucial to mitigate these risks.



Ecosystem Services Estimates

The City of Mauston's Forestry Department employs Tree Keeper, a cloud-based program for managing tree data and the living inventory, which is accessible through the city website. This system incorporates I-Tree, and advanced software suite developed by the USDA Forest Service, designed for urban and rural forestry analysis, allowing for effective assessment of the benefits and structure of trees. By utilizing these tools, the forestry department can enhance forest management by quantifying the environmental and economic advantages that trees offer, ultimately supporting sustainable urban forestry initiatives. The illustrations show 1,10 and 20 years.

i-Tree Eco Tree Benefits		i-Tree Eco Tree Benefits	
Tree Sites Benefits		Tree Sites Benefits	
924		924	
Calculated Trees		Calculated Trees	
Total Benefits Over		Total Benefits Over	
1 year		10 years	
\$2,852.02		\$29,633.54	
Carbon Dioxide Uptake \$1,392.39 Carbon Sequestered 16,198.37 pounds CO2 Equivalent 59,394.04 pounds		Carbon Dioxide Uptake \$14,515.85 Carbon Sequestered 168,494.44 pounds CO2 Equivalent 617,812.93 pounds	
Storm Water Mitigation \$278.40 Runoff Avoided 31,154.49 gallons Rainfall Intercepted 418,934.43 gallons		Storm Water Mitigation \$2,889.90 Runoff Avoided 323,399.79 gallons Rainfall Intercepted 4,341,075.01 gallons	
Air Pollution Removal \$1,181.23 Carbon Monoxide 77.98 ounces Ozone 7,559.94 ounces Nitrogen Dioxide 73.99 ounces Sulfur Dioxide 18.24 ounces PM _{2.5} 154.92 ounces		Air Pollution Removal \$12,227.79 Carbon Monoxide 806.91 ounces Ozone 78,111.15 ounces Nitrogen Dioxide 763.42 ounces Sulfur Dioxide 188.41 ounces PM _{2.5} 1,601.14 ounces	

i-Tree Eco Tree Benefits	
Tree Sites Benefits	
924	 
Calculated Trees	
Total Benefits Over	
20 years	
\$58,798.24	
Carbon Dioxide Uptake	
\$28,876.17	
Carbon Sequestered 334,165.28 pounds	
CO2 Equivalent 1,225,272.68 pounds	
Storm Water Mitigation	
\$5,738.24	
Runoff Avoided 642,148.26 gallons	
Rainfall Intercepted 8,600,816.51 gallons	
Air Pollution Removal	
\$24,183.84	
Carbon Monoxide 1,596.05 ounces	
Ozone 154,109.97 ounces	
Nitrogen Dioxide 1,503.21 ounces	
Sulfur Dioxide 371.61 ounces	
PM_{2.5} 3,159.48 ounces	

The I-Tree data highlights the critical role of trees in addressing both climate change and local air quality. Trees absorb carbon dioxide, helping to mitigate climate change by reducing greenhouse gases in the atmosphere. In addition, they remove harmful air pollutants such as sulfur dioxide, nitrogen oxides, and particulate matter, thus enhancing the health and well-being of communities. While carbon dioxide uptake addresses the long-term impacts of climate change, air pollution removal provides immediate benefits by improving local air quality. Together, these functions underscore the importance of maintaining and expanding tree coverage in urban areas.



Furthermore, trees play a vital role in stormwater mitigation by serving as natural infrastructure that reduces runoff volume and enhances water quality. They achieve this by intercepting rainfall in their canopies, promoting soil infiltration through their root systems, and absorbing water via transpiration. Urban trees can decrease annual runoff by 2-7% with larger canopy trees offering significant cost-saving advantages for municipal sewage systems. This underscores the importance of integrating trees into urban planning to manage stormwater effectively and sustainably.

Tree valuations assess the monetary worth of trees based on factors such as species, size, condition, and location, potentially increasing property value by thousands of dollars. ISA Certified Arborist employ various appraisal methods, including the Cost Approach, Income Approach, and Trunk Formula Technique, to value trees for purpose like insurance claims, legal disputes, or real estate transactions.

Tree Valuations

Tree Sites ▼

Most Recent Valuations 

Tree Sites Layer :
924 Trees Across
1,007 Total Sites
\$2,625,876.21

TreeKeeper's plant appraisal functionality is provided for qualified plant appraisers to use as a tool to help manage and understand tree value. TreeKeeper's plant appraisal tool is based on the Trunk Formula Technique as described in the Guide for Plant Appraisal, 10th Edition (CTLA, 2018). Estimated values using Trunk Formula Technique are based on default inputs provided by DRG for demonstration purposes only. Actual appraisal values may involve multiple methods in addition or in place of Trunk Formula Technique and should only be used by someone experienced and qualified in plant appraisal.



4. Budget and Tree City USA

The City of Mauston has been a Tree City USA for 12 years, starting back in 2014. To earn Tree City USA recognition, a community must meet four core standards, including maintaining a tree board or department, having a community tree ordinance, spending at least \$2 per capita on urban forestry, and participating in an Arbor Day celebration. These standards ensure a consistent, and accountable approach to managing local tree resources.



Tree City USA also has growth awards. Growth Awards are annual recognitions from the Arbor Day Foundation given to designated Tree City USA communities that demonstrate higher levels of tree care, innovation, and community engagement. It honors initiatives that go beyond the basic four standards required to maintain Tree City USA status.

The City of Mauston has demonstrated a commitment to excellence by receiving five Growth Awards and continues to pursue additional awards through the implementation of new practices.



Last year, the city allocated a total of \$11,565 for tree care. Which included a budget of \$10,000 for tree and brush along with addition funds for ground maintenance towards trees for items like mulch, tools, and water bags. This expenditure translates to approximately \$2.66 per capita.



Mauston's Forestry department was highlighted by the Wisconsin Urban Forestry Council for its project at Marchowski park. The Wisconsin Urban Forestry Council annually recognizes excellence in urban forestry through awards for innovation, partnership, and leadership. The Living Food Pantry was the recipient of Innovations in Urban Forestry in February of 2024. Innovations in Urban Forestry recognizes a community, individual, association or organization exhibiting outstanding innovations in the development or enhancement of an urban forestry project or program. This award recognizes the creativity, commitment and success of urban forestry efforts.



5. Summary and conclusion

Mauston's urban forest includes all trees and green spaces throughout the city, such as street trees, park trees, wooded areas, and trees on private property. These trees provide many benefits, including cleaner air, cooler temperatures, wildlife habitat, stormwater control, lower energy costs, and improved community health and beauty.

The city currently has an inventory of 924 trees. More than 75% of the trees are in good or fair condition, and only a small number are dead or declining.

Mauston has a healthy mix of tree sizes, including many young trees, which helps ensure the forest continues to grow in the future.

The city has also worked to manage the effects of the Emerald Ash Borer by treating healthy ash trees and removing heavily damaged ones. Currently, 43 ash trees are still being treated.

Tree diversity is important because it helps protect the urban forest from pests, diseases, and climate stress. Mauston has 38 different tree genera, but maples make up a large portion of the tree population, which could become a concern if invasive insects spread into Wisconsin.

Using Tree Keeper and I-Tree software, the Forestry Department measures the environmental and economic value of trees. Trees help absorb carbon dioxide, improve air quality, reduce stormwater runoff, save energy, increase property values and track staff work logs.

Mauston has been recognized as a Tree City USA community since 2014 and has earned five Growth Awards for its commitment to urban forestry. In 2025, the city spent about \$11,565 on tree care, or about \$2.66 per capita. Mauston must maintain a \$2 to keep status and working to obtain more growth awards.

The city also received recognition from the Wisconsin Urban Forestry Council for its Living Food Pantry project at Marchowski Park, which won a 2024 Innovation in Urban Forestry Award.