

DRAFT MINUTES FOR THE VILLAGE OF SHOREWOOD HILLS PARKS COMMITTEE

Date and Time: Tuesday, June 24, 2025 – 5:30 p.m.

Location: Heiden House

- 1. Call to Order Chair Barford called the meeting to order at 5:31pm.**
- 2. Roll Call:** Committee members present included Chair Carol Barford, Roma Lenehan, Nancy Heiden, Kathie Brock, and David Boutwell. Jeremy Rogers, Jan Tymorek and Mei Hu (Garden Club Liaison). were absent/excused. Also in attendance were Forester Patrick Finnegan and Administrative Assistant Julie Wills.
- 3. Note Compliance with Open Meeting Law.** Wills noted that the meeting was posted in compliance with the open meeting law.
- 4. Approval of Minutes – Tuesday, May 27, 2025.** Motion by Lenehan, seconded by Boutwell to approve the minutes of the May 27, 2025 Parks Committee meeting. Motion carried.
- 5. Public Comments.** No members of the public were present.
- 6. Monthly Forester's Report.** Finnegan reviewed his report with the Committee. He noted that he has two part time summer assistants and recently hired a seasonal parks assistant who will be starting soon. They will all assist with mulching, pruning, watering and assorted other duties. Training will be necessary for two of the employees, however, the other has worked as a summer assistant in previous years. Finnegan updated the Committee on the outside utility projects. The MMSD contractor has begun work on the landscaping plan and tree replacement. Concerns were raised regarding the depth of the plantings and the potential erosion due to the recent rains. Finnegan will continue to be in contact with the project managers to ensure the work is done correctly. MGE has almost completed their project as well but after their work is done, the communications utilities will begin their work.

Other items discussed included budget planning for next year and adding a description to the website regarding the Forester and educating residents on what their role is and how they can be of assistance.

- 7. Discussion and Possible action on Community Forestry Management Plan.** Discussion occurred regarding the proposed plan. It was suggested that photos of the parks be added to the document and that a request for photos be placed in the next bulletin.
- 8. Discussion of the Formation of a Natural Areas Mapping Subcommittee and Working Rubric.** A discussion occurred regarding forming a subcommittee to report back on natural area mapping as recommended in the Village's CORP. The rubric would include ingress/egress points of existing trails, distance to nearest trail, condition of trail surfaces, slope, parking access and identify new trails. A subcommittee will include Finnegan, Boutwell and tentatively Heiden and Tymorek.
- 9. Discussion of Ordinance Language for Tree Conservation.** It was noted that any changes should be framed in a positive tone and should take into consideration best practices for old tree preservation. Due to time constraints, this topic will be moved to the next meeting agenda.

- 10. Discussion of Community Outreach for the Village Centennial.** A brief discussion occurred regarding activities to consider during the Village centennial celebration. A tree walk/tour was discussed that would incorporate fun, non-digital activities. This topic will be discussed in more depth at a future meeting.
- 11. Future Agenda Items**
 - a) Statement on Signage and Potential Changes at the Harvard Drive Pedestrian Path for the Public Works Committee**
 - b) Possible Update on Quarry Park**
- 12. Next Meeting date: Tuesday, July 28, 2025, at 5:30 pm.** The next meeting will be held on July 28th at Heiden House.
- 13. Adjourn.** Motion by Heiden, seconded by Brock to adjourn. Motion carried. The meeting adjourned at 6:53pm.

Respectfully submitted
Julie Wills
Recording Secretary

Forester's Report

July 2025

Patrick Finnegan

This summer season has been extremely busy for the forestry department. So far, the department has been working diligently to complete a variety of tasks around the village even as plant growth continues to explode around us. Since we last met, the department has added a seasonal full-time parks assistant named Christine. She has been really helpful since she came to work for the village. I look forward to her continuing to help the department through the summer. Some of the tasks we have been getting into over the past month include pruning/trimming park paths, pruning for road sign visibility, working in the rain gardens, and working on the village's street medians. So far, I am happy with the progress made in these areas and I have plans to continue working in these areas as need be.

The infrastructure projects are continuing to wind down throughout the village. I spoke with the MGE foreman regarding their progress throughout the village. He was excited to tell me that they have concluded the underground drilling portion of the project and are turning towards pulling wire, connecting boxes, removing poles, and beginning restoration. The timeline given at the last meeting of wrapping up around the end of September/beginning of October is still their goal and is looking very attainable. MMSD on the other hand is still working to complete some of their last few tasks and fix some of their mistakes from the last month and a half. I had a meeting with the MMSD engineer, town and country engineering, Speedway, Hartford, and Tary last week to discuss the low spots collecting water along the path and to remedy the amount of mulch laid down. A plan was formed that works for all parties that includes removal of mulch in several areas to be replaced by grass and two grass swails to be added along the path to assist with drainage. I also spoke with the MMSD engineer regarding a warranty for the plants installed

along the path. He informed me that the village has at least a one-year warranty for all the plantings, so anything that dies over the next year will be replaced at no cost to the village. Other than that, MMSD still has approximately 60 Iowa junipers still left to be planted in that area, with those scheduled to be planted as soon as they are ready from the nursery.

As I mentioned previously, the department has recently added a seasonal full-time parks assistant to the staff this summer. Along with the two part-time summer helpers, this makes for a good crew that can make good time through the projects I am having them complete. Some of those projects include pruning and trimming along park paths for clearance, weeding and trimming the street medians, and weeding and trimming the rain gardens. The department is really prioritizing completing the various maintenance tasks around the village first before engaging in some of the more time intensive projects. I am projecting that we will be wrapping up the important maintenance activities within the next week or two which would then allow us to focus on other projects during the month of August.

There has been very minimal contracted work throughout the last month. I do have bids for several trees to be removed within the next month but with the amount of storms we have gotten over the past month and a half, a lot of private tree companies are prioritizing storm damage work over normal removals. That said I still had several stumps removed and a few individual trees treated. Those treatments have primarily been for elm leaf beetle and elm flea weevil in trees that have been treated for it in the past.

Some of the other consistent activities undertaken by the department over the last month include performing resident consultations. With the consistent rain and high temperatures, everyone in the village has been watching their gardens explode with weeds and volunteer trees. The department also consistently takes time to clean our vehicles, maintain our equipment, and ensure the village is stocked on essential materials. I have also started getting into the budgeting process for fiscal year 2026. Work has been ongoing to ensure that the department has the funding it needs to

continue this critical work throughout the village. So far I have been happy with the tasks that have been completed by the department thus far and am excited to get into some of the more intense projects over the next few months.

2024-2029



Community Forestry Management Plan

December 2024

Developed using grant funding from the Wisconsin Department of Natural Resources as authorized under Wis. Stat. 23.097, with matching funds from the Village of Shorewood Hills.



Village of Shorewood Hills, WI

Community Forestry Management Plan 2024-2029



Developed collaboratively by:

Patrick Finnegan, Forester, Village of Shorewood Hills

Carol Barford, Parks Committee Chair, Village of Shorewood Hills

Matt Noone, Senior Environmental Planner, Capital Area Regional Planning Commission

Jeremy Kane, Board Certified Master Arborist, Urban Tree Management

Date: 7/22/2025

Development of this document was funded by a grant from the Wisconsin Department of Natural Resources as authorized under Wis. Stat. 23.097, with matching funds from the Village of Shorewood Hills.

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Land Acknowledgement

The Village of Shorewood Hills was established on sacred ancestral land of the Ho-Chunk People, a place their nation has called *Teejop* (day-JOPE) since time immemorial. In an 1832 treaty, the Ho-Chunk were forced to cede this territory. Decades of ethnic cleansing followed when both the federal and state government repeatedly, but unsuccessfully, sought to forcibly remove the Ho-Chunk from Wisconsin.

The Village of Shorewood Hills acknowledges the circumstances that led to the forced removal of the Ho-Chunk People and honors their legacy of resistance and resilience. This history of colonization informs our work and vision for a collaborative future. With great respect, the community of Shorewood Hills acknowledges and celebrates the inherent sovereignty of the Ho-Chunk Nation and the eleven Indigenous First Nations within what is now referred to as the State of Wisconsin.

Executive Summary

Shorewood Hills is an incorporated village located on the southwestern shore of Lake Mendota and surrounded by the City of Madison. Established in 1927, this community has historically placed a high value on trees, with commitment from Village staff and officials to maintain a robust tree canopy and to enhance the ecological vitality of the community's public trees.

This 2025 document is an updated version of the 2007 and 2012 Community Forestry Management Plans. The 2007 5-year management plan included a new GIS database of street trees and made specific recommendations to improve the urban forestry program. In 2012, the Village updated its street tree inventory and completed its first inventory of the community's park trees. In 2023, certified arborists and mapping specialists completed a new comprehensive inventory, including evaluation of the condition of all street and park trees. Additionally, data from 2022 Light Detection and Ranging (LiDAR) maps of this region were used to conduct a canopy change analysis, indicating areas in which the canopy has increased or diminished over the last ~10 years.

This plan contains four main sections. The first section, **Environmental Analysis**, focuses on the environmental and social benefits of Shorewood Hill's urban forest canopy. The second section, **Street and Park Tree Inventory and Analysis**, describes the tree inventory data. The third section, **Management Goals and Implementation**, provides detailed recommendations.

The updated Shorewood Hills tree inventory data was analyzed using i-Tree Eco, a specialized forestry modeling software, to help Village officials and residents understand how the Village's public trees affect carbon sequestration, stormwater interception, air pollutant removal, and energy use reductions. Findings are presented for all public trees as well as separately for street trees and park trees.

Finally, this plan presents a range of urban forest management considerations based on the diversity and condition of trees found in the field, including individual tree maintenance, larger scale ecological restoration efforts, and parks and forest budget.

Summary of Tree Inventory and Benefits

- The Village of Shorewood Hills has one of the highest canopy cover percentages of all Wisconsin municipalities (43% or 221 acres of canopy).
- 6,635 trees have been inventoried on Shorewood Hills public property, including 1,904 street trees and 4,731 in parks and other Village green spaces.
- Public trees in Shorewood Hills sequester nearly 200 tons of carbon each year with a value of \$80,000.
- Trees in Shorewood Hills intercept 3,700 gallons of stormwater per year, reducing runoff by 800 gallons and resulting in an annual benefit valued at \$28,000.
- 9,000 pounds of air pollutants are removed annually by trees included in this inventory for a total value of \$32,000 each year.
- The Village of Shorewood Hills is home to 111 unique tree species.
- The most common species observed were hackberry (11.5%), northern white cedar (7.1%) and Norway maple (6.0%).
- The age distribution of the tree population tends toward over-mature with an under-representation of young trees. According to the Center of Urban Forestry Research an ideal age distribution for a municipality is 40% young, 30% maturing, 20% mature, 10% over mature. The Village trees are 24.7% young, 29% maturing, 25.8% mature, and 20.5% over-mature.
- The public canopy of Shorewood Hills was found to be in exceptional condition, with 3,933 trees (88%) in good health.
- The total replacement value of the public trees inventoried was \$5,538,000.

Environmental and Social Benefits of Urban Trees

An advanced computer modeling program called i-Tree Eco, developed by the USDA Forest Service and the Davey Tree Company, measures and quantifies the ecosystem services that trees provide. The program uses the best available localized climate and other environmental datasets to estimate the value of these services. i-Tree is considered the premier tool to evaluate tree ecosystem services, with users all around the world.

Summary of Tree Inventory Analysis and Economic Benefits

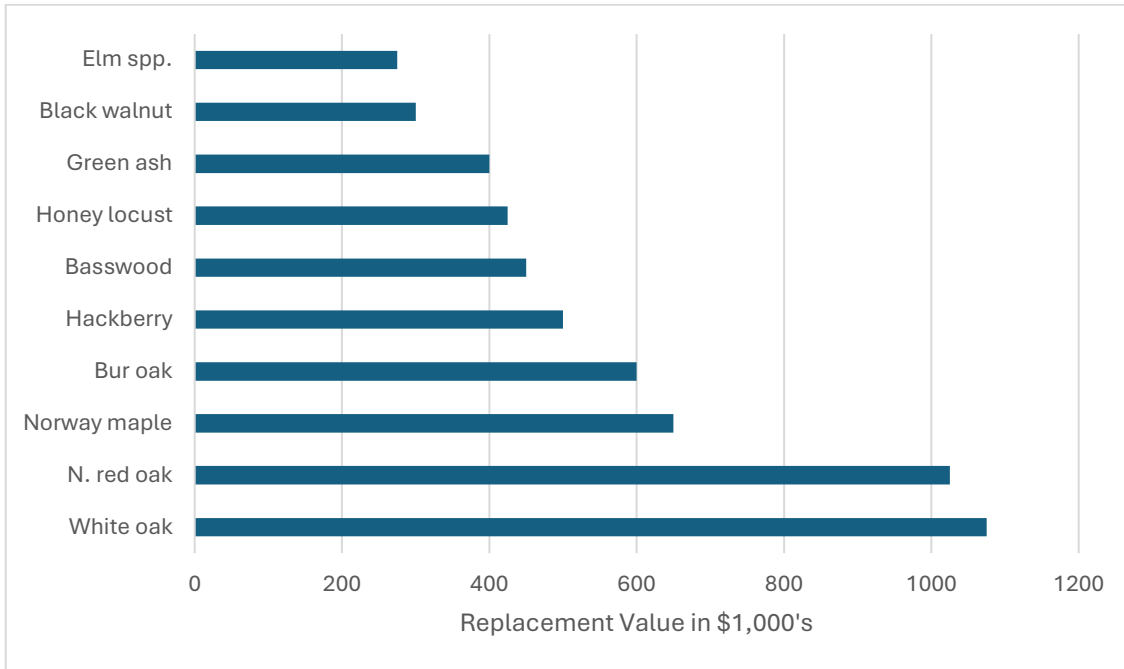
Because of the essential services trees provide, the health of the Village's tree canopy and overall community health are mutually dependent. Continued investment in and management of healthy public trees is essential for maintaining and growing their value. The Village's trees contribute the following benefits to the community:

- Pollution removal valued at \$32,000/year
- Carbon sequestration valued at \$80,000/year¹
- Avoided runoff valued at \$28,000/year
- Oxygen production: 120 tons/year

i-Tree Eco analysis calculated the replacement value of public trees in the Village of Shorewood Hills at \$5,538,000. The replacement value for each tree is an estimate of the cost of replacement with a similar tree (Figure 1). The replacement value of this urban forest will increase with the number and size of healthy trees (Nowak et al, 2002a). Benefits such as cooling, habitat, and stormwater mitigation also tend to increase with the number of healthy trees in a community.

¹ Dollar values of tree carbon sequestration and storage in this report are calculated using the social cost of carbon (SCC), which estimates the net present value of future damage done by current carbon emissions.

Figure 1. Replacement values of Shorewood Hills’ public trees (top 10 species).



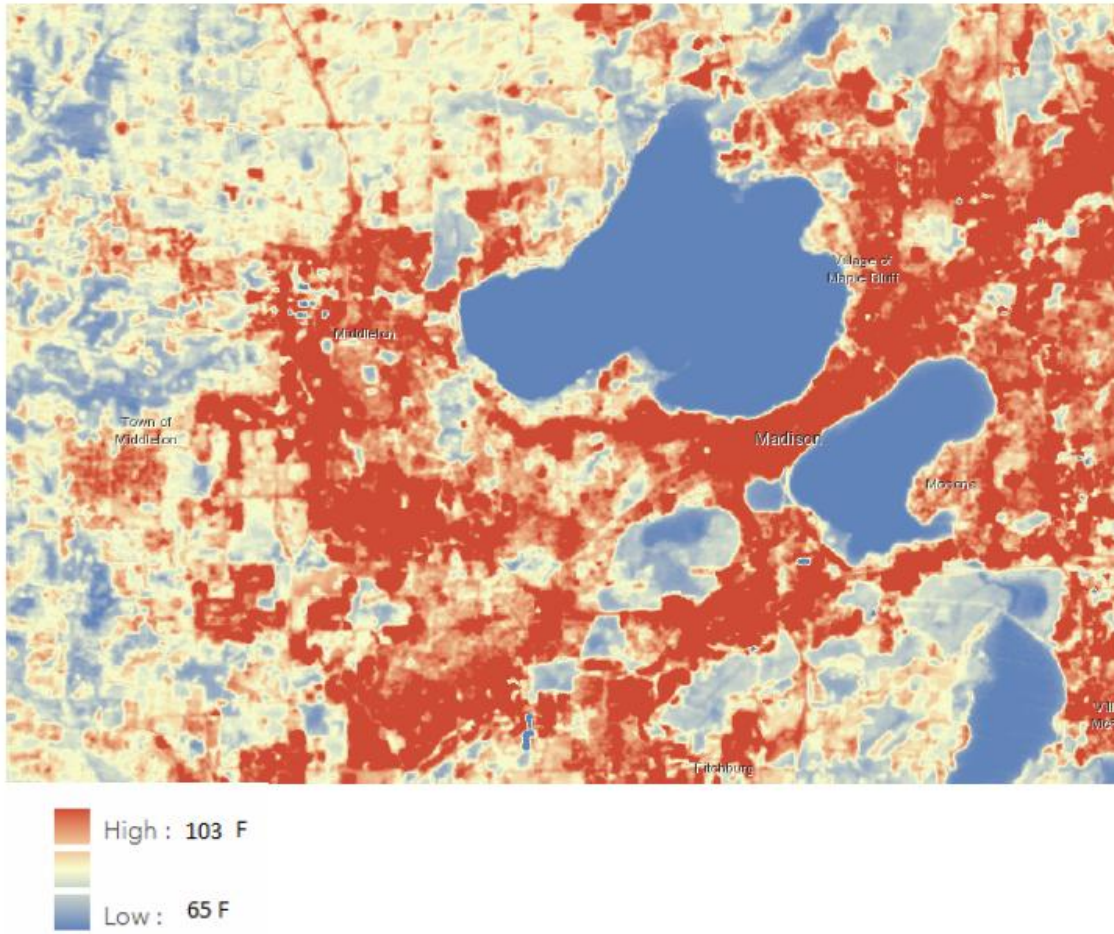
Stormwater Mitigation

Surface runoff contributes pollution to our streams, lakes, and oceans. In urban areas, the harmful effects are amplified by extensive impervious surfaces which decrease soil infiltration and increase runoff quantities. Trees mitigate stormwater flow by intercepting and storing rainwater in leaves, branches, and bark. Trees also facilitate soil organic matter cycling and reduce nutrient-rich sediment erosion by dampening the impact of falling raindrops (Hirabayashi 2012). In 2020, when the annual precipitation was 40.3 inches, Shorewood Hills’ park and street trees reduced runoff by an estimated 800 gallons with an associated value of \$28,000.

Urban Cooling

Urban areas are sometimes 5-9 degrees F warmer than the surrounding rural areas. Exposed asphalt, brick and concrete absorb sunlight and radiate heat back into the environment, creating the “urban heat island effect.” Trees mitigate this effect by shading the ground surface and by cooling the air through transpiration. Figure 2 illustrates the contrast of land surface temperatures between areas with relatively more urban development and impervious surfaces, vs. areas with more trees.

Figure 2. A remotely sensed thermal infrared land surface temperature map illustrates the urban heat island effect in summer. Areas of high land surface temperature are displayed in yellow and red, while vegetated areas and water appear blue.



Carbon Sequestration and Storage

Carbon dioxide (CO₂) and other heat-trapping (*i.e.* greenhouse) gases are causing changes in weather patterns all over the world. As trees take CO₂ out of the air to build new tissue during annual growth; the carbon in CO₂ is captured or “sequestered” in the growing woody roots, stems and branches. Carbon sequestration by urban trees can significantly offset the burning of fossil fuels (Abdollahi 2000, Nowak et al 2002b). Carbon storage refers to the amount of carbon that a tree has converted into woody biomass over its lifetime. If a tree is burned or decomposes, most of its stored carbon is released back into the atmosphere.

The amount of carbon sequestered annually varies by tree species, the number of individual

trees of a species, their size, and their health. The annual sequestration of all Shorewood Hills' public trees is ~200 tons of carbon, with an associated value of \$80,000. The species that sequester the most total carbon are Norway maple, northern red oak and white oak. Over time, public trees in Shorewood Hills have stored a total of just over 7,000 tons of carbon with an associated value of \$3 million.

Air Purification

Each year, the Village's trees remove an estimated 9,000 pounds of air pollution that affects human health and ecosystems, including ground-level ozone (7,000 lbs.), carbon monoxide (70 lbs.), nitrogen dioxide (1,300 lbs.), sulfur dioxide (220 lbs.), and particulate matter smaller than 2.5 microns (470 lbs.). The associated value is \$32,000.

Energy Conservation

Trees lower greenhouse gas emissions by reducing the amount of energy needed to heat or cool buildings. In the summer, a tree's shade can reduce air conditioning demand; likewise, winter heating bills can be lessened in cold climates by trees that block the wind. It is estimated that if every household in the country had three trees on its property, it would generate nationwide energy savings worth \$2 billion (McPherson and Simpson, 1999).

Biodiversity

By creating habitat for birds, mammals, and insects, trees increase biodiversity in urban areas. Planting a diverse mix of trees and vegetation is particularly important for increasing wildlife biodiversity. Natural forested patches often have greater species diversity due to seed drift from urban areas.

Human Health

Urban trees benefit both mental and physical human health. By reducing air pollutants, urban trees have the potential to decrease asthma rates, an ailment especially prevalent in urban youth. On the other hand, decreasing access to nature is tied to increasing rates of obesity among adults and children. Shade provided by trees in parks, playgrounds, and backyards also can reduce exposure to ultraviolet radiation, a known contributor to the development of skin cancer.

Psychologically, the presence of trees provides a sense of relaxation. Studies have shown that surgery patients recover more quickly when given a view of a "natural scene" from

their hospital room. Similarly, trees help people recover from the mental stress experienced in daily life, improving the effectiveness with which they conduct their daily activities (Saraev et al 2021).

Community Character

Trees lend aesthetic appeal to streets, neighborhoods, shopping districts, and parks. The presence of trees and participation in tree planting programs fosters a sense of community, a positive community image, and an appreciation for natural resources (Nowak et al. 2014).

Property Values

Multiple studies have shown that the presence of trees along streets and on private properties increases home value and property rental rates, decreases the time it takes to sell a home, and increases the prices shoppers are willing to pay at retail stores (Kovacs et al. 2022)

Street and Park Trees Inventory and Analysis

Street and Park Tree Inventory Summary

A complete inventory of the trees in the Village of Shorewood Hill's public street terraces and parks was conducted from June to early October of 2023. The primary measurements recorded for each tree were species, diameter at breast height (DBH), tree health (good, fair, poor, or dead), and geographical location.

In total 6,635 trees were measured and inventoried.

Street & Park Tree Species Composition

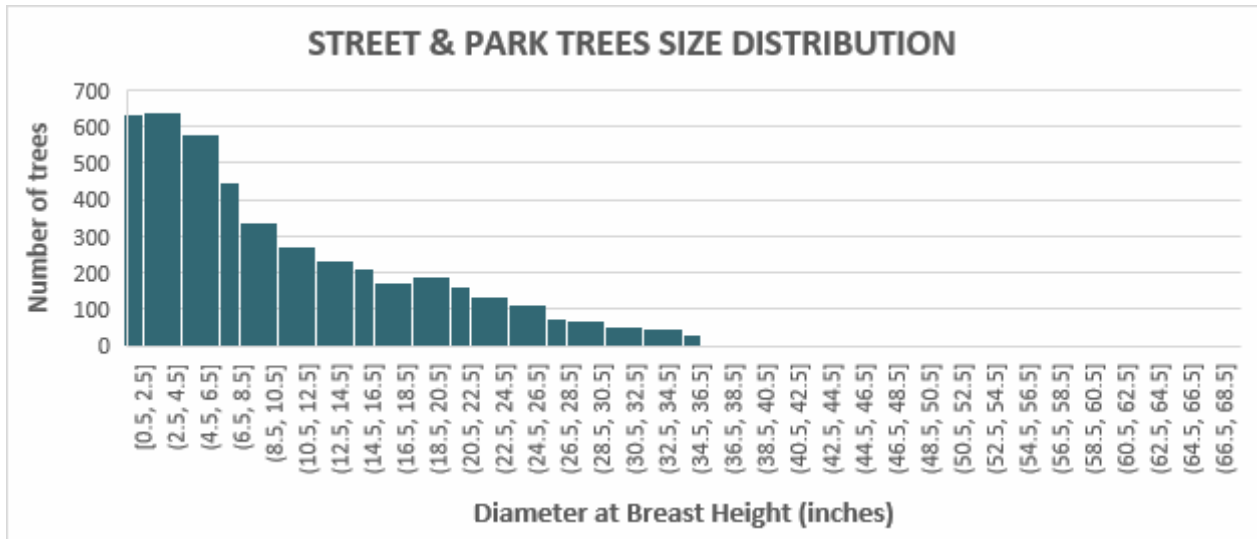
- The Village of Shorewood Hills is home to 111 unique tree species representing 66 genera.
- The ten most common species observed were hackberry (11.5%), northern white cedar (7.1%), Norway maple (6.0%), American basswood (4.8%), elm spp. (4.8%), alternate leaf dogwood (4.6%), common chokecherry (4.1%), staghorn sumac (3.7%), European buckthorn (3.5%), and black cherry (3.4%). A complete table of inventoried trees is shown in Appendix A.
- The most common genera observed were hackberry (11.5%), maple (10.8%), and oak (8.8%).

Street & Park Tree Size Distribution

Tree size, measured as diameter at breast height (DBH), indicates the approximate age of a tree. A

tree's expected lifespan varies by species; for instance, a crab apple is mature at 30 years while a bur oak is mature at 300. Growth rates also vary by species, so that a 6" DBH crabapple would likely range between 7-10 years old, while a 6" DBH bur oak would likely be 10-15 years old. The mean DBH of all Shorewood Hills's street and park trees is 11.28" with a standard deviation of 9.6".

Figure 3: Street and park tree size distribution (all species.)



Although there is variation between species as described above, The Center for Urban Forest Research (CUFR) provides the following guidelines for classifying tree sizes according to relative age:

- Young: less than 6" DBH
- Maturing: 6-12" DBH
- Mature: 12-24" DBH
- Over-Mature: greater than 24" DBH

The CUFR further asserts that an ideal age distribution for a population of urban trees is 40% young, 30% maturing, 20% mature, and 10% over-mature. Compared to these standards, Shorewood Hills has fewer young and maturing trees and more mature and over-mature trees.

- Shorewood Hills has 6% less young trees and 3% less maturing trees than recommended.
- Shorewood Hills has 5% more mature trees and 2% more over-mature trees than recommended.

Street & Park Tree Condition

The health of each inventoried tree was assessed as good, fair, poor, or dead based on the following standards:

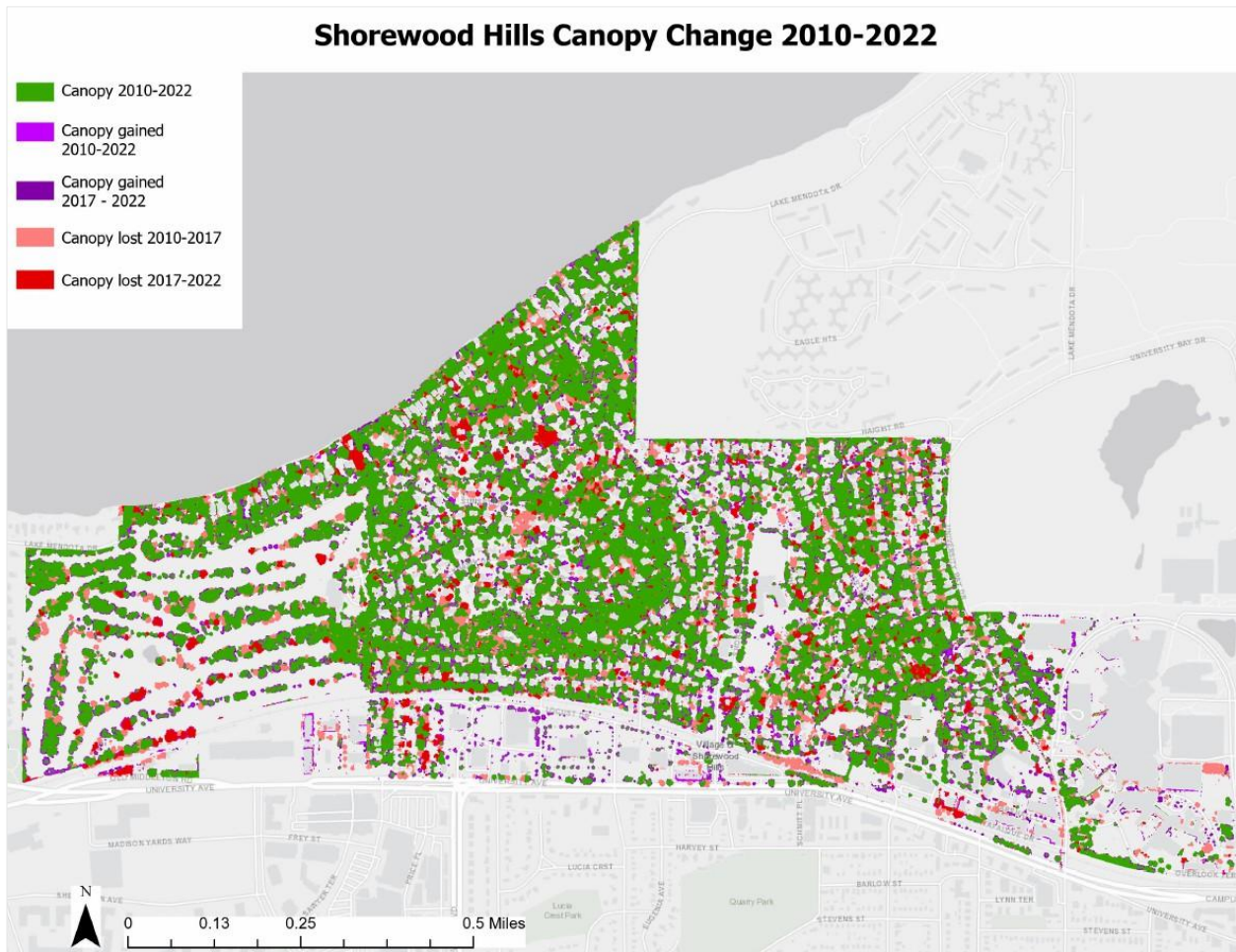
- Good: excellent branch structure, no obvious insect or disease problems, no deadwood, no obvious physical or environmental injuries, optimal growth space and conditions.
- Fair: intact branching, no obvious insect or disease problems, possible deadwood, possible physical injuries, possible constraints on growth.
- Poor: tree death likely within a 5-year time frame.
- Dead: No leaf production or annual growth.

The public canopy of Shorewood Hills was found to be in exceptional condition, with 88% of trees in good health. Three species (with at least 10 total trees) had 20% or more of their population either dead or in poor health: blue spruce, white ash, and box elder.

Historic Canopy Change

The Village of Shorewood Hills's total tree canopy, including private, street and park trees, covers 43% of its land area (Figure 4). This is one of the highest percentages of all Wisconsin municipalities, including Maple Bluff, Middleton and Madison. While many local municipalities have observed decreases in canopy cover over the last decade due to emerald ash borer, oak wilt, development pressures and weather-related events, the percent canopy cover in the Village has remained stable. The canopy remains abundant despite the virtual elimination of ash species in the Village and the loss of a significant amount of old growth oak trees due to old age or oak wilt.

Figure 4. Change in the total tree canopy in Shorewood Hills, 2010-2022. Flights capturing remotely sensed Light Detection and Ranging (LiDAR) data were flown over the Village in 2010, 2017 and 2022. The LiDAR datasets were processed to develop canopy cover maps for each of the successive time periods. The results were integrated with ancillary GIS data sets of land use and park parcel boundaries.



Historic Canopy Change by Land Use

Over the study period of 2010 to 2022, the most significant increase in canopy cover (just under 2 acres) was observed on commercial properties (Table 1). Canopy cover also increased on residential, recreational and institutional/government properties. Canopy cover decreased in all transportation-related land uses by 0.76 acres.

Table 1. Canopy cover according to land use.

2010 Land Use		
Land Use Category	Canopy Cover (Acres)	Canopy Cover (%)
Commercial	4.21	11.71
Institutional/Governmental	9.39	15.06
Recreation	44.57	39.07
Residential	111.60	54.39
Transportation	45.28	48.69
2022 Land Use		
Land Use Category	Canopy Cover (Acres)	Canopy Cover (%)
Commercial	6.19	17.19
Institutional/Governmental	10.64	17.06
Recreation	45.14	39.57
Residential	113.27	55.21
Transportation	44.52	47.88
Canopy Change by Land Use Category, 2010 -2022		
Land Use Category	Canopy Change (Acres)	
Commercial	1.97	
Institutional/Governmental	1.25	
Recreation	0.57	
Residential	1.67	
Transportation	-0.76	
Total	4.73	

Street Tree Inventory

Inventory Summary

Of the 6,635 public trees inventoried, 1,904 were street trees. Street trees are defined as trees located along the boulevard, terrace area or “road right-of-way”.

Street Tree Species Distribution

Species diversity is important to the health and longevity of the urban forest. According to the WI DNR species diversity guidelines, no tree species should exceed 10% and no genus more than 20% of the entire tree population. The Village meets both thresholds with a remarkably diverse street tree canopy.

- There were 86 unique species inventoried representing 63 genera.
- The most common species observed were northern white cedar (8.8%), apple species (8.3%),

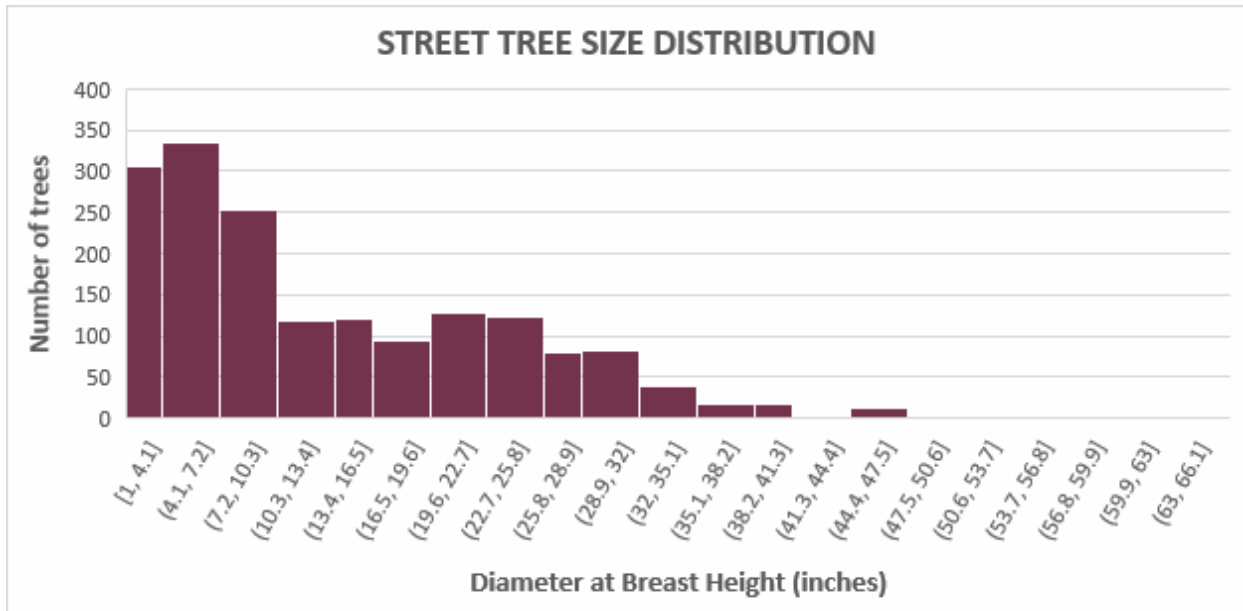
and Norway maple (6.9%).

- The most common genera observed were Acer (15.2%), Quercus (12.8%), and Thuja (8.7%).

Street Tree Size Distribution

The size distribution of trees, which also reflects tree age distribution, is shown in Figure 5.

Figure 5: Street tree size distribution. The mean DBH is 14” with a standard deviation of 10.6”.



As noted above, the CUFR recommends an ideal age distribution for a population of urban trees: 40% young, 30% maturing, 20% mature, and 10% overmature. Shorewood Hills has 15% less young trees (approx. 261 trees) and 1% less maturing trees (approx. 17 trees) than recommended, but 6% more mature trees (approx. 104 trees) and 11% more over-mature trees (approx. 191 trees) than recommended. A high percentage of over mature trees increases the potential for high-risk or high-cost situations. High-risk situations are precursors to tree failure which can result in harm to people or property. High-cost situations refer to expensive removals and a massive replanting program². However, mature trees with large canopies provide more ecosystem benefits than young trees. Larger trees, particularly silver maples, should receive annual, detailed risk assessments that account for tree health and likelihood of failure. Potential mitigation measures such as reduction pruning, cabling and bracing should be considered to preserve canopies and reduce risk.

² For example, the replacement value of the Village’s White oak street trees alone is more than \$600,000.

Street Tree Condition

Of the 1,740 street trees inventoried, 1,482 were in good condition, 176 were in fair condition, 67 were in poor condition, and 15 were dead (Figure 6). See the [Street & Park Tree Condition section](#) for condition class definitions. For condition information about each species of street trees, see Appendix B.

Green and White Ash

The presence of emerald ash borer was formally recognized in Dane County in 2014. This flying insect creates a fatal hazard for both white ash (*Fraxinus americana*) and green ash (*Fraxinus pennsylvanica*). Larvae from hatched eggs burrow under the bark, feeding on the infected trees' cambium. Typically, over the course of 2 to 3 years, health of untreated trees will precipitously decline and create significant hazards as the wood quickly decays and loses its holding strength. Injections of emamectin benzoate into an ash tree's root flare on a two or three-year cycle has proven to be highly effective in preventing the emergence of the larvae and thereby reducing or eliminating damage to the tree.

The Village began ash tree treatments in public terraces in 2015. Initially this program was funded by property owners who had ash trees in the terraces surrounding their homes.

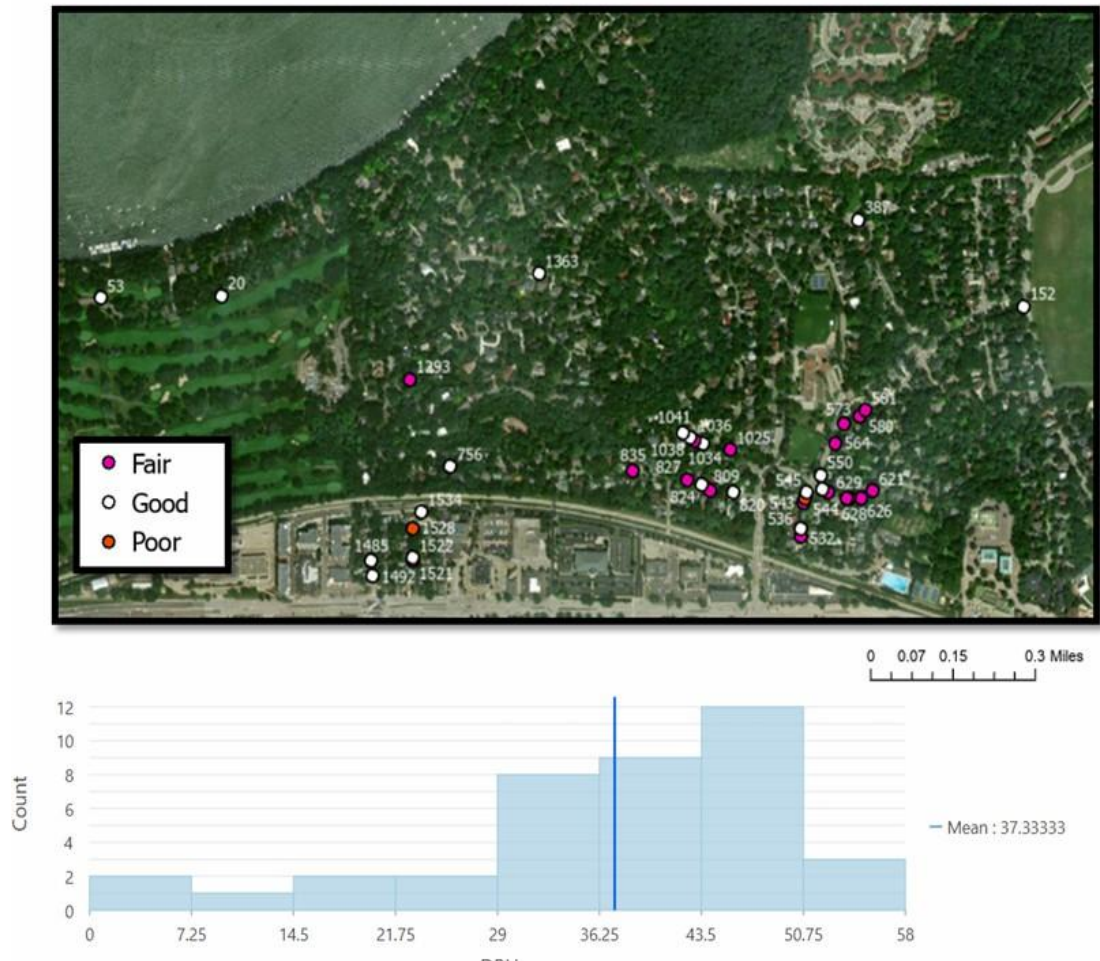
Recently the funding for the program has been assumed by the Village. All healthy ash trees in the terraces were treated in 2024. It is recommended that the Village continue treating healthy ash trees on a two-year cycle with selective removals of trees as they begin showing signs of decline. Currently, the condition of ash trees on street terraces is 70% Good, 17% Fair, 9% Poor and 3% Dead (doesn't add to 100% due to rounding error).

Silver Maple

Silver maples (*Acer saccharinum*) are native floodplain species that were planted widely as elm tree replacements ranging from 70-30 years ago. As a fast-growing, weak-wooded species, the original silver maple plantings are now reaching advanced maturity and exhibiting a range of consequential and concerning structural and health issues. In the Village, the mean size of silver maples is ~ 37" DBH, whereas the overall mean for street trees is ~ 14" DBH. Large cavities and regularly falling deadwood branches are typical concerns associated with the species. These combined factors indicate that special attention should be paid to the Village's silver maple street tree population. It is recommended that a Level 2 tree risk assessment be conducted for each silver maple in the public right-of-way according to the International Society of

Arboriculture Tree Risk Assessment Qualification (ISA-TRAQ) standards. These assessments will provide a more detailed inventory of tree health, potential risk, and risk mitigation strategies.

Figure 6. Silver maple street trees. Map showing location and condition in 2023 (upper) and size distribution (DBH in inches, lower).



Park Tree Inventory

The Village of Shorewood Hills has 11 public parks, many of which are managed as nature-based recreation or natural areas and require diverse management perspectives. An extensive inventory was conducted of all park trees and shrubs throughout the spring and summer of 2023. Each tree's GPS coordinates were recorded and entered in a powerful web mapping tool ([Shorewood Hills Forest Management Explorer](#)) that allows trees to be grouped by any recorded attribute.

Figure 7. Map of Village of Shorewood Hills parks.



Inventory Summary

- 4,731 trees and shrubs were measured and inventoried in the Village's parks.
- There were 96 unique species inventoried representing 46 genera.
- The most common species observed were hackberry (14.8%), white cedar (6.4%), and basswood (5.9%); see Table 2.
- The species with the highest leaf area were hackberry (14.8%), basswood (11.8%), and white oak (10%).
- White cedar comprised 6.4% of all park trees, but only 1.3% of park leaf area. This was due to the close spacing of many white cedars that are planted as hedge trees.
- Oak species comprised only 6% of all park trees yet provided a disproportional 28.3% of park leaf area.
- Of the 334 oaks in parks, only 8.6% were between 1-5" DBH. Nearly all the oaks in the sapling diameter class were planted. There was a nearly complete lack of oak natural regeneration.
- The average DBH of oak trees was 20".
- Notably, 3 red, 3 white, 3 bur, and 3 swamp white heritage oak trees (estimated to be >200 years old) were identified.
- Ash has effectively been eliminated from the canopy due to the invasive exotic emerald ash borer.
- Invasive shrub control throughout the parks has been very effective with the exceptions of inaccessible parts of Quarry Park and the Marina, where little forest management has occurred.
- 93.6% (4,418) of the park trees were found to be in good condition, 3.9% (183) of the trees were in fair condition, 2.1% (99) of the trees were in poor condition and 0.4% (20) of the trees were found to be recently dead.
- William Kaeser Woods had the highest percentage canopy cover at 96%. Koval Woods had the second highest canopy cover at 93%.
- Post Farm Park had the lowest canopy cover at 45%. The Marina Park had the second lowest canopy cover at 60%.

Table 2. Percent population, percent leaf area, and importance value (IV) for the 10 park species with the highest IV.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Hackberry	14.8	14.8	29.5
American basswood	5.9	11.8	17.6
White oak	2.0	10.0	12.0
Bur oak	2.3	9.7	12.0
Black walnut	2.5	7.7	10.2
Norway maple	5.7	3.2	8.9
Black locust	2.9	5.7	8.6
Northern red oak	1.7	6.8	8.5
Elm species	5.2	3.0	8.1
Northern white cedar	6.4	1.3	7.7

Park Tree Species Composition and Structure Changes

Shorewood Hills’ park trees were inventoried in 2012 and again in 2023. The two inventories were compared to identify the greatest changes observed.

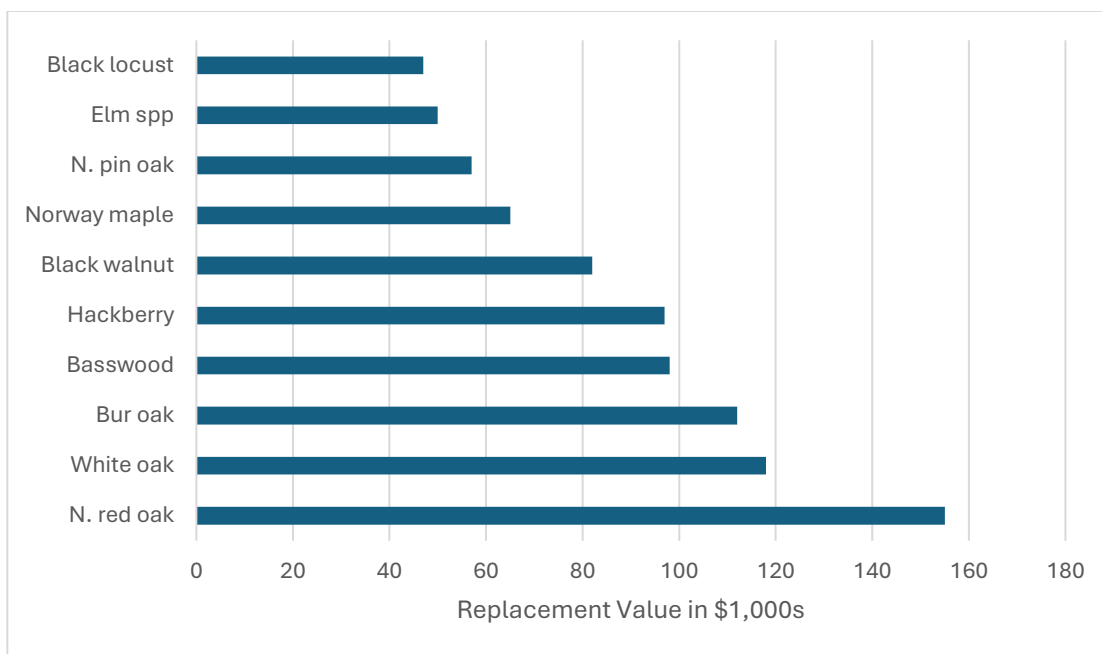
- The greatest net species increases observed between 2012 and 2023 were hackberry (296), white cedar (221), black cherry (138), and Norway maple (93).
- The greatest net species decreases observed between 2012 and 2023 were green ash (- 98), mulberry (-97), and black locust (-46).
- Mature oaks decreased significantly across almost all parks. Since the 2012 inventory, red oaks (-42), bur oaks (-34), and white oaks (-28) have all declined in number.
- Oak tree loss occurred across all diameter classes but was most abundant in the larger diameter classes (> 20” DBH).
- Although there was a net increase in basswood tree occurrences, basswood showed one of the largest decreases in carbon storage and replacement value (second only to northern red oak). Significant basswood decreases in all size classes > 20” DBH were observed.
- Over the last 10 years, natural regeneration more than doubled for basswood, elm, black cherry, box elder, and Norway maple.
- The addition of 221 white cedars was primarily due to hedge row planting.
- Over the 12-year study period, a 13% decrease in canopy cover was observed in Four Corners Park, and a 10% decrease in canopy cover was observed in McKenna Park
- Village tree planting efforts in Sam Roth Park resulted in a 11% increase in canopy cover, while canopy cover in Karl Frantz Park increased 5% as well.

- Canopy cover in the remaining parks stayed relatively stable over the 12-year period.

Park Tree Replacement Values

Oak trees are (literally) emblematic of the Village. They are also important providers of shade and wildlife food and habitat. In the Village’s parks, red, white, and bur oaks store more carbon collectively than all other trees combined. They are also the most expensive to replace, given their large size.

Figure 8. Replacement values of Shorewood Hills’ park trees (top 10 species).



Management Consideration Highlights of Park Trees

- Several of the parks have a history of oak wilt which has resulted in significant oak mortality over time. Continued monitoring and containment of oak wilt will be required.
- A lack of natural regeneration of oak species will require continued planting of oaks to maintain an oak component into the future.
- In the parks, many mature oaks are increasingly encroached upon by more shade tolerant species such as elm and hackberry. Given oaks' shade intolerance, over time these trees will be gradually lost to forest succession.
- Successful removals of mature invasive black locust and Norway maples have occurred throughout the parks. However, there has been a large increase in Norway maple regeneration that did not exist in 2012. Mature Norway maples remain in several parks, which continue to produce seed.
- Spongy moth egg masses have been observed in several locations in the Village; the most significant observations were at Post Farm Park. Continued monitoring of spongy moth will allow the Village to implement appropriate treatment.

Big Foot Park (0.29 Acres)

One of the smallest parks in the Village, Big Foot Park is an unimproved stormwater management parcel located off Lake Mendota Drive halfway between McKenna Park and the Shorewood Hills Marina. The park is a natural area without any recreation infrastructure. The parcel boundary is long, narrow, and steeply sloped down to the shore of Lake Mendota. Given the steepness of the park, riprap boulders have been added for erosion prevention.

Park Summary

Big Foot Park is characterized by a dominance of basswood that exists in various size classes. Natural regeneration is predominantly hackberry and basswood. There is a semi-open understory, with a significant component of chokecherry. Several recent exotic plantings include an apple cultivar, Japanese maple, yew, red bud and amur chokecherry.

Management Recommendations

Given the lack of recreation opportunities, the primary management concern is potential tree failures impacting adjacent single-family lots on either side of the Park. It is recommended to monitor Village trees along private property lines where tree failures could impact private properties. Management considerations should include removal of existing Norway maples as there is one mature 24.6" DBH seed tree in the park.

Tree Conditions/Composition

- A total of 66 trees and 100 shrubs were inventoried.
- The most common tree species were basswood (15) and hemlock (14). The largest hemlock had a DBH of 7.8".
- Canopy-dominant species by percent leaf area were basswood (44%) and red oak (24%).
- There were 18 unique tree species representing 15 different genera.
- 96.7% of the trees were listed to be in good condition. There were two red oaks of 13" DBH noted to be in poor condition.
- Existing canopy cover was 86%, a 3% decrease since 2010.

Table 3. Name, percent population, percent leaf area, and importance value for 10 most common species in Big Foot Park.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Common chokecherry	60.2	2.8	63.1
American basswood	9.0	44.5	53.5
Northern red oak	3.6	24.3	27.9
Eastern hemlock	8.4	2.7	11.2
Black locust	1.2	6.9	8.2
Norway maple	1.8	5.5	7.4
Elm species	1.2	4.3	5.5
Black cherry	0.6	3.7	4.3
Hackberry	3.0	0.8	3.8
Northern white cedar	3.0	0.1	3.2

2012-2023 Inventory Change Highlights

- The dominant canopy of basswood and red oak remains unchanged after a decade. Unlike other Village parks, hackberry and elm represent a very small component of the canopy, with very little regeneration occurring.
- Three additional hemlocks were planted, giving a total population of 14.
- Three >25” DBH American basswood and two >20” elms were lost since the 2012 inventory.
- Four box elders <15” DBH were also lost.

Bradley Park (1.27 acres)



Bradley Park, known for its popular sledding hill, provides one of the most popular winter recreation opportunities in the Village. It is located just east of Shorewood Hills Elementary School on Amherst Drive. A small path connects Bradley Park to Dartmouth Road. Fourteen single family homes border Bradley Park, where the park serves as an extension of their backyards.

The park is characterized by several large open-grown bur oaks with some unique branching patterns in the manicured portion of the park. The far interior of the park is a natural area with regeneration occurring. There is a community “Fruit Forest” that was established since the last forest inventory in 2012 that consists of a variety of apple, pear, plum, peach and cherry trees.

Park Summary

Spongy moth cocoons were observed on numerous bur oak trees, likely presenting a concern to the Village in 2024 and beyond. Additionally, a private property owner adjacent to the park had an oak diagnosed with oak wilt.

In the natural area portion of the park, a large bur oak (30” DBH) was found to have recently died, and several very large red or pin oaks have also died since 2012. Large numbers of Norway maple and hackberry have regenerated from the few remaining larger seed trees.

Management Recommendations

- Remove the larger Norway maples to reduce competition amongst the oak canopies and prevent future invasive regeneration establishment.
- Remove Norway maple regeneration and replant with oak seedlings and larger trees protected by metal cages.

- Remove encroaching trees to preserve the one notable large 35” DBH red oak in the natural area.
- Monitor trees for oak wilt nearby.

Tree Conditions/Composition

- A total of 246 trees were inventoried.
- The most abundant trees were hackberry (65) and Norway maple (41). Hackberry was represented in all size classes but primarily observed as recent regeneration <2” DBH. There were 6 Norway maples >10” DBH, 31 Norway maples observed were <2” DBH.
- Canopy dominant species by percent leaf area were hackberry (24.7%) followed by bur oak (19.7%).
- There were 33 unique tree species representing 20 different genera.
- 83.7 % of the trees were listed as in good health, while poor or fair condition trees represent 7.7% of all trees respectively. 0.8% of trees were found to have recently died. Seven mature oaks were identified as in either fair or poor condition.
- A 30” DBH bur oak had recently succumbed, along with several large red oaks that appear to have died sometime after the 2012 inventory.
- Existing canopy cover of 74% represents a 0% change since 2010.

Table 4. Name, percent population, percent leaf area, and importance value for 10 most common species in Bradley Park.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Hackberry	26.4	24.7	51.1
Bur oak	6.1	19.7	25.8
Norway maple	16.7	5.3	21.9
Black walnut	4.5	11.4	15.9
Northern pin oak	3.3	11.1	14.4
Red pine	5.7	5.9	11.6
Black locust	4.5	6.4	10.8
Eastern redbud	6.1	0.4	6.5
White oak	1.2	4.3	5.5
Elm species	4.5	0.8	5.3

2012-2023 Inventory Change Highlights

- Evidence of significant efforts to remove the invasive Norway maples is apparent, including the observed removal of 14 trees > 5” DBH. Even with these successful removals, a continued removal effort is required as 14 additional saplings <5” DBH were observed.
- Significant efforts in removal of black locust were also observed, resulting in the reduction of 5 trees.
- Significant increases of natural regeneration of hackberry and elm species were observed, similar to the trends observed in most natural areas in the Village.
- There was a decrease of 8 mature bur oaks in the park.

Dudley Davis Quarry Park & Reese Woods (3.86 acres)

Dudley Davis Quarry Park and the Tess and Hans Reese Woods are two separately donated parcels situated between Topping Road and Highbury Road. One parcel of the park was historically utilized as a limestone quarry in the late 1800s and early 1900s. The other parcel is managed as a rare oak savanna, an example of what the pre-Euro American landscape looked like.

This park is unique in that it is secluded and contains a distinctive geological outcropping, as well as hiking trails and large cliffs that are used for rock climbing. The park also operates as a staging area for Village residents to drop off yard waste or pick up free leaf mulch and wood chips.

Park Summary

The geology and topography of the landscape prevented access to timber at the time of settlement and led to the preservation of the oak savanna today. Savanna restoration began in the 1990s. The savanna exists today due to ongoing restoration work from local dedicated volunteers who have been continuously removing invasive species and conducting periodic controlled burns. The extremely shallow soils of the savanna likely slow the growth of the oaks present, meaning they are much older than similar sized trees. This park was one of the very few areas where limited natural oak regeneration was observed. Also of note is a 33" DBH swamp white oak located off Highbury Road near the access gate.

The portion of the park that was quarried is now populated by early successional pioneer species such as red cedar. As disturbed areas result in prime habitat for invasives, there was a considerable presence of honeysuckle and buckthorn. However, these species most often occurred around the generally inaccessible perimeters of the park.

Unique to this park was the high abundance of sumac, with over 200 occurrences. Sumac is commonly found along roadsides and in areas of disturbance due to its ability to persist where other tree species cannot. It is native and valued for its bright colorful foliage and wildlife habitat.

Management Recommendation

Maintain oak savanna through controlled burns and removal of invasive species.

Tree Conditions/Composition

- 971 tree species and 174 shrub species were identified.
- The most common tree species were hackberry (309) and bur oak (73); more than half of the hackberries were less than 5" DBH, and nearly all of the bur oaks were greater than 10" DBH.

- Canopy dominant species by percent leaf area were hackberry (32.9%) and bur oak (29%).
- A total of 28 unique tree species representing 21 different genera were observed.
- 95.3% of trees were identified as being in good condition, 2.8% in fair condition, and 1.4% in poor condition. 0.5% of the trees were identified as having died within the last five years. Fourteen of the 48 trees identified as in either poor or fair condition were bur oaks.
- The majority of recently deceased trees were black locusts; these trees had been girdled to promote the health of the savanna restoration efforts.
- Existing canopy cover of 80% represents a 2% decrease since 2010.

Table 5. Name, percent population, percent leaf area, and importance value for 10 most common species of Quarry Park and Reese Woods.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Hackberry	27.2	32.9	60.1
Bur oak	6.4	29.0	35.4
Staghorn sumac	20.6	0.9	21.5
Black locust	5.9	12.3	18.2
Black walnut	4.0	11.7	15.7
European buckthorn	11.5	0.5	12.0
Elm species	5.6	1.1	6.7
Eastern red cedar	4.0	1.0	5.0
Bell's honeysuckle	2.7	0.1	2.8
Eastern cottonwood	0.3	2.4	2.7

2012-2023 Inventory Change Highlights

- Due to the emerald ash borer, there was a near elimination of ash trees across all diameter ranges.
- Black locust populations have also decreased due to management operations, primarily girdling. Limited natural regeneration of black locust was observed.
- Increases of eastern red cedar were observed on the disturbed and rocky exposed sites.
- Over 10 bur oaks > 10" DBH have been lost since the 2012 inventory; five of these were >30" DBH.
- The most significant changes observed in these parks was a dramatic increase in hackberry and elm regeneration.

Entryway Parks (1.06 acres)

The Village's Entryway Parks serve as the gateway to Shorewood Hills as they are located on each side of Shorewood Boulevard, the primary entrance to the Village. Sam Roth Park is found to the east, while Karl Frantz Park is located to the west of Shorewood Boulevard. These parks represent a more manicured, landscaped environment than many of the other Village parks.

Karl Frantz Park includes an attractive retention pond accompanied by several planted river birch trees.

Park Summary

Three heritage swamp white oaks of exemplary form are found in these parks. As of 2023, no spongy moth egg masses were observed on these trees despite significant spongy moth egg masses observed in nearby Post Farm Park and an outbreak in Glen Oak Hills Park in the spring of 2023.

Many of the trees in these parks have been planted, resulting in a higher diversity than in other Village parks. Two American chestnut trees planted prior to 2010 are now infected with the chestnut blight and in significant decline. Sam Roth and Karl Frantz Parks both experienced the greatest canopy cover increases between 2010 and 2022 due to successful tree planting program.

Management Recommendation

Preserve heritage swamp white oaks and monitor for spongy moth. See [WI DNR Spongy Moth](#) standards for information on monitoring and management methods.

Tree Conditions/Composition

- A total of 149 trees and 5 shrubs were inventoried.
- The most common tree species were white cedar (62) and hemlock (8). The high number of cedar trees is the result of hedge row plantings. The mean diameter of the hemlocks was 6.6" DBH.
- Canopy dominant species by percent leaf area were northern pin oak (15.7%) and swamp white oak (15.6%).
- Karl Frantz Park has 17 unique tree species representing 13 genera, while Sam Roth Park has 22 unique tree species representing 19 genera. There is a high level of diversity for such small parks due to historic plantings. There are 7 species of conifers in these parks.
- 92.8 % of the trees inventoried were in good condition, 5.2% were in fair condition, 2% in poor condition, and no trees were dead. The only trees in poor condition were the American chestnuts and a 5.7" DBH tulip tree.
- Existing canopy cover of 74% in Karl Frantz Park represents a 5% increase since 2010.
- Existing canopy cover of 71% in Sam Roth Park represents an 11% increase since 2010.

Table 6. Name, percent population, percent leaf area, and importance value for 10 most common species in the Entryway Parks.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Northern white cedar	40.5	11.5	52.0
Swamp white oak	3.9	15.6	19.6
Northern pin oak	2.6	15.7	18.4
Blue spruce	4.6	10.3	14.8
Norway spruce	2.0	9.0	10.9
Eastern hemlock	5.2	2.5	7.7
Apple species	3.9	2.7	6.7
American basswood	1.3	5.1	6.4
Norway maple	2.0	4.1	6.1
Sugar maple	2.0	4.1	6.1

2012-2023 Inventory Change Highlights

As these parks are more manicured than most other parks in Shorewood Hills, the most significant changes in tree species composition are related to plantings. In this case the greatest change was due to the addition of white cedar for hedge row plantings. Other recent plantings since the 2012 inventory include yew, redbud, silver maple, tamarack and a tulip tree.

Four Corners Park (1.61 acres)

Four Corners is a very popular park centrally located in the Village yet largely hidden by the surrounding dense residential canopy. There is a playground, a shelter, and in summertime, a children's camp. The park is accessed from either Edgehill Drive or Sunset Drive. A very large multi-stem Norway spruce marks the main entrance. Vegetation is a mix of landscaped, manicured areas and portions of closed canopy natural area with active forest regeneration.

Park Summary

Four Corners Park is the Village's only park containing natural origin white pines, which dominate the Park's canopy. Only two other parks in the Village have any white pines at all, with only one tree each. The mean diameter of the 14 white pines in Four Corners Park is 24", while the maximum diameter is an impressive 35.4". Near the Sunset Drive entrance of the park, there is a heritage white oak with a diameter of 44.6".

Recent plantings have included hickory, spruce, hophornbeam, hemlock, cedar and redbud. Overall, this park has experienced significant changes in recent history, with the near elimination of a previously dominant old growth red oak/white oak forest due to oak wilt. The few remaining oak trees appear to be in decline. Other losses in the park include four red pines and a hickory tree.

Management Recommendations

- Given the park's history of oak wilt, monitor for future infections.
- Remove Norway maple regeneration and replace with native species plantings such as oak protected with metal caging.

Tree Conditions/Composition

- A total of 227 trees and 17 shrubs were inventoried.
- The most common species were hackberry (31) and Norway maple (22).
- Canopy-dominant species by percent leaf area were white pine (18.9%) and red oak (10.7%).
- The park contains 41 unique tree species representing 30 different genera.
- 93% of the trees were found to be in good condition, 3.3 % in fair condition, 3.3% in poor condition, and 0.4% were found to be dead. There were 3 red oaks and 3 white pines in either poor or fair condition, 4 of which were greater than 20" DBH. The other fair or poor category trees were distributed across species, with no other species being represented more than once.
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Table 7. Name, percent population, percent leaf area, and importance value for 10 most common species in Four Corners Park.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Eastern white pine	5.7	18.9	24.7
Hackberry	12.7	6.4	19.1
Norway maple	9.0	7.0	16.0
Northern red oak	3.7	10.7	14.3
Norway spruce	3.3	9.0	12.3
Eastern hemlock	7.8	2.2	10.0
Black cherry	5.3	4.0	9.3
Northern white cedar	7.0	2.0	9.0
Black locust	2.0	4.9	6.9
Northern pin oak	1.2	5.2	6.5

2012-2023 Inventory Change Highlights

- Loss of 8 mulberries between 0-15" DBH likely due to active management activity.
- Loss of 5 white oaks, 4 of which had a DBH > 20".
- Loss of 8 red oaks, half of which had a DBH of > 35".
- Loss of 4 red pine and one hickory.
- Significant decreases in Norway maple saplings occurred, though all other size classes remained unchanged.

John C. McKenna Park (2.17 acres)

John C. McKenna Park, located on Lake Mendota Drive, is characterized as a natural area with steep north-facing slopes leading down to the Lake where there is boating and swimming access. A paved road leads down to a community boat house and picnic shelter. There is also a foot trail leading from the boat house up a steep hill to the corner of Edgehill Drive and Lake Mendota Drive. Prior to the creation of Post Farm Park and the Shorewood Hills Pool, McKenna Park was the most popular park in the Village. It now offers a quiet place to enjoy the woods and Lake Mendota. A recent bridge reconstruction resulted in the loss of several trees.

Park Summary

A significant amount of invasive tree species, primarily Norway maple and black locust, have become established in McKenna Park and are now actively reproducing. The evidence of recent management activities to remove these invasive trees was widely observed. 122 Norway maples were observed in the park, making up 18% of the tree population, though the average diameter was only 3.2". There were two very large (>35" DBH) red oaks observed that had died in the last year or two. One of the largest basswood trees (40" DBH) in all the village parks was identified here.

Management Recommendations

- Remove mature Norway maple seed trees that are promoting natural regeneration of an undesirable and invasive tree species.
- Remove shade-tolerant species such as Norway maple, elm and black locust encroaching on large red oaks. Consider removing understory native species such as hackberry that will eventually shade out desirable oaks.

Tree Conditions/Composition

- A total of 591 trees and 78 shrubs were inventoried.
- The most common species were Norway maple (122) and basswood (109)
- The canopy-dominant species by percent leaf area were basswood (31.5%), northern red oak (19.3%), and white oak (16.4%).
- This park contains 34 unique tree species representing 24 different genera.
- 96.1% of the trees were in good condition, 1.9% in fair condition, 1.6% in poor condition, and 0.3% were dead. Eight basswoods, 3 mature red oaks, and 1 bur oak were identified as either fair or poor condition. The two trees found to have recently died were both red oaks with diameters over 35".
- Existing canopy cover of 77% represents a 10% decrease since 2010.

Table 8. Name, percent population, percent leaf area, and importance value for 10 most common species in McKenna Park.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
American basswood	16.9	31.5	48.4
Norway maple	18.2	6.7	24.9
Northern red oak	3.9	19.3	23.2
White oak	2.5	16.4	18.9
Alternate leaf dogwood	11.2	0.3	11.5
Hackberry	5.7	3.8	9.5
Black cherry	5.1	1.8	6.9
Northern catalpa	4.3	2.5	6.8
Elm species	3.7	3.1	6.8
Common chokecherry	4.9	0.4	5.3

2012-2023 Inventory Change Highlights

- Due to the emerald ash borer, there were significant decreases in ash across all diameter classes.
- Loss of 12 red oaks across all diameter classes.
- Loss of 5 white oaks across all diameter classes.
- While there was a loss of 12 Norway maples across all diameter classes > 5” DBH, there was a significant increase of almost 100 Norway maples in the 0-5” diameter class.
- Loss of 3 hickories > 10” DBH.
- Increases of regeneration in the understory were observed with basswood, black cherry, hackberry, catalpa and Norway maple.

Koval Woods (1.66 acres)

Koval Woods is a natural area with the second highest canopy cover of all Village parks at 93%. The park is located off Edgehill Drive and Wood Lane adjacent to McKenna Park. Koval Woods acts as an extension to nine residential lots. There is a small trail that cuts through the park, providing a second access point from Wood Lane.

Koval Woods is unique in that the area has never been logged. Oak wilt has historically spread from Eagle Heights Woods into Koval Woods since 2001. Despite precautions such as trenching and fungicide injections, the classic old growth characteristics of the woods have dramatically changed over the last two decades.

Park Summary

Koval Woods is the only park where shagbark hickory comprises a significant component of the tree canopy. Out of 34 total shagbark hickories, 15 trees were over 10" DBH. Although there was evidence of some hickory plantings, it appears that the majority of the smaller diameter trees were established through natural regeneration. The largest hickory was 33" DBH, a tree that is now likely approaching 250 years of age.

The overstory is dominated by red oak, white oak, and black walnut. There were 53 oaks in the park, about half white and half red. Most of the oaks were in good condition, although there were two large oaks (one a heritage oak) that had recently died and several other large oaks that had died within the last 10 years. Within the last 10 years, the Village removed a significant portion of the invasives to preserve the existing oak component. This past management activity created large canopy gaps, likely resulting in the abundance of dogwood and black cherry, which establish quickly in forest openings.

Management Recommendations

- Although the majority of Norway maples have been removed, 3 remain that are greater than 5" DBH, and there is natural regeneration occurring in several areas. It is recommended that these be removed.
- Consider removing some of the native hackberry or elm species that are encroaching on the oak canopies to help preserve the historic and rare habitat Koval Woods is providing.
- Remove the observed small population of highly invasive Japanese knotweed.
- Given the history of oak wilt in Koval Woods, continue monitoring for future outbreaks.
- Given the rarity of shagbark stands, protect the younger cohort of hickories until they are clearly established. Protection strategies include caging saplings and removing competing tree species from established trees.

Tree Conditions/Composition

- A total of 474 trees and 5 shrubs were inventoried in Koval Woods.
- The most common trees observed were black cherry (76) and box elder (34), although almost all of these were < 5” DBH.
- The canopy-dominant species by percent leaf area were white oak (31%) followed closely by red oak (28.4%) and then shagbark hickory (15.8%).
- Koval Woods contains 27 unique tree species represented by 21 genera.
- 93.1% of the trees in the park were in good condition, 4.6% in fair condition, 1.9% in poor condition, and 0.4% were dead. There were 5 mature oaks listed in fair condition. Most of the trees listed as fair or poor condition were box elder.
- Existing canopy cover of 93% represents a decrease of 2% since 2010.

Table 9. Name, percent population, percent leaf area, and importance value for 10 most common species in Koval Woods.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
White oak	5.2	31.0	36.2
Alternate leaf dogwood	34.4	0.8	35.3
Northern red oak	5.8	28.4	34.3
Shagbark hickory	7.1	15.8	22.9
Black cherry	15.9	6.6	22.5
Box elder	7.1	1.8	8.9
Hackberry	5.6	3.1	8.8
Black walnut	2.3	6.1	8.4
Elm species	3.3	1.4	4.8
Norway maple	2.9	0.9	3.8

2012-2023 Inventory Change Highlights

- Emerald ash borer caused significant decreases in ash across all diameter classes.
- Loss of 5 mature red oaks.
- Loss of 6 mature white oaks.
- Large increases of regeneration of black cherry, box elder, hackberry, and hickory in the understory.

Post Farm Park (7.75 acres)

Post Farm Park was a historic farm, purchased by the Village in 1968. It is by far the most popular and intensively utilized park in the Village because of its central location, bike trail access, tennis courts, the Shorewood Hills Pool, a natural playground, picnic tables and benches, and a large community garden. The park is accessed from either Purdue Street on its west end, from the bike trail on the west and east, or from the pedestrian path at Harvard Drive on the north side of the park. The park is composed of parking areas, three tennis courts, a pool and pool house, a manicured landscape, community garden, and a natural area with a closed canopy in the northeast corner of the park.

Park Summary

The park's natural area is characterized by canopy primarily dominated by mature walnut, hackberry, and elm species. Post Farm Park is one of two Village parks where naturally occurring red cedar is found, indicative of a past disturbance event.

There are several heritage bur oak trees near the pool and tennis courts. Significant spongy moth egg masses were identified on several of the heritage oaks. Given the significance of these trees and their importance and visibility to the community, it is recommended that all potential treatment efforts be explored. There is one large American elm in poor condition along the bike path that should be monitored for Dutch elm disease.

A large Madison Metropolitan Sewerage District project to install an additional West Interceptor Relief Line is scheduled for completion in the spring of 2025. This project will result in the replacement of nearly all trees along the bike trail in between the pool and the railroad tracks. Of note is one heritage swamp white oak along the path that the Village has been actively advocating for MMSD to preserve by altering its boring path.

Management Recommendations

- Monitor for spongy moth.
- Monitor/diagnose the large American elm for Dutch elm disease.
- Preserve and protect heritage oaks.

Tree Conditions/Composition

- In total there were 663 trees and 23 shrubs inventoried.
- The most common trees in the park were northern white cedar (195), hackberry (86), and elm (72).
- The canopy dominant species by percent leaf area were hackberry (19%) and black walnut (14.2%).

- Post Farm Park has by far the most diversity of the Village parks, with 67 unique tree species from 42 genera. The abundance of diversity stems from the fact that most of the park is manicured and has a long history of tree plantings. The abundance of species is particularly observable along the bike trail.
- 91.8 % of the trees inventoried were found to be in good condition, 6.7% in fair condition, 1.2% in poor condition, and 0.3% were dead. Notable trees in fair condition include 5 northern pin oaks, 1 swamp white oak and 1 bur oak. In total there were 8 trees in poor condition including a 17.5” cottonwood, a <5” DBH swamp white oak, and a large American elm.
- In eastern portion of the park’s natural area, the dominant vegetation is characterized by large black walnuts and co-dominant hackberry and elm species.
- There are only 7 bur oaks, representing just 1% of the tree population in the park. However, several of these bur oaks are heritage trees and in total represent a disproportional 7.1% of the total park leaf area.
- Existing canopy cover of 45% represents an increase of 4% since 2010.

Table 10. Name, percent population, percent leaf area, and importance value for 10 most common species in Post Farm Park.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Northern white cedar	28.4	4.3	32.7
Hackberry	12.5	19.0	31.5
Elm species	10.5	8.6	19.1
Black walnut	3.9	14.2	18.1
Bur oak	1.0	7.1	8.1
White spruce	3.4	3.5	6.8
Eastern red cedar	4.8	1.5	6.3
Eastern cottonwood	1.0	5.1	6.1
Silver maple	0.7	4.2	5.0
Northern pin oak	1.2	2.4	3.5

2012-2023 Inventory Change Highlights

- Loss of 34 mulberry trees resulting from Village management activities.
- In the natural area of the park, there were large increases of regenerating elm, hackberry, and red cedar.
- Overall, the natural area composition remained relatively stable over the 10-year period.

- In the manicured portion of the park, there was an increase of over 140 northern white cedars, planted as hedges primarily along the bike path and pool.
- Loss of 8 Norway maples.

Shorewood Hills Marina and Shoreline

The Shorewood Hills Marina is a natural shoreline area with a closed canopy except over the access road and temporary parking areas. The Marina is accessed from Lake Mendota Drive, adjacent to the Blackhawk Country Club.

The Marina is one of only two public access points to Lake Mendota in the Village and the only public dock for motorized boat craft. Besides dock access for boaters, the Marina is not utilized as a recreational area as there are no picnic tables or trails and limited public access. The Marina receives very little active forest management.

Park Summary

Similar to other Village parks adjacent to Lake Mendota, the Marina's trees are characterized by more mesic composition, heavily dominated by basswood. There is also a significant component of silver maple and walnut in the canopy. Six red oaks were inventoried, all of which were > 14" DBH, along with one heritage red oak with a DBH of 40.3" DBH. Because this park has been a lower priority for active forest management, it is not surprising to see a relatively high abundance of European buckthorn.

Management Recommendations

- Implement erosion control on steep north-facing slopes leading down to the Lake, eliminate buckthorn.
- Implement protection measures to preserve the heritage red oak.

Tree Conditions/Composition

- A total of 400 trees and 125 shrubs were inventoried.
- The most common trees were basswood (125) and box elder (65). Basswood was found in all diameter classes.
- The most common shrub was buckthorn (62).
- The canopy dominant species by percent leaf area were American basswood (47.6%) and black walnut (10.3%).
- There were 23 unique tree species representing 16 different genera.
- 95.6% of the inventoried trees were classified as in good condition, 1.7% in fair condition, 2.3% in poor condition, and 0.4% were dead. Observed large, dead trees included a 35.7" white oak and a 22.5" shagbark hickory.
- Existing canopy cover of 60% represents a 1% decrease since 2010.

Table 11. Name, percent population, percent leaf area, and importance value for 10 most common species in the Marina.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
American basswood	23.8	47.6	71.4
Box elder	12.4	2.3	14.7
Black walnut	3.0	10.3	13.3
European buckthorn	11.8	0.6	12.4
Common chokecherry	11.0	0.3	11.3
Silver maple	1.1	9.8	10.9
Black cherry	7.6	1.0	8.7
White oak	1.0	5.5	6.4
Elm species	4.4	2.0	6.4
Northern red oak	1.1	4.3	5.5

2012-2023 Inventory Change Highlights

- Loss of 12 box elders in the 10-20" DBH range.
- Loss of 13 basswoods > 30" DBH. The decrease of large basswoods is likely due to the large trees reaching the end of their natural life span.
- Large regeneration increases were observed for ash, basswood, elm, hackberry, black cherry, Norway maple, and box elder.
- Loss of 7 red/bur oaks at various diameter ranges.
- Addition of 12 white cedar as part of a hedge row planting.

William Kaeser Woods (1 acre)

William Kaeser Woods is a natural area with a canopy cover of 96%, the highest of all Village parks. This lesser-known park is accessed from Oak Way. Although there is signage and several unmarked foot trails, there are no parking areas or established recreation facilities. The park is characterized by a rocky ridge following the road with a steep drop off. Similar to other parks in the Village, the park acts as an extension to several residential backyards.

Park Summary

Kaeser Woods is a classic oak woodland, the only Village park or natural area that is dominated by white oak. Notably, there were dominant 39 white oaks and 8 bur oaks, almost all of which were between 10-20" DBH. More than half of the black locust population is either in fair or poor condition; it is likely the black locust trees are reaching the end of their life span or being shaded out by competing vegetation.

Management Recommendations

- If the Village desires to preserve the oak component of this park, it is recommended to remove naturally occurring regeneration underneath and adjacent to specific high-value oaks. The more shade tolerant species such as hackberry, elm, locust, cherry and Norway maple will eventually out compete the shade-intolerant oaks.
- Monitor and protect shagbark hickory regeneration from deer and smaller mammals who will girdle the stem of the smaller trees, though caging and staking of the trees.

Tree Conditions/Composition

- There were totals of 357 trees and 61 shrubs in the inventory.
- The most common tree species were hackberry (117) and black locust (41).
- The canopy dominant species by percent leaf area were white oak (35%), black locust (18.8%) and hackberry (17.2%).
- Kaeser Woods contains 18 unique tree species representing 15 genera.
- 88.3% of trees inventoried were identified as in good condition, 5.5% fair, 5.5% poor, and 0.7% were dead. There was a high number (46) of trees in either fair or poor condition, 25 of which were either black locust or Norway maple and 6 that were either white or bur oak. The one dead white oak observed had a DBH of 14.1".
- Existing canopy cover of 96% represents a decrease of 2% since 2010.

Table 12. Name, percent population, percent leaf area, and importance value for 10 most common species in Kaeser Woods.

Species Name	Percent Population	Percent Leaf Area	Importance Value (IV) (Percent Population + Percent Leaf Area)
Hackberry	28.0	17.2	45.2
White oak	9.3	35.0	44.3
Black locust	9.8	18.8	28.6
Common chokecherry	14.1	0.3	14.4
Norway maple	7.7	5.8	13.4
Black cherry	8.1	3.3	11.4
Elm species	5.7	3.9	9.7
Bur oak	1.9	6.9	8.8
Alternate leaf dogwood	4.8	0.1	4.9
Eastern cottonwood	0.7	3.3	4.1

2012-2023 Inventory Change Highlights

- The most significant changes in canopy since the 2012 inventory occurred within the white oak population, which saw a decrease of 15 trees spread among all diameter classes.
- Loss of 12 boxelders of all diameter classes. In 2022, there were no boxelders observed.
- Additional decreases in black locust and Norway maples can be seen since the last inventory, due to intentional Village management activity and natural decline.
- A large increase in the younger cohort of the hackberry, black cherry, and elm populations. This shift is partially the result of gaps created in the canopy by past management activity to remove boxelders, Norway maples, and black locusts.

Viburnum Triangle

Located at the intersection of Viburnum Drive and Sunset Drive, and adjacent to the back entrance to the Four Corners Park, this parkway intersection presents a compelling restoration opportunity. The triangular roadway configuration was originally established in 1922 to preserve the native oak savanna at the site. Over the years, the native trees were lost and replaced by non-native species as reflected in the tree inventory.

Tree Conditions/Composition

- A total of 30 trees were inventoried.
- Most common species include Norway maple (22) followed by catalpa (6). Norway maples were distributed evenly among all diameter classes.
- The canopy dominant species is Norway maple.
- Viburnum Triangle includes 4 species representing 4 genera.
- 2 Norway maples were in poor condition, 2 Norway maples were in fair condition, and 1 catalpa was in fair condition. All other trees were identified to be in good condition.

Management Recommendation

Remove and replace the dominant exotic Norway maples with native tree species.

Bowdoin Triangle

The Bowdoin Triangle is just north of Shorewood Hills Elementary School and west of the school tennis courts between Shorewood Boulevard, Amherst Drive and Bowdin Road.

Tree Conditions/Composition

- The very small island triangle contains just 14 trees.
- The two very large green ash trees (>30" DBH) are a rare observation.
- There are also two very large honey locusts and two large tamarack all > 20" DBH.
- A large tamarack and a large white spruce were listed as fair condition.

Management Recommendation

Continue protecting the ash trees from emerald ash borer.

Management Goals and Implementation

The Village of Shorewood Hills offers an exemplary model of urban forestry, with all the attendant benefits and challenges. The community recognizes that it continues to be at a critical stage in managing and protecting its aging community forest and will strive to maintain and protect the health and vigor of its existing trees. At the same time, it will work to ensure that a diverse, resilient, and attractive urban canopy thrives into the future by planting and nurturing new trees.

The goal of the Forestry Department is to maintain a robust urban tree canopy and to preserve the beauty and ecological vitality of the Village's parks and public green spaces. The Department works to improve the safety, health, and resilience of the Village tree population; to minimize the presence of noxious weeds and woody invasives in the Village; and to promote awareness and involvement of the public in the care and maintenance of trees.

Manage Trees for Public Safety

The Village of Shorewood Hills has an active policy to maintain the safety of the public from potentially hazardous trees. The Village will strive to reduce, in a timely fashion, the potential of harm from any tree deemed high-risk. When the available fiscal and human resources limit the ability of the Village to remove high-risk trees, priority shall be placed on trees deemed to carry the highest risk. An annual survey of existing trees in high traffic areas should assess risk priorities. Based on this survey, the Village should

- Remove high risk trees
- Prune high risk trees
- Remove Stumps
- Evaluate Street Vegetation

Optimize Tree Maintenance Program

Regular maintenance of trees is a cost-effective method for mitigating risk and preserving existing trees. The Village should pursue the following strategies:

- **Maintain a 5-year pruning rotation.** Figure 9 shows the current routes for annual pruning. During the annual cycle, all trees in the rights-of-way are assessed and pruned (see appendix 4 for the Village's pruning schedule).
- **Perform training prunes on younger trees.** Training pruning is the structural pruning of all trees 10 years of age or younger. Pruning 2-3 times in the first ten years of a tree's life will reduce structural problems and increase safety.
- **Enforce tree protection standards.** Tree protection specifications should be included in Public Works contract specifications.

Figure 9. Map of Village tree pruning routes.



Optimize Tree Planting Program

- **Ensure adequate replanting of street and park trees.** Tree planting should prioritize replacement of trees lost within the past year and the tree planting locations noted in the inventory. Particular attention should be paid to recent removals associated with utility projects and along University Ave.
- **Maintain diversity of tree species to promote canopy resilience.** The Village has a remarkably diverse canopy; this should be maintained with trees that are predominately native species, but also those that show high success rates in urban area.

Tree Monitoring

- **Update GIS Inventory-** As trees are removed or planted, the inventory should be also updated with the changes recorded minimally a list or table format. Ideally the GIS database will also be updated based on the capacity of the Forester to do so.
- **Perform Yearly Tree Inspections-** It is important that all the street and park trees in the Village receive a yearly inspection. Complete this inspection once with leaf cover and once without until the hazard has been eliminated or the situation resolved. Additionally, all large-diameter trees need an extra inspection after storms. If any hazards are identified, the situations need to be corrected immediately before continuing with the list of routine maintenance.
- **Evaluate for Risk.** During annual inspections. Trees should be evaluated for risk, using [ISA-Tree Risk Assessment Qualification standards](#). The map below shows trees that were rated with poor health and should be prioritized in subsequent assessments.

Staff Development

- **Training-** Continue Village employee training in proper tree care and management such as Wisconsin Community Tree Management Institute (WCTMI), Extension Landscape short course and urban forestry workshops as well as WAA workshops and conferences.
- **Professional Membership-** Hold at least one membership in International Society of Arboriculture (ISA) and Wisconsin Arborist Association (WAA) and have multiple employees attend WAA meetings
- **ISA Certification-** Encourage and support staff to obtain and maintain ISA Certified Arborist status.

Park Management

- Consider multiple ecological objectives: preserve the historic native ecosystem; support pollinators, birds, and wildlife; reduce erosion and water runoff; etc.
- There have been numerous heritage oak trees lost across nearly all the Village parks over the last 10 years. To preserve the old-growth oaks it is recommended to:
 - Release oak trees from competing against more shade-tolerant trees that are encroaching and growing in the understory.
 - Monitor for spongy moth egg masses. [DNR spongy moth informational page](#).
 - Monitor for oak wilt disease. [DNR oak wilt informational page](#).
- Currently healthy oaks in open areas can be maintained with mulching that extends to the drip line where possible and annual monitoring
- Air spading for open-grown trees with buried root collars and trees that experience significant compaction can enhance growing conditions,
- Continue and expand oak plantings in the Parks. Natural oak regeneration is not occurring in any of the parks. Newly planted trees should be protected from deer browse through staking and the installation of caging.
- Significant invasive tree species removals have occurred over the last decade, however as long as seed trees remain, invasive tree species continue to establish. Continue invasive tree species removals, including seed trees.
- Shagbark hickory regeneration is rare throughout the Village parks. Where it occurs, protect regenerating stands.
- Continue removal efforts of undesirable non-native tree species such as Norway maple, black locust and mulberry.
- Continue removal efforts of undesirable non-native shrub species such as European buckthorn and honeysuckle.

Operational/Capital Expenses & Funding

Table 13 shows current and projected Village budget expenses related to Village trees.

Table 13. Forestry and Parks expenses, 2024-2030.

	2024	2025	2026	2027	2028	2029	2030
Parks:Stormwater charge	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
Parks: Insurance-Liability	x	\$ 1,434	\$ 1,434	\$ 1,434	\$ 1,434	\$ 1,434	\$ 1,434
Parks: Insurance- Property	x	\$ 325	\$ 325	\$ 325	\$ 325	\$ 325	\$ 325
Parks:Salaries and Wages	\$ 30,261	\$ 29,920	\$ 29,920	\$ 29,920	\$ 29,920	\$ 29,920	\$ 29,920
Parks:Benefits	\$ 9,416	\$ 10,960	\$ 10,960	\$ 10,960	\$ 10,960	\$ 10,960	\$ 10,960
Parks:Contracted Services	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
Parks: Information Technol	\$ 2,200	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Parks: Telephones	\$ 2,000	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Parks:Training	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Parks:Community Gardens	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900
Parks:Operating Expenses	\$ 4,700	\$ 4,700	\$ 4,700	\$ 4,700	\$ 4,700	\$ 4,700	\$ 4,700
Parks: Projects	x	x	x	x	x	x	x
Parks: Fuel	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Forestry: Salaries and Wages	\$ 67,123	\$ 64,979	\$ 64,979	\$ 64,979	\$ 64,979	\$ 64,979	\$ 64,979
Forestry: Benefits	\$ 26,224	\$ 28,800	\$ 28,800	\$ 28,800	\$ 28,800	\$ 28,800	\$ 28,800
Parks: Reforestation	\$ 5,500	\$ 5,500	\$ 5,500	\$ 5,500	\$ 5,500	\$ 5,500	\$ 5,500
Parks: Plantings	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Parks: Tree Maintenance an	\$ 140,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000

Cost Projections

Tree Removals- Fifty-three trees in poor health are recommended for removal (Table 14). Over the next 5 years, the estimated cost of removals based on tree size is \$37,950. It is recommended that these removals be undertaken from 2025 to 2026.

Table 14. Cost of tree removal by tree size.

DBH Range	Cost per Tree	# of Trees	Totals
1-6"	75	6	450
7-12"	300	12	3600
13-24"	750	18	13,500
25+"	1200	17	20,400
			\$37,95

Tree Planting. Tree planting needs are relatively low given the Village's active planting program over the last 10 to 15 years and the high existing canopy coverage. However, tree planting should be sustained on annual basis. Table 15 shows costs of planting 15 trees per year.

Table 15. *Planting costs.*

Tree Size	Tree Cost	Labor & Equipment	# of Trees	Total
1.5"-2"	200	275	15	\$7,125

Routine Pruning. Regular street tree pruning currently follows a 5-year cycle, where all trees are visited every five years. It is recommended that this practice and frequency continue. A review of existing and recent invoices and contracted service payments will yield the most precise estimate of future costs. The estimates in Table 16 are based on tree size and assume that staff will complete pruning for trees that are less the 7 inches in diameter at breast height (DBH). The total cost should be divided over 5 years; resulting in a projected cost of \$62,460/year.

Table 16. *Pruning costs.*

DBH Range	Cost per Tree	# of Trees	Totals
7-12"	125	432	54,000
13-24"	225	458	103,050
25+"	450	345	155,250
			\$312,300

Additional Resources

Staffing-The Forestry Department is staffed by the Village Forester, a full-time forestry assistant, and two seasonal laborers.

Program Administration-The forestry program is administered by the Village Forester. This position is 40 hours/week year-round. Please review the Forester/Horticulturist position description for more detail.

Equipment-The forestry department has access to the following equipment for forestry activities: pickup truck, chipper and chipper truck, 1-ton pickup with dump/box, bobcat, toolcat, front end loader tractor, small UTV, 4 chainsaws, power pole saw, and water tank trailer, manual pole saw/pruner, handsaws, loppers, and pruners.

Public Awareness-The Forester administers public awareness through monthly public Forestry Reports to the Village Parks committee, public education workshops, and Arbor Day events. An active Garden Club and Parks Committee also make significant public awareness efforts.

Grants- As needed, The Forester applies for urban forestry grants through the Wisconsin DNR to help fund projects like conducting tree inventories, creating management plans, tree maintenance, and public and staff education.

Utility Lines- The majority of public trees are found along the following streets: Lake Mendota Drive, Edgehill Parkway, Oxford Road, Columbia Road, Amherst Drive, Dartmouth Road, Sweetbriar Road, Wellesley Road, Colgate Road, Harvard Drive, Cornell Court, and University Bay Drive.

Partnering/communication with MGE is essential for tree maintenance/work near energized lines. For Tree Maintenance Services/questions call MGE customer service line - 608-252-7000. Partnering with MGE on removals near lines is also a potential way to reduce costs.

Street Construction-The Village is currently undertaking a major street reconstruction program. Street trees are being evaluated thoroughly during these street reconstruction projects to determine whether removal is warranted. Extreme care is being taken to protect and preserve existing trees. However, if damage cannot be avoided and the damage could cause a tree to become unsafe, then the tree will be removed as part of the street project.

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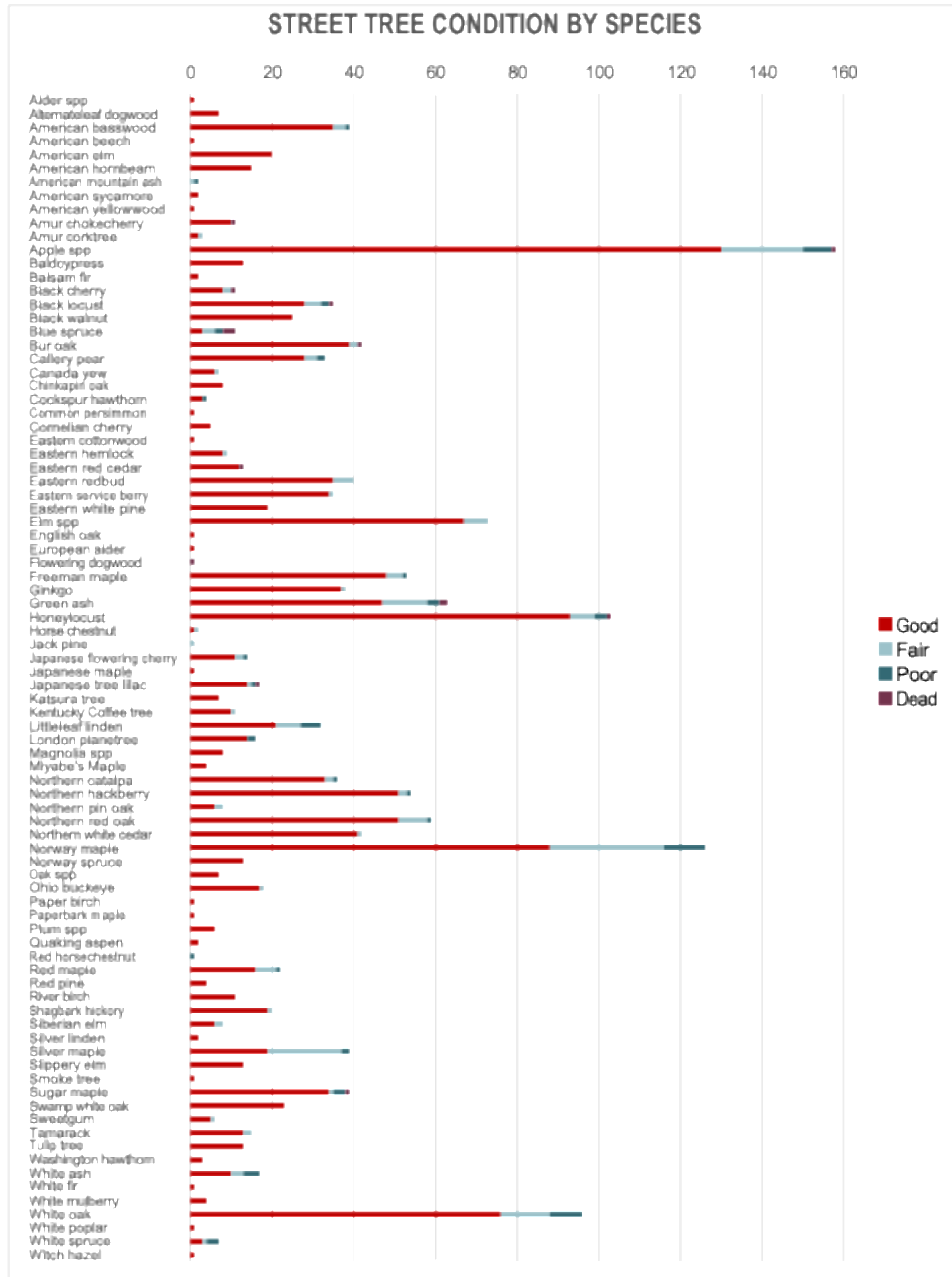
Appendix A. Complete tree inventory.

Species	Count	Percent	Species	Count	Percent
Hackberry	760	11.5 %	Tulip tree	15	0.2%
Northern white cedar	472	7.1%	River birch	14	0.2%
Norway maple	401	6.0%	Slippery elm	13	0.2%
American basswood	317	4.8%	Amur chokecherry	12	0.2%
Elm spp	317	4.8%	Chinkapin oak	12	0.2%
Alternate leaf dogwood	305	4.6%	Eastern hophornbeam	12	0.2%
Common chokecherry	269	4.1%	Plum spp	11	0.2%
Staghorn sumac	242	3.7%	Quaking aspen	11	0.2%
European buckthorn	230	3.5%	White mulberry	10	0.2%
Black cherry	222	3.4%	Magnolia spp	9	0.1%
White oak	190	2.9%	White fir	9	0.1%
Apple spp	176	2.7%	Bigtooth aspen	8	0.1%
Black locust	173	2.6%	Katsura tree	8	0.1%
Bur oak	150	2.3%	Cornelian cherry	7	0.1%
Black walnut	143	2.2%	Horse chestnut	7	0.1%
Northern red oak	141	2.1%	Oak spp	7	0.1%
Green ash	133	2.0%	Amur corktree	6	0.09%
Honeylocust	125	1.9%	Sweetgum	6	0.09%
Boxelder	108	1.6%	Cockspur hawthorn	5	0.08%
Eastern red cedar	106	1.6%	American sycamore	4	0.06%

Eastern redbud	103	1.6%
Shagbark hickory	87	1.3%
Northern catalpa	84	1.3%
Eastern hemlock	80	1.2%
Eastern service berry	73	1.1%
Freeman maple	59	0.9%
Sugar maple	58	0.9%
Silver maple	55	0.8%
Bell's honeysuckle	50	0.8%
Swamp white oak	49	0.7%
Japanese tree lilac	41	0.6%
Common elderberry	39	0.6%
Ginkgo	38	0.6%
Callery pear	37	0.6%
Canada yew	37	0.6%
Eastern white pine	37	0.6%
White spruce	37	0.6%
Littleleaf linden	36	0.5%
Norway spruce	35	0.5%
Ohio buckeye	35	0.5%
Northern pin oak	32	0.5%
Red pine	25	0.4%
Red maple	24	0.4%
American elm	23	0.4%
American hornbeam	23	0.4%
Eastern cottonwood	23	0.4%
Blue spruce	20	0.3%
Tamarack	20	0.3%
Red mulberry	19	0.3%
Witch hazel	19	0.3%
Baldcypress	17	0.3%
White ash	17	0.3%
Japanese flowering cherry	16	0.2%
Kentucky Coffee tree	16	0.2%
London planetree	16	0.2%
Siberian elm	15	0.2%

Balsam fir	4	0.06%
European white birch	4	0.06%
Miyabe's Maple	4	0.06%
Yellow birch	4	0.06%
American beech	3	0.05%
American hazelnut	3	0.05%
American yellowwood	3	0.05%
Austrian pine	3	0.05%
Japanese maple	3	0.05%
Spruce spp	3	0.05%
Washington hawthorn	3	0.05%
White willow	3	0.05%
American chestnut	2	0.03%
American mountain ash	2	0.03%
Bitternut hickory	2	0.03%
Brewer's Weeping Spruce	2	0.03%
Dawn redwood	2	0.03%
Flowering dogwood	2	0.03%
Paper birch	2	0.03%
Peach	2	0.03%
Silver linden	2	0.03%
Smoke tree	2	0.03%
Yellow buckeye	2	0.03%
Alder spp	1	0.02%
American bladdernut	1	0.02%
Common ninebark	1	0.02%
Common persimmon	1	0.02%
Common plum	1	0.02%
Douglas fir	1	0.02%
English oak	1	0.02%
European alder	1	0.02%
Jack pine	1	0.02%
Paperbark maple	1	0.02%
Red horse chestnut	1	0.02%
White poplar	1	0.02%

Appendix B. Street tree condition by species.



Appendix C. Tree pruning schedule.

SHOREWOOD PRUNING SCHEDULE															
	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Link to Streets Map															
Amherst Drive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amherst Street	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beloit Court	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blackhawk Drive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bowdoin Road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bruce Court	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Burbank Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Circle Close	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colgate Road	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Cornell Court	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crestwood Drive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dartmouth Road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Edgehill Parkway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Harvard Drive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Locust Drive	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maple Terrace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oak Way	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Purdue Street	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shorewood Boulevard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sumac Drive	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Swarthmore Court	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sweetbriar Road	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Topping Road	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
University Avenue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Viburnum Drive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wellesley Road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood Lane	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Yale Road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2025 System-wide Trail Mapping Project*

Parks Committee Sub-group

Sub-group Project Scope: Create current state trail maps of **Village Park Natural Areas**.

Action steps:

1. Create aerial image park maps
2. Define the natural area boundaries
3. Conduct field visits to measure and assess currently existing trail segments
4. Map the trail segments, assign attributes and trail definitions
5. Report back to Committee Chair

Trail Definition List:

Unofficial Trail – Seldom used short-cut or “cow path”

Foot Path (unimproved) – Well defined narrow dirt or grass walking path.

Foot Path (improved) - Well defined and maintained walking path, often wood chipped.

Trail – Well established, somewhat wider than a foot path and longer in length used for hiking.

Paved Path or Trail – Solid surface of gravel, asphalt or stone.

Cement Sidewalk

Access Road – Restricted access road capable of supporting large vehicles

Steps – Made from cut stone, wood plank, or natural rock

Trail Segment Attributes:

Surface Material

Trail Width

Slope / Grade

Location of Egress / Ingress (access points)

Distance to nearest “Next Park” Trail

*** Village Comprehensive Plan Update** (Board Adopted 2021, see Natural Resources, pg. 13, and actions pg.16)

Goal 2: Balance conservation with increased access to natural resource amenities.

Policy 5: Preserve and protect key environmental corridors, native vegetation, tree canopy, and wildlife species consistent with the Sustainability Plan.

Action 5: Annually inspect access points to natural areas, and prioritize maintenance to ensure all areas receive adequate levels of care, to encourage continued use in balance with maintaining the natural environment.

***Comprehensive Outdoor Recreation Plan** (2023 CORP Document, Park/Facility Improvement, page 100)

“Identify trails within natural areas that may be suitable for paving with pervious materials (e.g. crushed rock, porous asphalt, etc.)”

The Parks Committee at their June 24, 2025, monthly committee meeting recommended the sub- group document the **current trail network in the following five natural areas.**

1.) McKenna Park

Trail segment 1 – Access Road (Edgehill Pkwy to Boathouse)

Trail segment 2 – Pedestrian Sidewalk (Lake Mendota Drive to Terraced Overlook)

Trail segment 3 – Cliffside Trail

Trail segment 4 – Wooden Stairway (Boathouse to Terraced Overlook)

2.) Koval Woods

Trail segment 1 – Access Path (Edgehill Drive to Wood Lane)

3.) Four Corners Park

Trail segment 1 – Main Trail from Pavillion to Sunset Drive Entrance & Viburnum Triangle

Trail segment 2 – Edgehill Entrance (lawn from sidewalk to playground)

4.) Quarry Park / Reese Woods

Segment 1 – Highbury entrance and across Public Works

Segment 2 – Quarry Ramp to Picnic Table & Trash Receptacle

Segment 3 – Quarry Wall Loop

Segment 4 – Quarry Loop East Extension (Leopold Bench)

Segment 5 – Reese Woods Loop Topping Rd (park sign) to Highbury Rd

5.) Post Farm Park

Segment 1 – Harvard Drive Entrance Path, Harvard Drive to Utility Road (authorized vehicles only)

Segment 2 – Utility Road from Marshall Court to Parking Lot

Segment 3 – Marshall Court Sidewalk

Segment 4 – Grass Lawn (from Harvard Path past Old Scout Shack to top of hill)

Segment 5 – Grass Lawn to Utility Road

Segment 6 – Grass Lawn “through natural area” to Harvard Entrance Path

Post Farm Park - Natural Area Path Network and Pedestrian Access

July 16, 2025

NOTE: Segments 1 - 4 run adjacent to natural areas

NOTE: Segments 5 & 6 run through natural areas, once known as Brickyard Hill

Segment	Trail Type	Surface	Length	Width	Slope	Comments
1 Harvard Drive to Utility Road	Paved	Asphalt	400'	4' -5'	Variable	46' steep slope at Harvard Dr. Runs adjacent to natural area
2 Utility Road to Parking Lot	Paved	Asphalt	570'	8'-10'	Slight Slope	Access to park entrances 385' adjacent to natural area
3 Marshall Court Sidewalk	Paved	Cement	145'	5'	Flat	ADA accessible to crosswalk
4 Scout Shack Lawn	Lawn	Grass	156'		Steep	Large adjacent lawn area
5 North Hillside Natural Area	Unimproved	Soil	260'	2-3'	Steep	Seasonally mowed
6 South Hillside Natural Area	Unimproved	Soil	110'	2'	Variable	Seasonally string trimmed

Four Corners Park - Natural Area Path and Pedestrian Access

July 16, 2025

NOTE: Entire length from Edgehill Drive to Sunset Drive is ~800'

Segment	Trail Type	Surface	Length	Width	Slope	Comments
1 Edgehill Dr. entrance to Playground	Mowed Lawn	Grass & Gravel	180'	Expansive	Flat	Lawn = 120' Gravel = 60'
2 Playground (middle) Segment	Central Trail	Wood Chipped	155'	Expansive	Flat	Playground
3 Natural Area Pavillion to Sunset Dr.	Trail	Gravel, Mowed	465'	6-8'	Moderate	Utility Line shared access

