City of Minnetonka Tree Inventory

Parcel ID Nos. 3411722110022 and 3411722110017

July, 2022

Submitted by:
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I. EXECUTIVE SUMMARY

The City of Minnetonka has requested an inventory and assessment of trees located within two City properties – PID Nos. 3411722110022 and 3411722110017 (Exhibit 1). The tree survey was conducted in July of 2022. Understanding an urban forest's structure, function, and value can help determine management decisions that will provide public health and environmental quality. Bolton and Menk collected and analyzed the inventory data to understand species composition and tree condition. This report will discuss the health and benefits of inventoried trees within the two subject parcels.

II. TREES SURVEY METHODOLOGY

The tree survey was conducted in accordance with section 314.01 – Tree Protection of the Minnetonka City Code. A Geode sub foot GPS System was used to collect data. The parcels encompass greater than two acres (2.24-acres), therefore the tree inventory focused on the following:

- Deciduous trees above a DSH of 4-inches.
- Coniferous trees at least 10-feet high.
- Understory trees, shrubs, and herbaceous plants were identified and quantified using a plot survey. Twelve random plots were identified prior to the survey. These plots were used to determine the general species density of the understory within parcels.
- General heath of the trees was inspected for trunk damage, root damage, branch damage and crown damage.
- Extent on emerald ash bore was determined for all ash species.
- Invasive species such as buckthorn or honeysuckle were not inventoried. Invasive species were noted and density determined estimated through the plot surveys.

III. KEY FINDINGS

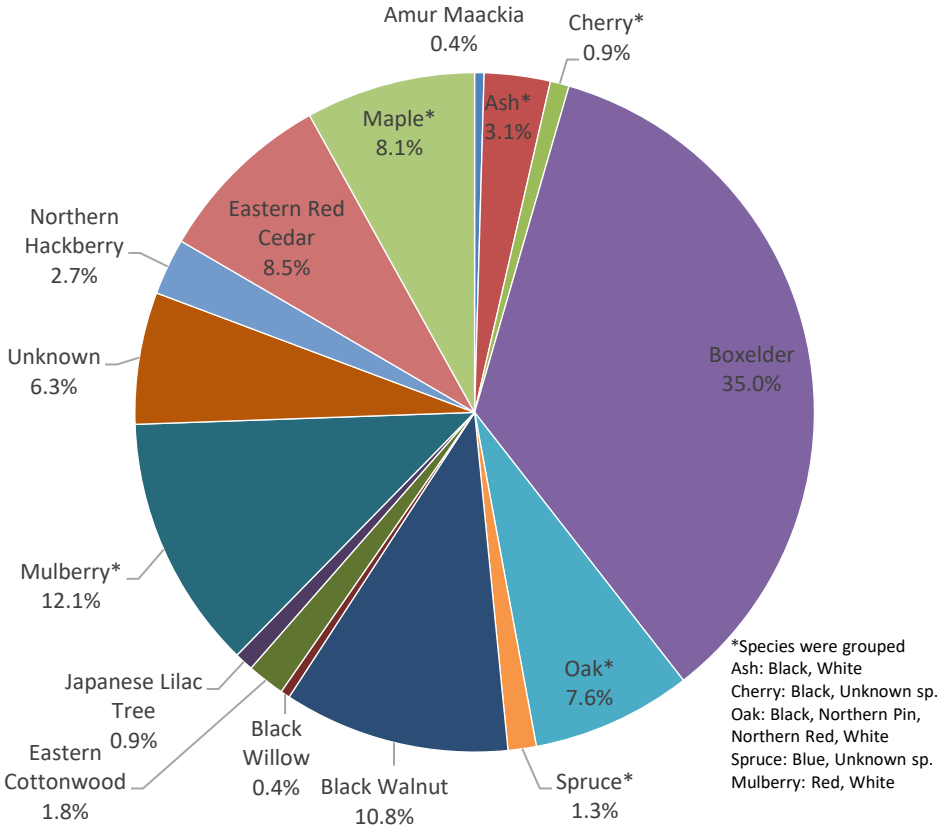
- A total of 220 trees were inventories.
- The most common species are box elder, mulberry and black walnut.
- The overall condition of the trees is very good.
- No emerald ash bore is present.
- The inventoried woodland is not considered a Woodland Preserve Area.

IV. TREE INVENTORY ASSESSMENT

Species Diversity

Within the two City properties 220 trees meeting the above-mentioned criteria were inventoried. Figure 1 shows the composition of the most populous tree species in comparison to all inventoried trees. Of all the trees inventoried box elder, mulberry, and black walnut are dominant.

Figure 1: Tree Species Composition



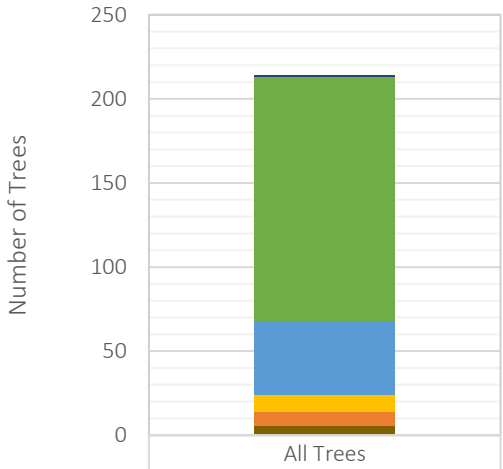
Tree Condition

The condition of each tree was assessed based on several factors, including root characteristics, branch structure, trunk, canopy and presence of pests. The condition of each inventoried tree was rated on a scale of 0 – 5 based on condition, with 5 being excellent and 0 being dead. The inventory found that the trees within the woodland receive a rating of 4 or very good. There are no species of note with problematic health issues. Seven of the 220 trees showed visible damage common in woodland areas such as these to trunks and branches.

Understory

Using a vegetative plot system to understand the condition of the understory, Bolton & Menk found it to be dominated by European buckthorn (43%) and garlic mustard (11%). The understory also included dumping areas with appliances, metal, glass and general debris.

Figure 2: Overall Tree Condition



Excellent	1
Very Good	145
Good	44
Fair	10
Poor	0
Critical	8
Dead	6

Ecosystem Determination

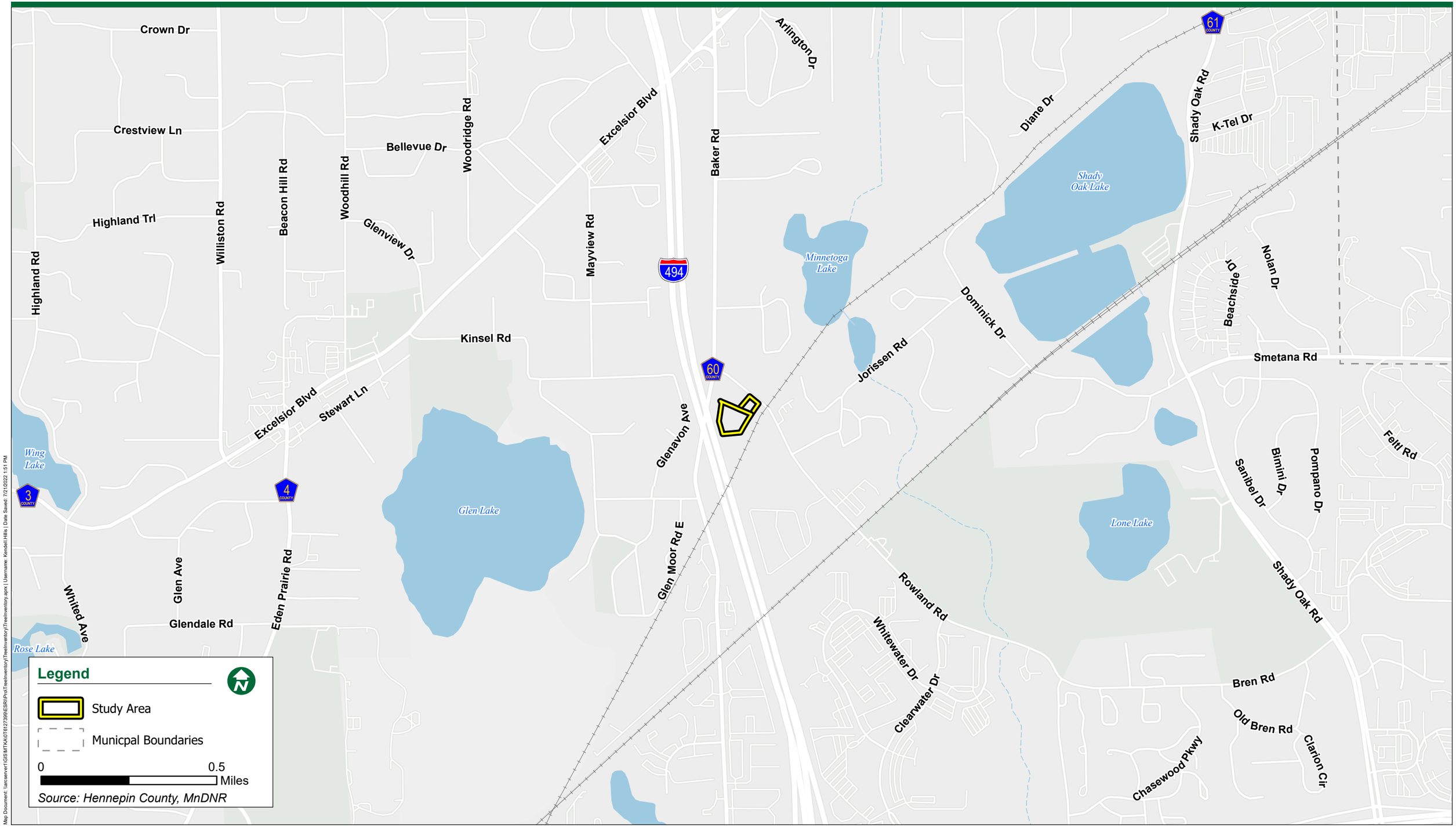
Using the MN Land Cover Classification System (Exhibit 2) database, the two properties are listed as Oak (forest or woodland). The MN Land Cover Classification System describes an Oak Forest as a woodland with greater than 30% oak species within the tree stratum. Companion species include aspen, paper birch, or black cherry.

The tree inventory verified the dominant tree species is box elder with only 8% of the inventoried trees being oak species. Further, the companion trees outlined by the MN Land Cover Classification System made up less than 1% of the species present. The tree community existing on these parcels does not meet any of the MN Land Cover Classification System descriptions noted as part of section 314.01 – Tree Protection of the Minnetonka City Code. Therefore, this woodland would not be considered a Woodland Preservation Area as outlined within section 314.01 of the Minnetonka City Code.

V. CONCLUSION

The survey did not identify any threatened and endangered species. Although the general health of woody species is very good, there are only limited species of marketable value. The study area is dominated by European buckthorn, considered an invasive species that dominates urban and disturbed wooded areas such as this. Further, the herbaceous layer is dominated by garlic mustard also an invasive species. As a whole, considering all stratum present on the site (tree, shrub and herbaceous), the woodland inventoried is considered to be of poor quality because of the abundance of invasive species in the understory.

EXHIBITS



CITY OF MINNETONKA

2022 Tree Survey

City of Minnetonka

Exhibit 2: Minnesota Land Cover Classification System

July 2022

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