

2014 McGhie and Betts Valhalla Park Design:

Valhalla Park Restoration and Management Guidelines Village of Frontenac/Florence Township

Valhalla Park is located on the terrace of Lake Pepin and provides a critical recreational and scenic space between the historic village of Frontenac, Minnesota and Lake Pepin. It is the front door of the community, and functioned even more so in the days of steamboat travel, when steamboats were the primary means of arriving at Frontenac. Currently, the majority of the park is wooded and is mostly situated on a steep slope above the lowlands along the shoreline.

Historical context and current trends:

The woods historically appear to have been bur oak, white oak, pin oak and red oak, with some sugar maple and basswood. It should be noted that some of these species are indicative of a savanna community of open-grown oaks with grassy openings. In areas where older maples, red oaks, and basswoods are present, these areas may have been more historically mesic hardwood forest. Oaks such as bur oak and white oak, and to some extent, pin oak, typically don't reproduce well under the shade of other forest species, and are indicative of a more open character of the woodland. However, in the absence of fire, savanna communities typically will go through a process of natural succession and will morph into a denser oak forest and ultimately a maple-basswood-red oak forest in this region of Minnesota. Sugar maple, basswood, and black walnut appear to be increasing their presence within portion of the park. Additional native species such as black walnut, hackberry, cottonwood are also present and invasive tree species such as black locust, and invasive exotic shrub species such as common buckthorn, white mulberry, tatarian honeysuckle, and others are making significant inroads into the woodland. These invasive species pose a concern as they are highly competitive and have the potential to limit the regeneration of desirable native species. These species can reproduce at a density that crowds out native species, and also are proliferative fruit-bearers, and tend to retain their foliage for longer periods than native species. Ultimately, with these advantages, the woodland will revert to a thorny thicket as the older canopy oaks and maples die, and can't reproduce under the buckthorn thickets. This is a highly undesired outcome as the exotic species will reduce habitat for native birds and mammals, increase erosion potential since native ground covers will be lost, reduce the aesthetic appeal of the forest, and reduce the recreational value of the park as much of it becomes an impenetrable thicket.

At this point, the park woodland is showing signs of ecological disturbance due to the presence of these invasive species. At the time that the site was reviewed for this project, the presence of garlic mustard could not be definitively assessed since the site was reviewed during dormant times outside of the growing season. Other portions are in better shape with few exotic species. It is an important time for the community to take action to manage the park woodland, as invasive species could quickly spread to the rest of the community woodlands that aren't already infested with buckthorn, honeysuckle and mulberry.

In addition to these management goals, there are other goals that the community has with regard to the future of Valhalla Park. These goals are listed below and their implementation will be discussed later in this report.

Primary Goals:

1. Restore the native plant community(ies) within Valhalla Park
2. Create or maintain vistas in a manner that preserves the character of the park forest.
3. Provide habitat for wildlife species, particularly bird species utilizing the Mississippi Flyway.
4. Maintain the legacy character of the park.

Primary objectives:

1. **Remove invasive species** such as common buckthorn, tatarian honeysuckle, black locust, white mulberry and implement a management plan to reduce impact of invasive species.
2. Provide **replacement planting with native, fruit-producing shrub** species such as American cranberry bush viburnum, scarlet elder, pagoda dogwood, hazelnut, to provide habitat and provide a ground cover to reduce erosional impacts that may have been impacted by invasive species, or their removal.
3. Create or maintain **view zones or vistas in areas in a limited manner**. These zones will create portals with overstory trees to remain that will provide an upper frame for the views were such trees exist. These zones were selected for having reduced impacts to desirable trees, they are aligned with existing streets, or are in areas already devoid of existing overstory trees.
4. Identify and **preserve heritage trees** (those over 24" diameter breast height).
5. **Preserve the extent of continuous canopy of native trees**. Removal of exotic canopy species such as black locust is allowed. However, where large densities of invasive species are removed, some supplemental planting of native species of overstory trees will be done to maintain the canopy cover.
6. **Create a forestry plan** for use by the community or its designated arborist for implementation.
7. **Establish guidelines for vegetation and tree removal** through the use of a community-approved arborist.
8. In addition to view sites, provide limited opportunities for passive recreation, including **limited trails** to complete the circuit from Garrard Avenue to Lake Avenue Way.

The goal of the view zones is to manage existing view corridors and to create new view corridors with a minimum of disturbance to the forest and forest canopy. Existing views in areas that have been already clear-cut shall be maintained, however invasive species shall be managed and removed and native shrubs will be planted in locations that don't impact the view, but provided some constraints for invasive shrubs to resprout.

Strategies:

- Focus on light infestation areas first, get more bang for the buck. It is much easier to remove invasive species at the seedling stage than when they are small trees. The likelihood of large fruit crops having been released in these areas is also an important consideration—seedling trees are less likely to have release berries that will continue to sprout for several years after the trees' removal. In areas of infestation with larger, fruit-producing trees, numerous berries have been deposited and will continue to germinate for years after the parent trees have been removed.
- Focus on selected areas first, and limit management actions to those. Cutting, herbicide, infill planting with native shrubs.

Invasive species shall be removed in these zones as will small saplings and young trees up to 6" dbh. However, primary forest species such as sugar maple, basswood, red oak, white oak, bur oak, and walnut will be prioritized for preservation. Some pruning of limbs may occur to improve views. However, vistas are not intended to be clear cut of all species.

Provide replacement planting with native, fruit-producing shrub species such as American cranberry bush viburnum, scarlet elder, common elderberry, downy arrow wood, nannyberry, choke cherry, pagoda dogwood, hazelnut, or, where appropriate, wild plum to provide habitat and provide a ground cover

Bill Bleckwenn
McGhie and Betts
Rochester, MN