# **Arlington Community Boathouse -- Vegetation Survey**

September 26, 2022

# Background

The vegetation of the George Washington Memorial Parkway adjacent to Arlington County includes a mix of upland, floodplain forest, and tidal marsh communities, as well as rare vegetation types found on bedrock terraces, exposed rocks, and frequently flooded river shores. Disturbed, secondary forests are common and belong to the following ecological groups (Fleming *et al.* 2004): basic mesic forest, mesic mixed hardwood forest, acidic oak-hickory forest, oak/heath forest, and Piedmont / Mountain floodplain forest.

## **Survey Findings**

Vegetation surveys conducted by volunteers (12/2021 – 9/2022) illustrate that the proposed Arlington Community Boathouse sites are in highly disturbed areas that are substantially covered by non-native, invasive plants and vines. The vegetation surveys revealed a diverse number of species on the sites, including 9 native perennials/grasses, 22 native trees/shrubs and 5 native vines. Non-native invasive species included 6 perennials/grasses, 14 trees/shrubs and 7 vines. Invasive species ground coverage was extensive (90% in areas not mowed); covering vegetation and climbing into canopy trees as illustrated below. While unfortunate, these degraded conditions do offer opportunities for improvement and restoration of the area post-construction. No rare species were noted. Note that surveys were informal, and all locations approximate. (See attached plant list and drawings.)

The vegetation surveys were consistent with recent findings of National Park Service (NPS) long-term monitoring work as described in the National Capital Region Network: Resource Brief: *What We're Learning and Why it Matters: Long Term Monitoring in the National Capital Region (*Chen HC and Others. 2022), including the following: <u>https://www.nps.gov/articles/000/ncrn\_changes.htm</u>

- Invasive plants are pervasive and spreading.
- In forests, invasive shrubs are increasing faster than invasive herbs, trees, or vines. Ticks benefit from this increasing shrub cover and given added risk to human health from tick-borne diseases, invasive shrubs are a high management priority.
- ...trees along the forest edge are vulnerable to climbing vines. Once a vine reaches the crown of a tree, the tree's growth slows. At the forest edge, trees are already vulnerable to a more stressful environment (e.g., more wind and sun). Managing vines in trees along forest edges can help reduce tree mortality.
- Non-native vines are more abundant and increasing faster. Managing invasive vines is a great way to support trees along the forest edge, and forest patches.

## **PLANT LIST**

### NATIVE PERENNIALS+GRASSES (9)

Aster Aster spp. Carolina elephant's foot Elephantopus carolinianus Carex Carex spp. Coneflower Echinacea spp. Horseweed Erigeron canadensis Goldenrod Solidago rugosa Nimblewill grass Muhlenbergia schreberi Path sedge Juncus tenuis Pokeweed Phytolacca americana

### NATIVE TREES+SHRUBS (22)

American beech Fagus grandiflora American elm Ulmus americana Black cherry Prunus serotina Black locust Robinia pseudoacacia Black oak Quercus velutina Black walnut Juglans nigra Boxelder Acer negundo Cottonwood Populus deltoides Eastern redbud Cercis canadensis Eastern red cedar Juniperus virginiana Green ash Fraxinus pennsylvanica Hickory Carya spp. Kentucky coffee-tree Gymnocladus dioicus Spicebush Lindera benzoin Pawpaw Asimina triloba Pin oak Quercus palustris Red maple Acer rubra River birch Betula nigra Silver maple Acer saccharinum Slippery elm Ulmus rubra Sycamore Platanus occidentalis White ash Fraxinus americana

### NATIVE VINES (5)

Blackberry Rubus allegheniensis Poison ivy Taxicodendron radicans Trumpet-creeper Campsis radicans Virginia creeper Parthenocissus quinquefolia Wild grape Vitus riparian

## NON-NATIVE PERENNIALS+GRASSES (6)

Broadleaf dock *Rumex obustifolius* Creeping Charlie *Glechoma hederacea* Garlic mustard *Alliaria petiolata* Japanese stiltgrass *Microstegium vimineum* Lirope *Lirope spp*. Mugwort *Artemisia vulgaris* 

## **NON-NATIVE TREES+SHRUBS** (14)

Bradford pear *Pyrus calleryana* Burning bush/Winged euonymus *Euonymus alatus* Bush honeysuckle *Lonicera tartarica* Crabapple *Malus pumila* Ginko *Ginko biloba* Golden rain tree *Koelreuteria paniculata* Japanese Zelkova *Zelkova serrata* Northern catalpa *Catalpa speciosa* Oriental bittersweet *Celastrus orbiculatus* Pagoda tree *Sephora japonica* Paulownia /Princess tree *Paulownia tomentosa* Privet *Ligustrum spp.* Tree of heaven *Ailanthus altissima* White mulberry *Morus alba* 

### **NON-NATIVE VINES** (7)

Autumn clematis *Clematis paniculata* English ivy *Hedera helix* Himalayan blackberry *Rubus armeniacus* Japanese honeysuckle *Lonicera japonica* Porcelain-berry *Ampelopsis brevipedunculata* Wineberry *Rubus phoenicolasius* Winter creeper *Euonymus fortunei* 



UPPER SITE – Invasive plants throughout areas not mowed.



Invasive vines throughout the tree canopy in places.



LOWER SITE – Invasive plants throughout 90% of the area



Invasive plants smothering native ground vegetation.



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## LOWER SITE OVERVIEW

All locations approximate.

#### INVASIVE PLANTS



PROPOSED RIGGING AREA AND BOAT STORAGE



All locations are approximate.

**Survey Methods:** The 2 project areas were mapped and divided into sections. Pairs of volunteers traversed the sections several times during the year, identifying plant species, noting abundance, percent cover and approximate locations. Efforts were made to refine information as the seasons progressed. The extent of invasive plant cover made precise identification impossible in some areas. The overview images are compilations of survey notes and maps. All locations are approximate.

**Prepared by:** This information was prepared by Jerilyn Levi with the generous assistance and botanical expertise of Jill Barker, Caroline Hayes, Joann Hutton and Glen Tobin. (December 2021 - September 2022)