

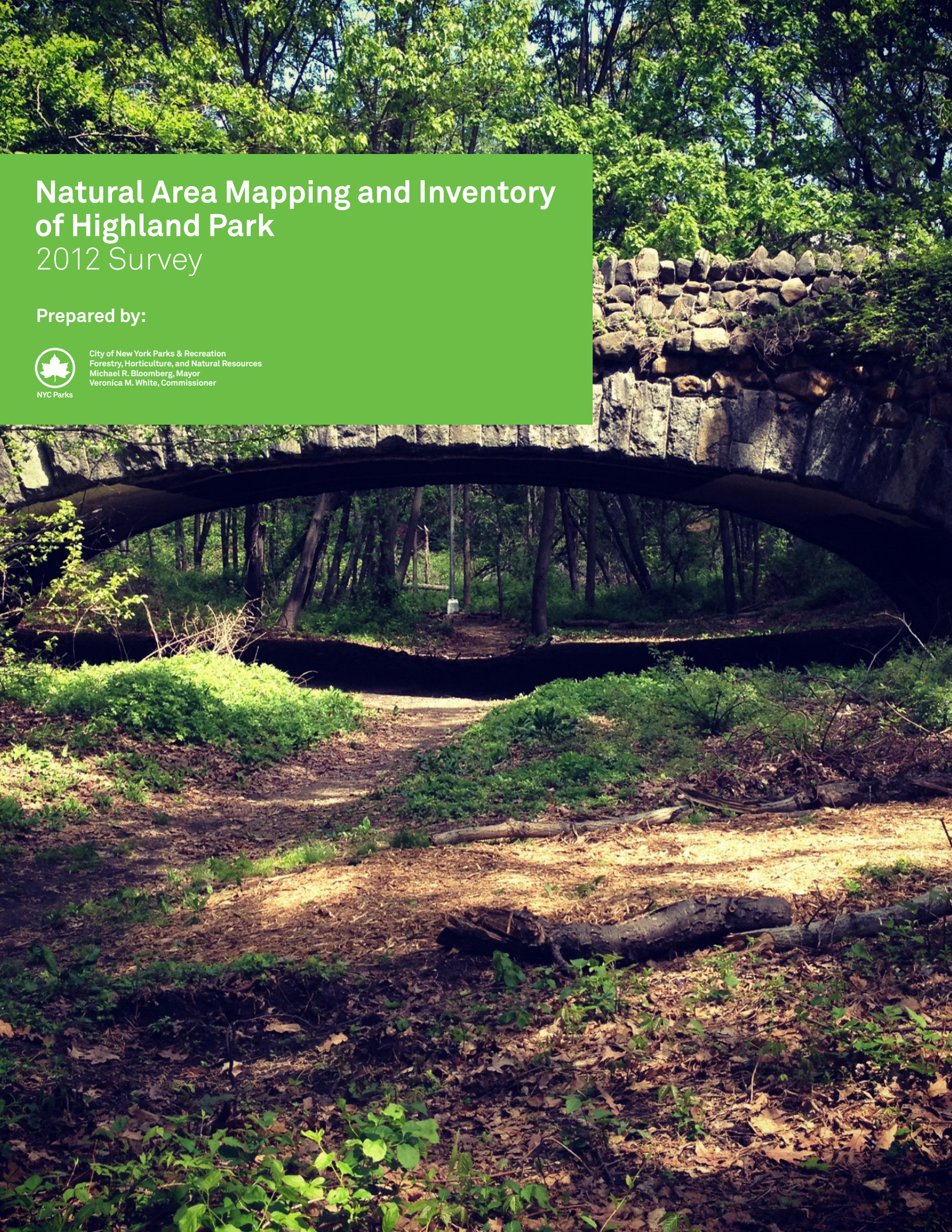
# Natural Area Mapping and Inventory of Highland Park 2012 Survey

Prepared by:



NYC Parks

City of New York Parks & Recreation  
Forestry, Horticulture, and Natural Resources  
Michael R. Bloomberg, Mayor  
Veronica M. White, Commissioner





## **Highland Park Natural Area Mapping & Inventory Surveyed 2012**

**40 acres**

### **Introduction**

The City of New York Parks & Recreation (DPR) manages one of the most extensive and varied parks systems of any city in the world. These 29,000 acres of city park property occupy about 15 percent of New York City's total area. In addition to flagship parks such as Central Park and Prospect Park, the city's parklands include over 11,000 acres of natural areas.

Until the 1980's, the DPR was primarily concerned with developed landscapes and recreation facilities rather than natural areas. In the absence of a comprehensive management policy, these areas succumbed to invasive species, pollution and erosion. In 1984, Parks established the Natural Resources Group (NRG) with a mandate to acquire, restore, and manage natural areas in New York City. The wetlands, forests, meadows, and shorelines under Parks jurisdiction provide valuable habitat for hundreds of species, from rare wildflowers to endangered birds of prey. To facilitate the protection, management and restoration of natural areas, NRG began an inventory of parkland using entitiation, a process of identifying and describing ecologically distinct plant communities.

### **Entitiation**

Originally designed for European landscapes, the system was revised by NRG in 1985 for use in urban parkland. This method of inventory was chosen because it is well suited to the patchy environments often found in urban areas. The focus of this type of survey is to break down a landscape into discrete, manageable units based primarily on dominant vegetation; each unit is described as an "entitiation unit". Entitiation units are defined using a weighted list of criteria. The following distinctions qualify entitiation units:

- Vegetation cover type (e.g. closed forest, vineland, scrub)
- Dominant canopy vegetation (e.g. Norway maple, hickory, oak)
- Understory vegetation type (e.g. herbs, vines, shrubs)

Additional factors, such as topography, current use, environmental disturbance and soil condition (e.g. wet, moist, and dry) are also taken into account. Using aerial photographs and field reconnaissance, a landscape can be delineated and mapped into distinct ecological entities. These maps and descriptions will serve as baseline ecological data to conduct natural areas management.

### **Data Collection**

To prepare for fieldwork, mapping technicians examine aerial photographs and delineate areas of similar cover and create a strategy for on the ground surveys. In the field, boundaries are identified as described based on ground cover and vegetation types. For each unit, staff records the data listed above, current uses, environmental disturbances, historical indicators, community stability, and a narrative description of the area including management concerns and notable other species present.

Once collected, all of this data is then entered into a central entitiation database. The field maps are then digitized in ArcGIS with the boundaries of each unit recreated and linked to the entitiation database. Once the digital map and database are linked maps can be created and information can be queried quickly. The final step is to convert the unit map and descriptions into a final report format.

## **Highland Park Overview**

### **Land Use History**

Straddling Brooklyn and Queens, Highland Park is situated on a high plateau that commands dramatic views of nearby cemeteries, East New York, Woodhaven, the Rockaways, and the Atlantic Ocean. In 1856 the City of Brooklyn acquired land here for the site of the Ridgewood Reservoir, which operated from the 1860s until 1985. In 1891 the City of Brooklyn purchased the land surrounding the reservoir for park purposes under the jurisdiction of the Highland Park Society.

The Brooklyn Department of Parks initiated substantial improvements to the property, then known as Ridgewood Park. Between 1901 and 1905 several new structures were built, including a combined music stand and tool house, a shelter house, a rustic bridge, and two rustic arbors. Landscaping efforts laid out roads and footpaths, created a new lake with a fountain, and reclaimed a swamp for the site of a flower garden.

Highland Park took its present shape in 1906-08, when Parks acquired a third parcel to the west from the Department of Water Supply, Gas and Electricity. The park became a favorite spot for the people of Brooklyn and Queens. Athletes could play on football fields, baseball fields, and 28 tennis courts—and skate on the frozen pond in winter. An aquatic garden with water lilies and other water plants was created in 1907, and the children's farm gardens were planted in 1915. The Dawn of Glory World War I monument by sculptor Pietro Montana was dedicated in 1925.

### **Current Use**

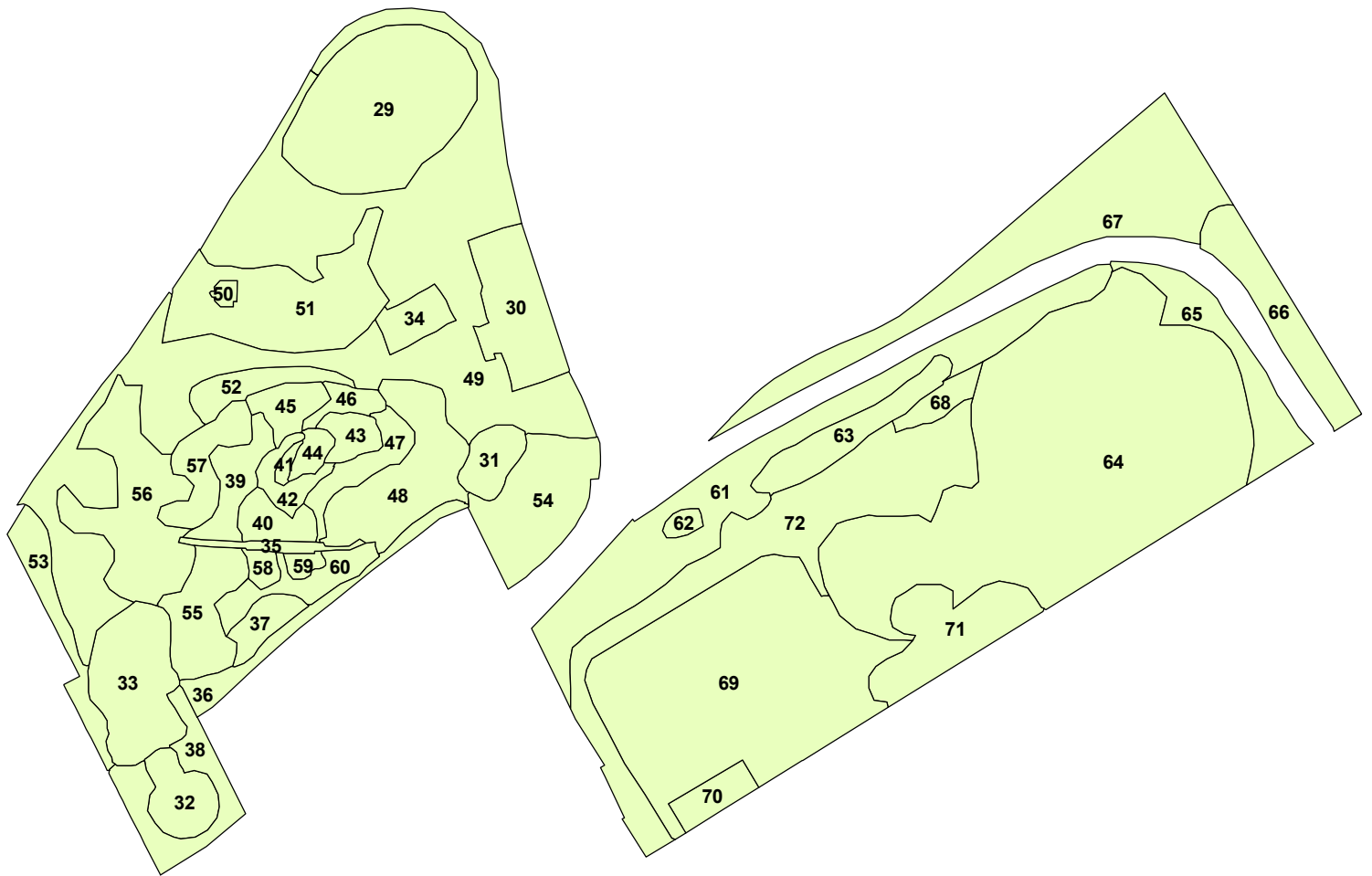
More recent projects have improved recreational and educational facilities at Highland Park. In 1998 the playground in Upper Highland Park was renovated. With farm gardens, barbecue areas, and numerous tennis courts, baseball fields, handball courts, and basketball courts this park provides an opportunity for local residents from both boroughs a safe, clean spot for athletic recreation.

As Parks employees, volunteers, and students help to maintain and improve the park, nature also lends a hand. Native tree seedlings were planted in several areas within the park as the Natural Resources Group long term commitment to native forest restoration in NYC natural areas.


While Ridgewood Reservoir was surveyed in 2005 separately this inventory of Highland Park was conducted in the winter of 2012 and then revisited in the summer of 2012 to capture vegetation during the growing season. While much of the park remains landscaped several forested patches exist and native plants and trees prevalent. One swamp area provides valuable bird habitat where herons were sighted during this survey. These surveys are conducted as part of NRG's long term commitment to inventorying and managing the natural areas of New York City parks.

**Technicians:** Clara Pregitzer, Tim Wenskus, Jeremy Lessing


# Highland Park 2012 Entitation Brooklyn, NY



## Legend

 Entitation unit selection selection

0 455 910 Feet



# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 29                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 3.49                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IVA2f

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Herbaceous Deciduous Hemicryptophytes Level Dry	Cool season grass	<5'	No		Sports	Soil compaction

## Comments:

This unit is a sports field with two baseball diamonds at the north edge of the park bordered by landscaped unit and the highway. Mowed cool season grass in the understory. On the eastern edge of the unit is a comfort station. Other species include: dandelion and plantain.

**Unit:** 30                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 1.47                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** VCD

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Scarcely Vegetated Deciduous Hemicryptophytes Level Dry			No		Vehicle access	

## Comments:

This unit is a parking lot at the eastern edge of the park and is scarcely vegetated.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 31                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.51                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, red	>30'	No		Picnic	Trash
Deciduous	Cool season grass	<5'	No		Sports	
Hemicryptophytes						
Level						
Dry/Moist						

## Comments:

This unit is an open mature oak woodland with a paved footpath and picnic area. Cool season grass dominates the understory. A large white oak has recently fallen within this unit. Other species include: common plantain, dandelion, rush.

**Unit:** 32                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.69                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** VCD

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Scarcely Vegetated	Oak, pin	>30'	No		Sports	
Deciduous	Oak, red	>30'	No			
Hemicryptophytes						
Level						
Dry						

## Comments:

This unit is a scarcely vegetated paved area including a playground and basketball court a comfort station located at the southwestern edge of the park. Vegetation includes few shade trees and weeds growing out of the pavement.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 33                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 1.69                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IVA2f

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Herbaceous	Cool season grass	<5'	No		Sports	
Deciduous	Oak, pin	>30'	No			
Hemicryptophytes						
Level						
Dry/Moist						

## Comments:

This unit is a managed sports field at the southern edge of the park. It is dominated by cool season grass and contains two baseball diamonds. There are a few pin oak shade trees, plantain, clover and dandelions.

**Unit:** 34                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.44                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** VCD

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Scarcely Vegetated	London plane	>30'	No			
Deciduous	Sweetgum	>30'	No			
Hemicryptophytes	Oak, pin	>30'	No			
Level						
Dry						

## Comments:

This unit is a paved sports area including volleyball and badminton courts just to the west of the parking lot. This unit is scarcely vegetated with mature London plane, oaks and sweetgum shade trees.

**Unit:** 35                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.22                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** VCD

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Scarcely Vegetated Deciduous					Foot traffic	
Level Dry						

**Comments:**

This unit includes the pedestrian bridge and extends out to the footpath to the east and west. This unit is paved and scarcely vegetated.

**Unit:** 36                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.68                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, red	>30' & 5-30'	No	Road	Foot traffic	Dumping
Deciduous	Ash, green	5'-30'	No			
Hemicryptophytes	Multiflora rose	<5'	Yes			
Slope	Virginia creeper	<5'	No			
Dry/Moist						

**Comments:**

This unit is on the southeastern edge of the park boundary and is bordered by houses and an old access road. This unit is a closed forest dominated by mature oaks, green ash, sassafras with multiflora rose and Virginia creeper in the understory. Some Japanese Knotweed found in the unit. Other species include: Oriental bittersweet and black cherry, Virginia creeper, wood violet, pokeweed, Ailanthus and Rose of Sharon.



# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 37                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.40                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Sassafras	all	No			
Deciduous	Oak, pin	>30' & 5-30'	No			
Hemicryptophytes	Multiflora rose	<5'	Yes			
Undulating	Knotweed,	<5'	Yes			
Dry/Moist						

## Comments:

This is a closed forest unit dominated by Sassafras, multiflora rose with some intermediate and large oak. Some privet and Japanese knotweed are also within this unit. Virginia creeper and aster dominate the understory. Some blowdown has occurred in this area and therefore woody debris is found also in the understory.

**Unit:** 38                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 1.05                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, pin	>30'	No			
Deciduous	Maple, Norway	>30'	Yes			
Hemicryptophytes						
Level						
Dry						

## Comments:

This unit contains a paved footpath and mature oaks as shade trees. It is located at the southwestern edge of the park and adjacent to Highland blvd. This unit surrounds the comfort station where some ornamental plantings are found including which hazel, cherry and dogwood.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 39                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.64                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, pin	>30'	No		Foot traffic	
Deciduous	Sweetgum	5'-30'	No	Paved path		
Hemicryptophytes	Cherry, black	>30' & 5-30'	No			
Undulating						
Dry/Moist						

## Comments:

This is a closed forest unit with mature oak, sweetgum and black cherry. This area has a mostly native shrub and herb layer including Virginia creeper, Virginia knotweed, white wood aster and goldenrod. A paved foot path runs through the unit.

**Unit:** 40                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.44                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a6

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Cherry, black	<5' & 5-30'	No	Lamppost	Foot traffic	
Deciduous	Oak, pin	<5' & 5-30'	No			
Lianas						
Undulating						
Moist						

## Comments:

This is a closed forest unit is just north of the pedestrian bridge and is dominated by black cherry and pin oak. A paved foot path runs through the unit. This area is mostly native with Virginia creeper in the understory. Other species include: multiflora rose and mugwort.

**Unit:** 41                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.08                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** IVA3a1

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Herbaceous Deciduous Geophytes Level Dry/Moist	Knotweed,	<5'	Yes			

**Comments:**

This unit is dominated by Japanese knotweed and requires invasive species management.

**Unit:** 42                      **Date of Visit:** 6/11/2012                      **Species Changing:** No  
**Acreage:** 0.35                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest Deciduous Hemicryptophytes Undulating Moist	Oak, pin Sweetgum Cherry, black Aster, white wood Virginia creeper	all >30' <5' & 5-30' <5' <5'	No No No No No	Paved path	Foot traffic	

**Comments:**

This unit is dominated by pin oak with a few sweetgum and black cherry. The understory contains white wood aster and Virginia creeper. A old light post and footpath is found in the unit.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 43                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.34                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Mulberry, white	5'-30'	Yes			
Deciduous	Privet	5'-30'	Yes			
Hemicryptophytes	Aster, white wood	<5'	No			
Slope						
Moist						

## Comments:

This unit is an open woodland with mulberry trees, privet shrubs and white wood aster in the understory. It is fairly open with some Japanese knotweed encroachment. There is some concrete debris in this unit. Other species include: mugwort, Oriental bittersweet and multiflora rose.

**Unit:** 44                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.21                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Willow spp.	<5' & 5-30'	No			
Deciduous	Hawthorn	5'-30'	No			
Hemicryptophytes	Sweetgum	>30' & 5-30'	No			
Depression	Oak, pin	5'-30'	No			
Wet						

## Comments:

This is a low wet unit with pooled water in places. Dominated by willow spp., hawthorn, some sweetgum and pin oak. Several trees have recently fallen in this area and there could be a potential area for reforestation.



# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 45                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.44                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Sweetgum	>30' & 5-30'	No			
Deciduous	Oak, black	all	No			
Hemicryptophytes	Maple, silver	>30' & 5-30'	No			
Slope	Cherry, black	5'-30'	No			
Moist						

## Comments:

This is a closed forest unit that borders the low wet area. This unit is dominated by a mix of sweetgum, oak, silver maple and black cherry. The understory includes a mix of native and invasive species such as Virginia knotweed, garlic mustard, smart weed and poison ivy.

**Unit:** 46                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.26                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** IIB2a4

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, pin	5'-30'	No			
Deciduous	Mulberry spp.	5'-30'	Yes			
Geophytes	Knotweed,	<5'	Yes			
Slope						
Moist						

## Comments:

This unit is on a slope and contains a lot of concrete debris and channels water down to the low lying area. This unit is fairly open with some white mulberry, pin oak and Japanese knotweed.

**Unit:** 47      **Date of Visit:** 1/23/2012      **Species Changing:** No  
**Acreage:** 0.56      **Management Concern:** No      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, pin	>30' & 5-30'	No			
Deciduous	Locust, black	5'-30'	No			
Hemicryptophytes	Cherry, black	5'-30'	No			
Slope						
Dry/Moist						

**Comments:**

This is a transitional unit is largely made up of mature pin oak and follows the contour of the lowland area. Some other tree and shrub species are found along the transition of the slope including black cherry, black locust, white mulberry and sweetgum. Cool season grass is found in the understory as well as Oriental bittersweet, multiflora rose and garlic mustard. Scattered Virginia knotweed and mugwort throughout.

**Unit:** 48      **Date of Visit:** 6/11/2012      **Species Changing:** No  
**Acreage:** 1.83      **Management Concern:** No      **Community Structure Changing:** No  
**Classification:** IIB2a2

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, red	>30'	No			
Deciduous	Locust, black	5'-30'	No			
Chamaephytes	maple, red	>30' & 5-30'	No			
Undulating	Multiflora rose	<5'	Yes			
Dry/Moist	Hickory, shagbark	>30' & 5-30'	No			

**Comments:**

This is a woodland unit with large mature oak trees, a few black locust trees, multiflora rose, red maple shagbark hickory and mowed cool season grass. A paved foot path runs through the unit. Other species include: Japanese knotweed, white oak, violet, pin oak and plantain.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 49                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 10.86                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, red	>30'	No		Foot traffic	
Deciduous	London Plane	>30'	No			
Hemicryptophytes	Maple, Norway	>30'	Yes		Foot traffic	
Undulating	Oak, black	>30'	No			
Dry/Moist	Oak, pin	>30'	No			
	Sweetgum	>30'	No			

## Comments:

Large landscaped extending through out the park and boarding a baseball field and parking lot. This unit includes comfort stations, paths, and light posts. Many mature trees along the paved foot paths and some recently planted yellowwood, red bud, ginkgo and tuliptrees. Also present though not abundant are mature green ash, silver leaf linden and black locust. Understory of cool season grass, plantain, clover and scattered patches of mugwort. Large horsechestnut on the border of the unit. A few planted eastern red cedars along the Jackie Robinson Parkway.

**Unit:** 50                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.08                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** VCD

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Scarcely Vegetated	Cool season grass	<5'	No			
Deciduous						
Hemicryptophytes						
Level						
Dry						

## Comments:

This is a managed recreation facility that is paved and scarcely vegetated.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 51                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 2.58                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IVA2f

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Herbaceous	Cool season grass	<5'	No		Picnic	
Deciduous	Plantain, common	<5'	No		Sports	
Hemicryptophytes						
Level						
Dry/Moist						

## Comments:

This was formally a managed pavilion which is no longer managed and is overcome with grasses. Light posts surround the area and at the eastern edge of the park are concrete steps. Other species include: clover, plantain, dandelion and there is some trash throughout this unit.

**Unit:** 52                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.56                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, black	>30'	No	Paved path		Trash
Deciduous	Oak, red	>30'	No			
Hemicryptophytes	Oak, white	>30'	No			
Level	Cherry, black	5'-30'	No			
Dry/Moist	Knotweed, Virginia	<5'	No			

## Comments:

This is an open woodland with mature landscaped oaks, slippery elm, black cherry and sweetgum. The understory contains, violet, dandelion, white wood aster, cool season grass, smartweed, plantain, Virginia knotweed, burdock and multiflora rose. A paved foot path runs through the unit. This unit is on the northwestern edge of the park.



**Unit:** 53                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.79                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a4

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, pin	>30'	No			
Deciduous	Maple, Norway	>30'	No			
Geophytes	Cherry, black	5'-30'	No			
Undulating	Sweetgum	>30' & 5-30'	No			
Dry/Moist	Multiflora rose	<5'	Yes			
	Mustard, garlic	<5'	Yes			

**Comments:**

This is a closed forest unit on the southwestern edge of the park. It is dominated by large oak trees with Norway maple, black cherry, sweetgum with an understory dominated by garlic mustard, multiflora rose, poison ivy, Japanese knotweed. Several foot paths run through out the unit. Other species include: Oriental bittersweet, white wood aster, Japanese knotweed, which hazel, wood sorrel, sycamore maple, tuliptree, bush honeysuckle, English ivy, white clover, pokeweed, Virginia knotweed and Rubus spp..

**Unit:** 54                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 1.72                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a4

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, pin	>30'	No			
Deciduous	Linden, littleleaf	>30'	No			
Geophytes	Cherry, black	>30'	Yes			
Undulating	Locust, black	5'-30'				
Dry/Moist	Sweetgum	>30'	No			

**Comments:**

This is a closed forest unit on the northeastern edge of the park. It is dominated by large oak trees, linden, black cherry, sweetgum with a few scattered black locust trees. The understory includes swallowwort, garlic mustard, poison ivy, dandelion, Oriental bittersweet. Several foot paths run through out the unit. Other species include: smartweed, Norway maple, white wood aster.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 55                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 1.08                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a4

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, pin	>30'	No	Paved path	Foot traffic	
Deciduous	Oak, red	>30'	No			
Geophytes	Hickory, shagbark	>30'	No			
Undulating	Cool season grass	<5'	No			
Dry/Moist						

## Comments:

This is a closed forest unit on the southern side of the park. It is dominated by large oak trees with a few scattered hickory and Norway maple trees. Cool season grass is in the understory and several foot paths run through out the unit.

**Unit:** 56                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 2.23                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Cool season grass	<5'	No	Paved path	Foot traffic	
Deciduous	Oak, pin	>30'	No			
Hemicryptophytes						
Level						
Dry						

## Comments:

This is an open landscaped woodland with newly planted trees on the western section of the park. It is dominated by cool season grass and scattered sweetgum, black locust, oak and silverleaf linden. Several foot paths run through out the unit. Other species include: plantain, mugwort, goldenrod and a large tuliptree.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 57                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.78                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, black	>30'	No		Foot traffic	
Deciduous	Maple, Norway	all	Yes			
Hemicryptophytes	Sweetgum	>30'	No			
Undulating						
Dry/Moist						

## Comments:

This is a closed forest unit boarding a main footpath in the park. It is dominated by large oak trees with a few scattered Norway maple and sweetgum trees. The understory is dominated by white wood aster and Virginia creeper.

**Unit:** 58                      **Date of Visit:** 1/23/2012                      **Species Changing:** No  
**Acreage:** 0.16                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Mulberry, white	5'-30'	Yes		Foot traffic	
Deciduous	Privet	5'-30'	Yes	Paved path		
Hemicryptophytes	Pokeweed	5'-30'	No			
Level						
Dry/Moist						

## Comments:

This is an open woodland unit with a white mulberry tree and some privet bushes just south of the pedestrian bridge and adjacent to a foot path. Other species include: jetbead, mugwort, plantain, Oriental bittersweet.

**Unit:** 59      **Date of Visit:** 1/23/2012      **Species Changing:** No  
**Acreage:** 0.12      **Management Concern:** No      **Community Structure Changing:** No  
**Classification:** IB2a2

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Oak, pin	>30'	No			
Deciduous	sasafrass	5'-30'	No	Paved path		
Chamaephytes	Multiflora rose	<5'	Yes			
Undulating	bittersweet, Oriental	<5'	Yes			
Dry/Moist	Cherry, black	5'-30'	No			
	Multiflora rose	<5'	Yes			

**Comments:**

This is a small unit just south of the pedestrian bridge with a few oaks, Sassafras, and a shrub layer dominated by multiflora rose, privet and Oriental bittersweet. Other species include: Rubus spp., Virginia knotweed, wood sorrel, black swallowwort, oak saplings, shagbark hickory, mugwort, Virginia creeper, black cherry and smartweed.

**Unit:** 60      **Date of Visit:** 1/23/2012      **Species Changing:** No  
**Acreage:** 0.64      **Management Concern:** No      **Community Structure Changing:** No  
**Classification:** IB2a2

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Sassafras	all	No			
Deciduous	Cherry, black	all	No			
Chamaephytes	Oak, black	>30' & 5-30'	No			
Undulating	Tulip tree	5'-30'	No			
Dry/Moist						

**Comments:**

This is a closed forest unit south of the pedestrian bridge. It is dominated by Sassafras, black cherry, oak and a few tulip saplings. A large elm is in the unit. The shrub layer consists of multiflora rose and jetbead and Virginia creeper and poison ivy is in the understory.



**Unit:** 61      **Date of Visit:** 6/6/2012      **Species Changing:** No  
**Acreage:** 3.90      **Management Concern:** Yes      **Community Structure Changing:** Yes  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Maple, Norway	all	Yes	Fence	Foot traffic	Dumping
Deciduous	Oak, black	>30'	No	Full-crown tree		Trash
Hemicryptophytes	Sweetgum	all	No			Vandalism
Slope	Oak, red	>30'	No			
Dry/Moist	Cherry, black	5'-30'	No			
	Hawthorn, downy	5'-30'	No			

**Comments:**

This is a closed forest unit at the southern edge of the park just south of Highland blvd. The overstory is dominated by Norway maple, oak, sweetgum, black cherry and hawthorne. The understory is mostly invasive with a mix a mugwort, garlic mustard, Oriental bittersweet and bush honeysuckle. A lot of trash is found throughout and there was a homeless camp within this unit. A foot path runs throughout. Other species include: Virginia knotweed, white wood aster, multiflora rose, Virginia creeper, black cherry, London plane, English ivy, hackberry, poison ivy, goldenrod, buckthorn, honey locust, Ailanthus, green ash, red oak, ragweed, white mulberry, jetbead and cool season grass.

**Unit:** 62      **Date of Visit:** 6/6/2012      **Species Changing:** No  
**Acreage:** 0.13      **Management Concern:** Yes      **Community Structure Changing:** Yes  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Closed Forest	Ailanthus	all	Yes		Foot traffic	Trash
Deciduous	Cherry, black	>30'	No			
Hemicryptophytes	Mugwort	<5'	Yes			
Slope	Multiflora rose	<5'	Yes			
Dry/Moist						

**Comments:**

This is a small patch of Ailanthus dominated forest and is next to an emerging vineland. The understory is dominated by invasives including mugwort and multiflora rose. This unit is located just south of Highland Blvd and a foot path runs through this unit.

**Unit:** 63                      **Date of Visit:** 6/6/2012                      **Species Changing:** No  
**Acreage:** 0.95                      **Management Concern:** Yes                      **Community Structure Changing:** No  
**Classification:** VIIC

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Vineland	bittersweet, Orienta	<5'	Yes			
Deciduous	Multiflora rose	<5'	Yes			
Lianas	Maple, Norway	all	Yes			
Slope	Cherry, black	5'-30'	No			
Dry/Moist						

**Comments:**

This is a long emergent vineland dominated by Oriental bittersweet with scattered Norway maple and black cherry throughout. Vines are taking over the trees and there are some new gaps in the canopy where vines are proliferating. A large green ash sits at the southern edge of the vinland. This unit is found just north of the tennis courts in the southern section of the park. Other species include: mugwort, buckthorn and bush honeysuckle.

**Unit:** 64                      **Date of Visit:** 6/6/2012                      **Species Changing:** No  
**Acreage:** 11.86                      **Management Concern:**                      **Community Structure Changing:** No  
**Classification:** IVA2f

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Herbaceous	Cool season grass	<5'	No			
Deciduous	Clover, white	<5'	No			
Hemicryptophytes	Plantain, common	<5'	No			
Undulating						
Dry/Moist						

**Comments:**

This is a mowed open law including two baseball diamonds. This unit is dominated by cool season grass, clover and plantain. It is actively used for sports and picnicking. A few scattered mature Norway maple and London plane trees are found throughout. A row of landscaped ornamental pear and London plane street trees are to the south and a large stump is also found within this unit. This unit is bordered by Jamaica Avenue to the south.

**Unit:** 65      **Date of Visit:** 6/6/2012      **Species Changing:** No  
**Acreage:** 1.26      **Management Concern:** No      **Community Structure Changing:** No  
**Classification:** IB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	London Plane	>30'	No			
Deciduous	Oak, black	>30'	No			
Hemicryptophytes	Oak, red	>30'	No			
Level	Ash, green	>30'	No			
Dry/Moist	Oak, pin	>30'	No			
	Cool season grass					

**Comments:**

This is a landscaped unit with mature oak and ash trees with mowed grass in the understory. This unit is bordered by Jamaica Avenue and Highland blvd. Other species include: violet and swetgum.

**Unit:** 66      **Date of Visit:** 6/6/2012      **Species Changing:** No  
**Acreage:** 1.33      **Management Concern:** Yes      **Community Structure Changing:** Yes  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Ash, green	>30'	No			
Deciduous	Ash, white	>30'	No			
Hemicryptophytes						
Level						
Dry/Moist						

**Comments:**

This is a reforestation planting site with red, black and white oak planted, also white pine, hackberry, serviceberry, black cherry and swamp white oak. There are a few standing dead trees, a large black oak, dogwood and street trees shading the area. Invasives are starting to come up in the understory including Oriental bittersweet, mugwort, plantain and dandelion. This unit is to the west of Highland Blvd and east of the cemetery. Other species include: stinging nettle, cool season grass and violet.

**Unit:** 67      **Date of Visit:** 6/6/2012      **Species Changing:** No  
**Acreage:** 4.04      **Management Concern:** No      **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Herbaceous	Cool season grass	<5'	No			
Deciduous	Knotweed,	<5'	Yes			
Hemicryptophytes	Mugwort	<5'	Yes			
Undulating	Oak, black	>30'	No			
Dry/Moist	Oak, pin	>30'	No			

**Comments:**

This is an herbaceous unit just north of the reforestation planting area and adjacent to the cemetery. Several foot paths throughout and some large shade trees. Some invasive species are starting to be prevalent including Japanese knotweed, mugwort and Oriental bittersweet. This area seems to be intermittently maintained/mowed. Other species include: clover, dandelion, Carex spp., common plantain.

**Unit:** 68      **Date of Visit:** 6/6/2012      **Species Changing:** No  
**Acreage:** 0.33      **Management Concern:** Yes      **Community Structure Changing:** Yes  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, red	<5' & 5-30'	No	Fence		
Deciduous	Oak, black	<5' & 5-30'	No	Restoration		
Hemicryptophytes	Oak, red	<5' & 5-30'	No			
Level	Pine, white	<5' & 5-30'	No			
Dry/Moist	Mugwort	<5'	Yes			
	Cherry, black	<5' & 5-30'	No			

**Comments:**

This unit contains a reforestation planting just south of the invasive dominated closed forest. Species include red, white and black oak, black cherry, serviceberry, tuliptree and hackberry. Mugwort is prevalent in the understory as well as cool season grass. A fence surrounds this unit.

# Highland Park Entation Unit Descriptions, Surveyed 2012

**Unit:** 69                      **Date of Visit:** 6/6/2012                      **Species Changing:** No  
**Acreage:** 7.08                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** VCD

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Scarcely Vegetated	London plane	>30'	No	Fence		
Deciduous	Hackberry	>30'	No	Planting		
Hemicryptophytes	Mulberry, white	>30'	Yes			
Undulating	Cool season grass	<5'	No			
Dry/Moist						

## Comments:

This unit has many recreation facilities including tennis, racquetball, fields used for soccer and football. Paved paths weave throughout the unit with large planted shade trees. Rows of London plane, white mulberry and hackberry are found along the walkway.

**Unit:** 70                      **Date of Visit:** 6/6/2012                      **Species Changing:** No  
**Acreage:** 0.42                      **Management Concern:** No                      **Community Structure Changing:** No  
**Classification:** IVA2f

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Herbaceous	Mulberry, white	>30' & 5-30'	Yes			
Deciduous	Cool season grass	<5'	No			
Hemicryptophytes	Ivy, English	<5'	Yes			
Level						
Dry/Moist						

## Comments:

This unit includes the Highland Park Children's Garden at the south edge of the park. There is one large mulberry tree, and ivy growing up the fence and surrounding the garden plots. It is moderately maintained. Other species include: hackberry.

**Unit:** 71 **Date of Visit:** 6/6/2012 **Species Changing:** No  
**Acreage:** 1.59 **Management Concern:** No **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, red	>30' & 5-30'	No			
Deciduous	Oak, pin	>30' & 5-30'	No			
Hemicryptophytes	Maple, Norway	>30'	No			
Level	Dogwood, flowering	<5'	No			
Dry/Moist	Cherry, black	<5'	No			

**Comments:**

This unit includes a landscaped woodland with mowed grass on the edge of Highland Blvd and the walkway around the playground and is dominated by oaks, Norway maple, black cherry and dogwood. There is one ornamental Japanese maple. Which hazel is planted in the northern part of the playground on the opposite side of the comfort station. This unit also includes park house, amphiteater/spary shower, playgrounds and greeting gardens

**Unit:** 72 **Date of Visit:** 6/6/2012 **Species Changing:** No  
**Acreage:** 4.20 **Management Concern:** No **Community Structure Changing:** No  
**Classification:** IIB2a3

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbances</u>
Woodland	Oak, pin	>30'	No			
Deciduous	Maple, Norway	>30'	Yes			
Hemicryptophytes	London Plane	>30'	No			
Level	Cool season grass	<5'	No			
Dry/Moist						

**Comments:**

This is a maintained lawn with large landscaped trees. Several foot paths run through the unit. This is located within the southern section of the park.