

# **Natural Area Mapping and Inventory of Spuyten Duyvil Shorefront Park 2007 Survey**



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# **Spuyten Duyvil Shorefront Park Natural Area Mapping & Inventory**

**8.48 acres**

## ***Introduction***

City of New York Parks & Recreation (DPR) manages one of the most extensive and varied park 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 Parks Department 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 NRG's jurisdiction provide valuable habitat for hundreds of species, from rare wildflowers to endangered birds of prey. In addition to the goals mentioned above, NRG serves as a clearinghouse for technical research to aid in the protection and restoration of the city's natural resources. This inventory of Spuyten Duyvil Shorefront Park was conducted in 2007 as part of NRG's commitment to improving the natural areas of New York City parks.

Spuyten Duyvil Shorefront Park was named in 1987 to describe the waterfront property in relation to its neighborhood. There are two major theories concerning the origin of the Dutch name Spuyten Duyvil. According to the first, a trumpeter dispatched to the Bronx during the 1664 British invasion of New Amsterdam rowed across the turbulent creek "en spijt den Duyvil" (in spite of the Devil). The second is based on a 1647 reference to a gushing fountain that emptied into the creek, "Spuit den Duyvil" (Devil's Spout) or to the creek itself (Devil's Spate). At least fourteen different spellings of the name have been recorded, including those mentioned above and Speak Devil, Speight den Duyvil, Speit den Duyvil, Spike & Devil, Spiling Devil, Spilling Devil, Spitendeuval, Spitten Divil, Spittin Debell, Spitting Devil, and Spitton Divil.

The City of New York acquired this land as a public park in 1882 after condemnation proceedings. It consists of a triangle formed by Palisade Avenue, Edsall Avenue, and the Hudson line of the Metro North railroad running along the Harlem River.

As Parks Commissioner and as President and sole member of the Henry Hudson Parkway Authority, Robert Moses sited the northern structural column of the Henry Hudson Bridge on this parkland. In June of 1935, construction began on what was to be the longest plate girder bridge in the world. The single level four lane bridge spans the Harlem River, from cliffs on one side in Inwood (Manhattan) to high bluffs on the other side in Spuyten Duyvil (the Bronx), with a vertical clearance of 142.5 feet. The bridge opened to motorists with a toll of ten cents per crossing on December 12, 1936; the second level was added, in accordance with original plans, in July 1938.

The bridge was part of Moses's dream to endow New York City with a complete arterial highway system. An instrumental junction in his West Side Improvement Plan, the Henry Hudson Bridge connected the West

Side Highway with the Henry Hudson Parkway which, in turn, linked Manhattan to the mainland of the United States.

The Department of Parks and Recreation--in compliance with the 1986 Environmental Quality Bond Act Project--remodeled the rugged and neglected land on which the tower is situated. Renovations completed in 1994 provided a network of graveled pathways and a footbridge allowing pedestrian accessibility to a natural spring and small pond which feed into the Harlem River. Benches, fencing and railings were installed to make the park more comfortable. In order to enhance the view of the River, terracing was added to create an overlook, and existing flora was trimmed and pruned sparingly so as to preserve the natural and untamed quality of the property. In addition, shrubbery was planted and grass seeded both to correct an erosion problem and to beautify the area.

The new landscaping is attractive to local wildlife that now frequents the park. Many varieties of birds either breed by the pond or in the surrounding woods, or stop here on their regular migration paths. Snowy and Yellow Egrets, Green and Black-crowned Night-Herons, Ring-necked Pheasants, Mallards, Spotted and Solitary Sandpipers, and Mallards all have been spotted in and around Spuyten Duyvil Shorefront Park.

To facilitate the protection, management and restoration of Spuyten Duyvil Shorefront Park, NRG completed an inventory of the area using entitiation, a process of identifying and describing ecologically distinct plant communities. Using aerial photographs and field reconnaissance, Parks staff delineated distinct ecological entities, known as entitiation units, based on cover type, understory structure, species composition, and topography. Evidence of historical use, current use, environmental disturbance, and additional notes were also recorded for each unit. Entitiation of Spuyten Duyvil Shorefront Park resulted in a map and database that can be used to locate valuable and threatened areas. They also serve as a baseline for measuring change over time.

### ***Entitiation***

Entitiation is a type of plant community inventory well suited to the patchy environments often found in urban areas. Originally designed for European landscapes, the system was revised by NRG in 1985 for use in urban parkland. NRG has used entitiation widely and successfully to facilitate acquisition and restoration decisions. Put simply, entitiation is a process of breaking up a park into manageable parts called "entities" or "entitiation units." Entitiation units are defined using a weighted list of criteria. The first level of distinction is based on cover type (e.g. closed forest, vineland, scrub), followed by canopy species composition, understory type (e.g. herbs, vines, shrubs), and understory species composition. Additional factors, such as topography and soil condition (e.g. wet, moist, dry) are also taken into account.

To prepare for fieldwork, mapping technicians examine aerial photographs and delineate areas of similar cover. The mapping staff use the aerial information to create a strategy for covering land area. In the field, boundaries are identified as described above. For each unit, staff record the data listed above, as well as current uses, environmental disturbances, historical indicators, community stability, and comments.



1 INCH = 200 FEET



**ENTITAMENT UNITS - AUGUST 2007  
SPUYTEN DUYVIL SHOREFRONT PARK  
BRONX COUNTY, CITY OF NEW YORK**

11/21/2007



**City of New York  
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2007.21.11.01

## Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 1  
**Acreage:** 0.02  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous	Hosta	<5'	yes		Exotic planting	
Deciduous	Arrowwood	<5'	no			
Geophytes	Elm, Siberian	5'-30'	yes			
Slope	Mulberry, white	5'-30'	yes			
Dry/Moist	Elm, American	5'-30'	no			

### Comments:

This unit is a planted ornamental area that is triangular in shape. It is bordered by Independence Avenue, Palisade Avenue, and wooded unit # 2. Wood chips cover most of the ground. Other species present include: yew, English ivy, garlic mustard, wood sorrel, common plantain, day lily, and other ornamental species.

**Unit:** 2  
**Acreage:** 0.02  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Norway maple	all	yes		Phone pole	
Deciduous	Honeysuckle, Amur	<5' & >30'	yes			
Chamaephytes	Hackberry	<5' & 5-30'	no			
Slope	Elm, slippery	5'-30'	no			
Dry/Moist	Ivy, English	<5'	yes			

### Comments:

This unit is a closed forest dominated by the above species. It is located between Independence Avenue and Palisade Avenue. The ground cover is dominated by English ivy and woodchip mulch. Other species present include: Siberian elm, pin oak, Ailanthus, black cherry, bitternut hickory sapling, multiflora rose and wood aster. Species along the outer edge of unit include: poison ivy, garlic mustard, Asiatic dayflower, burdock, chicory, and fleabane. MC: because of invasives.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 3  
**Acreage:** 0.05  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous	goose grass	<5'	yes		Phone pole	
Deciduous	Mugwort	<5'	yes			
Hemicryptophytes	terniflora, Clematis	<5'	yes			
Slope	Ailanthus	<5'	yes			
Dry/Moist						

**Comments:**

Unit is located at the edge of closed forest units 2, 4, and 5, along Palisade Ave. It is herbaceous with a few scattered Ailanthus and vines beginning to encroach. Other species present include: American elm, mulberry (<5'), Siberian elm sapling, a box elder tree stump encircled by shoots, Virginia creeper, poison ivy, crab grass, dandelion, lamb's quarters, fleabane, black nightshade, white wood aster, csg, burdock, smartweed, and New England aster. MC: because of invasive Ailanthus and yam-leaved clematis, can be aggressive.

**Unit:** 4  
**Acreage:** 0.12  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Hackberry	>30' & 5-30'	no		Full-crown tree	Foot traffic
Deciduous	terniflora, Clematis	<5' & 5-30'	yes			
Lianas	Norway maple	>30' & 5-30'	yes			
Slope						
Dry/Moist						

**Comments:**

Unit is a closed forest that slopes from Independence Avenue to Palisade Avenue. The ground cover is dominated by Clematis terniflora. Garlic mustard and Ailanthus saplings are located along Independence Avenue. Other species present include: Ailanthus, box elder, black cherry, bitternut hickory sapling, Amur honeysuckle, multiflora rose, English ivy, grape vine, porcelainberry, mugwort, white wood aster, and pokeweed. A large pile of mulch is present. MC: because of invasives.

Spuyten Duyvil Entitment Unit Descriptions, Surveyed August 2007

**Unit:** 5  
**Acreage:** 0.14  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Hackberry	all	no	Phone pole		
Deciduous	Norway maple	<5' & 5-30'	yes			
Phanerophytes	Ivy, English	<5'	yes			
Slope	Honeysuckle, Amur	<5'	yes			
Dry/Moist	Oak, pin	>30'	no			

**Comments:**

Unit is a closed forest located between Palisade Avenue and Independence Avenue. Other species present include: Ailanthus, linden, slippery elm, Siberian elm, bitternut hickory saplings, multiflora rose, poison ivy, porcelainberry, bittersweet nightshade, burdock, Viburnum lentago, garlic mustard, and pokeweed. MC: because of invasives.

**Unit:** 6  
**Acreage:** 0.03  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Sycamore maple	<5' & 5-30'	yes			
Deciduous						
Phanerophytes						
Slope						
Dry/Moist						

**Comments:**

This is a small unit on a steep slope near the railroad tracks on the west side of the park. Other species present include: black cherry, black birch, Amur honeysuckle, Japanese knotweed, white wood aster, wood sorrel, and common nightshade.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 7  
**Acreage:** 0.1  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Oak, black	all	no	Foundation	Foot traffic	
Deciduous	Honeysuckle, Amur	<5' & 5-30'	yes			
Chamaephytes	Ivy, poison	<5'	no			
Slope	Privet	<5' & 5-30'	yes			
Dry/Moist						

**Comments:**

This unit is dominated by black oak and is bordered by the wall of a building on the west side of the park and near the railroad tracks. Other species present include: Siberian elm, hackberry, box elder saplings, Norway maples saplings, multiflora rose, porcelainberry, and garlic mustard.

**Unit:** 8  
**Acreage:** 0.12  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Elm, Siberian	all	yes			
Deciduous	Elm, slippery	all	no			
Lianas	Ivy, English	<5' & 5-30'	yes			
Slope	Honeysuckle, Amur	<5' & 5-30'	yes			
Dry/Moist						

**Comments:**

This unit is dominated by elms and the ground is completely covered with English ivy. It is located on a slope in the NW corner of the park. Other species present include: box elder, white mulberry, multiflora rose, porcelainberry, Oriental bittersweet, poison ivy, garlic mustard, and white snakeroot. MC: because of invasives such as Amur honeysuckle, porcelainberry, and Oriental bittersweet.

Spuyten Duyvil Entitment Unit Descriptions, Surveyed August 2007

**Unit:** 9  
**Acreage:** 0.28  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Porcelain berry	<5' & 5-30'	yes	Foundation	Campfire/ party	Trash
Deciduous	Honeysuckle, Amur	<5' & 5-30'	yes			Vandalism
Lianas	Grape, wild	<5' & 5-30'	no			Feces
Slope	Ivy, English	<5'	yes			
Dry/Moist						

**Comments:**

This is a vineland over Amur honeysuckle with Siberian elms, bindweed, mugwort and burdock at edge near Half-Moon Overlook. English ivy is the dominant groundcover. There is a cluster of Liriope. A few scattered Siberian elms have ivy crawling on them. Other species present include: yew sp., pokeweed, Virginia knotweed, wineberry, poison ivy, and white mulberry sapling. An old foundation with graffiti is present. MC: drug use and partying.

**Unit:** 10  
**Acreage:** 0.02  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Desert						
Level						
Dry						

**Comments:**

This is the Half-Moon Overlook. Benches are located within the gated fenced in area. On the gate is a depiction of Henry Hudson's ship, the Half-Moon. The area is not very scenic due to overgrown vegetation surrounding the overlook.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 11  
**Acreage:** 0.22  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Porcelain berry	<5' & 5-30'	yes			
Deciduous	Bittersweet, Oriental	<5' & 5-30'	yes			
Lianas	Honeysuckle, Japanese	<5' & 5-30'	yes			
Slope	Grape, wild	<5' & 5-30'	no			
Dry/Moist						

**Comments:**

This unit is a vineland with trees and shrubs. It is difficult to penetrate due to cliffs and vines. It is located in the west portion of the park. Other species present include: red maple, walnut, Siberian elm, Ailanthus, hackberry, multiflora rose, mugwort, foxtail, and morning glory.

**Unit:** 12  
**Acreage:** 0.07  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Porcelain berry	<5' & 5-30'	yes			
Deciduous						
Lianas						
Slope						
Dry/Moist						

**Comments:**

This unit is a large sloping vineland in the west portion of the park. It slopes from Palisades Avenue and becomes wider half way down the slope. Other species present include: mugwort. MC: porcelainberry is invasive.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 13  
**Acreage:** 0.36  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Elm, slippery	>30' & 5-30'	no		Foot traffic	Trash
Deciduous	Elm, Siberian	>30' & 5-30'	yes		Campfire/ party	
Chamaephytes	Norway maple	<5' & 5-30'	yes			
Slope	Sycamore maple	<5' & 5-30'	yes			
Dry/Moist	multiflora rose	<5'	yes			
	Honeysuckle, Amur	<5' & 5-30'	yes			

**Comments:**

This unit is on a slope and is located near a parking lot for The Bradley. The canopy consists of large elms with maples underneath. Multiflora rose and Amur honeysuckle are dominant in the understory. There is a ditch and a footpath within the unit. Other species present include: hackberry, box elder sapling, Virginia creeper, Oriental bittersweet, porcelainberry, poison ivy, English ivy, Asiatic dayflower, white snakeroot, pokeweed, and garlic mustard. MC: invasives, party and drug use.

**Unit:** 14  
**Acreage:** 0.11  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Sycamore maple	5'-30'	yes	Fence		
Deciduous	Box Elder	5'-30'	no			
Chamaephytes	Elm, Siberian	5'-30'	yes			
Slope	Honeysuckle, Amur	<5' & 5-30'	yes			
Dry/Moist	Porcelain berry	<5' & 5-30'	yes			
	Multiflora rose	<5'	yes			

**Comments:**

This is a triangular unit, on a slope, surrounded by Edsall Avenue, a paved path, and a foot bridge to the Metro North station. Dominant species are as listed above, with vines growing on trees and shrubs on the south side of the unit. A few Siberian elms are clustered near the foot bridge; however there are a few in the rest of the unit as well. A small ornamental bed, containing hostas, is on the bridge side of the unit. Japanese knotweed is under the bridge. Other species present include: Ailanthus, white mulberry, slippery elm, hackberry, Oriental bittersweet, Japanese honeysuckle, grape, English ivy, wineberry, mugwort, dandelion, pokeweed, garlic mustard, spiny sow thistle, foxtail, lamb's quarters, and black nightshade. MC: invasives and no standing sign engulfed in vines.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 15  
**Acreage:** 0.01  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous	Mugwort	<5'	yes		Exotic planting	
Deciduous	Smartweed	<5'	yes			
Hemicryptophytes	Dayflower, Asiatic	<5'	yes			
Level	Spiny-leaved sow thistle	<5'	yes			
Dry/Moist						

**Comments:**

This is a small U shaped unit that surrounds a support for the foot bridge to the Metro North station. It looks like this was an ornamental planting that has since been overgrown. Other species present include: Siberian elm saplings, multiflora rose, ornamental rose, porcelainberry, Oriental bittersweet, Echinacea, iris, crabgrass, and lamb's quarters. MC: because of invasives.

**Unit:** 16  
**Acreage:** 0.17  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Locust, black	all	yes		Full-crown tree	
Deciduous	Siberian elm	all	yes			
Geophytes	Ash, green	all	no			
Level	Sycamore maple	<5' & 5-30'	yes			
Dry/Moist	Mustard, garlic	<5'	yes			
	Multiflora rose	<5'	yes			

**Comments:**

This unit is a closed forest dominated by the above species. Other species present include: white mulberry, box elder, two Eastern hemlock, hackberry, American beech, red maple, highbush cranberry, Amur honeysuckle, porcelainberry, Oriental bittersweet, English ivy, Japanese honeysuckle, grape, Virginia creeper, Virginia knotweed, pokeweed, mugwort, dock, wineberry, wood sorrel, and white wood aster. MC: because of invasives.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 17  
**Acreage:** 0.22  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Desert					Foot traffic Vehicle access	
Level						
Dry						

**Comments:**

This unit is the paved pathway that starts at a gated entrance at Edsall Avenue and ends just before the Henry Hudson Parkway overpass.

**Unit:** 18  
**Acreage:** 0.37  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Locust, black	all	yes			
Deciduous	Sycamore maple	all	yes			
Lianas	Ivy, English	<5'	yes			
Slope	Box Elder	<5' & 5-30'	no			
Dry/Moist	Multiflora rose	<5'	yes			

**Comments:**

Black locust is the dominant canopy species. Sycamore maple is dominant in the subcanopy with scattered Norway maple, green ash, and box elder. Slippery elm and Siberian elm are present at the top of the rocky slope. English ivy is dense at the north side of the unit and climbs down the slope. Other species present include: white mulberry, bitternut hickory saplings, hackberry sapling, Amur honeysuckle, Japanese honeysuckle, porcelainberry, Virginia creeper, poison ivy, a small section of wisteria, wineberry, mugwort, garlic mustard, bittersweet nightshade, and pokeweed. MC: invasives.

Spuyten Duyvil Entitment Unit Descriptions, Surveyed August 2007

**Unit:** 19  
**Acreage:** 0.43  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Paulownia	>30'	yes		Foot traffic	
Deciduous	Oak, pin	>30'	no			
Hemicryptophytes	Locust, black	>30'	yes			
Level	Aster, white wood	<5'	no			
Dry/Moist	Snakeroot, white	<5'	no			
	Mustard, garlic	<5'	yes			

**Comments:**

This is a very diverse unit that cannot be easily broken up into subunits. It is located to the west of a pond and the Henry Hudson Bridge. A footpath runs through the unit. Other species present include: green ash, silver maple, sycamore maple, box elder, a few paper birch clustered together, black cherry, black birch, red maple, white mulberry, black oak saplings, hackberry saplings, Ailanthus saplings, Rhododendron sp., Amur honeysuckle, spicebush, Forsythia, highbush cranberry, arrowwood, English ivy, poison ivy, porcelainberry, Virginia creeper, wineberry, hosta, wood sorrel, black nightshade, Virginia knotweed, lamb's quarters, Asiatic dayflower, and smartweed. MC: because of invasives such as porcelainberry, Ailanthus, Amur honeysuckle, etc.

**Unit:** 20  
**Acreage:** 0.04  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Apple, crab	5'-30'	yes			
Deciduous	Sweetgum	5'-30'	no			
Geophytes	Witch hazel	5'-30'	no			
Level	Mustard, garlic	<5'	yes			
Dry/Moist						

**Comments:**

This is a small unit of 4 crabapple, 3 witch hazel, and 2 sweetgum with patches of English ivy, garlic mustard, and white snakeroot. It is located on the South side of the park near the pond. Other species present include: bitternut hickory sapling, Ailanthus saplings, mimosa sapling, spice bush, Virginia creeper, English ivy, mugwort, wood sorrel, black nightshade, wineberry, Asiatic dayflower, and Virginia knotweed. MC: invasives such as Ailanthus, mimosa, and garlic mustard.

Spuyten Duyvil Entitment Unit Descriptions, Surveyed August 2007

**Unit:** 21  
**Acreage:** 0.05  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Scrub	Sumac, staghorn	<5' & 5-30'	no			
Deciduous	Phragmites	5'-30'	yes			
Geophytes	Grape, wild	<5' & 5-30'	no			
Slope						
Dry/Moist						

**Comments:**

This is a small unit bordering Edsall Avenue across from the Metro North station. It is on a slight slope. Other species present include: Japanese honeysuckle, mugwort, and garlic mustard. MC: invasive species.

**Unit:** 22  
**Acreage:** 0.04  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Grape, wild	<5' & 5-30'	no			
Deciduous	Mugwort	<5'	yes			
Lianas						
Slope						
Dry/Moist						

**Comments:**

This unit is a vineland growing over trees, mugwort, goldenrod, and Phragmites. It is located next to Edsall Avenue across from the Metro North Station and near the pond. Other species present include: sycamore maple, a few dead trees, staghorn sumac, wineberry, English ivy, and paspalum spp.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 23  
**Acreage:** 0.09  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Woodland	Sycamore maple	5'-30'	yes			
Deciduous	Ailanthus	all	yes			
Lianas	Ivy, English	<5'	yes			
Slope	Ivy, poison	<5'	no			
Dry/Moist	Box Elder	5'-30'	no			

**Comments:**

Transition unit between black locust / sycamore maple unit to Ailanthus unit. A large dying Ailanthus is present. Other species present include: Siberian elm, hackberry, green ash, black cherry sapling, Amur honeysuckle, multiflora rose, Virginia creeper, porcelainberry, grape, garlic mustard, and pokeweed. MC: because of invasive Ailanthus and porcelainberry.

**Unit:** 24  
**Acreage:** 0.08  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Sycamore maple	<5' & 5-30'	yes			
Deciduous	Mustard, garlic	<5'	yes			
Lianas	Ivy, poison	<5'	no			
Level						
Dry/Moist						

**Comments:**

This is a small unit located near a pond. Other species present include: box elder, Amur honeysuckle, white mulberry, English ivy, and white snakeroot.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 25  
**Acreage:** 0.16  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland Deciduous Lianas Slope Dry/Moist	Porcelain berry	<5' & 5-30'	yes	Phone pole	Foot traffic	

**Comments:**

This unit is a small sloping vineland on the west side of Henry Hudson Bridge. It is bordered by a herbaceous community under the bridge, forest unit 26, and Edsall Avenue at the top of slope. This unit is located on both sides of a paved pathway. A small amount of garlic mustard and mugwort are present. Other species present include: a few slippery elm and sycamore maple covered in vines and located at the top of the slope, poison ivy, Amur honeysuckle, and pokeweed.

**Unit:** 26  
**Acreage:** 0.11  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest Deciduous Lianas Slope Dry/Moist	Norway maple Ivy, English	<5' & 5-30' <5'	yes yes			

**Comments:**

This unit is a small closed forest on a rocky slope near the Henry Hudson Bridge. It is bordered by a vineland, Edsall Avenue, a pathway, and unit 18. Other species present include: bitternut hickory, slippery elm, box elder, black locust saplings, hackberry saplings, poison ivy, and garlic mustard. Three cardinals were spotted in unit.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 27  
**Acreage:** 0.11  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous	Mugwort	<5'	yes		Foot traffic	Erosion
Deciduous	Lamb's quarters	<5'	yes			
Hemicryptophytes						
Slope						
Dry/Moist						

**Comments:**

This unit is an herbaceous community located directly under the Henry Hudson Bridge. There is some erosion cutting through the center of the unit from the top to the bottom of the slope. Two bridge supports, which are fenced in and surrounded by rocks, are within the unit. Other species present include: 1 white mulberry, 1 hackberry sapling, porcelainberry, Japanese hops, garlic mustard, pokeweed, and wild grape.

**Unit:** 28  
**Acreage:** 0.17  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Norway maple	<5' & 5-30'	yes			Dumping
Deciduous	Locust, black	>30'	yes			
Hemicryptophytes	Aster, white wood	<5'	no			
Slope						
Dry/Moist						

**Comments:**

This unit is a Norway maple / black locust forest located on a rocky slope. Wood chip mulch covers the ground from the top of the slope to mid slope. At the bottom of the slope is a small pond with rocks around it. Other species present include: sycamore maple, green ash, hackberry, 1 tulip poplar, white mulberry, slippery elm, black walnut sapling, bitternut hickory sapling, nannyberry, spicebush, cat briar, Japanese honeysuckle, porcelainberry, poison ivy, Virginia creeper, garlic mustard, mugwort, and pokeweed.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 29  
**Acreage:** 0.15  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Grape, wild	<5' & 5-30'	no			
Deciduous	Porcelain berry	<5'	yes			
Lianas	Cucumber vine	<5'	no			
Slope						
Dry/Moist						

**Comments:**

This is a vineland that slopes from Edsall Avenue down to a pathway with ornamentals along side of it, which are beginning to be taken over by vines. Other species present include: Ailanthus, royal Paulownia, black cherry, mimosa, white pine, slippery elm, magnolia, white mulberry, a hedgerow of privet, Virginia creeper, poison ivy, Japanese honeysuckle, mugwort, white snakeroot, and pokeweed. A driveway with an old vehicle covered with vines is at the top of this unit. A sign states that this is private property and to keep out. MC: possible encroachment and invasives such as porcelainberry.

**Unit:** 30  
**Acreage:** 0.2  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
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**Comments:**

Unit currently staging area for the Henry Hudson Bridge construction project.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 31  
**Acreage:** 0.06  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Hops, Japanese	<5'	yes			Dumping
Deciduous	Ragweed, common	<5'	no			
Lianas	Mugwort	<5'	yes			
Level	Elm, Siberian	5'-30'	yes			
Dry/Moist						

**Comments:**

This is a small unit located under the Henry Hudson Bridge. It is dominated by Japanese hops, which thin out on the west side of the unit. Ragweed becomes more dominant on the west side of the unit. A small cluster of Siberian elms are present. Other species present include: fescue sp., pokeweed, porcelainberry, common nightshade, garlic mustard, lamb's quarters, and common plantain. A dumped bed is present in this unit.

**Unit:** 32  
**Acreage:** 0.04  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous	Phragmites	<5' & 5-30'	yes			
Deciduous						
Geophytes						
Level						
Moist						

**Comments:**

This is a small unit of Phragmites located under the Henry Hudson Bridge. It is bordered by the pond and Japanese hops unit 31.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 33  
**Acreage:** 0.16  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Aquatic (fresh) Deciduous Phanerophytes Depression Surface water	Willow, black	<5'	no			

**Comments:**

This unit is a pond that contains a fallen black willow that is still alive, and trying to resprout. A muskrat has been observed in the pond. Part of the pond is directly under the bridge.

**Unit:** 34  
**Acreage:** 0.05  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest Deciduous Hemicryptophytes Slope Dry/Moist	Elm, Siberian Box Elder Grass spp.	all all <5'	yes no		Foot traffic	

**Comments:**

This is a small unit next to the pond, with a few trees and fescue underneath. A foot path runs through this unit from Edsall Avenue to a dirt path. A nearly dead box elder is located next to the pond. The unit is rocky with many exposed roots by the pond. A patch of poison ivy is located next to the pond. Oriental bittersweet climbs some of the elm saplings. Small amounts of other species are present including: hackberry sapling, white mulberry saplings, mimosa, English ivy, Japanese honeysuckle, spiny sow thistle, beggars tick, mugwort, sweet yellow clover, and garlic mustard.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 35  
**Acreage:** 0.08  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous Deciduous Geophytes Level Moist	Phragmites	<5' & 5-30'	yes			

**Comments:**

This unit is a strip of Phragmites with patches of vines. A few staghorn sumac are at one end of the unit. A few trees are within the unit as well. It is located between the pond and Edsall Avenue near the Metro North station. Two "no standing anytime" signs are present within the unit. Other species present include: Siberian elm, boxelder, slippery elm, green ash sapling, poison ivy and porcelainberry. MC: Phragmites is an invasive species.

**Unit:** 36  
**Acreage:** 0.2  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest Deciduous Lianas Slope Dry/Moist	Elm, slippery Norway maple Ivy, poison Ivy, English	<5' & 5-30' <5' & 5-30' <5' <5'	no yes no yes		Foot traffic	

**Comments:**

This unit is located near the pond. It has several trails cutting through it. A large black willow marks the SW corner of the unit. Black locust are in the top canopy layer. Other species present include: box elder, American beech, Sassafras, cottonwood, white mulberry, green ash, black locust sapling, mimosa sapling, bitternut hickory sapling, red oak, witch hazel, multiflora rose, Japanese knotweed, wineberry, porcelainberry, grape, garlic mustard, pokeweed, white snakeroot, and mugwort. MC: because of invasives.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 37  
**Acreage:** 0.16  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Elm, slippery	<5' & 5-30'	no			
Deciduous	Siberian elm	<5' & 5-30'	yes			
Lianas	Mulberry, white	<5' & 5-30'	yes			
Slope	Locust, black	>30'	yes			
Dry/Moist	Ivy, English	<5'	yes			
	Grass, orchard	<5'	yes			

**Comments:**

A stream that feeds the pond runs through this unit. It is bordered by two footpaths, the bridge, and a large white willow near the pond. A pile of twigs is near the bridge construction site. Other species present include: box elder, royal Paulownia (1), green ash, bitternut hickory saplings, grape, porcelainberry, Japanese hops, cucumber, poison ivy, white wood aster, pokeweed, wineberry, and garlic mustard.

**Unit:** 38  
**Acreage:** 0.37  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Norway maple	all	yes	Exotic planting	Foot traffic	
Deciduous	Ivy, English	<5'	yes	Phone pole		
Lianas	Ash, green	all	no			
Undulating						
Dry/Moist						

**Comments:**

This is an undulating unit that is partially bordered by Edsall Avenue. A footpath runs through it. Norway maples dominate the overstory. A cluster of black cherries and scattered ash are present. English ivy dominates the understory. Ornaments are present along the roadside and along parts of the path. It looks like part of the unit was mulched with pine needles and cones. A fallen maple is within the unit. Other species present include: witch hazel, one large black locust, sycamore maple, box elder, slippery elm, black cherry, cork tree, hackberry, juniper, bitternut hickory sapling, spicebush, Amur honeysuckle, rose-of-Sharon, multiflora rose, porcelainberry, poison ivy, wineberry, hostas, white snakeroot, black nightshade, pokeweed, and ornamental flowers. MC: because of porcelainberry and other invasives.

Spuyten Duyvil Entitment Unit Descriptions, Surveyed August 2007

**Unit:** 39  
**Acreage:** 0.21  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Locust, black	all	yes			
Deciduous	Norway maple	5'-30'	yes			
Geophytes						
Slope						
Dry/Moist						

**Comments:**

This unit differs from neighboring unit 40 in that there is a scarce amount of ground vegetation. Other species present include: Ailanthus, slippery elm, sycamore maple, horse chestnut, sweet cherry, hackberry, box elder, green ash saplings, black locust saplings, Amur honeysuckle, multiflora rose, wineberry, poison ivy, English ivy, porcelainberry, wild grape, garlic mustard, white snakeroot, and pokeweed.

**Unit:** 40  
**Acreage:** 0.12  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous	Plantain, common	<5'	yes		Foot traffic	
Deciduous	Ragweed, common	<5'	no			
Hemicryptophytes	Mugwort	<5'	yes			
Level	Smartweed	<5'	yes			
Dry/Moist	Snakeroot, white	<5'	no			

**Comments:**

This unit is an herbaceous community on the SE side of the park that opens up to an area with small stones, a large rock, a black birch enclosed by a low fence, and two foot paths. The unit is dominated by common plantain on one side and a mix of ragweed, mugwort, and common plantain on the other side. White snakeroot becomes more dominant where the surrounding tree canopy overlaps the herbaceous community. Other species present include: wineberry, porcelainberry, Virginia knotweed, Asiatic dayflower, lamb's quarters, pokeweed, and white wood aster.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 41  
**Acreage:** 0.52  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Locust, black	>30'	yes			Dumping
Deciduous	Norway maple	<5' & 5-30'	yes			
Lianas	Ivy, English	<5'	yes			
Slope	Ivy, poison	<5'	no			
Dry/Moist						

**Comments:**

This unit is a sloping closed forest dominated by black locust (~30') in canopy, Norway maple in the sub-canopy, and English ivy and poison ivy on the ground. There are patches of English ivy dominance, poison ivy dominance, and small areas of mostly bare ground with garlic mustard. This unit is bordered by Edsall Avenue on the south side near the Metro North Station. Other species present include: black cherry, hackberry, Ailanthus, Siberian elm, box elder, slippery elm, bitternut hickory sapling, Japanese maple, Amur honeysuckle, multiflora rose, Japanese honeysuckle, Virginia creeper, Oriental bittersweet, Asiatic dayflower (on unit's edge), black nightshade, and white wood aster. Some bricks and concrete are within the unit.

**Unit:** 42  
**Acreage:** 0.23  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Woodland	Locust, black	>30'	yes	Exotic planting	Foot traffic	
Deciduous	Rose-of-Sharon	5'-30'	yes			
Hemicryptophytes	Periwinkle	<5'	yes			
Level						
Dry/Moist						

**Comments:**

This unit is an area where a lot of ornamental vines and shrubs have been planted. Other species present include: white pine (1), Norway maple (>30), white mulberry, Siberian elm, red maple, green ash, slippery elm, hackberry, box elder, mimosa, multiflora rose, Amur honeysuckle, grape, porcelainberry, Virginia creeper, poison ivy, Yam leaved clematis, hostas, pokeweed, garlic mustard, Asiatic dayflower, and mugwort (on the South side of the unit). A pile of plant trimmings is present. MC: invasives.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 43  
**Acreage:** 0.21  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Norway maple	<5' & 5-30'	yes			Erosion
Deciduous	Locust, black	all	yes			Trash
Lianas	Sycamore maple	all	yes			
Slope	Ivy, English	<5'	yes			
Dry/Moist						

**Comments:**

This is a sloped closed forest bordered by Palisade Avenue, Edsall Avenue, the Henry Hudson Bridge, and a house. A driveway cuts into the unit. Lots of detritus is present in the understory at the top of the slope and English ivy is present at the bottom of the slope. Large rocks border the bottom of the unit. Other species present include: 1 silver maple, Ailanthus, hackberry, box elder, white mulberry, horse chestnut sapling, bitternut hickory sapling, porcelainberry, Boston ivy, poison ivy, mugwort, black nightshade, wood sorrel, and white wood aster. MC: because of invasives and possible encroachment.

**Unit:** 44  
**Acreage:** 0.05  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Scarcely	Locust, black	<5'	yes			Erosion
Deciduous	Dayflower, Asiatic	<5'	yes			
Hemicryptophytes	Lamb's quarters	<5'	yes			
Slope						
Dry/Moist						

**Comments:**

This unit is located underneath the Henry Hudson Bridge between Palisade Avenue and Edsall Avenue. The unit includes two bridge supports, fenced in and surrounded by rock, a dirt slope with scattered vegetation, and two ruts where water likely flows down the slope causing erosion. In front of the supports, at the bottom of the slope vegetation becomes denser. Other species present include: black nightshade, spiny sow thistle, ragweed, Virginia creeper, and mugwort. Many bees or wasps present.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 45  
**Acreage:** 0.09  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Woodland	Norway maple	<5' & 5-30'	yes		Vehicle access	Trash
Deciduous	Liriope	<5'				Soil compaction
Hemicryptophytes	Mulberry, white	<5' & 5-30'	yes			
Slope	Nightshade, common	<5'	yes			
Dry/Moist						

**Comments:**

This unit is triangular in shape and located between Palisade Avenue, Edsall Avenue, and a fence located under the Henry Hudson Bridge. Norway maples dominate the canopy and Liriope dominates the understory. Construction workers park their vehicles at the top of this unit, causing soil compaction. A traffic sign and cut trees are within the unit. Other species present include: black locust, box elder saplings, bitternut hickory saplings, Ailanthus sapling, Asiatic dayflower, wood sorrel, pokeweed, garlic mustard, white snakeroot, and small amounts of mugwort, lamb's quarters, and porcelainberry. MC: because of invasives, cut trees, and soil compaction.

**Unit:** 46  
**Acreage:** 0.16  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Elm, slippery	<5' & 5-30'	no	Phone pole		
Deciduous	Elm, Siberian	<5' & 5-30'	yes			
Lianas	Elm, Chinese	<5' & 5-30'	yes			
Level	Ivy, English	<5'	yes			
Dry/Moist						

**Comments:**

This is a small unit of elms along a gravel trail in the east section of the park. The majority of the understory is English ivy with spots of garlic mustard. On the east side of the unit there is less English ivy. On the North side of the trail periwinkle is the dominant understory species and box elders and Norway maple are in the overstory. Other species present include: Ailanthus, black locust, box elder, hackberry, sycamore maple, highbush cranberry, rose-of-Sharon, Japanese knotweed, bindweed, Virginia creeper, porcelainberry, mugwort, and garlic mustard. Porcelainberry is present on the north side of the trail climbing over trees. (MC)

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 47  
**Acreage:** 0.05  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Grape, wild	<5' & 5-30'	no			
Deciduous	Porcelain berry	<5' & 5-30'	yes			
Lianas	Cucumber vine	<5' & 5-30'	no			
Slope						
Dry/Moist						

**Comments:**

This unit is a vineland that slopes from Johnson Avenue to a trail that runs through the woods. It is bordered on one side by a fence that separates the park from 2288 Johnson Avenue. On the other side there is a closed forest and the vines are beginning to climb the trees in this neighboring unit. Many bees are present. Other species present: mugwort. MC: stop spread of vineland.

**Unit:** 48  
**Acreage:** 0.49  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Norway maple	all	yes			Dumping
Deciduous	Sycamore maple	all	yes			Trash
Geophytes	Sassafras	all	no			
Slope	Mustard, garlic	<5'	yes			
Dry/Moist						

**Comments:**

This unit is a closed forest on a slope on the east side of the park. It is dominated by maples but has a significant amount of Sassafras. It differs from its neighboring unit because of the lack of oak. Other species present include: box elder, a large black cherry (>30'), green ash, Siberian elm, black walnut, hackberry, multiflora rose, spice bush, Oriental bittersweet, poison ivy, cat briar, and wineberry.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 49  
**Acreage:** 0.03  
**Mgmt. Concern:** Yes

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland	Porcelain berry	<5' & 5-30'	yes			
Deciduous	Elm, slippery	5'-30'	no			
Lianas						
Level						
Dry/Moist						

**Comments:**

This is a vineland which is climbing over an herbaceous community on the east side and is taking over trees to the west. It is also climbing telephone poles, wires, and a fire hydrant. MC: A large hole is present in the trail next to this unit. Other species present include: Norway maple, box elder, black oak, spicebush, Virginia creeper, English ivy, garlic mustard, and pokeweed.

**Unit:** 50  
**Acreage:** 0.5  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Norway maple	all	yes			Dumping
Deciduous	Sycamore maple	all	yes			Trash
Hemicryptophytes	Oak, white	>30'	no			
Slope	Oak, pin	>30'	no			
Dry/Moist	Aster, white wood	<5'	no			

**Comments:**

This is a forested unit dominated by maples with >30' oaks. This unit is located on the east side of the park. Other species present include: black oak, chestnut oak, black birch, black cherry, green ash, black locust, Ailanthus, Sassafras, cat briar, poison ivy, Virginia creeper, and garlic mustard.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 51  
**Acreage:** 0.07  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest Deciduous Phanerophytes Slope Dry/Moist	Elm, Siberian	<5' & 5-30'	yes			Dumping Trash

**Comments:**

This is a small unit of Siberian elms along the fence that borders the park from Johnson Avenue. Other species present include: Chinese elm, Norway maple saplings, box elder saplings, hackberry saplings, Virginia creeper, poison ivy, and garlic mustard. Feral cats are present. There is a woman who is feeding and finding homes for cats in this area.

**Unit:** 52  
**Acreage:** 0.15  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Vineland Deciduous Lianas Slope Dry/Moist	Porcelain berry Grape, wild	<5' & 5-30' <5' & 5-30'	yes no			

**Comments:**

This is a vineland between a herbaceous community and a closed forest. It is located near the railroad tracks and extends into the closed forest and over a path. Vines have grown over trees including: Siberian elm, Chinese elm, box elder, white mulberry, and Ailanthus. Other species present include: yam-leaved clematis, pokeweed, spiny-leaved sow thistle, and mugwort.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 53  
**Acreage:** 0.09  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Herbaceous	Foxtail	<5'	yes			
Deciduous	Dayflower, Asiatic	<5'	yes			
Hemicryptophytes	spiny-leaved sow thistle	<5'	yes			
Slope						
Dry/Moist						

**Comments:**

This is an edge unit, which borders a forest and railroad tracks. Other species present include: black locust saplings, Japanese hops and garlic mustard.

**Unit:** 54  
**Acreage:** 0.02  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Elm, slippery	<5' & 5-30'	no			
Deciduous	Elm, Siberian	<5' & 5-30'	yes			
Geophytes	Mustard, garlic	<5'	yes			
Level						
Dry/Moist						

**Comments:**

This is a small unit of elms. Other species present include: poison ivy.

Spuyten Duyvil Entitation Unit Descriptions, Surveyed August 2007

**Unit:** 55  
**Acreage:** 0.31  
**Mgmt. Concern:** No

<u>Site:</u>	<u>Species</u>	<u>Height</u>	<u>Exotic</u>	<u>Historical</u>	<u>Uses</u>	<u>Disturbance</u>
Closed Forest	Locust, black	all	yes			
Deciduous	Norway maple	<5' & 5-30'	yes			
Geophytes	Sycamore maple	<5' & 5-30'	yes			
Slope	Mustard, garlic	<5'	yes			
Dry/Moist	Ivy, poison	<5'	no			

**Comments:**

This unit has a canopy of black locust, and an understory of Norway and sycamore maple, with a variety of species in the herbaceous layer. It is located in the southeast portion of the park between an elm unit and a vineland unit. Other species present include: pin oak, osage orange (1, >30'), crab apple, hackberry, black cherry, white mulberry, Amur honeysuckle, multiflora rose, porcelainberry, Virginia creeper, English ivy, Japanese honeysuckle, yam-leaved clematis, wineberry, pokeweed, Asiatic dayflower, and wood sorrel.

## APPENDIX: Glossary

Many of these definitions are adapted from Marge Garguillo's unpublished *Plants of New York City Natural Areas: An ecological manual* (2005).

**Chamaephyte:** Mature branch or shoot system remaining perennially less than or equal to 100in above ground. Buds are produced on aerial branches close to the soil. (e.g. shrubs)

**Closed forest:** An area formed by trees at least 15 feet tall with interlocking crowns and at least 80% canopy closure.

**Competition:** The ability of one plant to overwhelm another plant by shading it out or otherwise overwhelming it.

**Deciduous:** Majority of trees shed their foliage in the autumn months.

**Depression:** A hollow, or low point, as compared to the surrounding topography. May or may not contain water.

**Dominant:** The most abundant plants in a particular plant community. A **codominant** plant is about equally as abundant as the dominant species.

**Exotic:** A species that does not naturally inhabit a specific area. An exotic plant may or may not be invasive where it is introduced.

**Exotic planting:** A gardened area where non-native species (e.g. privet, periwinkle) are tended.

**Full-crown tree:** Initially open-grown and free of competition: currently very large with a dominating crown.

**Geophyte:** Plants with buds or shoots surviving below the ground (rhizomes, bulbs, stem tubers, root tubers.)

**Graminoid:** Grasses and grass-like plants.

**Hedgerow:** Evidence of trees or shrubs planted in line i.e., maple or privet along road or path.

**Hemicryptophyte:** Shoots die back to ground level.

**Herb:** Plants without woody tissues that die back to the ground in the winter. This classification is usually applied to broad-leaved plants rather than grasses, but includes grasses for the purpose of entitation.

**Herbaceous community:** An area where grasses, grasslike plants, and herbaceous plants are predominant. Woody plants may be sparingly present, but cover less than 30% of area.

**Intertidal Communities:** Substrate is exposed and flooded by tides, includes the associated splash zone.

**Invasive plant:** A plant species that grows and reproduces without constraint, crowding or shading out other plants. The term is usually applied to plants that are not native to the given region. Invasiveness in a plant that is native to the region is rare and probably caused by unusual circumstances.

**Knoll:** A small isolated hillock.

**Landfill:** Topography altered by previous filling or dumping: i.e., while building a road or altering a wetland area. Look for rubble on the soil surface or sudden changes in grade.

**Lianas:** Vascular plants needing support, rooting in the ground permanently (vines).

**Native plant:** Plants that were growing in this region before Europeans came to North America. Native plants are adapted to the climate and soils of their region. They have relationships with birds, mammals, insects, and fungi and are integrated into the ecology of the region. New York City's native plants come from seed that spread northward after the last glaciers melted thousands of years ago.

**Ornamental:** Plants used as horticultural specimens in gardens or developed parks, not intended to reproduce or be part of a natural plant community. Very often they are non-native plants.

**Phanerophyte:** Plants that grow taller than 100 in. or whose shoots do not die back periodically to that height (e.g., trees).

**Scrub:** A shrubland or thicket, mainly composed of woody plants 1.5 to 15 feet tall.

**Slope:** Ground that forms a natural or artificial incline.

**Soil compaction:** Increasing soil density and decreasing porosity due to application of mechanical forces to the soil: i.e. due to vehicle, horse, or foot traffic.

**Species:** A group of organisms that can interbreed to produce fertile young.

**Understory:** Habitat below the tree canopy of a forest. The understory is a plant community of tree saplings, shrubs, herbs, graminoids, and mosses that can live in shade or part shade.

**Undulating:** The area has a wavy surface. Its neither a slope, a level area, or a depression, but rather a combination of all three.

**Vineland:** An area formed by at least 30% vines. Vines may be supported by vegetation, artificial means or ground surface. Often occurs on the forest or shrub border.

**Woodland:** An area formed by trees at least 15 feet tall, with most of their crowns not touching each other, but at least 30% canopy closure.