

BIOLOGICAL INVENTORIES AT THREE NATIONAL PARK SERVICE
SITES IN THE NATIONAL CAPITOL REGION

FINAL REPORT

May 2000

Submitted to:

National Park Service
National Capital Parks-East
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

Submitted by:

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9415 Rockville Pike
Bethesda, Maryland 20814

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1. INTRODUCTION

The goal of this study was to establish a species list and some limited relative abundance estimates for herptiles and small mammals for Greenbelt and Piscataway National Parks. In addition, we are initiating a plant list and description of vegetation cover types for Greenbelt National Park and the Piscataway Annex property on the north side of Piscataway Creek. The information derived from this study will contribute to the baseline information available concerning the parks, and will be used to help evaluate current park management practices and determine if changes are necessary to maintain or enhance existing habitats to preserve biodiversity.

2. THE STUDY SITES

2.a Greenbelt National Park

Greenbelt Park encompasses over 1,000 acres of mostly forested land in urban Prince George's County (**figure 1**). The Park provides camping, picnicking and playground facilities, and hiking/horseback riding through an extensive trail system.

Greenbelt Park is located within the Atlantic Coastal Plain. Sediments consist of clay, silt, sand, and gravel, with clay and silty clay making up the largest part. The stream valleys in the park generally have broad alluvial floors.

The topography of the park is rolling to steep, with many deep ravines. Slopes vary from 0% to 50%.

Greenbelt Park is intersected by two streams, Deep Creek and Still Creek (**figure 2**). These streams flow into the Northeast Branch of the Anacostia River. These streams are deeply cut in many areas.

2.b. Piscataway National Park and the Piscataway Annex

Piscataway National Park (PNP) consists of 4,251 acres, with the Piscataway Annex (Annex) accounting for an additional 107 acres. PNP is located approximately 10 miles south of Washington, D.C. (**figure 1**). The eastern three-quarters of the park is located in Prince George's County, while the western one-third is located in Calvert County. PNP is bounded on the north by the Potomac River and Piscataway Creek. The Annex is located across Piscataway Creek from the PNP, a short distance from the Fort Washington marina.

PNP includes a number of habitat types, including upland and wetland forest, emergent wetland, agricultural and abandoned agricultural land, ponds, streams, and tidal riverine areas. The Annex includes upland forest and a much smaller area of wetland forest, with a small amount of tidal riverine areas (**figure 3**).

3. METHODS

3.a. Vegetation Species List

A list of herbaceous and woody plants was initiated by recording all flowering (or otherwise identifiable) plants observed during visits to specific habitats at Greenbelt National Park and the Piscataway Annex. In addition, observations were made during the woody vegetation sampling and while other field work was being conducted. An attempt was made to see representative areas at various times during the growing season. Unknown species were collected for later identification. These plant lists were checked against state and federal list of rare, threatened and endangered species.

3.b. Herptile survey

Methods used to inventory reptiles and amphibians included aural surveys and visual encounter surveys that focused on breeding and other potential congregation points. Drift fences and traps were not used in 1998 due to concerns about habitat disturbance, and limited time and resources to cover such large areas. However, in 1999 it was decided to use funnel traps to try to catch snakes and other hard-to-observe species. Approximately 12 funnel traps were set during each Sherman trap session in 1999. Fallen logs and walls were used as "fences" to aid in directing animals into the funnel traps.

Frog calls heard during daytime field work on many dates were noted. In addition, a night aural survey of Piscataway NP and Greenbelt NP was conducted on April 22, 1998 which was a warm, cloudy night after some rain. Accessible breeding sites at Piscataway were visited including Marshall Hall, Braniton Road ponds, Colonial Farm, Accokeek Creek, and Wharf Road. At Greenbelt, the paved roads of the west area were cruised. Plans were made to conduct later night aural surveys, but the onset of the drought resulted in no rainy weather after early May.

In 1999, due to the drought, many vernal ponds were dry or very low, and there was no opportunity to conduct a night aural survey during rainy weather. However, egg and adult searches were conducted in suitable habitats during the day.

Visual encounter surveys for herps involved intensive searches through various habitats by turning cover and searching for eggs and larvae in potential breeding sites. The most extensive of

these occurred in the spring in conjunction with herbaceous plant surveys, although other searches were conducted during forest cover surveys and mammal trapping in the summer and fall. The drought caused such dry soils that very few herp observations were made after the spring, however. The dates and locations of intensive, targeted herp surveys are shown in **table 1**, below. These include aural and visual encounter surveys. Incidental searches occurring in the summer and fall are not shown (see text):

Table 1

1998	3/13	3/17	4/3	4/22	4/23	4/29	5/26
Piscataway	X	X		X			X
Greenbelt		X	X	X	X	X	X

1999	4/19	4/21	4/28	5/21
Piscataway	X			X
Greenbelt		X	X	

3.c. Mammal Survey

Small mammals were sampled using Sherman live traps set in a variety of habitats. Traps were baited with a mixture of peanut butter and oatmeal. Approximately 150 traps (1998) or 100 (1999) were set at each study site for three consecutive nights in late spring and early fall (see Table 2.) for a total of 3006 trap nights. Either 25 or 50 traps were set along transects located to sample representative habitat types. Most transects were located in different areas for the second session at each site than in the first session, to maximize the area sampled. The number of Sherman traps set during each trapping session for both study sites, and the total number of trap nights per session and site, are shown in **table 2**, below (Note: Numbers with an (*) were adjusted due to traps taken out of service during the session due to destruction or flooding):

Table 2

1998	6/10-13	6/17-20	9/28-30	10/13-16	TOTAL
Piscataway		148		150	894
Greenbelt	150		150		900
TOTAL	450	444	450	450	1794

1999	5/18-21	6/1-4	9/7-10	9/14-17	TOTAL
Piscataway	106		101		616*
Greenbelt		103		100	596*
TOTAL	313*	309	303	287*	1212

In addition to the trapping, all sightings of mammals or their sign made whenever we were in the field were noted. Records of medium and large species were gathered this way.

3.d. Forest Structure Survey

Transects were used to sample the woody vegetation on selected parts of Greenbelt National Park and the Piscataway Annex. Sample points were taken at intervals of 35 or 55 meters, depending on the uniformity of the forest. These samples were intended to provide intensive data on specific areas of the parks, and thus provide a baseline with which future changes could be compared.

A plotless sampling method was used to characterize the woody vegetation. At each sample point, a Factor 10 wedge prism was used to identify the woody stems to tally. The diameter breast height (dbh) and species of each "in" tree were recorded. For stand basal area the number of "in" trees at each point were averaged over all of the points within a stand and multiplied by the prism factor (*i.e.*, 10) to estimate square feet per acre. For stand density, the number of "in" trees in each dbh class was multiplied by the number of trees represented by each of the diameter classes (Bell and Dilworth, 1997). The densities at all of the Sample Points were then averaged to get stand density.

In some areas of large tracts of uniform forest (*e.g.*, the east side of Greenbelt) sample points were not established, and instead the entire area was walked while taking extensive notes on species composition and stem size.

The forest structure information is located in the **Appendix**.

4. RESULTS AND DISCUSSION

The first field season (1998) of this project was spent obtaining an overview of the study sites to identify and characterize the major habitats, and begin the floral and faunal inventories. This was accomplished sufficiently to allow the second season to be used to focus on filling in likely gaps in the data that became apparent. This phased approach to the inventory project has used the limited time and resources available to produce a baseline data base as comprehensive as possible.

Below are descriptions of the data bases for each biotic category, including any notable limitations to data collection that were encountered.

4.a. Vegetation Species List

There were 157 herbaceous species, in 118 genera, identified at Greenbelt National park (table 3), and there were 76 woody species, in 50 genera, identified at the Park (table 4). Two species were listed on the global, federal, or state lists of rare, threatened, or endangered species (see table 5 for a list of these rankings). These species are:

<i>Krigia virginica</i>	Virginia dwarf dandelion (G5, S1, E)
<i>Castanea pumila</i>	Chinquapin (G5, S3)

The *Krigia* population is confined to one portion of stream bank along Still Creek and is comprised of perhaps several hundred individuals. It is not known whether the population is stable or not. The *Castanea* population consists of uncounted scattered plants through the northern upland mixed woods of the east side, and similar forest types near the Dogwood Trail. It is not known whether the population is stable or not.

There were 189 herbaceous species, in 145 genera, and 77 woody species, in 51 genera identified at the Piscataway Annex (tables 6 and 7). Eight species were listed on the global, federal, or state lists of rare, threatened, or endangered species. These species include:

1. <i>Arisaema dracontium</i>	Green dragon	G5; S3
2. <i>Bidens coronata</i>	Tickseed-sunflower	G5; S2S3
3. <i>Carex albursina</i>	White bear sedge	G5; S3
4. <i>Commelina virginica</i>	Virginia dayflower	G5; S3
5. <i>Myosotis macrosperma</i>	Large-seeded forget-me-not	G5; S1; T
6. <i>Nemophila aphylla</i>	Sm. fl. Baby blue-eyes	G5; S1
7. <i>Ranunculus micranthus</i>	Small-flowered crowfoot	G5; S3
8. <i>Scutellaria galericulata</i>	Marsh skullcap	G5; S1
9. <i>Fraxinus profundo</i>	Pumpkin ash	G4, S2, S3

Population trends for all of these species are unknown. Species 5, 6, and 7 are widespread and reproducing on the site. The *Commelina* occurs as a large stand just above high tide along the beach near the mouth of the large unnamed stream draining through the site. The *Arisaema* population consists of a stand of perhaps 20 or 30 immature and mature plants at the base of one of the small gullies near the center of the site. The remaining listed herbaceous plants occur as scattered individuals within the non-tidal wetlands of the site.

Tables 3, 4, 6 and 7 also note which species are listed as invasive on several published lists (Cooley, 1994; VA Dept. of Cons. and Rec., undated; Md. Native Plant Society, 1999). Most of these are introduced species, and all of them are known to have the potential to displace native species and lower overall diversity. Exotic species that are not generally considered invasive are not noted in the tables. The Greenbelt list

includes 25 herbaceous and 8 woody invasives, and the Piscataway Annex list includes 21 herbaceous and 9 woody invasive species. Many of the most aggressive species occur on both lists, such as *Ailanthus*, *Alliaria*, *Arthraxon*, *Celastrus*, *Clematis*, *Duchesnea*, *Festuca*, *Glechoma*, *Hedera*, *Lonicera*, *Microstegium*, *Perilla*, *Polygonum perfoliatum*, *Rosa*, and *Stellaria*. Some of these are apparently now abundant enough to be significantly affecting native diversity, or have the potential to do so. These are discussed in the Management Recommendations section below.

4.b. Herptile Survey

Tables 8 and 9 summarize the species of reptiles and amphibians observed by the authors, or reliably reported since 1980, at each study site. The tables also indicate species which were expected to be present, but were not observed during this study. The expected list is based on reliable historical records and the apparent presence of appropriate habitat for species known from this region.

As shown in tables 8 and 9, more than twice as many amphibian species were found at Piscataway NP than at Greenbelt. This is as expected due to the larger and more diverse wetlands at Piscataway, and its more rural setting. The most attractive looking wetland at Greenbelt is the beaver impoundment on the east side. This impoundment could probably support more species, but the fact that it is a relatively new feature of the environment isolated from potential source populations probably results in it being under utilized.

The streams of Greenbelt are poor quality amphibian habitat due to the scouring and unstable substrate typical of urban streams. There are still some floodplain swamps along Still and Deep creeks, but they apparently do not typically hold water long enough to provide reliable breeding sites for many amphibians. This assumption is based on the lack of eggs or larvae of common species such as *Ambystoma maculatum* in the vernal pools both springs, and not solely because the pools did not persist in these unusually dry years. The lack of rain after mid-spring both years was possibly a factor contributing to the failure to find more salamander, snake, and turtle species.

Reptile observations were sparse at both sites in spite of many hours in the field. As mentioned above, dry weather may partially account for this. Since cryptic and fossorial species (e.g. many snakes) in particular, are difficult to inventory without trapping, some funnel traps were used in 1999. These traps resulted in confirmation of 2 new amphibian species at Greenbelt, and 1 mammal and 1 reptile at Piscataway, but no new species of snakes were captured in them.

Another factor that may help explain the lack of medium to large snake species (and certain other predators) is the surprisingly low numbers of small mammals apparently present at both study sites (see discussion below).

In 1999, targeted searches were conducted at likely times and places to determine if some of the species likely to occur but were not found in 1998 were present. Species targeted include redback salamander, newt, dusky salamander, Fowler's toad, green treefrog, five-lined skink and several snakes and turtles at Piscataway; and spring peeper, Fowler's toad, pickerel frog, four-toed salamander, and painted turtle at Greenbelt. Of these, Fowler's toad, green tree frog, five-lined skink, three turtles, and three snakes were found at Piscataway; but only Fowler's toad and pickerel frog were found in 1999 at Greenbelt.

In summary, a ranking of the lists of groups of herptiles from the highest to lowest confidence in their completeness is as follows: Anurans, lizards, turtles, salamanders, snakes. This is because of the relative observability of these groups determined by their daily and seasonal activity patterns, and relative abundance. In order to gain confidence in the list of salamanders and snakes, a more extensive use of specialized traps and more intensive search of microhabitats at appropriate times is needed.

4.c. Mammal Survey

Table 10 summarizes the species of mammals observed by the authors, or reliably reported since 1980, at each study site. The table also indicates species which were expected to be present, but were not observed during this study. The expected list is based on reliable historical records and the apparent presence of appropriate habitat for species known from this region. Of the species listed, only *Peromyscus*, *Blarina*, *Sorex*, and *Mus* were caught in traps.

In 1998 the total trap rate was a remarkably low 43 captures (36 *Peromyscus*, 4 *Blarina*, and 3 *Mus*) for 1794 trap nights, indicating very low densities. In 1999 the capture rate improved overall to 71 (69 *Peromyscus*, 1 *Blarina*, and 1 *Mus*) for 1,212 trap nights, but most of that improvement was at Greenbelt. Discussion of these results is presented in the Discussion section below.

The most remarkable thing about the results of the small mammal trapping at both sites was the scarcity of typically abundant species such as white-footed mice, shorttail shrews, and meadow voles. No meadow voles were captured in the field sets at either site, although a few runs were visible at Piscataway, and a vole was seen there. House mice were caught in a grassy meadow by the access road to Accokeek Creek, at Marshall Hall, and near the Colonial Farm where voles were expected. Raccoon and

squirrel disturbance to some of the traps was moderate but not enough to account for the low capture rate.

Small mammal species are known to experience local population crashes, but it is hard to explain the low numbers of several species at both study sites (the white-footed mouse population at Greenbelt seemed to be recovering in 1999.) There may have been unusual failures of mast crops in recent years affecting forest rodents. As mentioned above, the low mouse populations may explain the scarcity of some predators such as some snakes, fox, skunk, and weasel. Species notably missing or scarce include flying squirrel, *Sorex* shrews, star-nosed mole, meadow vole and chipmunk at either site; and red fox at Piscataway. Some of these species have been reported by others in recent years, and so may be reasonably expected to re-occur, or become more numerous in the future.

Species that were undoubtedly under-sampled include small predators such as *Sorex* shrew species and weasels. Shrews are most successfully captured using pitfall traps, which were not used in this study. Weasels are never numerous, very secretive, and difficult to trap. The only *Mustelid* discovered during this study was mink, as indicated by a few tracks seen in mud. Some of the other expected, but not confirmed species are notoriously sporadic in their occurrence within their ranges. These include spotted skunk, river otter, and meadow jumping mouse. Two species, the marsh rice rat and eastern harvest mouse, have not been reported from this area for many years and are at the edge of their known ranges at Piscataway, and therefore may be expected to appear and disappear periodically.

5. Management Recommendations

A detailed and comprehensive list of recommendations for managing the biota of the study sites is beyond the scope of this project. However, during the course of this study certain processes were observed that have the potential to negatively affect biodiversity, and these are discussed in the following sections.

5.a. Plant Management

5.a.1. Greenbelt NP

Further study is necessary to determine the health and sustainability of the populations of the two listed rare plant species found at Greenbelt. Neither species occurs in areas of intensive use, and no imminent threat to them is apparent. *Krigia* may be vulnerable to over-browsing by deer if the deer become over abundant, but its attractiveness to deer is unknown. *Castanea* reproduction may also be impeded by sustained over abundant deer. Other notable plants, such as *Cypripedium acaule* (pink lady's slipper) would probably also suffer if deer became

too numerous. Currently, deer over abundance is not a problem at Greenbelt, but other nearby parks and government compounds have had this problem. Recognizing that deer population control is a controversial issue, close monitoring of Greenbelt deer is recommended so that a burgeoning population can be detected and managed before ecological damage occurs.

Since the vast majority of Greenbelt NP is forested, successional processes will not dramatically alter plant community structure. Pines can be expected to steadily decline as canopy dominants as the forest matures. Typically, forest structure complexity increases as oak-hickory forests mature, and this bodes well for overall community stability, and although some early successional species may decline, these tend to be abundant species regionally. Therefore, management of successional processes at Greenbelt is not recommended.

Probably the most imminent threat to plant diversity at Greenbelt is the abundance of certain invasive exotic species. Some of the invasives noted on the plant list are most prevalent in actively or recently disturbed areas, and are unlikely to persist long after the disturbance stops (i.e. *Allium*, *Anthoxanthum*, *Artemisia*, *Cirsium*, *Dipsacus*, *Echinochloa*, *Lamium*, *Lespedeza*, *Perilla*, *Stellaria*, and *Sorghum*) and therefore are not serious threats to forests. Many of the remaining species are shade tolerant, and may persist under closed canopies. Some of these (i.e. *Celastrus*, *Clematis*, *Lonicera*, *Polygonum perfoliatum*, *Rosa*, and *Rubus phoenicolasius*) languish in deep shade, but can flourish when released by a canopy break. Others (*Ailanthus*, *Alliaria*, *Duchesnea*, *Glechoma*, *Hedera*, *Microstegium*, *Polygonum cespitosum*, and *Vinca*) may spread even in the shade, and these are probably the most threatening species at Greenbelt. Most of these still do best where disturbances such as soil compaction or water scouring and deposition have occurred, and therefore line footpaths, floodplains, and erosion channels. *Hedera* and *Vinca* are garden escapes that are most abundant along boundaries with residential land where they spread vegetatively into the park.

Management recommendations for controlling the spread and ecological impact of invasive plants include:

1. Continue to vigorously discourage off-trail foot traffic, especially ad hoc trail formation. Reclaim abandoned trails by removing any invasive plants and mulching heavily.
2. Improve management of surface runoff from trails and roads to eliminate active erosion and deposition of sediment.
3. Develop a neighbor education program that explains the negative effects of disposing of yard waste in forest edges, and discourage planting of invasives.

4. Actively remove spreading stands of invasives using community volunteers or Conservation Corps. A good reference for appropriate methods for the various species is "Control of Invasive Non-Native Plants: A Guide for Gardeners and Homeowners in the Mid-Atlantic Region" published by the Maryland Native Plant Society (1999).

5.a.2. Piscataway Annex

Further study is necessary to determine the health and sustainability of the populations of the nine listed rare plant species found at this site. However, some general comments may be made about the relative vulnerability of these plants. The most vulnerable of the rare perennials is probably the lone stand of *Commelina virginica* that could be damaged by shore erosion or tidal-born pollutants. Also, the *Arisaema dracontium* was found in only one area, although out of the way of any likely source of disturbance. The other rare wetland plants (*Bidens*, *Fraxinus*, *Scutellaria*) could conceivably be damaged by a severe flood that scoured or filled significant portions of the non-tidal wetland. The remaining rare species are widespread on the uplands, and would only be threatened by some general change in the vegetative structure, such as large scale tree removal by a windstorm, for instance.

Ongoing artificial disturbances to portions of the site result from use by dirt and mountain bikers. Poorly located trails that run up steep slopes are actively eroding and widening. In some locations, these trails directly threaten stands of native wildflowers. They also aid in the spread of certain exotic invasive plants, such as *Microstegium*. The potential for restricting biker use of the Annex through more effective barriers, signage, or regular patrolling should be explored. If this is not feasible, the most destructive trails should be reclaimed and/or relocated, and all remaining trails should be stabilized with erosion control structures.

As discussed for Greenbelt, exotic invasive species also threaten the biodiversity of the Annex. The extensive edge created by the shoreline makes controlling invasives along the river trail more problematic due to increased light levels. Vines such as *Lonicera*, *Celastrus*, and *Clematis* are well established along the river, and would require a sustained effort to control. A priority would be removal of those that appear to be spreading inland. Shade tolerant invasives such as *Alliaria*, *Glechoma*, *Duchesnea*, and *Microstegium* should also be targeted since they may compete directly with the *Arisaema*, *Carex*, *Nemophila*, *Myosotis*, and *Ranunculus micranthus*.

5.b. Herptile Management

5.b.1. Greenbelt NP

Little is known about the specific habitat requirements of most native reptile and amphibian species, with the possible exception of the breeding site requirements of frogs and some salamanders. This study was not designed to assess the population status of the animal species, but the presence of those reported may generally be interpreted as confirmation that breeding is occurring in or around the study site, and therefore adequate habitat exists to some extent. As mentioned above, this study took place during two exceptionally dry years, and wetland (especially ephemeral wetland) dependent species undoubtedly suffered. Further research is needed to determine the long range population trends of all the herptile species.

The proximate cause for the lack of certain amphibian species at Greenbelt may be the lack of suitable breeding wetlands. In particular, red-spotted newts, wood frogs, and spotted salamanders prefer ephemeral ponds that persist through the spring and early summer in average rainfall years. Some of the floodplain swamps along Still Creek probably met this criteria before the stream channel hydrology became altered by deforestation and development of the watershed. Currently, these swamps typically dry up long before these amphibians can complete their larval development. The opportunity to restore some of these wetland areas without major disruption to the landscape should be explored. The beaver impoundment on the east side may have already accomplished this by flooding some of these wetlands. If the beaver impoundment does indeed provide suitable breeding ponds, or if restoration elsewhere is feasible, these species may be reintroduced by transplanting eggs or larvae into the restored wetlands. Breeding populations of these species may increase the prey base enough to help support larger predators, such as certain snakes.

Other amphibians that were not found (N. dusky and two-lined salamanders) are stream breeding species that probably cannot survive in the flashy streams that support poor aquatic invertebrate populations. Although the condition of the watershed outside the park is beyond the control of the Park Service, it may be possible to restore some of the smaller tributaries to a state where they could support these animals. Poor water quality from highway runoff may be problematic, but the feasibility of restoration should be researched.

5.b.2. Piscataway NP

The size and landscape diversity of Piscataway NP support a diverse reptile and amphibian community, and the general management recommendation is to maintain the existing vegetative and wetland types. However, there may be room for improvement of

stream and wetland habitat which could benefit animal populations. For example, Johnson's Gully is currently burdened with a large slug of sediment from an unstabilized slope where runoff from Poplar Hill Road is poorly controlled. The lower floodplain of Accokeek Creek is also heavily sedimented from an undetermined source. These drainages should be surveyed for active erosion problems and stabilized wherever feasible.

5.c. Mammal Management

5.c.1. Greenbelt NP

Greenbelt NP is an isolated island of forest surrounded by busy roads and intense development. As such, it is subject to the processes of island biogeography that portend a steady decline in biodiversity. It is probably not large enough to sustain viable populations of area-sensitive mammals, particularly predators weasel size and larger, and non-forest species. The regular occurrence of these species in the Park would likely depend on a suitable corridor connecting it to outside sources and a regional metapopulation. Without these corridors, little can be done to sustain mammal diversity in the Park except artificial reintroduction of existing species that may disappear after some catastrophic event, such as a disease epizootic, or prolonged failure of important food sources.

It is conceivable that certain small mammal species that are not present in spite of apparently suitable habitat, were eliminated by past land use changes, and have been unable to recolonize the Park due to isolation from source populations. Examples include star-nosed mole, pine vole, masked shrew, and eastern chipmunk. If continued efforts to locate these species in the Park fail, and healthy source populations are accessible, reintroduction of these species should be considered.

5.c.2. Piscataway NP

As stated in the Herptile Management section above, the variety of habitat types present at Piscataway NP results in a fairly diverse mammal community, and the general management recommendation is to maintain the existing vegetative and wetland types. There is the open question here about the reasons for the lack of good populations of non-forest species. The rural setting of the Park would seem to allow for immigration of these species into suitable habitat, but it is unknown whether source populations exist within a reasonable distance, or if the surrounding forested viewshed is an effective barrier for these species. It is recommended that periodic sampling in meadows be conducted to determine if the present absences are merely a temporary condition, or not. If species such as meadow vole, marsh rice rat, eastern harvest mouse, and meadow jumping mouse are not found, and the long term plan for the park is to retain large meadows, reintroduction of any or all of these should be

considered. Breeding populations of these species may increase and stabilize the prey base enough to help support more predator species.

6. SUMMARY AND CONCLUSIONS

Herbaceous and woody species lists were established at PA and GNP. These lists represent an intensive survey of the two sites, but should not be considered comprehensive. The lists were checked against global, federal, and state rare, threatened and endangered species lists. In addition, the forest structure was investigated at the Piscataway Annex (PA) and Greenbelt National Park (GNP) using transects and plotless sampling.

Herptiles and mammals were investigated at GNP and at Piscataway National park. Methods used to inventory reptiles and amphibians included aural surveys and visual encounter surveys that focused on breeding and other potential congregation points. Funnel traps were used to try to catch snakes and other hard-to-observe species. Small mammals were sampled using Sherman live traps set in a variety of habitats.

There were 157 herbaceous species in 118 genera, and 76 woody species, in 50 genera, identified at GNP. Two of these species were found on the global, federal, or state lists of rare, threatened, and endangered species.

There were 189 herbaceous species, in 145 genera, and 77 woody species, in 51 genera, identified at the Piscataway Annex. Nine of these species were found on the global, federal, or state lists of rare, threatened, and endangered species.

There were 7 amphibian species observed or reported at GNP, and 16 species observed or reported at the PA. The finding that there were more amphibian species found at Piscataway NP than at Greenbelt is not unexpected. This is due to the larger and more diverse wetlands at Piscataway, and its more rural setting. The most attractive looking wetland at Greenbelt is the beaver impoundment on the east side. This impoundment could probably support more species, but the fact that it is a relatively new feature of the environment isolated from potential source populations probably results in it being under utilized.

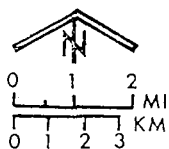
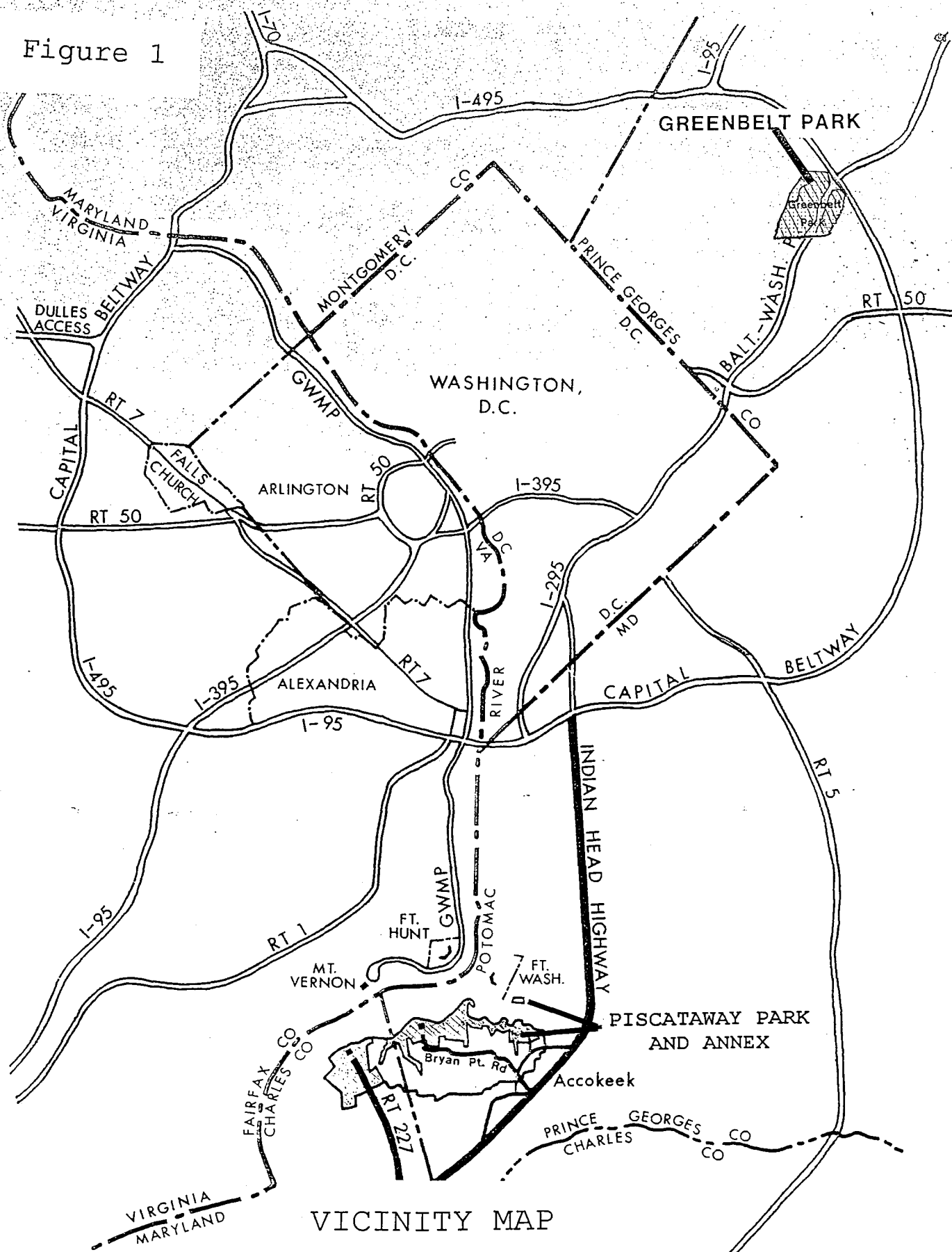
There were 4 reptile species observed or reported at the GNP, and 19 observed or reported at the PI. Reptile observations were sparse at both sites in spite of many hours in the field. As mentioned above, dry weather may partially account for this. Another factor that may help explain the lack of medium to large snake species (and certain other predators) is the surprisingly low numbers of small mammals apparently present at both study sites.

There were 11 mammal species observed or reported from GN, and 19 species observed or reported from the PA. However, In 1998 the total trap rate was a remarkably low 43 captures (36 *Peromyscus*, 4 *Blarina*, and 3 *Mus*) for 1794 trap nights, indicating very low densities. In 1999 the capture rate improved overall to 71 (69 *Peromyscus*, 1 *Blarina*, and 1 *Mus*) for 1,212 trap nights. Most of that improvement was at Greenbelt. The most remarkable thing about the results of the small mammal trapping at both sites was the scarcity of typically abundant species such as white-footed mice, shorttail shrews, and meadow voles. There may have been unusual failures of mast crops in recent years affecting forest rodents. As mentioned above, the low mouse populations may explain the scarcity of some predators such as some snakes, fox, skunk, and weasel.

7. LITERATURE CITED

- Adams, Lowell W. 1994. Urban Wildlife Habitats, A Landscape Perspective. Univ. of Minnesota Press, Minneapolis 186 pp.
- Bell, J.F. and J.R Dilworth. 1997. Log Scaling and Timber Cruising. John Bell and Associates, Inc., Corvallis, Oregon.
- Burt, William H., 1980. A Field Guide to the Mammals , The Peterson Field Guide Series. Houghton Mifflin Co., New York, NY, 289 pp.
- Cooley, Gene. 1994. Exotic Plants. Md. Natural Heritage Program. 6 pages.
- Ernst, Carl H. et al. 1997. The Amphibians and Reptiles of Ft. Belvoir and Northern Virginia. in Bulletin of the Maryland Herpetological Society, Vol.33, Number 1.
- Fowler, A., 1945. The amphibians and reptiles of the National Capital Parks and the District of Columbia region. Dept. of the Interior, National Park Service, National Capital Parks.
- Harris, Herbert S., 1969. Distributional Survey: Maryland and the District of Columbia. in Bulletin of the Maryland Herpetological Society, Vol. 5, Number 4.
- Maryland Native Plant Society. 1999. Control of Invasive Non-native plants. Silver Spring, MD.
- Virginia Department of Conservation and Recreation. Undated. Invasive Alien Plant Species in Virginia.

Figure 1



GREENBELT PARK AND PISCATAWAY PARK/ANNEX

Figure 2

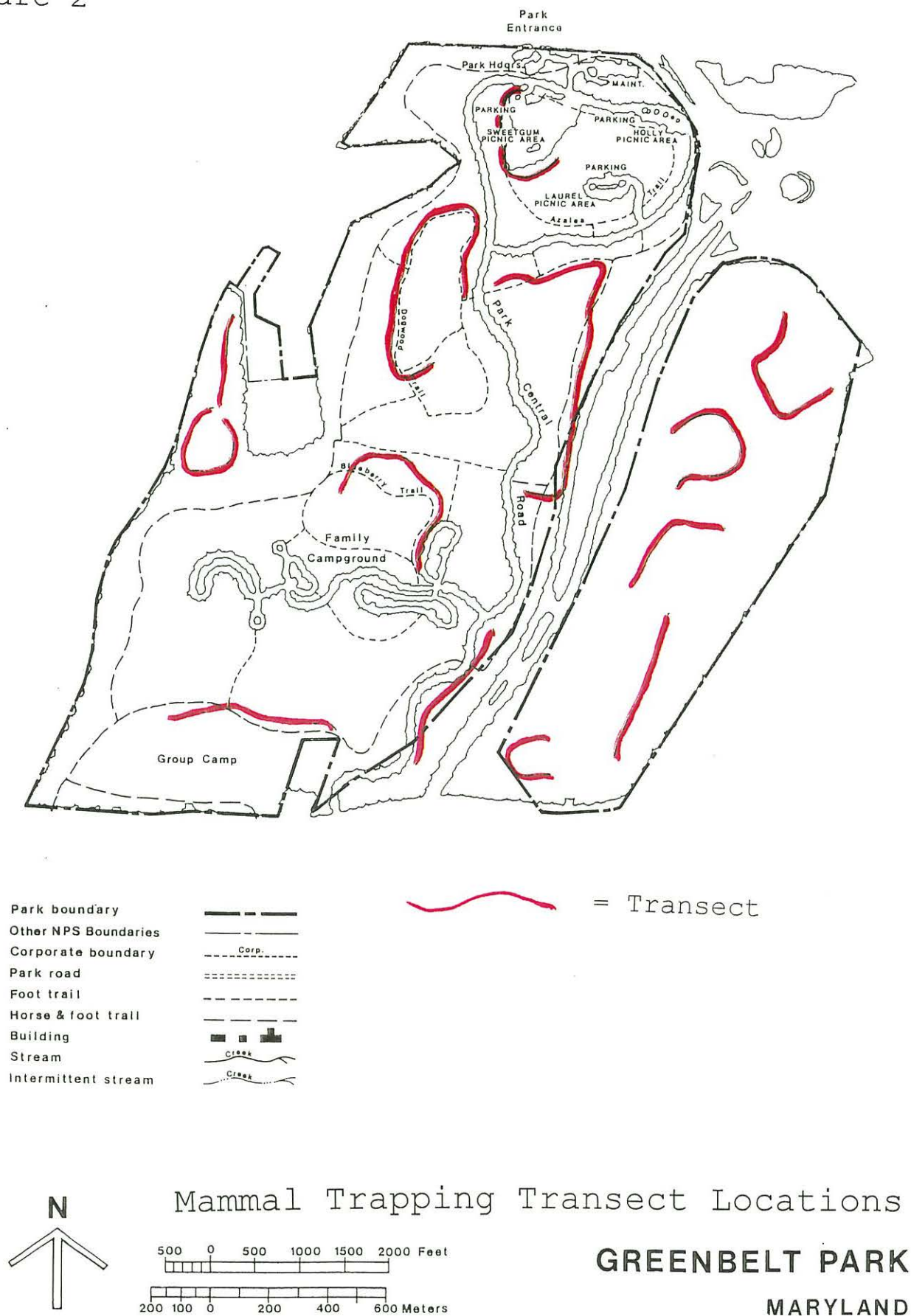


Figure 3

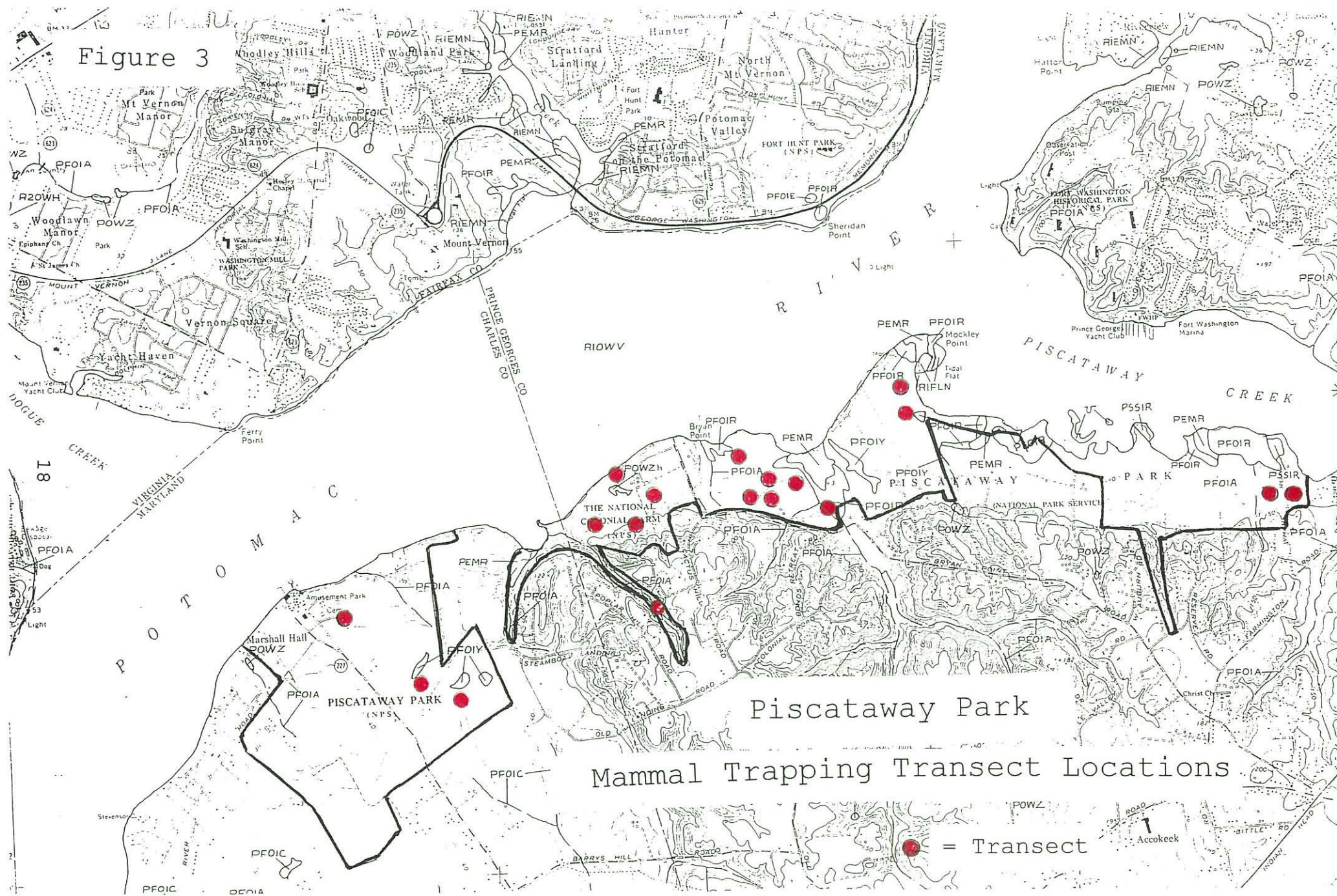


Table 3
Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Agrostis stolonifera</i>	Creeping bent	
<i>Ajuga reptans</i>	Creeping bugleweed	Invasive
<i>Alisma subcordatum</i>	Mud-plantain	
<i>Alliaria officinalis</i>	Garlic-mustard	Invasive
<i>Allium vineale</i>	Field garlic	Invasive
<i>Ambrosia artemisiifolia</i>	Common ragweed	
<i>Andropogon virginicus</i>	Broomsedge	
<i>Anemone quinquefolia</i>	Wood anemone	
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	Invasive
<i>Apocynum cannabinum</i>	Indian hemp	
<i>Aralia nudicaulis</i>	Wild sarsaparilla	
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	
<i>Artemisia vulgaris</i>	Wormwood	Invasive
<i>Arthraxon hispidus</i>	Arthraxon	Invasive
<i>Asclepias syriaca</i>	Common milkweed	
<i>Ascyrum Hypericoides</i>	St. Andrew's cross	
<i>Asplenium platyneuron</i>	Ebony spleenwort	
<i>Aster cordifolius</i>	Common blue wood aster	
<i>Aster lateriflorus</i>	Calico aster	
<i>Aster vimineus</i>	Small white aster	
<i>Barbarea vulgaris</i>	Winter-cress	
<i>Boehmeria cylindrica</i>	False nettle	
<i>Botrychium dissectum</i>	Cutleaf grapefern	
<i>Botrychium virginianum</i>	Rattlesnake fern	
<i>Bromus mollis</i>	Soft chess	
<i>Calystegia sepium</i>	Hedge bindweed	
<i>Cardamine hirsuta</i>	Hairy bittercress	
<i>Carex bicknellii</i>	Bicknell's sedge	
<i>Carex crinita</i>	Tasseled sedge	
<i>Carex debilis</i>	Weak sedge	
<i>Carex folliculata</i>	Folliculed sedge	
<i>Carex lurida</i>	Yellow-green sedge	
<i>Carex tribuloides</i>	Blunt broom sedge	
<i>Chimaphila maculata</i>	Striped wintergreen	
<i>Cirsium arvense</i>	Canada thistle	Invasive
<i>Cirsium discolor</i>	Field thistle	
<i>Claytonia virginica</i>	Spring beauty	
<i>Commelina communis</i>	Asiatic dayflower	Invasive
<i>Convallaria majalis</i>	Lily-of-the-valley	
<i>Cryptotaenia canadensis</i>	Honewort	
<i>Cyperus odoratus</i>	Fragrant galingale	
<i>Cyperus strigosus</i>	Galingale	
<i>Cypripedium acaule</i>	Pink lady's slipper	
<i>Danthonia spicata</i>	Poverty grass	
<i>Datura stramonium</i>	Jimson weed	
<i>Daucus carota</i>	Queen Anne's lace	
<i>Dennstaedtia punctilobula</i>	Hay-scented fern	
<i>Dichanthelium acuminatum</i>	Hairy panic grass	
<i>Dichanthelium linearifolium</i>	Low panic grass	

Table 3
Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Dichanthelium spaerocarpon</i>	Round-fruited panic grass	
<i>Dipsacus laciniatus</i>	Teasel	Invasive
<i>Dryopteris intermedia</i>	Evergreen wood fern	
<i>Duchesnea indica</i>	Indian strawberry	Invasive
<i>Echinochloa crus-galli</i>	Barnyard grass	Invasive
<i>Eragrostis spectabilis</i>	Purple lovegrass	
<i>Erigeron annuus</i>	Daisy fleabane	
<i>Erythronium americanum</i>	Trout lily	
<i>Eupatorium coelestinum</i>	Mistflower	
<i>Eupatorium perfoliatum</i>	Boneset	
<i>Festuca elatior</i>	Meadow fescue	Invasive
<i>Galium aparine</i>	Cleavers	
<i>Glechoma hederacea</i>	Ground-ivy	Invasive
<i>Glyceria striata</i>	Fowl manna grass	
<i>Goodyera pubescens</i>	Rattlesnake plantain	
<i>Heuchera americana</i>	Alumroot	
<i>Hieracium pratense</i>	King devil	
<i>Houstonia caerulea</i>	Bluets	
<i>Hypochaeris radicata</i>	Cat's ear	
<i>Impatiens capensis</i>	Jewelweed	
<i>Iris pseudacorus</i>	Yellow iris	Invasive
<i>Juncus acuminatus</i>	Taper-tip rush	
<i>Juncus dichotomus</i>	Forked rush	
<i>Juncus effusus</i>	Soft rush	
<i>Juncus tenuis</i>	Path rush	
<i>Krigia virginica</i>	Dwarf dandelion	G5; S1; E
<i>Lactuca canadensis</i>	Wild lettuce	
<i>Lamium amplexicaule</i>	Henbit	Invasive
<i>Leersia oryzoides</i>	Rice cutgrass	
<i>Leersia virginica</i>	Whitegrass	
<i>Lespedeza cuneata</i>	Bush-clover	Invasive
<i>Lolium multiflorum</i>	Annual ryegrass	
<i>Ludwigia alternifolia</i>	Seedbox	
<i>Luzula echinata</i>	Sea-urchin woodrush	
<i>Lycopodium flabelliforme</i>	Ground pine	
<i>Lycopodium lucidulum</i>	Shining clubmoss	
<i>Lycopodium obscurum</i>	Tree clubmoss	
<i>Lycopus virginicus</i>	Virginia bugleweed	
<i>Lysimachia quadrifolia</i>	Whorled loosestrife	
<i>Maianthemum canadense</i>	Wild lily-of-the-valley	
<i>Medeola virginiana</i>	Indian cucumber-root	
<i>Microstegium viminium</i>	Stilt grass	Invasive
<i>Mitchella repens</i>	Partridge-berry	
<i>Onoclea sensibilis</i>	Sensitive fern	
<i>Ornithogalum umbellatum</i>	Star-of-Bethlehem	Invasive
<i>Osmunda cinnamomea</i>	Cinnamon fern	
<i>Osmunda regalis</i>	Royal fern	
<i>Oxalis stricta</i>	Wood-sorrel	
<i>Panicum leucothrix</i>	Panic grass	
<i>Perilla frutescens</i>	Beefsteak mint	Invasive

Table 3

Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Phragmites australis</i>	Phragmites	Invasive
<i>Phytolacca americana</i>	Pokeweed	
<i>Plantago aristata</i>	Bracted plantain	
<i>Plantago lanceolata</i>	English plantain	
<i>Poa annua</i>	Annual bluegrass	
<i>Podophyllum peltatum</i>	May-apple	
<i>Polygonatum biflorum</i>	Solomon's seal	
<i>Polygonum arifolium</i>	Halberd-leaved tearthumb	
<i>Polygonum cespitosum</i>	Long-bristled smartweed	Invasive
<i>Polygonum convulvulus</i>	Black bindweed	
<i>Polygonum perfoliatum</i>	Mile-a-minute	Invasive
<i>Polygonum punctatum</i>	Water smartweed	
<i>Polystichum acrostichoides</i>	Christmas fern	
<i>Pontederia cordata</i>	Pickereel-weed	
<i>Potentilla recta</i>	Rough-fruited cinquefoil	
<i>Prenanthes serpentina</i>	Lion's foot	
<i>Prunella vulgaris</i>	Selfheal	
<i>Ranunculus abortivus</i>	Kidney-leaved buttercup	
<i>Ranunculus bulbosus</i>	Bulbous buttercup	
<i>Rhexia mariana</i>	Maryland meadow beauty	
<i>Sagittaria latifolia</i>	Broad-leaved arrowhead	
<i>Sanicula canadensis</i>	Black snakeroot	
<i>Saururus cernuus</i>	Lizard's-tail	
<i>Schizachyrium scoparium</i>	Little bluestem	
<i>Scirpus cyperinus</i>	Woolgrass	
<i>Scirpus polyphyllus</i>	Many-leaved bulrush	
<i>Setaria faberii</i>	Faber's foxtail	
<i>Setaria glauca</i>	Yellow foxtail	
<i>Sisyrinchium angustifolium</i>	Blue-eyed grass	
<i>Smilacina racemosa</i>	False Solomon's seal	
<i>Solanum carolinense</i>	Horse nettle	
<i>Solanum dulcamara</i>	Nightshade	
<i>Solidago caesia</i>	Blue-stem goldenrod	
<i>Solidago nemoralis</i>	Gray goldenrod	
<i>Solidago rugosa</i>	Wrinkle-leaf goldenrod	
<i>Sorghum halepense</i>	Johnson grass	Invasive
<i>Stellaria media</i>	Common chickweed	Invasive
<i>Symplocarpus foetidus</i>	Skunk cabbage	
<i>Taraxacum officinale</i>	Common dandelion	
<i>Thelypteris noveboracensis</i>	New York fern	
<i>Thelypteris thelypteroides</i>	Marsh fern	
<i>Tovara virginiana</i>	Knotweed	
<i>Tridens flavus</i>	Purpletop grass	
<i>Typha latifolia</i>	Broad-leaved cattail	
<i>Uvularia perfoliata</i>	Perfoliate bellwort	
<i>Verbascum blattaria</i>	Moth mullien	
<i>Veronica officinalis</i>	Common speedwell	
<i>Vicia grandiflora</i>	Large-flowered vetch	
<i>Vinca minor</i>	Periwinkle	Invasive
<i>Viola blanda</i>	Sweet white violet	

Table 3

Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Viola cucullata</i>	Blue marsh violet	
<i>Viola papilionacea</i>	Common blue violet	
<i>Viola primulifolia</i>	Primrose-leaved violet	
<i>Viola sagittata</i>	Arrow-leaved violet	
<i>Woodwardia virginica</i>	Virginia chainfern	

Table 4

Greenbelt National Park Woody Plants

Scientific Name	Common Name	Status
<i>Acer rubrum</i>	Red maple	
<i>Ailanthus altissima</i>	Tree-of-heaven	Invasive
<i>Amelanchier arborea</i>	Canada serviceberry	
<i>Berberis Thunbergii</i>	Japanese barberry	Invasive
<i>Betula nigra</i>	River birch	
<i>Campsis radicans</i>	Trumpet-creeper	
<i>Carpinus caroliniana</i>	Musclewood	
<i>Carya glabra</i>	Pignut hickory	
<i>Castanea pumila</i>	Chinquapin	G5; S3
<i>Celastrus orbiculata</i>	Asiatic bittersweet	Invasive
<i>Celtis occidentalis</i>	Hackberry	
<i>Clematis dioscoreifolia</i>	Potato-vine	Invasive
<i>Clethra alnifolia</i>	Sweet pepperbush	
<i>Cornus ammomun</i>	Silky dogwood	
<i>Cornus florida</i>	Flowering dogwood	
<i>Diospyros virginiana</i>	Persimmon	
<i>Fagus grandifolia</i>	American beech	
<i>Fraxinus americana</i>	White ash	
<i>Fraxinus pennsylvanica</i>	Green ash	
<i>Gaylussacia frondosa</i>	Dangleberry	
<i>Hedera helix</i>	English ivy	Invasive
<i>Ilex opaca</i>	American holly	
<i>Ilex verticillata</i>	Winterberry	
<i>Juglans nigra</i>	Black walnut	
<i>Juniperis virginiana</i>	Red cedar	
<i>Kalmia latifolia</i>	Mountain laurel	
<i>Leucothoe racemosa</i>	Fetterbush	
<i>Lindera benzoin</i>	Spicebush	
<i>Liriodendron tulipifera</i>	Tulip poplar	
<i>Liquidambar styraciflua</i>	Sweetgum	
<i>Lonicera japonica</i>	Japanese honeysuckle	Invasive
<i>Lyonia ligustrina</i>	Male-berry	
<i>Magnolia virginiana</i>	Sweet bay	
<i>Nyssa sylvatica</i>	Black gum	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	
<i>Pinus echinata</i>	Short-leaf pine	
<i>Pinus rigida</i>	Pitch pine	
<i>Pinus virginiana</i>	Virginia Pine	
<i>Platanus occidentalis</i>	Sycamore	
<i>Prunus avium</i>	Bird cherry	
<i>Prunus serotina</i>	Black cherry	
<i>Quercus alba</i>	White oak	
<i>Quercus coccinea</i>	Scarlet oak	
<i>Quercus falcata</i>	Southern red oak	
<i>Quercus michauxii</i>	Basket oak	
<i>Quercus palustris</i>	Pin oak	
<i>Quercus phellos</i>	Willow oak	
<i>Quercus prinus</i>	Chestnut oak	
<i>Quercus rubra</i>	Red oak	

Table 4

Greenbelt National Park Woody Plants

Scientific Name	Common Name	Status
<i>Acer rubrum</i>	Red maple	
<i>Ailanthus altissima</i>	Tree-of-heaven	Invasive
<i>Amelanchier arborea</i>	Canada serviceberry	
<i>Berberis Thunbergii</i>	Japanese barberry	Invasive
<i>Betula nigra</i>	River birch	
<i>Campsis radicans</i>	Trumpet-creeper	
<i>Carpinus caroliniana</i>	Musclewood	
<i>Carya glabra</i>	Pignut hickory	
<i>Castanea pumila</i>	Chinquapin	G5; S3
<i>Celastrus orbiculata</i>	Asiatic bittersweet	Invasive
<i>Celtis occidentalis</i>	Hackberry	
<i>Clematis dioscoreifolia</i>	Potato-vine	Invasive
<i>Clethra alnifolia</i>	Sweet pepperbush	
<i>Cornus ammomun</i>	Silky dogwood	
<i>Cornus florida</i>	Flowering dogwood	
<i>Diospyros virginiana</i>	Persimmon	
<i>Fagus grandifolia</i>	American beech	
<i>Fraxinus americana</i>	White ash	
<i>Fraxinus pennsylvanica</i>	Green ash	
<i>Gaylussacia frondosa</i>	Dangleberry	
<i>Hedera helix</i>	English ivy	Invasive
<i>Ilex opaca</i>	American holly	
<i>Ilex verticillata</i>	Winterberry	
<i>Juglans nigra</i>	Black walnut	
<i>Juniperis virginiana</i>	Red cedar	
<i>Kalmia latifolia</i>	Mountain laurel	
<i>Leucothoe racemosa</i>	Fetterbush	
<i>Lindera benzoin</i>	Spicebush	
<i>Liriodendron tulipifera</i>	Tulip poplar	
<i>Liquidambar styraciflua</i>	Sweetgum	
<i>Lonicera japonica</i>	Japanese honeysuckle	Invasive
<i>Lyonia ligustrina</i>	Male-berry	
<i>Magnolia virginiana</i>	Sweet bay	
<i>Nyssa sylvatica</i>	Black gum	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	
<i>Pinus echinata</i>	Short-leaf pine	
<i>Pinus rigida</i>	Pitch pine	
<i>Pinus virginiana</i>	Virginia Pine	
<i>Platanus occidentalis</i>	Sycamore	
<i>Prunus avium</i>	Bird cherry	
<i>Prunus serotina</i>	Black cherry	
<i>Quercus alba</i>	White oak	
<i>Quercus coccinea</i>	Scarlet oak	
<i>Quercus falcata</i>	Southern red oak	
<i>Quercus michauxii</i>	Basket oak	
<i>Quercus palustris</i>	Pin oak	
<i>Quercus phellos</i>	Willow oak	
<i>Quercus prinus</i>	Chestnut oak	
<i>Quercus rubra</i>	Red oak	

Table 4

Greenbelt National Park Woody Plants

Scientific Name	Common Name	Status
<i>Quercus velutina</i>	Black oak	
<i>Rhododendron nudiflorum</i>	Pink azalea	
<i>Rhododendron viscosum</i>	Swamp azalea	
<i>Rhus typhina</i>	Staghorn sumac	
<i>Robinia pseudoacacia</i>	Black locust	
<i>Rosa multiflora</i>	Multiflora rose	Invasive
<i>Rubus allegheniensis</i>	Allegheny blackberry	
<i>Rubus flagellaris</i>	Common dewberry	
<i>Rubus hispidus</i>	Swamp dewberry	
<i>Rubus occidentalis</i>	Black raspberry	
<i>Rubus phoenicolasius</i>	Wineberry	Invasive
<i>Sassafras albidum</i>	Sassafras	
<i>Smilax glauca</i>	Glaucous greenbrier	
<i>Smilax rotundifolia</i>	Common greenbrier	
<i>Toxicodendron radicans</i>	Poison ivy	
<i>Ulmus rubra</i>	Red elm	
<i>Vaccinium corymbosum</i>	Highbush blueberry	
<i>Vaccinium pallidum</i>	Mountain blueberry	
<i>Vaccinium stamineum</i>	Deerberry	
<i>Vaccinium vacillans</i>	Lowbush blueberry	
<i>Viburnum acerifolium</i>	Maple-leaf viburnum	
<i>Viburnum dentatum</i>	Southern arrowwood	
<i>Viburnum nudum</i>	Possum-haw	
<i>Viburnum prunifolium</i>	Black haw	

Table 5

EXPLANATION OF GLOBAL AND STATE SPECIES RANKS

Originally developed and instituted by The Nature Conservancy, an international conservation organization, the global and state ranking system is used by all 50 state Natural Heritage Programs and numerous Conservation Data Centers in other countries in this hemisphere. Because they are assigned based upon standard criteria, the ranks can be used to assess the range-wide status of a species as well as the status within portions of the species' range. The primary criterion used to define these ranks are the number of known distinct occurrences with consideration given to the total number of individuals at each locality. Additional factors considered include the current level of protection, the types and degree of threats, ecological vulnerability, and population trends. Global and state ranks are used in combination to set inventory, protection, and management priorities for species both at the state as well as regional level.

GLOBAL RANK

- G1 Highly globally rare. Critically imperiled globally because of extreme rarity (typically 5 or fewer estimated occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
- G2 Globally rare. Imperiled globally because of rarity (typically 6 to 20 estimated occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
- G3 Either very rare and local throughout its range or distributed locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; typically with 21 to 100 estimated occurrences.
- G4 Apparently secure globally, although it may be quite rare in parts of its range, especially at the periphery.
- G5 Demonstrably secure globally, although it may be quite rare in parts of its range, especially at the periphery.
- GH No known extant occurrences (i.e., formerly part of the established biota, with the expectation that it may be rediscovered).
- GU Possibly in peril range-wide, but its status is uncertain; more information is needed.
- GX Believed to be extinct throughout its range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered.
- G? The species has not yet been ranked.
- _Q Species containing a "Q" in the rank indicates that the taxon is of questionable or uncertain taxonomic standing (i.e., some taxonomists regard it as a full species, while others treat it at an infraspecific level).
- _T Ranks containing a "T" indicate that the infraspecific taxon is being ranked differently than the full species.

Table 5

STATE RANK

- S1** Highly State rare. Critically imperiled in Maryland because of extreme rarity (typically 5 or fewer estimated occurrences or very few remaining individuals or acres in the State) or because of some factor(s) making it especially vulnerable to extirpation. Species with this rank are actively tracked by the Wildlife and Heritage Division (WHD).
- S2** State rare. Imperiled in Maryland because of rarity (typically 6 to 20 estimated occurrences or few remaining individuals or acres in the State) or because of some factor(s) making it vulnerable to becoming extirpated. Species with this rank are actively tracked by WHD.
- S3** Watch List. Rare to uncommon with the number of occurrences typically in the range of 21 to 100 in Maryland. It may have fewer occurrences but with a large number of individuals in some populations, and it may be susceptible to large-scale disturbances. Species with this rank are not actively tracked by WHD.
- S3.1** A "Watch List" species that is actively tracked by WHD because of the global significance of Maryland occurrences. For instance, a G3 S3 species is globally rare to uncommon, and although it may not be currently threatened with extirpation in Maryland, its occurrences in Maryland may be critical to the long term security of the species. Therefore, its status in the State is being monitored.
- S4** Apparently secure in Maryland with typically more than 100 occurrences in the State or may have fewer occurrences if they contain large numbers of individuals. It is apparently secure under present conditions, although it may be restricted to only a portion of the State.
- S5** Demonstrably secure in Maryland under present conditions.
- SA** Accidental or a vagrant in Maryland.
- SE** Established, but not native to Maryland; it may be native elsewhere in North America.
- SH** Historically known from Maryland, but not verified for an extended period (usually 20 or more years), with the expectation that it may be rediscovered.
- SP** Potentially occurring in Maryland or likely to have occurred in Maryland (but without persuasive documentation).
- SR** Reported from Maryland, but without persuasive documentation that would provide a basis for either accepting or rejecting the report (e.g., no voucher specimen exists).
- SRF** Reported falsely (in error) from Maryland, and the error may persist in the literature.
- SU** Possibly rare in Maryland, but of uncertain status for reasons including lack of historical records, low search effort, cryptic nature of the species, or concerns that the species may not be native to the State. Uncertainty spans a range of 4 or 5 ranks as defined above.
- SX** Believed to be extirpated in Maryland with virtually no chance of rediscovery.
- S?** The species has not yet been ranked.

Table 5

STATE STATUS

This is the status of a species as determined by the Maryland Department of Natural Resources, in accordance with the Nongame and Endangered Species Conservation Act. Definitions for the following categories have been taken from Code of Maryland Regulations (COMAR) 08.03.08.

- E** Endangered; a species whose continued existence as a viable component of the State's flora or fauna is determined to be in jeopardy.
- I** In Need of Conservation; an animal species whose population is limited or declining in the State such that it may become threatened in the foreseeable future if current trends or conditions persist.
- T** Threatened; a species of flora or fauna which appears likely, within the foreseeable future, to become endangered in the State.
- X** Endangered Extirpated; a species that was once a viable component of the flora or fauna of the State, but for which no naturally occurring populations are known to exist in the State.
- *** A qualifier denoting the species is listed in a limited geographic area only.

FEDERAL STATUS

This is the status of a species as determined by the U.S. Fish and Wildlife Service's Office of Endangered Species, in accordance with the Endangered Species Act. Definitions for the following categories have been modified from 50 CRF 17.

- LE** Taxa listed as endangered; in danger of extinction throughout all or a significant portion of their range.
- LT** Taxa listed as threatened; likely to become endangered within the foreseeable future throughout all or a significant portion of their range.
- PE** Taxa proposed to be listed as endangered.
- PT** Taxa proposed to be listed as threatened.
- C** Candidate taxa for listing for which the Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened.

Table 6

Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Acorus calamus</i>	Sweetflag	
<i>Adiantum pedatum</i>	Maidenhair fern	
<i>Agastache nepetoides</i>	Yellow giant hyssop	
<i>Agrostis perennans</i>	Autumn bent	
<i>Agrostis stolonifera</i>	Creeping bent	
<i>Alisma subcordatum</i>	Mud-plantain	
<i>Alliaria officinalis</i>	Garlic-mustard	Invasive
<i>Allium vineale</i>	Field garlic	Invasive
<i>Apios americana</i>	Ground-nut	
<i>Aplectrum hyemale</i>	Putty-root	
<i>Apocynum cannabinum</i>	Indian hemp	
<i>Arabis laevigata</i>	Smooth rockcress	
<i>Arisaema dracontium</i>	Green dragon	G5; S3
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	
<i>Aristida dichotoma</i>	Three-awn grass	
<i>Artemisia vulgaris</i>	Wormwood	Invasive
<i>Arthraxon hispidus</i>	Arthraxon	Invasive
<i>Asarum canadense</i>	Wild ginger	
<i>Ascyrum Hypericoides</i>	St. Andrew's cross	
<i>Asplenium platyneuron</i>	Ebony spleenwort	
<i>Aster ericoides</i>	Heath aster	
<i>Aster divaricatus</i>	White wood aster	
<i>Athyrium thelypteroides</i>	Silvery athyrium	
<i>Barbarea vulgaris</i>	Winter-cress	
<i>Bidens aristosa</i>	Tickseed-sunflower	
<i>Bidens coronata</i>	Tickseed-sunflower	G5; S2S3
<i>Bidens vulgata</i>	Beggar-ticks	
<i>Boehmeria cylindrica</i>	False nettle	
<i>Botrychium dissectum</i>	Cutleaf grapefern	
<i>Botrychium virginianum</i>	Rattlesnake fern	
<i>Calystegia sepium</i>	Hedge bindweed	
<i>Cardamine hirsuta</i>	Hairy bittercress	
<i>Carex albursina</i>	White bear sedge	G5; S3
<i>Carex crinita</i>	Tasseled sedge	
<i>Carex frankii</i>	Frank's sedge	
<i>Carex lurida</i>	Yellow-green sedge	
<i>Chaerophyllum procumbens</i>	Spreading chervil	
<i>Chelone glabra</i>	Turtlehead	
<i>Cicuta maculata</i>	Water hemlock	
<i>Cimicifuga racemosa</i>	Bugbane	
<i>Cinna arundinacea</i>	Wood reed	
<i>Claytonia virginica</i>	Spring beauty	
<i>Collinsonia canadensis</i>	Horse-balm	
<i>Commelina communis</i>	Asiatic dayflower	Invasive
<i>Commelina virginica</i>	Virginia dayflower	G5; S3
<i>Conopholis americana</i>	Squawroot	
<i>Corydalis flavula</i>	Pale corydalis	
<i>Cryptotaenia canadensis</i>	Honewort	
<i>Cuscuta gronovii</i>	Dodder	

Table 6

Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Cynoglossum virginianum</i>	Wild comfrey	
<i>Cyperus iria</i>	Yellow cyperus	
<i>Cyperus rivularis</i>	Shining cyperus	
<i>Cystopteris protrusa</i>	Lowland brittle fern	
<i>Dennstaedtia punctilobula</i>	Hay-scented fern	
<i>Dentaria laciniata</i>	Cut-leaved toothwort	
<i>Desmodium canescens</i>	Hoary tick-trefoil	
<i>Dicentra cucullaria</i>	Dutchman's breeches	
<i>Digitaria sanguinalis</i>	Crabgrass	
<i>Diodia teres</i>	Rough buttonweed	
<i>Dioscorea quaternata</i>	Wild yam	
<i>Duchesnea indica</i>	Indian strawberry	Invasive
<i>Echinochloa crus-galli</i>	Barnyard grass	Invasive
<i>Elymus villosus</i>	Slender wild rye	
<i>Epifagus virginiana</i>	Beechdrops	
<i>Equisetum arvense</i>	Common horsetail	
<i>Erigeron annuus</i>	Daisy fleabane	
<i>Erythronium americanum</i>	Trout lily	
<i>Eupatorium fistulosum</i>	Hollow-stem Joe-pye weed	
<i>Eupatorium hyssopifolium</i>	Hyssop-leaved thoroughwort	
<i>Eupatorium perfoliatum</i>	Boneset	
<i>Eupatorium rugosum</i>	White snakeroot	
<i>Eupatorium serotinum</i>	Late-flowering thoroughwort	
<i>Festuca elatior</i>	Meadow fescue	Invasive
<i>Galearis spectabilis</i>	Showy orchis	
<i>Galium aparine</i>	Cleavers	
<i>Galium asprellum</i>	Rough bedstraw	
<i>Galium circaeazans</i>	Wild licorice	
<i>Geum canadense</i>	White avens	
<i>Geum virginianum</i>	Rough avens	
<i>Glechoma hederacea</i>	Ground-ivy	Invasive
<i>Glyceria striata</i>	Fowl manna grass	
<i>Gnaphalium obtusifolium</i>	Cudweed	
<i>Goodyera pubescens</i>	Rattlesnake plantain	
<i>Hedeoma hispida</i>	Rough pennyroyal	
<i>Hedera helix</i>	English ivy	Invasive
<i>Helenium autumnale</i>	Yellow sneezeweed	
<i>Heimerocallis fulva</i>	Day-lily	Invasive
<i>Hibiscus moscheutos</i>	Rose mallow	
<i>Hieracium venosum</i>	Rattle-snake weed	
<i>Houstonia caerulea</i>	Bluets	
<i>Houstonia longifolia</i>	Long-leaved bluet	
<i>Hystrix patula</i>	Bottle-brush grass	
<i>Impatiens capensis</i>	Jewelweed	
<i>Iris pseudacorus</i>	Yellow iris	Invasive
<i>Juncus effusus</i>	Soft rush	
<i>Juncus tenuis</i>	Path rush	
<i>Laportea canadensis</i>	Wood-nettle	
<i>Leersia oryzoides</i>	Rice cutgrass	
<i>Lespedeza cuneata</i>	Bush-clover	Invasive

Table 6

Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Ludwigia alternifolia</i>	Seedbox	
<i>Lycopodium lucidulum</i>	Shining clubmoss	
<i>Lycopus virginicus</i>	Virginia bugleweed	
<i>Lysimachia ciliata</i>	Fringed loosestrife	
<i>Medeola virginiana</i>	Indian cucumber-root	
<i>Microstegium viminium</i>	Stilt grass	Invasive
<i>Mikania scandens</i>	Climbing hempweed	
<i>Mimulus alatus</i>	Sharp-winged monkeyflower	
<i>Mitchella repens</i>	Partridge-berry	
<i>Mitella diphylla</i>	Miterwort	
<i>Monotropa uniflora</i>	Indian pipe	
<i>Myosotis macrosperma</i>	Large-seeded forget-me-not	G5; S1; T
<i>Nemophila aphylla</i>	Sm. fl. baby blue-eyes	G5; S1
<i>Nuphar advena</i>	Spatterdock	
<i>Onoclea sensibilis</i>	Sensitive fern	
<i>Osmorhiza claytoni</i>	Sweet cicely	
<i>Osmunda cinnamomea</i>	Cinnamon fern	
<i>Oxalis stricta</i>	Wood-sorrel	
<i>Panicum anceps</i>	Flat-stemmed panic grass	
<i>Panicum dichotomiflorum</i>	Spreading witch grass	
<i>Panicum virgatum</i>	Switchgrass	
<i>Peltandra virginica</i>	Arrow-arum	
<i>Penthorum sedoides</i>	Ditch stonecrop	
<i>Perilla frutescens</i>	Beefsteak mint	Invasive
<i>Phalaris arundinacea</i>	Reed canary grass	Invasive
<i>Phegopteris hexagonoptera</i>	Broad beech fern	
<i>Phryma leptostachya</i>	Lopseed	
<i>Phytolacca americana</i>	Pokeweed	
<i>Pilea pumila</i>	Clearweed	
<i>Podophyllum peltatum</i>	May-apple	
<i>Polygonatum biflorum</i>	Solomon's seal	
<i>Polygonum aviculare</i>	Knotweed	
<i>Polygonum cespitosum</i>	Long-bristled smartweed	Invasive
<i>Polygonum cuspidatum</i>	Japanese knotweed	Invasive
<i>Polygonum perfoliatum</i>	Mile-a-minute	Invasive
<i>Polygonum punctatum</i>	Water smartweed	
<i>Polygonum sagittatum</i>	Arrow-leaved tearthumb	
<i>Polymnia uvedalia</i>	Yellow-flowered leafcup	
<i>Polystichum acrostichoides</i>	Christmas fern	
<i>Pontederia cordata</i>	Pickerel-weed	
<i>Prunella vulgaris</i>	Selfheal	
<i>Ranunculus abortivus</i>	Kidney-leaved buttercup	
<i>Ranunculus micranthus</i>	Small-flowered crowfoot	G5; S3
<i>Ranunculus recurvatus</i>	Hooked crowfoot	
<i>Rudbeckia laciniata</i>	Green-headed coneflower	
<i>Sagittaria latifolia</i>	Broad-leaved arrowhead	
<i>Sanguinaria canadensis</i>	Bloodroot	
<i>Sanicula canadensis</i>	Black snakeroot	
<i>Saururus cernuus</i>	Lizard's-tail	
<i>Scirpus americanus</i>	Three-square	

Table 6
Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Scirpus atrovirens</i>	Green bulrush	
<i>Scirpus cyperinus</i>	Woolgrass	
<i>Scirpus polyphyllus</i>	Many-leaved bulrush	
<i>Scrophularia marilandica</i>	Maryland figwort	
<i>Scutellaria galericulata</i>	Marsh skullcap	G5; S1
<i>Sedum ternatum</i>	Wild stonecrop	
<i>Sisyrinchium angustifolium</i>	Blue-eyed grass	
<i>Solanum carolinense</i>	Horse nettle	
<i>Solidago caesia</i>	Blue-stem goldenrod	
<i>Solidago flexicaulis</i>	Zig-zag goldenrod	
<i>Solidago gigantea</i>	Giant goldenrod	
<i>Solidago rugosa</i>	Wrinkle-leaf goldenrod	
<i>Sorghum halpense</i>	Johnson grass	Invasive
<i>Stellaria media</i>	Common chickweed	Invasive
<i>Stellaria pubera</i>	Great chickweed	
<i>Symplocarpus foetidus</i>	Skunk cabbage	
<i>Sisyrinchium angustifolium</i>	Blue-eyed grass	
<i>Taraxacum officinale</i>	Common dandelion	
<i>Thelypteris noveboracensis</i>	New York fern	
<i>Thelypteris thelypteroides</i>	Marsh fern	
<i>Tipularia discolor</i>	Crane-fly orchid	
<i>Tovara virginiana</i>	Virginia knotweed	
<i>Tridens flavus</i>	Purpletop grass	
<i>Trillium sessile</i>	Toadshade	
<i>Triodanis perfoliata</i>	Venus's looking-glass	
<i>Typha angustifolia</i>	Narrow-leaved cattail	
<i>Typha latifolia</i>	Broad-leaved cattail	
<i>Uvularia perfoliata</i>	Perfoliate bellwort	
<i>Verbena urticifolia</i>	White vervain	
<i>Verbesina alternifolia</i>	Yellow ironweed	
<i>Vernonia noveboracensis</i>	New York ironweed	
<i>Vicia grandiflora</i>	Large-flowered vetch	
<i>Viola arvensis</i>	Field pansy	
<i>Viola cucullata</i>	Blue marsh violet	
<i>Viola pennsylvanica</i>	Smooth yellow violet	
<i>Woodwardia areolata</i>	Chainfern	
<i>Zizania aquatica</i>	Wild rice	

Table 7
Piscataway Annex Woody Plants

Scientific Name	Common Name	Status
<i>Acer negundo</i>	Box-elder	
<i>Acer rubrum</i>	Red maple	
<i>Acer saccharinum</i>	Silver maple	
<i>Ailanthus altissima</i>	Tree-of-heaven	Invasive
<i>Alnus serrulata</i>	Common alder	
<i>Asimina triloba</i>	Pawpaw	
<i>Betula nigra</i>	River birch	
<i>Campsis radicans</i>	Trumpet-creeper	
<i>Carpinus caroliniana</i>	Musclewood	
<i>Carya cordiformis</i>	Bitternut hickory	
<i>Carya tomentosa</i>	Mockernut hickory	
<i>Celastrus orbiculata</i>	Asiatic bittersweet	Invasive
<i>Celtis occidentalis</i>	Hackberry	
<i>Cephalanthus occidentalis</i>	Buttonbush	
<i>Cercis canadensis</i>	Redbud	
<i>Clematis dioscoreifolia</i>	Potato-vine	Invasive
<i>Cornus amomum</i>	Silky dogwood	
<i>Cornus florida</i>	Flowering dogwood	
<i>Diospyros virginiana</i>	Persimmon	
<i>Elaeagnus umbellata</i>	Autumn olive	Invasive
<i>Euonymus americanus</i>	Running strawberry-bush	
<i>Fagus grandifolia</i>	American beech	
<i>Fraxinus americana</i>	White ash	
<i>Fraxinus pennsylvanica</i>	Green ash	
<i>Fraxinus profunda</i>	Pumpkin ash	G4; S2S3
<i>Hamamelis virginiana</i>	Witch hazel	
<i>Hydrangea arborescens</i>	Wild hydrangea	
<i>Ilex opaca</i>	American holly	
<i>Ilex verticillata</i>	Winterberry	
<i>Juglans nigra</i>	Black walnut	
<i>Juniperis virginiana</i>	Red cedar	
<i>Kalmia latifolia</i>	Mountain laurel	
<i>Ligustrum vulgare</i>	Privet	Invasive
<i>Lindera benzoin</i>	Spicebush	
<i>Liriodendron tulipifera</i>	Tulip poplar	
<i>Liquidambar styraciflua</i>	Sweetgum	
<i>Lonicera japonica</i>	Japanese honeysuckle	Invasive
<i>Magnolia virginiana</i>	Sweet bay	
<i>Menispermum canadense</i>	Canada moonseed	
<i>Nyssa sylvatica</i>	Black gum	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	
<i>Paulownia tomentosa</i>	Princess-tree	Invasive
<i>Platanus occidentalis</i>	Sycamore	
<i>Populus deltoides</i>	Eastern cottonwood	
<i>Prunus serotina</i>	Black cherry	
<i>Pyrus coronaria</i>	Wild crab	
<i>Quercus alba</i>	White oak	
<i>Quercus falcata</i>	Southern red oak	
<i>Quercus michauxii</i>	Basket oak	

Table 7
Piscataway Annex Woody Plants

Scientific Name	Common Name	Status
<i>Quercus palustris</i>	Pin oak	
<i>Quercus phellos</i>	Willow oak	
<i>Quercus prinus</i>	Chestnut oak	
<i>Quercus rubra</i>	Red oak	
<i>Quercus velutina</i>	Black oak	
<i>Robinia pseudoacacia</i>	Black locust	
<i>Rosa multiflora</i>	Multiflora rose	Invasive
<i>Rosa palustris</i>	Swamp rose	
<i>Rubus allegheniensis</i>	Allegheny blackberry	
<i>Rubus hispidus</i>	Swamp dewberry	
<i>Rubus occidentalis</i>	Black raspberry	
<i>Rubus phoenicolasius</i>	Wineberry	Invasive
<i>Salix nigra</i>	Black willow	
<i>Sassafras albidum</i>	Sassafras	
<i>Smilax rotundifolia</i>	Common greenbrier	
<i>Toxicodendron radicans</i>	Poison ivy	
<i>Ulmus americana</i>	American elm	
<i>Ulmus rubra</i>	Red elm	
<i>Vaccinium corymbosum</i>	Highbush blueberry	
<i>Vaccinium vacillans</i>	Lowbush blueberry	
<i>Viburnum acerifolium</i>	Maple-leaf viburnum	
<i>Viburnum dentatum</i>	Southern arrowwood	
<i>Viburnum nudum</i>	Possum-haw	
<i>Viburnum prunifolium</i>	Black haw	
<i>Vitis vulpina</i>	Winter grape	

Table 8

Amphibians observed (O) during 1998 and 1999, reported (R) by others in the last 20 years, and expected (E) at Piscataway NP (PI) and Greenbelt NP (GR). (?) indicates an uncertain identification.

Scientific Name	Common Name	PI	GR
<i>Acris crepitans</i>	Northern cricket frog	O	
<i>Ambystoma maculatum</i>	Spotted salamander	O	E
<i>Ambystoma opacum</i>	Marbled salamander	O	E
<i>Bufo americanus</i>	American toad	O	E
<i>Bufo woodhousii fowleri</i>	Fowler's toad	E	O
<i>Desmognathus fuscus</i>	Dusky salamander	E	E
<i>Eurycea bislineata</i>	N. two-lined salamander	R	
<i>Hemidactylium scutatum</i>	Four-toed salamander	E	E
<i>Hyla cinerea</i>	Green treefrog	O	
<i>Hyla chrysocelis</i>	Cope's gray treefrog	O	O
<i>Hyla versicolor</i>	Gray treefrog	E	E
<i>Notothalmus viridescens</i>	Red spotted newt	E	E
<i>Plethodon cinereus</i>	Redback salamander	R	O
<i>Pseudacris crucifer</i>	Spring peeper	O	E
<i>Pseudacris feriarum</i>	Upland chorus frog	R	E
<i>Pseudotriton montanus</i>	Mud salamander	E	O?
<i>Pseudotriton ruber</i>	Red salamander	E	
<i>Rana catesbeiana</i>	Bullfrog	O	E
<i>Rana clamitans</i>	Green frog	O	O
<i>Rana palustris</i>	Pickerel frog	O	O
<i>Rana sylvatica</i>	Wood frog	O	E
<i>Rana utricularia</i>	Southern leopard frog	O	O
<i>Scaphiopus holbrookii</i>	Eastern spadefoot toad	R	
	TOTAL SPECIES O, R/E	16/23	7/18

Table 9

Reptiles observed (O) during 1998 and 1999, reported (R) by others in the last 20 years, and expected (E) at Piscataway NP (PI) and Greenbelt NP (GR).

Scientific Name	Common Name	PI	GR
<i>Carphophis amoenus</i>	Eastern worm snake	R	E
<i>Cnemidophorus sexlineatus</i>	Six-lined racerunner	E	
<i>Chelydra serpentina</i>	Snapping turtle	O	E
<i>Chrysemys picta</i>	Eastern painted turtle	O	E
<i>Clemmys guttata</i>	Spotted turtle	E	
<i>Coluber constrictor</i>	Northern black racer	O	E
<i>Diadophis punctatus</i>	Northern ringneck snake	R	E
<i>Elaphe obsoleta</i>	Black rat snake	O	O
<i>Eumeces fasciatus</i>	Five-lined skink	O	O
<i>Eumeces laticeps</i>	Broad-headed	R	
<i>Heterodon platirhinos</i>	Hognose snake	O	
<i>Kinosternum subrubrum</i>	Eastern mud turtle	O	
<i>Lampropeltis getula</i>	Eastern kingsnake	E	
<i>Lampropeltis triangulum</i>	Milk snake	E	
<i>Malaclemys terrapin</i>	Diamondback terrapin	R	
<i>Nerodia sipedon</i>	Northern water snake	O	O
<i>Opheodrys aestivus</i>	Rough green snake	R	E
<i>Pseudemys rubriventris</i>	Red belly turtle	O	
<i>Regina septemvittata</i>	Queen snake	R	
<i>Sceloporus undulatus</i>	Northern fence lizard	R	E
<i>Scincella lateralis</i>	Ground skink	E	E
<i>Sternotherus odoratus</i>	Musk turtle	R	
<i>Storeria dekayi</i>	Northern brown snake	E	E
<i>Storeria occipitomaculata</i>	Northern redbelly snake	E	E
<i>Terrapene carolina</i>	Eastern box turtle	O	O
<i>Thamnophis sauritis</i>	Ribbon snake	E	E
<i>Thamnophis sirtalis</i>	Eastern garter snake	R	E
	TOTAL SPECIES O,R/E	19/27	4/16

Table 10

Mammals, except bats, observed (O) during 1998 and 1999, reported (R) by others in the last 20 years, and expected (E) at Piscataway NP (PI) and Greenbelt NP (GR). (?) indicates an uncertain identification.

Scientific Name	Common Name	PI	GR
<i>Blarina brevicauda</i>	Short-tail shrew	O	O
<i>Castor canadensis</i>	Beaver	O	O
<i>Condylura cristata</i>	Starnose mole	E	E
<i>Didelphis marsupialis</i>	Opossum	O	O
<i>Glaucomys volans</i>	Southern flying squirrel	E	E
<i>Lutra canadensis</i>	River otter	R	
<i>Marmota monax</i>	Groundhog	O	O
<i>Mephitis mephitis</i>	Striped skunk	E	
<i>Microtus pennsylvanicus</i>	Meadow vole	O	E
<i>Mus musculus</i>	House mouse	O	E
<i>Mustela frenata</i>	Longtail weasel	E	E
<i>Mustela vison</i>	Mink	O	O
<i>Odocoileus virginiana</i>	Whitetail deer	O	O
<i>Ondatra zibethicus</i>	Muskrat	O	O
<i>Oryzomys palustris</i>	Marsh rice rat	E	
<i>Peromyscus leucopus</i>	White-footed mouse	O	O
<i>Pitymys pinetorum</i>	Pine vole	E	E
<i>Procyon lotor</i>	Raccoon	O	O
<i>Rattus norvegicus</i>	Norway rat	E	E
<i>Reithrodontomys humulis</i>	Eastern harvest mouse	E	
<i>Sorex cinereus</i>	Masked shrew	O?	E
<i>Scalopus aquaticus</i>	Eastern mole	O	O
<i>Sciuris carolinensis</i>	Eastern Gray squirrel	O	O
<i>Sylvilagus floridanus</i>	Eastern cottontail	O	E
<i>Tamias striatus</i>	Eastern chipmunk	R	E
<i>Urocyon cinereoargenteus</i>	Gray fox	R	E
<i>Vulpes vulpes</i>	Red fox	R	
<i>Zapus hudsonius</i>	Meadow jumping mouse	E	
	TOTAL SPECIES O, R/E	19/28	11/22

APPENDIX

FOREST STRUCTURE SURVEY

Sample Plot Results

A total of 47 sample points were taken along 7 transects at Greenbelt National Park (**Figure A-1**). The mean number of species per sample plot was 3.9, with a range between 1 species and 6 species. Basal area for the forest (i.e., the mean of all of the sample plots) was 38.7 ft²/ac, with a range between 10 ft²/ac and 60 ft²/ac. The mean density of the forest was 286.4 stems/ac, with a range between 13 stems/ac and 1,067 stems/ac (**Table A-1**).

Figure A-2 shows the density of the diameters of the sampled trees at Greenbelt National Park. The most dense dbh was in the 3.9" to 4.8" dbh class. This was more than twice as dense as the 2.9" to 3.8" diameter class.

There were 20 woody species with dbh $\geq$ than 2" identified on the sample plots (**Table A-2**). The species with the greatest density, blackgum (*Nyssa sylvatica*), had a density of 77 stems/ac. Virginia pine (*Pinus virginiana*), with 35 stems/ac, had the second highest stem density.

Blackgum (*N. sylvatica*), along with white oak (*Quercus alba*), had, at 49%, the highest frequencies of occurrence in the sample plots. Oaks (*Quercus* spp.) were the most common species in the forest. There were nine species identified, and they occurred in 74% of the sample plots (**Table A-2**).

In general, the forest sampled at Greenbelt National Park can be characterized as a relatively open oak/pine forest with a substantial understory of blackgum (*N. sylvatica*). The density of pine varies considerably between plots. Sweetgum (*Liquidambar styraciflua*) and red maple (*Acer rubrum*) are also important species.

The raw data and density calculations for each sample plot are appended to this report.

A total of 32 sample points were taken along 6 transects at the Piscataway Annex (**Figure A-3**). The mean number of

species per sample plot was 5.3, with a range between 3 species and 8 species. Basal area for the forest (i.e., the mean of all of the sample plots) was 100.9 ft²/ac, with a range between 50 ft²/ac and 170 ft²/ac. The mean density of the forest was 342.0 stems/ac, with a range between 47 stems/ac and 1,113 stems/ac (Table A-3).

Figure A-4 shows the density of the diameters of the sampled trees at the Piscataway Annex. The most dense dbh was in the 2.0" to 2.8" dbh class. This class far surpassed any other diameter class.

There were 25 woody species with dbh $\geq$ than 2" identified on the sample plots (table 11). The species with the greatest density, pawpaw (*Asimina triloba*), is an understory/shrub species with a density of 86 stems/ac. Red maple (*Acer rubrum*), with 39 stems/ac, had the second highest stem density (Table A-4).

Tulip poplar (*Liriodendron tulipifera*) and bitternut hickory (*Carya cordiformis*), had, at 78%, the highest frequencies of occurrence in the sample plots.

In general, the upland forest sampled at the Piscataway Annex can be characterized as a diverse hardwood forest dominated by tulip poplar (*L. tulipifera*) and bitternut hickory (*C. cordiformes*). Additional important species include oaks (*Quercus* spp.) and red maple (*A. rubrum*). The understory/shrub layer is dominated by pawpaw (*A. triloba*).

There are a number of drainages at the Piscataway Annex that contain bottomland forest. This comprises a smaller area than the upland forest described above. The dominant species include red maple (*A. rubrum*), black gum (*N. sylvatica*), and box elder (*Acer negundo*). The understory is dominated by pawpaw (*A. triloba*) and spicebush (*Lindera benzoin*). The groundcover is diverse, and includes a high proportion of exotic species (table 12).

At the top of the slopes the land is relatively flat, abandoned agricultural land with a well developed herbaceous layer. The forest here is younger, and early successional species such as black cherry (*Prunus serotina*) and black locust (*Robinia pseudoacacia*) are more common.

Forest Structure Narrative

The following narrative information on forest structure was taken in the east section (i.e., east of the Baltimore Washington Parkway) of Greenbelt NP. The narrative includes observations made on east-west transects starting in the south and up to the main stream valley, and continues describing a loop around the north end of the area (See Figure A-1).

In the forest of the southwest corner of the east section, the virginia pine overstory (8" to 12" dbh) is decadent. Hardwoods reaching the canopy include black gum (*Nyssa sylvatica*), white oak (*Q. alba*), sweetgum (*Liquidambar styraciflua*), chestnut oak (*Q. prinus*), scarlet oak (*Q. coccinea*), tulip poplar (*Liriodendron tulipifera*), northern red oak (*Q. rubra*), and red maple (*Acer rubrum*). The understory is moderately open, comprised of American holly (*Ilex opaca*), mt. laurel (*Kalmia latifolia*), sassafras (*Sassafras albidum*), pignut hickory (*Carya glabra*), and green ash (*Fraxinus pennsylvanica*). The shrub layer includes the same tree species plus black cherry (*Prunus serotina*), common greenbrier (*Smilax rotundifolia*), glaucous greenbrier (*S. Glauca*), southern arrowwood (*Viburnum dentatum*), lowbush blueberry (*Vaccinium* sp.), winterberry (*Ilex verticillata*), dewberry (*Rubus* sp.), partridgeberry (*Mitchella repens*), and English ivy (*Hedera Helix*) in patches. There are downed pines and gaps in the canopy (about 60% coverage). There is a sparse occurrence of clematis (*Clematis dioscoreifolia*), Japanese honeysuckle (*Lonicera japonica*), highbush blueberry (*Vaccinium* sp.), and lycopodium (*Lycopodium complanatum*).

In the broad (300 feet) east-west shallow valley near the south end of the site, the soils was damper and pines were not observed. The 80% canopy cover is made up of large (12" to 30") sweetgum (*L. styraciflua*), tulip poplar (*L. tulipifera*), and red maple (*A. rubrum*), with some sycamores (*Platanus occidentalis*). The understory consists of southern arrowwood (*V. dentatum*), American holly (*I. Opaca*), flowering dogwood (*Cornus florida*), common greenbrier (*S. rotundifolia*), black cherry (*P. serotina*), Japanese honeysuckle (*L. japonica*), dewberry (*Rubus* sp.), poison ivy (*Toxicodendron radicans*), Japanese barberry (*Berberis Thunbergii*), black haw (*Viburnum prunifolium*), highbush blueberry (*Vaccinium* sp.), Christmas fern

(*Polystichum acrostichoides*), N.Y. fern (*Thelypteris noveboracensis*) and Lycopodium (*Lycopodium obscurum*). Tree seedlings are common, as are downed logs. Other tree species include mockernut hickory (*Carya tomentosa*), white oak (*A. alba*), swamp white oak (*Q. bicolor*), large willow oaks (*Q. phellos*), beech (*Fagus grandifolia*), scarlet oak (*Q. coccinea*), chestnut oak (*Q. prinus*), southern red oak (*Q. falcata*), black gum (*Nyssa sylvatica*), and blue beech (*Carpinus caroliniana*). This hardwood stand continues to the east of the fire road with a thicker shrub layer (e.g., *Smilax* spp., *Viburnum* spp.) interspersed with some open vernal pools. Pines reappear about 500 feet east of the fire road at the head of the drainage.

Moving North from the east end of the drainage for about 500 feet, and turning back west to the parkway, there is dense stand of virginia pine (*P. virginiana*) that is somewhat younger than on the south leg described above. The pines are vigorous and the canopy is closed (except for a few blowdowns). Hardwoods are present but not dominate. The largest have a dbh of 6" to 10" inches. The primary species include sweetgum (*L. styraciflua*), southern red oak (*Q. falcata*), and red maple (*A. rubrum*). Holly (*I. opaca*), low and highbush blueberry (*Vaccinium* spp.), and huckleberry (*Gaylussacia* sp.) are dominant shrubs. West of the fire road and approaching the parkway the forest is similar to that of the first leg of this survey.

Moving north another 500 feet and heading back east the pines are mostly gone, with the canopy consisting of large (i.e., 18" to 24" dbh) mixed oaks (i.e., Southern red oak (*Q. falcata*), white oak (*Q. alba*), and chestnut oak (*Q. prinus*)). Shrub species include dogwood (*C. florida*), holly (*I. opaca*), beech (*F. Grandifolia*), lowbush blueberry (*Vaccinium* sp.), and mt. laurel (*Kalmia latifolia*). Hardwoods continue until about 100 feet east of the road where dense pines reappear and continue to the eastern boundary.

Moving north again about 500 feet and going back toward the west, the pines become scarcer and young hardwoods dominate again. These are mostly sweetgum (*L. styraciflua*) and southern red oak (*Q. falcata*) up to about 12" dbh. Mixed pine and oaks continue to the Parkway.

The next leg (i.e., north 500' and back to the east) starts south of a stream culvert under the Parkway. The forest is similar to the last leg, with lowland hardwoods lining the drainage until pines come back along the eastern quarter of the leg.

The next leg heads north and crosses a small drainage, and then continues along the main stream valley. The small drainages entering from the east are dry, but actively eroding and depositing sediment into the main valley. Pines are widely scattered, with the forest canopy much like the second leg, above. Sweetgum (*L. styraciflua*), tulip poplar (*L. tulipifera*) (up to 30 inches), red maple (*A. rubrum*), and pin oak (*Q. phellos*) are present. Pines dominate the higher ground in this area. The channel becomes very braided and sediment-choked before reaching the beaver impoundment. The swamp forest includes red maple (*A. rubrum*), black gum (*N. sylvatica*), river birch (*Betula nigra*), spicebush (*Lindera benzoin*), sweet bay (*Magnolia virginica*), winterberry (*I. verticillata*), highbush blueberry (*Vaccinium* sp.), southern arrowwood (*V. dentatum*), greenbriar (*Smilax* spp.), and cinnamon fern (*Osmunda cinnamomea*). Skunk cabbage (*Symplocarpus foetidus*) is abundant. Standing water is present in some depressions.

The Main branch of the stream is a deep channel flooded by the beaver dam to above the confluence of the east tributary. The main branch (north) is actively eroding its channel above the impoundment. The swamp forest continues up the north valley. The swamp depressions west of the channel dry support extensive skunk cabbage (*S. foetidus*).

The transect leaves the stream valley near the northeast boundary and loops northwest and moves back toward the south. A broad swale enters from the north that has a few pines but is dominated by hardwoods, including some 24" inch white oaks (*Q. alba*), tulip poplar (*L. tulipifera*), and red maple (*A. rubrum*). There is an understory of black gum (*N. sylvatica*), holly (*I. opaca*), highbush blueberry (*Vaccinium* sp.), southern arrowwood (*V. dentatum*), beech (*F. grandifolia*), and southern red oak (*Q. falcata*).

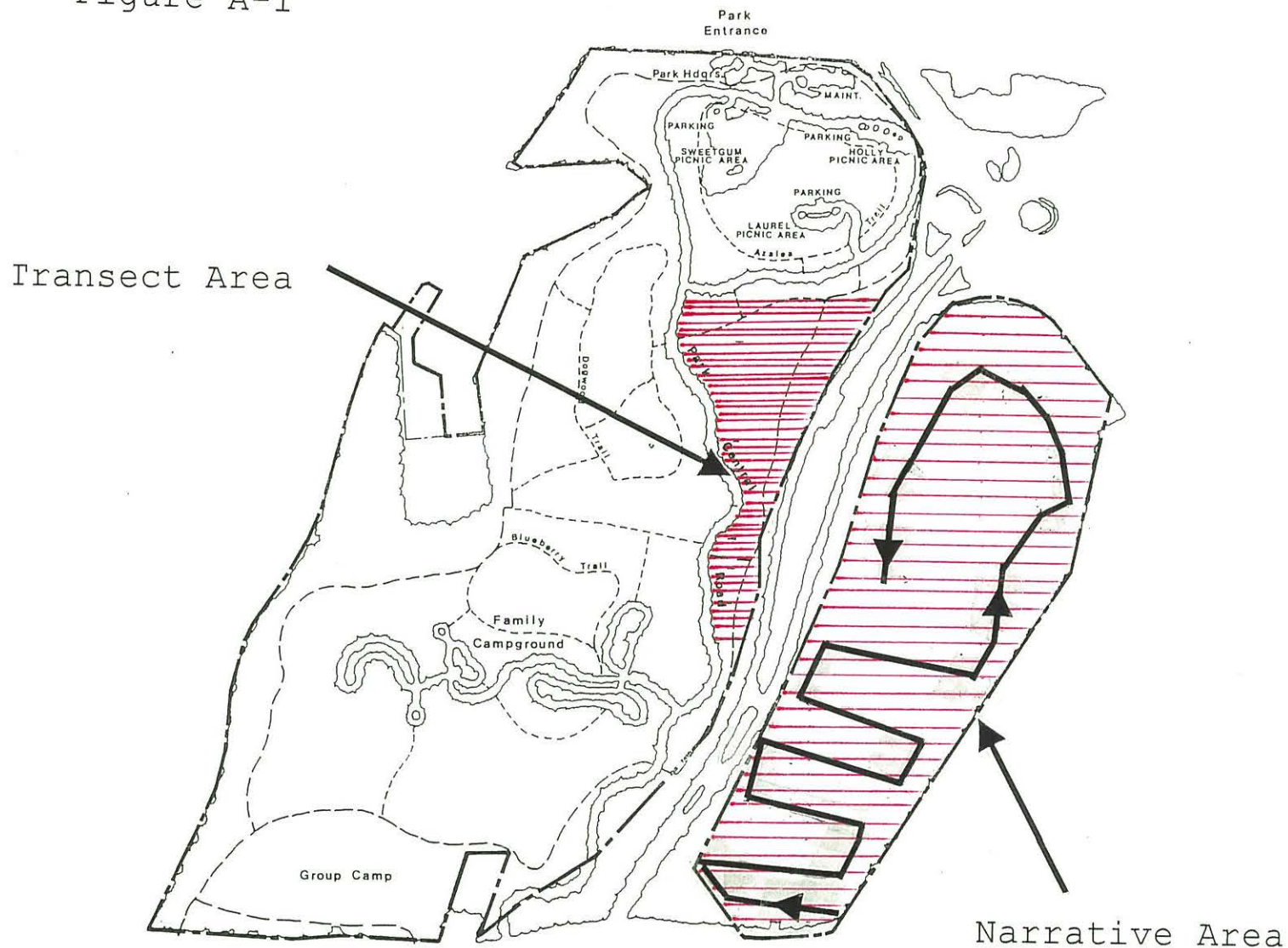
Further upslope and to the west the forest grades to decadent pines and mixed hardwoods, and then to dense pines over the ridge top. Pines have chinquapins (*Castanea*

pumila) in the understory. The pattern of pines on top of the ridges and the hardwoods on the slopes continues across several drain heads. There are azaleas in the understory.

Hardwoods are found around a very deeply incised (4 to 6 foot banks) channel draining the Parkway/Beltway cloverleaf, Pines, including pitch pines (*Pinus rigida*) are found upslope to the west. Hardwoods are found around the north end of the fire road with pines in sight on top of the ridge to the east.

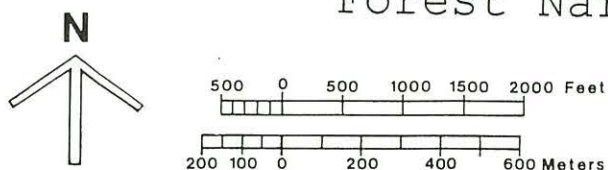
The survey ends back at the main beaver dam by the fire road. The beaver dam blocks the main channel about 100 feet up from the road and continues downstream along the top of the banks resulting in a broad impoundment that has killed the bottomland trees.

Figure A-1



Park boundary	
Other NPS Boundaries	
Corporate boundary	
Park road	
Foot trail	
Horse & foot trail	
Building	
Stream	
Intermittent stream	

Greenbelt Park Forest Transect and Forest Narrative Locations



GREENBELT PARK

MARYLAND

Appendix Figure A-2: Greenbelt Park
dbh Frequency Distributions

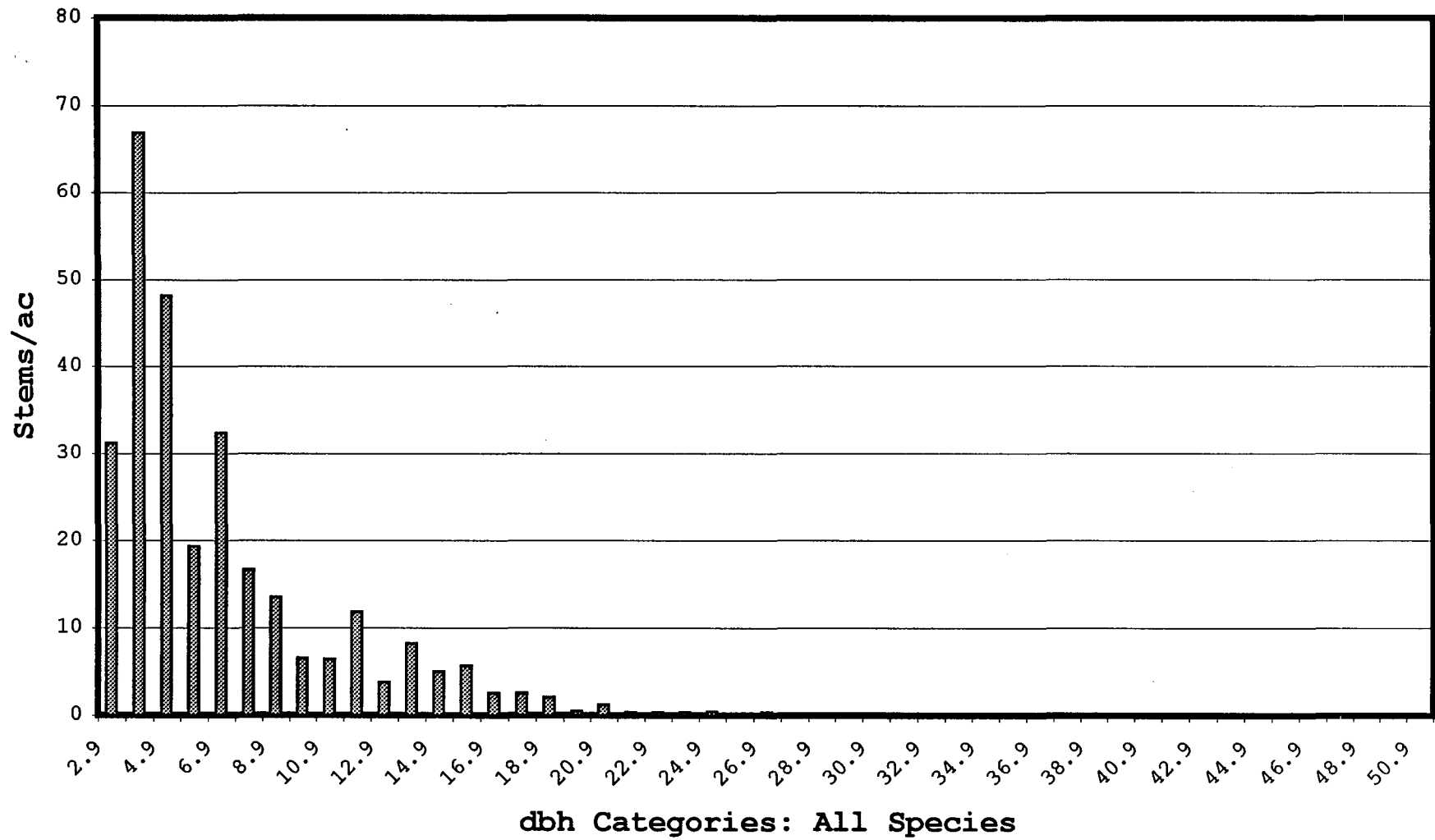
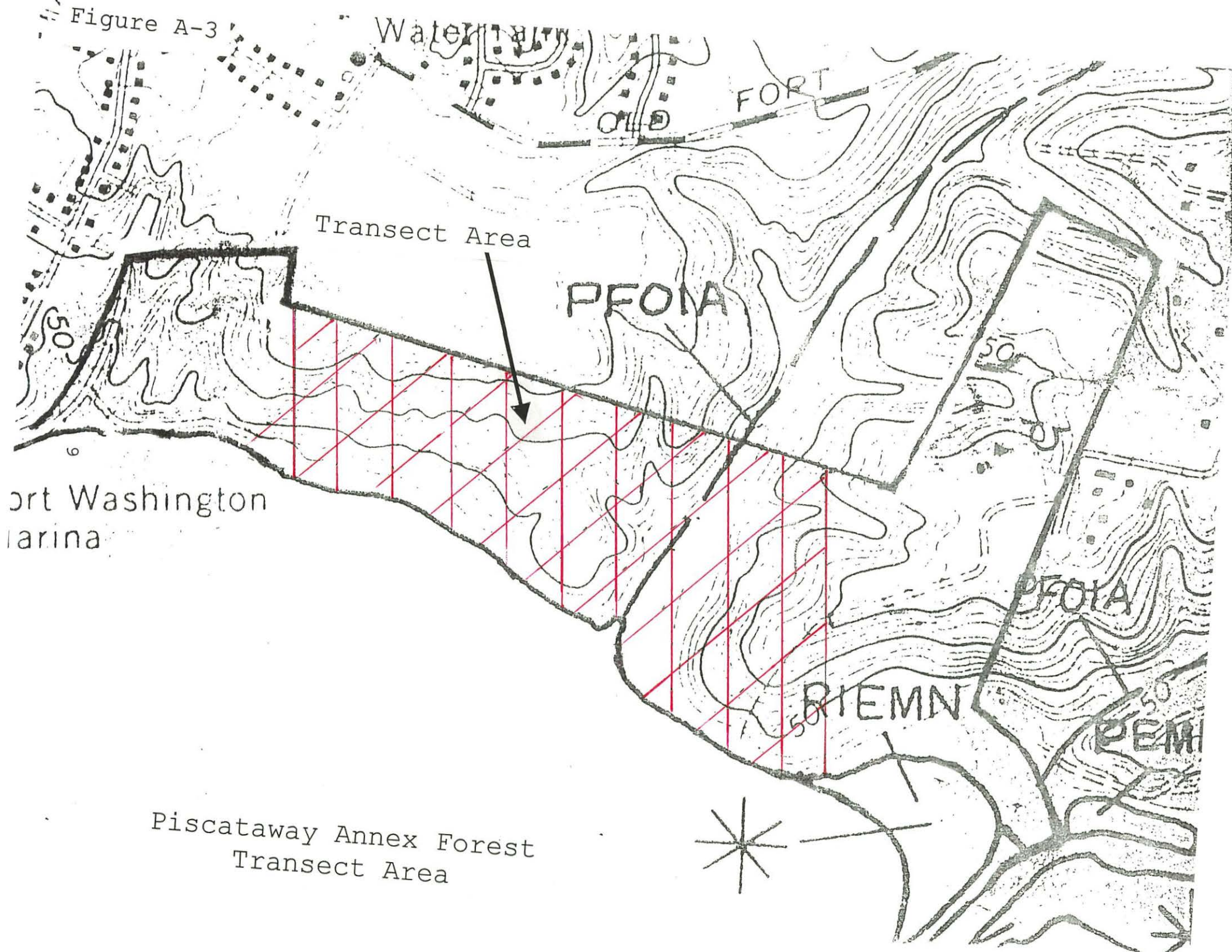
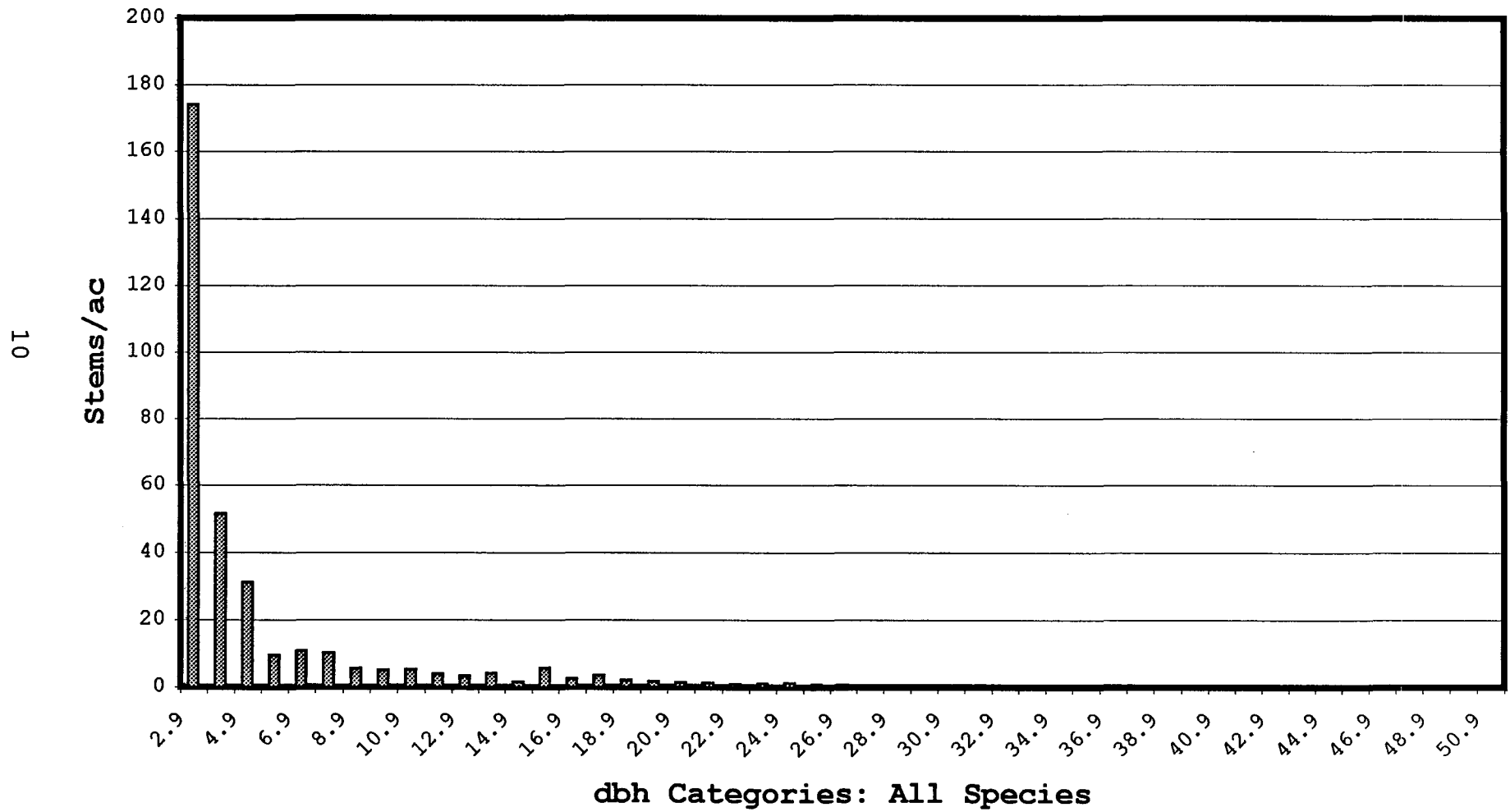


Figure A-3



Piscataway Annex Forest
Transect Area

Appendix Figure A-4: Piscataway Annex
dbh Frequency Distributions



Appendix Table A-1

Greenbelt Transect Data Summary

Sample Point	# Species	Basal Area (ft ² /ac)	Density (stems/ac)
T1-1	5	50	95
T1-2	3	30	141
T1-3	4	40	276
T1-4	4	40	406
T1-5	4	40	61
T1-6	3	30	656
T1-7	4	40	413
T1-8	4	40	588
T1-9	3	30	188
T1-10	6	60	289
T1-11	5	50	312
T1-12	3	30	305
T1-13	2	20	277
T1-14	4	40	234
T1-15	5	50	605
T1-16	4	40	88
T2-1	4	40	252
T2-2	2	20	339
T2-3	3	30	1067
T2-4	5	50	455
T2-5	4	40	213
T2-6	4	40	214
T2-7	4	40	72
T2-8	4	40	138
T2-9	3	30	336
T2-10	5	50	285
T2-11	3	30	330
T2-12	5	50	655
T2-13	2	20	219
T3-1	6	60	713
T3-2	4	40	194
T3-3	1	10	68
T3-4	5	50	108
T3-5	3	30	13
T3-6	5	50	157
T4-1	5	50	283
T4-2	1	10	92
T5-1	5	50	79
T5-2	5	50	583
T5-3	5	50	164
T5-4	3	30	173
T6-1	4	40	300
T6-2	4	40	43
T6-3	6	60	80
T6-4	2	20	175
T7-1	2	20	277
T7-2	5	50	449
Average	3.9	38.7	286.4
S. Error	0.182	1.815	31.06
Maximum	6	60	1067
Minimum	1	10	13

Appendix Table A-2

Greenbelt Park: Frequency of occurrence (%) and density (stems/ac) of woody species (dbh equal to or greater than 2").

Species	Frequency	Density
<i>Nyssa sylvatica</i>	49%	77
<i>Pinus virginiana</i>	43%	35
<i>Quercus alba</i>	49%	34
<i>Liquidambar styraciflua</i>	38%	32
<i>Acer rubrum</i>	40%	24
<i>Ilex opaca</i>	9%	22
<i>Sassafras albidum</i>	13%	15
<i>Quercus phellos</i>	11%	9
<i>Liriodendron tulipifera</i>	19%	7
<i>Cornus florida</i>	2%	6
<i>Quercus coccinea</i>	32%	5
<i>Quercus falcata</i>	9%	5
<i>Quercus velutina</i>	13%	5
<i>Pinus rigida</i>	13%	3
<i>Fagus grandifolia</i>	9%	2
<i>Quercus rubra</i>	15%	2
<i>Prunus serotina</i>	2%	2
<i>Quercus palustris</i>	9%	1
<i>Quercus michauxii</i>	2%	1
<i>Quercus prinus</i>	4%	0
	Total =	286

Appendix Table A-3

Piscataway Annex Transect
Data Summary

Sample Point	# Species	Basal Area (ft ² /ac)	Density (stems/ac)
T1-1-1	8	150	458
T1-1-2	7	130	239
T1-1-3	5	60	459
T1-1-4	5	100	501
T1-1-5	5	130	353
T1-1-6	3	130	357
T1-2-1	5	60	317
T1-2-2	7	70	702
T1-2-3	5	50	170
T1-2-4	5	90	129
T1-2-5	4	80	63
T1-2-6	6	100	492
T1-3-1	4	70	97
T1-3-2	5	100	158
T1-3-3	7	100	342
T1-3-4	4	80	121
T1-3-5	3	100	571
T1-3-6	6	110	68
T1-4-1	7	100	287
T1-4-2	8	130	1113
T1-4-3	6	70	605
T1-4-4	5	80	109
T1-4-5	4	60	66
T1-4-6	4	50	47
T1-5-1	6	110	632
T1-5-2	6	110	221
T1-5-3	7	130	350
T3-1-1	7	170	503
T3-1-2	5	100	100
T3-1-3	4	120	698
T3-1-4	5	120	133
T3-1-5	3	170	482
Average	5.3	100.9	342.0
S. Error	0.2484	5.6504	43.7249
Maximum	8	170	1113
Minimum	3	50	47

Appendix Table A-4

Piscataway Annex: Frequency of occurrence (%) and density (stems/ac) of woody species (dbh equal to or greater than 2").

Species	Frequency	Density
<i>Asimina triloba</i>	22%	86
<i>Acer rubrum</i>	34%	39
<i>Prunus</i> sp.	16%	28
<i>Ulmus americana</i>	19%	22
<i>Carpinus caroliniana</i>	6%	19
<i>Cornus florida</i>	6%	17
<i>Liriodendron tulipifera</i>	78%	15
<i>Quercus rubra</i>	38%	12
<i>Carya cordiformis</i>	78%	12
<i>Cercis canadensis</i>	6%	12
<i>Quercus michauxii</i>	44%	10
<i>Nyssa sylvatica</i>	9%	10
<i>Quercus alba</i>	38%	10
<i>Acer negundo</i>	9%	10
<i>Fraxinus americana</i>	34%	9
<i>Sassafras albidum</i>	3%	9
<i>Fagus grandifolia</i>	31%	8
<i>Quercus velutina</i>	3%	5
<i>Robinia pseudoacacia</i>	22%	3
<i>Liquidambar styraciflua</i>	9%	3
<i>Paulownia tomentosa</i>	3%	1
<i>Juglans nigra</i>	9%	1
<i>Platanus occidentalis</i>	6%	1
<i>Quercus falcata</i>	3%	0.2
<i>Quercus prinus</i>	3%	0.1

Total = 342

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T1-1.	dbh (in)
Quercus rubra	9
Quercus rubra	16
Quercus coccinea	18
Quercus coccinea	23
Pinus virginia	13
Pinus rigida	16
Quercus alba	16
Quercus alba	7
Sample Point #T1-2.	
Quercus alba	6
Quercus alba	13
Quercus alba	9
Quercus alba	16
Quercus coccinea	11
Quercus coccinea	15
Quercus rubra	8
Sample Point #T1-3.	
Quercus rubra	24
Quercus alba	6
Quercus alba	14
Quercus alba	17
Quercus alba	27
Quercus alba	12
Quercus alba	7
Quercus coccinea	21
Sassafras albidum	3

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T1-4.	
Quercus rubra	15
Quercus alba	6
Quercus alba	17
Nyssa sylvatica	6
Nyssa sylvatica	4
Nyssa sylvatica	4
Quercus velutina	14
Sample Point #T1-5.	
Acer rubrum	15
Acer rubrum	17
Acer rubrum	16
Acer rubrum	15
Acer rubrum	17
Acer rubrum	14
Quercus alba	24
Nyssa sylvatica	15
Quercus palustris	24
Sample Point #T1-6.	
Ilex opaca	2
Nyssa sylvatica	3
Nyssa sylvatica	15
Liquidambar styraciflua	11
Liquidambar styraciflua	14
Liquidambar styraciflua	17
Liquidambar styraciflua	15
Liquidambar styraciflua	13
Liquidambar styraciflua	15
Liquidambar styraciflua	3

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T1-7.	
Nyssa sylvatica	9
Nyssa sylvatica	20
Nyssa sylvatica	4
Liquidambar styraciflua	6
Liquidambar styraciflua	6
Liquidambar styraciflua	5
Liquidambar styraciflua	4
Quercus palustris	19
Acer rubrum	15
Sample Point #T1-8.	
Nyssa sylvatica	4
Nyssa sylvatica	8
Nyssa sylvatica	5
Nyssa sylvatica	6
Nyssa sylvatica	7
Nyssa sylvatica	4
Quercus alba	11
Quercus alba	11
Liquidambar styraciflua	15
Liquidambar styraciflua	9
Acer rubrum	6
Sample Point #T1-9.	
Nyssa sylvatica	7
Nyssa sylvatica	7
Nyssa sylvatica	13
Quercus coccinea	29
Liquidambar styraciflua	4
Liquidambar styraciflua	13

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T1-10.	
Quercus alba	10
Pinus rigida	19
Pinus rigida	12
Pinus rigida	16
Pinus rigida	14
Nyssa sylvatica	8
Nyssa sylvatica	4
Nyssa sylvatica	5
Acer rubrum	7
Liquidambar styraciflua	18
Liriodendron tulipifera	14
Sample Point #T1-11.	
Quercus falcata	4
Quercus falcata	6
Pinus rigida	15
Pinus rigida	13
Pinus rigida	11
Pinus rigida	18
Pinus virginiana	11
Pinus virginiana	13
Pinus virginiana	17
Pinus virginiana	17
Pinus virginiana	9
Liquidambar styraciflua	10
Liquidambar styraciflua	11
Quercus alba	6

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T1-12.	
Liquidambar styraciflua	8
Liquidambar styraciflua	8
Liquidambar styraciflua	3
Pinus rigida	11
Pinus rigida	14
Pinus virginiana	10
Pinus virginiana	11
Pinus virginiana	6
Sample Point #T1-13.	
Pinus virginiana	11
Pinus virginiana	17
Pinus virginiana	13
Pinus virginiana	6
Pinus virginiana	11
Pinus virginiana	13
Pinus virginiana	8
Pinus virginiana	11
Pinus virginiana	16
Pinus virginiana	12
Pinus virginiana	10
Pinus virginiana	15
Liquidambar styraciflua	9
Liquidambar styraciflua	6

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T1-14.	
Nyssa sylvatica	8
Pinus virginiana	15
Pinus virginiana	11
Pinus virginiana	10
Pinus virginiana	15
Pinus virginiana	12
Pinus virginiana	16
Pinus virginiana	14
Acer rubrum	7
Sassafras albidum	4
Sample Point #T1-15.	
Pinus virginiana	11
Pinus virginiana	14
Pinus virginiana	15
Pinus virginiana	14
Pinus virginiana	12
Pinus virginiana	15
Pinus virginiana	11
Pinus virginiana	14
Pinus virginiana	11
Pinus virginiana	13
Quercus velutina	3
Liquidambar styraciflua	6
Liquidambar styraciflua	3
Ilex opaca	4
Quercus phellos	20

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T1-16.	dbh (in)
Acer rubrum	24
Acer rubrum	16
Pinus virginiana	13
Pinus virginiana	17
Pinus virginiana	11
Pinus virginiana	16
Nyssa sylvatica	7
Pinus rigida	15
Sample Point #T2-1	
Acer rubrum	4
Quercus alba	6
Quercus alba	21
Quercus alba	6
Quercus alba	18
Quercus alba	14
Quercus alba	6
Quercus coccinea	19
Liquidambar styraciflua	15
Sample Point #T2-2.	
Nyssa sylvatica	6
Nyssa sylvatica	6
Nyssa sylvatica	4
Nyssa sylvatica	3
Quercus alba	18
Quercus alba	22
Quercus alba	27

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T2-3.	
Acer rubrum	5
Acer rubrum	6
Acer rubrum	6
Nyssa sylvatica	5
Nyssa sylvatica	2
Nyssa sylvatica	7
Nyssa sylvatica	6
Nyssa sylvatica	3
Quercus alba	3
Sample Point #T2-4.	
Nyssa sylvatica	14
Nyssa sylvatica	6
Nyssa sylvatica	7
Acer rubrum	4
Acer rubrum	18
Ilex opaca	7
Liriodendron tulipifera	4
Prunus serotina	4

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T2-5.	
Quercus falcata	16
Quercus alba	9
Quercus alba	7
Quercus alba	6
Liquidambar styraciflua	5
Nyssa sylvatica	12
Sample Point #T2-6.	
Nyssa sylvatica	5
Acer rubrum	14
Acer rubrum	29
Acer rubrum	16
Acer rubrum	19
Acer rubrum	16
Acer rubrum	14
Acer rubrum	20
Acer rubrum	18
Liriodendron tulipifera	30
Liriodendron tulipifera	12
Liquidambar styraciflua	6
Liquidambar styraciflua	11
Sample Point #T2-7.	
Quercus alba	6
Quercus alba	16
Quercus alba	24
Pinus virginiana	16
Liriodendron tulipifera	28
Quercus coccinea	19
Quercus coccinea	22

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T2-8.	
Pinus virginiana	15
Pinus virginiana	15
Pinus virginiana	14
Pinus virginiana	7
Pinus virginiana	14
Pinus virginiana	18
Liriodendron tulipifera	8
Quercus coccinea	24
Quercus coccinea	22
Quercus alba	7
Sample Point #T2-9.	
Pinus virginiana	14
Pinus virginiana	14
Pinus virginiana	13
Pinus virginiana	16
American Beech	5
Quercus alba	4
Quercus alba	5
Sample Point #T2-10.	
Pinus virginiana	8
Pinus virginiana	9
Pinus virginiana	15
Pinus virginiana	15
Pinus virginiana	9
Pinus virginiana	14
Pinus virginiana	16
Pinus virginiana	16
Quercus coccinea	9
Liquidambar styraciflua	5
Quercus michauxii	7
Quercus phellos	5

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T2-11.	
Pinus virginiana	14
Pinus virginiana	15
Pinus virginiana	9
Pinus virginiana	13
Pinus virginiana	13
Pinus virginiana	13
Pinus virginiana	15
Pinus virginiana	9
Pinus virginiana	11
Pinus virginiana	16
Pinus virginiana	17
Pinus virginiana	13
Quercus falcata	6
Nyssa sylvatica	6
Nyssa sylvatica	4
Sample Point #T2-12	
Pinus virginiana	13
Pinus virginiana	15
Pinus virginiana	12
Pinus virginiana	11
Pinus virginiana	11
Pinus virginiana	15
Pinus virginiana	18
Pinus virginiana	12
Quercus phellos	2
Sassafras albidum	4
Quercus phellos	5
Acer rubrum	10
Nyssa sylvatica	6

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T2-13.	
Acer rubrum	4
Acer rubrum	9
Acer rubrum	13
Acer rubrum	18
Acer rubrum	20
Acer rubrum	7
Acer rubrum	8
Acer rubrum	20
Acer rubrum	26
Acer rubrum	19
Acer rubrum	16
Quercus palustris	18
Sample Point #T3-1.	
Nyssa sylvatica	3
Nyssa sylvatica	7
Pinus virginiana	15
Pinus virginiana	13
Pinus virginiana	13
Pinus virginiana	12
Pinus virginiana	15
Liriodendron tulipifera	21
Liriodendron tulipifera	22
Liriodendron tulipifera	13
Liriodendron tulipifera	14
Liriodendron tulipifera	4
Liriodendron tulipifera	10
Liquidambar styraciflua	7
Pinus rigida	19
Cornus florida	2

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T3-2.	dbh (in)
Quercus palustris	9
Quercus falcata	7
Pinus virginiana	10
Pinus virginiana	14
Pinus virginiana	11
Pinus virginiana	9
Pinus virginiana	12
Pinus virginiana	9
Pinus virginiana	13
Quercus velutina	10
Sample Point #T3-3.	
Acer rubrum	11
Acer rubrum	17
Acer rubrum	9
Acer rubrum	17
Acer rubrum	20
Acer rubrum	24
Acer rubrum	26
Acer rubrum	17
Sample Point #T3-4.	
Fagus grandifolia	11
Acer rubrum	13
Acer rubrum	16
Liriodendron tulipifera	31
Nyssa sylvatica	12
Nyssa sylvatica	6
Nyssa sylvatica	14
Quercus velutina	19

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T3-5.	
Quercus alba	18
Quercus alba	21
Quercus alba	24
Sample Point #T3-6.	
Pinus virginiana	9
Pinus virginiana	14
Pinus virginiana	20
Quercus coccinea	11
Quercus coccinea	22
Quercus coccinea	20
Nyssa sylvatica	6
Quercus velutina	14
Quercus velutina	14
Quercus alba	24
Quercus alba	11
Sample Point #T4-1.	
Liriodendron tulipifera	20
Liriodendron tulipifera	13
Acer rubrum	8
Nyssa sylvatica	6
Quercus alba	14
Quercus alba	12
Quercus alba	11
Sassafras albidum	3

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T4-2.	
Acer rubrum	15
Acer rubrum	11
Acer rubrum	11
Acer rubrum	15
Acer rubrum	13
Acer rubrum	26
Acer rubrum	22
Acer rubrum	18
Acer rubrum	11
Acer rubrum	15
Sample Point #T5-1.	
Acer rubrum	26
Acer rubrum	29
Liriodendron tulipifera	15
Liriodendron tulipifera	10
Liriodendron tulipifera	13
Liriodendron tulipifera	15
Liquidambar styraciflua	12
Nyssa sylvatica	13
Fagus grandifolia	26
Sample Point #T5-2.	
Quercus alba	17
Acer rubrum	9
Ilex opaca	5
Ilex opaca	4
Ilex opaca	4
Ilex opaca	5
Ilex opaca	3
Scarlet oak	7
Quercus alba	9

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T5-3.	
Quercus velutina	8
Quercus alba	23
Quercus alba	12
Quercus alba	18
Quercus coccinea	10
Quercus coccinea	15
Quercus coccinea	18
Quercus coccinea	17
Liquidambar styraciflua	14
Ilex opaca	7
Ilex opaca	9
Sample Point #T5-4.	
Quercus alba	12
Quercus alba	13
Quercus alba	8
Quercus alba	9
Quercus alba	11
Quercus alba	6
Fagus grandifolia	15
Fagus grandifolia	12
Fagus grandifolia	14
Liquidambar styraciflua	21
Liquidambar styraciflua	16
Sample Point #T6-1.	
Nyssa sylvatica	3
Nyssa sylvatica	4
Quercus coccinea	8
Quercus coccinea	24
Quercus alba	19
Quercus alba	13
Quercus rubra	11

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T6-2.	
Quercus coccinea	16
Quercus coccinea	22
Quercus coccinea	20
Quercus coccinea	18
Quercus coccinea	17
Pinus virginiana	17
Quercus alba	17
Quercus prinus	31
Sample Point #T6-3.	
Sassafras albidum	7
Quercus alba	14
Quercus alba	19
Quercus alba	14
Quercus coccinea	26
Pinus virginiana	14
Pinus virginiana	19
Quercus prinus	31
Quercus rubra	23
Sample Point #T6-4.	
Pinus virginiana	8
Pinus virginiana	11
Pinus virginiana	11
Pinus virginiana	8
Pinus virginiana	10
Pinus virginiana	9
Pinus virginiana	8
Quercus phellos	12

Greenbelt Park: Raw tree data for each sample point.

Sample Point #T7-1.	dbh (in)
Pinus virginiana	7
Pinus virginiana	6
Pinus virginiana	11
Pinus virginiana	7
Pinus virginiana	7
Pinus virginiana	11
Pinus virginiana	6
Liquidambar styraciflua	13
Liquidambar styraciflua	13
Liquidambar styraciflua	10
Sample Point #T7-2.	
Sassafras albidum	4
Quercus coccinea	20
Quercus coccinea	21
Quercus alba	19
Quercus rubra	15
Quercus rubra	18
Nyssa sylvatica	4
Nyssa sylvatica	4
Nyssa sylvatica	4

Sample Point #T1-1.	dbh (in)	dbh's	dbh dist	stems/ac	
Quercus rubra	9	2.9	0	0	95.47322 stems/ac
Quercus rubra	16	3.9	0	0	
Quercus coccinea	18	4.9	0	0	
Quercus coccinea	23	5.9	0	0	
Pinus virginia	13	6.9	0	0	
Pinus rigida	16	7.9	1	32.59486	
Quercus alba	16	8.9	0	0	
Quercus alba	7	9.9	1	20.31535	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	3	22.89441	
		16.9	0	0	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	1	3.621651	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-2.	dbh (in)	dbh's	dbh dist	stems/ac	
Quercus alba	6	2.9	0	0	140.5537 stems/ac
Quercus alba	13	3.9	0	0	
Quercus alba	9	4.9	0	0	
Quercus alba	16	5.9	0	0	
Quercus coccinea	11	6.9	1	43.39552	
Quercus coccinea	15	7.9	1	32.59486	
Quercus rubra	8	8.9	1	25.37662	
		9.9	0	0	
		10.9	0	0	
		11.9	1	13.8636	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	2	15.26294	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-3.		dbh's	dbh dist	stems/ac	
Quercus rubra	24	2.9	0	0	276.4 stems/ac
Quercus alba	6	3.9	1	149.6703	
Quercus alba	14	4.9	0	0	
Quercus alba	17	5.9	0	0	
Quercus alba	27	6.9	2	86.79104	
Quercus alba	12	7.9	0	0	
Quercus alba	7	8.9	0	0	
Quercus coccinea	21	9.9	0	0	
Sassafras albidum	3	10.9	0	0	
		11.9	1	13.8636	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	1	4.362786	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	1	3.054495	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-4.		dbh's	dbh dist	stems/ac	
Quercus rubra	15	2.9	0	0	409.5591 stems/ac
Quercus alba	6	3.9	2	299.3405	
Quercus alba	17	4.9	0	0	
Nyssa sylvatica	6	5.9	0	0	
Nyssa sylvatica	4	6.9	2	86.79104	
Nyssa sylvatica	4	7.9	0	0	
Quercus velutina	14	8.9	0	0	
		9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	2	17.44077	
		15.9	0	0	
		16.9	0	0	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-5.		dbh's	dbh dist	stems/ac	
Acer rubrum	15	2.9	0	0	60.69713 stems/ac
Acer rubrum	17	3.9	0	0	
Acer rubrum	16	4.9	0	0	
Acer rubrum	15	5.9	0	0	
Acer rubrum	17	6.9	0	0	
Acer rubrum	14	7.9	0	0	
Quercus alba	24	8.9	0	0	
Nyssa sylvatica	15	9.9	0	0	
Quercus palustris	24	10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	2	17.44077	
		15.9	1	7.63147	
		16.9	2	13.46895	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	2	6.10899	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-6.		dbh's	dbh dist	stems/ac	
Ilex opaca	2	2.9	1	293.3537	656.0561 stems/ac
Nyssa sylvatica	3	3.9	2	299.3405	
Nyssa sylvatica	15	4.9	0	0	
Liquidambar styraciflua	11	5.9	0	0	
Liquidambar styraciflua	14	6.9	0	0	
Liquidambar styraciflua	17	7.9	0	0	
Liquidambar styraciflua	15	8.9	0	0	
Liquidambar styraciflua	13	9.9	0	0	
Liquidambar styraciflua	15	10.9	0	0	
Liquidambar styraciflua	3	11.9	1	13.8636	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	2	17.44077	
		15.9	2	15.26294	
		16.9	1	6.734474	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-7.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	9	2.9	0	0	413.2963 stems/ac
Nyssa sylvatica	20	3.9	0	0	
Nyssa sylvatica	4	4.9	3	271.6238	
Liquidambar styraciflua	6	5.9	1	60.61027	
Liquidambar styraciflua	6	6.9	1	43.39552	
Liquidambar styraciflua	5	7.9	0	0	
Liquidambar styraciflua	4	8.9	0	0	
Quercus palustris	19	9.9	1	20.31535	
Acer rubrum	15	10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	1	4.362786	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-8.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	4	2.9	0	0	588.1962 stems/ac
Nyssa sylvatica	8	3.9	2	299.3405	
Nyssa sylvatica	5	4.9	0	0	
Nyssa sylvatica	6	5.9	2	121.2205	
Nyssa sylvatica	7	6.9	1	43.39552	
Nyssa sylvatica	4	7.9	1	32.59486	
Quercus alba	11	8.9	2	50.75324	
Quercus alba	11	9.9	0	0	
Liquidambar styraciflua	15	10.9	2	33.26006	
Liquidambar styraciflua	9	11.9	0	0	
Acer rubrum	6	12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-9.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	7	2.9	0	0	188.75874
Nyssa sylvatica	7	3.9	0	0	
Nyssa sylvatica	13	4.9	1	90.541267	
Quercus coccinea	29	5.9	0	0	
Liquidambar styraciflua	4	6.9	1	43.395519	
Liquidambar styraciflua	13	7.9	1	32.594856	
		8.9	0	0	
		9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	2	20.120282	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	1	2.1068206	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-10.		dbh's	dbh dist	stems/ac	
Quercus alba	10	2.9	0	0	289.3537 stems/ac
Pinus rigida	19	3.9	0	0	
Pinus rigida	12	4.9	1	90.54127	
Pinus rigida	16	5.9	1	60.61027	
Pinus rigida	14	6.9	1	43.39552	
Nyssa sylvatica	8	7.9	0	0	
Nyssa sylvatica	4	8.9	1	25.37662	
Nyssa sylvatica	5	9.9	1	20.31535	
Acer rubrum	7	10.9	0	0	
Liquidambar styraciflua	18	11.9	1	13.8636	
Liriodendron tulipifera	14	12.9	0	0	
		13.9	0	0	
		14.9	2	17.44077	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	1	4.821724	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-11.		dbh's	dbh dist	stems/ac	
Quercus falcata	4	2.9	0	0	312.16383
Quercus falcata	6	3.9	0	0	
Pinus rigida	15	4.9	1	90.541267	
Pinus rigida	13	5.9	0	0	
Pinus rigida	11	6.9	2	86.791037	
Pinus rigida	18	7.9	0	0	
Pinus virginiana	11	8.9	1	25.376618	
Pinus virginiana	13	9.9	1	20.315354	
Pinus virginiana	17	10.9	0	0	
Pinus virginiana	17	11.9	3	41.59079	
Pinus virginiana	9	12.9	0	0	
Liquidambar styraciflua	10	13.9	2	20.120282	
Liquidambar styraciflua	11	14.9	1	8.7203836	
Quercus alba	6	15.9	0	0	
		16.9	1	6.7344744	
		17.9	2	11.973621	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-12.		dbh's	dbh dist	stems/ac	
Liquidambar styraciflua	8	2.9	0	0	305.4546 stems/ac
Liquidambar styraciflua	8	3.9	1	149.6703	
Liquidambar styraciflua	3	4.9	0	0	
Pinus rigida	11	5.9	0	0	
Pinus rigida	14	6.9	1	43.39552	
Pinus virginiana	10	7.9	1	32.59486	
Pinus virginiana	11	8.9	1	25.37662	
Pinus virginiana	6	9.9	0	0	
		10.9	1	16.63003	
		11.9	2	27.72719	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-13.		dbh's	dbh dist	stems/ac	
Pinus virginiana	11	2.9	0	0	277.30115
Pinus virginiana	17	3.9	0	0	
Pinus virginiana	13	4.9	0	0	
Pinus virginiana	6	5.9	1	60.61027	
Pinus virginiana	11	6.9	1	43.395519	
Pinus virginiana	13	7.9	1	32.594856	
Pinus virginiana	8	8.9	1	25.376618	
Pinus virginiana	11	9.9	0	0	
Pinus virginiana	16	10.9	2	33.260057	
Pinus virginiana	12	11.9	3	41.59079	
Pinus virginiana	10	12.9	0	0	
Pinus virginiana	15	13.9	2	20.120282	
Liquidambar styraciflua	9	14.9	0	0	
Liquidambar styraciflua	6	15.9	1	7.63147	
		16.9	1	6.7344744	
		17.9	1	5.9868103	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-14.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	8	2.9	0	0	234.2449 stems/ac
Pinus virginiana	15	3.9	0	0	
Pinus virginiana	11	4.9	1	90.54127	
Pinus virginiana	10	5.9	0	0	
Pinus virginiana	15	6.9	1	43.39552	
Pinus virginiana	12	7.9	0	0	
Pinus virginiana	16	8.9	1	25.37662	
Pinus virginiana	14	9.9	0	0	
Acer rubrum	7	10.9	1	16.63003	
Sassafras albidum	4	11.9	1	13.8636	
		12.9	1	11.73415	
		13.9	0	0	
		14.9	2	17.44077	
		15.9	2	15.26294	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-15.		dbh's	dbh dist	stems/ac	
Pinus virginiana	11	2.9	0	0	605.0475 stems/ac
Pinus virginiana	14	3.9	3	449.0108	
Pinus virginiana	15	4.9	0	0	
Pinus virginiana	14	5.9	0	0	
Pinus virginiana	12	6.9	1	43.39552	
Pinus virginiana	15	7.9	0	0	
Pinus virginiana	11	8.9	0	0	
Pinus virginiana	14	9.9	0	0	
Pinus virginiana	11	10.9	0	0	
Pinus virginiana	13	11.9	4	55.45439	
Quercus velutina	3	12.9	0	0	
Liquidambar styraciflua	6	13.9	2	20.12028	
Liquidambar styraciflua	3	14.9	2	17.44077	
Ilex opaca	4	15.9	2	15.26294	
Quercus phellos	20	16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	1	4.362786	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T1-16.	dbh (in)	dbh's	dbh dist	stems/ac	
Acer rubrum	24	2.9	0	0	88.33433 stems/ac
Acer rubrum	16	3.9	0	0	
Pinus virginiana	13	4.9	0	0	
Pinus virginiana	17	5.9	0	0	
Pinus virginiana	11	6.9	0	0	
Pinus virginiana	16	7.9	1	32.59486	
Nyssa sylvatica	7	8.9	0	0	
Pinus rigida	15	9.9	0	0	
		10.9	0	0	
		11.9	1	13.8636	
		12.9	1	11.73415	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	2	13.46895	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	1	3.054495	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-1		dbh's	dbh dist	stems/ac	
Acer rubrum	4	2.9	0	0	252.1566 stems/ac
Quercus alba	6	3.9	0	0	
Quercus alba	21	4.9	1	90.54127	
Quercus alba	6	5.9	0	0	
Quercus alba	18	6.9	3	130.1866	
Quercus alba	14	7.9	0	0	
Quercus alba	6	8.9	0	0	
Quercus coccinea	19	9.9	0	0	
Liquidambar styraciflua	15	10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	1	8.720384	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	2	10.71416	
		19.9	0	0	
		20.9	1	4.362786	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-2.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	6	2.9	0	0	338.5921 stems/ac
Nyssa sylvatica	6	3.9	1	149.6703	
Nyssa sylvatica	4	4.9	1	90.54127	
Nyssa sylvatica	3	5.9	0	0	
Quercus alba	18	6.9	2	86.79104	
Quercus alba	22	7.9	0	0	
Quercus alba	27	8.9	0	0	
		9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	1	3.621651	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-3.			dbh's	dbh dist	stems/ac	
Acer rubrum	5		2.9	2	586.7074	1067.525 stems/ac
Acer rubrum	6		3.9	1	149.6703	
Acer rubrum	6		4.9	1	90.54127	
Nyssa sylvatica	5		5.9	2	121.2205	
Nyssa sylvatica	2		6.9	2	86.79104	
Nyssa sylvatica	7		7.9	1	32.59486	
Nyssa sylvatica	6		8.9	0	0	
Nyssa sylvatica	3		9.9	0	0	
Quercus alba	3		10.9	0	0	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #T2-4.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	14	2.9	0	0	455.385 stems/ac
Nyssa sylvatica	6	3.9	1	149.6703	
Nyssa sylvatica	7	4.9	2	181.0825	
Acer rubrum	4	5.9	0	0	
Acer rubrum	18	6.9	1	43.39552	
Ilex opaca	7	7.9	2	65.18971	
Liriodendron tulipifera	4	8.9	0	0	
Prunus serotina	4	9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-5.		dbh's	dbh dist	stems/ac	
Quercus falcata	16	2.9	0	0	213.4033 stems/ac
Quercus alba	9	3.9	0	0	
Quercus alba	7	4.9	1	90.54127	
Quercus alba	6	5.9	0	0	
Liquidambar styraciflua	5	6.9	1	43.39552	
Nyssa sylvatica	12	7.9	1	32.59486	
		8.9	1	25.37662	
		9.9	0	0	
		10.9	0	0	
		11.9	1	13.8636	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	
		51.9		0	

Sample Point #T2-6.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	5	2.9	0	0	214.4819 stems/ac
Acer rubrum	14	3.9	0	0	
Acer rubrum	29	4.9	1	90.54127	
Acer rubrum	16	5.9	0	0	
Acer rubrum	19	6.9	1	43.39552	
Acer rubrum	16	7.9	0	0	
Acer rubrum	14	8.9	0	0	
Acer rubrum	20	9.9	0	0	
Acer rubrum	18	10.9	0	0	
Liriodendron tulipifera	30	11.9	2	27.72719	
Liriodendron tulipifera	12	12.9	0	0	
Liquidambar styraciflua	6	13.9	2	20.12028	
Liquidambar styraciflua	11	14.9	0	0	
		15.9	0	0	
		16.9	2	13.46895	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	2	9.643449	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	1	2.257262	
		29.9	0	0	
		30.9	1	1.970933	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-7.		dbh's	dbh dist	stems/ac	
Quercus alba	6	2.9	0	0	72.39668 stems/ac
Quercus alba	16	3.9	0	0	
Quercus alba	24	4.9	0	0	
Pinus virginiana	16	5.9	0	0	
Liriodendron tulipifera	28	6.9	1	43.39552	
Quercus coccinea	19	7.9	0	0	
Quercus coccinea	22	8.9	0	0	
		9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	1	6.734474	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	0	0	
		21.9	1	3.966383	
		22.9	0	0	
		23.9	0	0	
		24.9	1	3.054495	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	1	2.257262	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	
		51.9	0	0	

Sample Point #T2-8.		dbh's	dbh dist	stems/ac	
Pinus virginiana	15	2.9	0	0	137.883 stems/ac
Pinus virginiana	15	3.9	0	0	
Pinus virginiana	14	4.9	0	0	
Pinus virginiana	7	5.9	0	0	
Pinus virginiana	14	6.9	0	0	
Pinus virginiana	18	7.9	2	65.18971	
Liriodendron tulipifera	8	8.9	1	25.37662	
Quercus coccinea	24	9.9	0	0	
Quercus coccinea	22	10.9	0	0	
Quercus alba	7	11.9	0	0	
		12.9	0	0	
		13.9	1	10.06014	
		14.9	1	8.720384	
		15.9	2	15.26294	
		16.9	0	0	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	1	3.966383	
		22.9	0	0	
		23.9	1	3.319983	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-9.		dbh's	dbh dist	stems/ac	
Pinus virginiana	14	2.9	0	0	336.3969 stems/ac
Pinus virginiana	14	3.9	1	149.6703	
Pinus virginiana	13	4.9	1	90.54127	
Pinus virginiana	16	5.9	1	60.61027	
American Beech	5	6.9	0	0	
Quercus alba	4	7.9	0	0	
Quercus alba	5	8.9	0	0	
		9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	2	20.12028	
		14.9	1	8.720384	
		15.9	0	0	
		16.9	1	6.734474	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-10.		dbh's	dbh dist	stems/ac	
Pinus virginiana	8	2.9	0	0	284.6375 stems/ac
Pinus virginiana	9	3.9	0	0	
Pinus virginiana	15	4.9	0	0	
Pinus virginiana	15	5.9	2	121.2205	
Pinus virginiana	9	6.9	0	0	
Pinus virginiana	14	7.9	1	32.59486	
Pinus virginiana	16	8.9	2	50.75324	
Pinus virginiana	16	9.9	2	40.63071	
Quercus coccinea	9	10.9	0	0	
Liquidambar styraciflua	5	11.9	0	0	
Quercus michauxii	7	12.9	0	0	
Quercus phellos	5	13.9	0	0	
		14.9	2	17.44077	
		15.9	2	15.26294	
		16.9	1	6.734474	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-11.		dbh's	dbh dist	stems/ac	
Pinus virginiana	14	2.9	0	0	330.645 stems/ac
Pinus virginiana	15	3.9	0	0	
Pinus virginiana	9	4.9	1	90.54127	
Pinus virginiana	13	5.9	1	60.61027	
Pinus virginiana	13	6.9	1	43.39552	
Pinus virginiana	13	7.9	0	0	
Pinus virginiana	15	8.9	0	0	
Pinus virginiana	9	9.9	2	40.63071	
Pinus virginiana	11	10.9	0	0	
Pinus virginiana	16	11.9	1	13.8636	
Pinus virginiana	17	12.9	1	11.73415	
Pinus virginiana	13	13.9	4	40.24056	
Quercus falcata	6	14.9	0	0	
Nyssa sylvatica	6	15.9	3	22.89441	
Nyssa sylvatica	4	16.9	1	6.734474	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-12		dbh's	dbh dist	stems/ac	
Pinus virginiana	13	2.9	1	293.3537	654.7429 stems/ac
Pinus virginiana	15	3.9	1	149.6703	
Pinus virginiana	12	4.9	0	0	
Pinus virginiana	11	5.9	1	60.61027	
Pinus virginiana	11	6.9	1	43.39552	
Pinus virginiana	15	7.9	0	0	
Pinus virginiana	18	8.9	0	0	
Pinus virginiana	12	9.9	1	20.31535	
Quercus phellos	2	10.9	0	0	
Sassafras albidum	4	11.9	3	41.59079	
Quercus phellos	5	12.9	2	23.4683	
Acer rubrum	10	13.9	0	0	
Nyssa sylvatica	6	14.9	1	8.720384	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T2-13.		dbh's	dbh dist	stems/ac	
Acer rubrum	4	2.9	0	0	218.7214 stems/ac
Acer rubrum	9	3.9	0	0	
Acer rubrum	13	4.9	1	90.54127	
Acer rubrum	18	5.9	0	0	
Acer rubrum	20	6.9	0	0	
Acer rubrum	7	7.9	1	32.59486	
Acer rubrum	8	8.9	2	50.75324	
Acer rubrum	20	9.9	0	0	
Acer rubrum	26	10.9	0	0	
Acer rubrum	19	11.9	0	0	
Acer rubrum	16	12.9	0	0	
Quercus palustris	18	13.9	1	10.06014	
		14.9	0	0	
		15.9	0	0	
		16.9	1	6.734474	
		17.9	1	5.98681	
		18.9	2	10.71416	
		19.9	0	0	
		20.9	2	8.725571	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T3-1.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	3	2.9	1	293.3537	713.2586 stems/ac
Nyssa sylvatica	7	3.9	1	149.6703	
Pinus virginiana	15	4.9	1	90.54127	
Pinus virginiana	13	5.9	0	0	
Pinus virginiana	13	6.9	1	43.39552	
Pinus virginiana	12	7.9	1	32.59486	
Pinus virginiana	15	8.9	0	0	
Liriodendron tulipifera	21	9.9	1	20.31535	
Liriodendron tulipifera	22	10.9	0	0	
Liriodendron tulipifera	13	11.9	1	13.8636	
Liriodendron tulipifera	14	12.9	1	11.73415	
Liriodendron tulipifera	4	13.9	2	20.12028	
Liriodendron tulipifera	10	14.9	1	8.720384	
Liquidambar styraciflua	7	15.9	2	15.26294	
Pinus rigida	19	16.9	0	0	
Cornus florida	2	17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	1	4.362786	
		21.9	1	3.966383	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T3-2.	dbh (in)	dbh's	dbh dist	stems/ac	
Quercus palustris	9	2.9	0	0	193.5176 stems/ac
Quercus falcata	7	3.9	0	0	
Pinus virginiana	10	4.9	0	0	
Pinus virginiana	14	5.9	0	0	
Pinus virginiana	11	6.9	0	0	
Pinus virginiana	9	7.9	1	32.59486	
Pinus virginiana	12	8.9	3	76.12985	
Pinus virginiana	9	9.9	1	20.31535	
Pinus virginiana	13	10.9	1	16.63003	
Quercus velutina	10	11.9	2	27.72719	
		12.9	0	0	
		13.9	2	20.12028	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T3-3.		dbh's	dbh dist	stems/ac	
Acer rubrum	11	2.9	0	0	68.24192 stems/ac
Acer rubrum	17	3.9	0	0	
Acer rubrum	9	4.9	0	0	
Acer rubrum	17	5.9	0	0	
Acer rubrum	20	6.9	0	0	
Acer rubrum	24	7.9	0	0	
Acer rubrum	26	8.9	1	25.37662	
Acer rubrum	17	9.9	0	0	
		10.9	0	0	
		11.9	1	13.8636	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	0	0	
		16.9	1	6.734474	
		17.9	2	11.97362	
		18.9	0	0	
		19.9	0	0	
		20.9	1	4.362786	
		21.9	0	0	
		22.9	0	0	
		23.9	1	3.319983	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T3-4.		dbh's	dbh dist	stems/ac	
Fagus grandifolia	11	2.9	0	0	107.7533 stems/ac
Acer rubrum	13	3.9	0	0	
Acer rubrum	16	4.9	0	0	
Liriodendron tulipifera	31	5.9	0	0	
Nyssa sylvatica	12	6.9	1	43.39552	
Nyssa sylvatica	6	7.9	0	0	
Nyssa sylvatica	14	8.9	0	0	
Quercus velutina	19	9.9	0	0	
		10.9	0	0	
		11.9	2	27.72719	
		12.9	1	11.73415	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	1	1.847781	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T3-5.			dbh's	dbh dist	stems/ac	
Quercus alba	18		2.9	0	0	13.03985 stems/ac
Quercus alba	21		3.9	0	0	
Quercus alba	24		4.9	0	0	
			5.9	0	0	
			6.9	0	0	
			7.9	0	0	
			8.9	0	0	
			9.9	0	0	
			10.9	0	0	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	0	0	
			18.9	1	5.35708	
			19.9	0	0	
			20.9	1	4.362786	
			21.9	0	0	
			22.9	0	0	
			23.9	1	3.319983	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #T3-6.		dbh's	dbh dist	stems/ac	
Pinus virginiana	9	2.9	0	0	155.6616 stems/ac
Pinus virginiana	14	3.9	0	0	
Pinus virginiana	20	4.9	0	0	
Quercus coccinea	11	5.9	1	60.61027	
Quercus coccinea	22	6.9	0	0	
Quercus coccinea	20	7.9	0	0	
Nyssa sylvatica	6	8.9	0	0	
Quercus velutina	14	9.9	1	20.31535	
Quercus velutina	14	10.9	1	16.63003	
Quercus alba	24	11.9	1	13.8636	
Quercus alba	11	12.9	0	0	
		13.9	2	20.12028	
		14.9	1	8.720384	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	2	8.725571	
		21.9	0	0	
		22.9	1	3.621651	
		23.9	0	0	
		24.9	1	3.054495	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T4-1.		dbh's	dbh dist	stems/ac	
Liriodendron tulipifera	20	2.9	0	0	282.7703 stems/ac
Liriodendron tulipifera	13	3.9	1	149.6703	
Acer rubrum	8	4.9	0	0	
Nyssa sylvatica	6	5.9	0	0	
Quercus alba	14	6.9	1	43.39552	
Quercus alba	12	7.9	1	32.59486	
Quercus alba	11	8.9	0	0	
Sassafras albidum	3	9.9	0	0	
		10.9	1	16.63003	
		11.9	1	13.8636	
		12.9	1	11.73415	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	1	4.821724	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T4-2.		dbh's	dbh dist	stems/ac	
Acer rubrum	15	2.9	0	0	91.66426 stems/ac
Acer rubrum	11	3.9	0	0	
Acer rubrum	11	4.9	0	0	
Acer rubrum	15	5.9	0	0	
Acer rubrum	13	6.9	0	0	
Acer rubrum	26	7.9	0	0	
Acer rubrum	22	8.9	0	0	
Acer rubrum	18	9.9	0	0	
Acer rubrum	11	10.9	1	16.63003	
Acer rubrum	15	11.9	2	27.72719	
		12.9	1	11.73415	
		13.9	0	0	
		14.9	1	8.720384	
		15.9	2	15.26294	
		16.9	0	0	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	1	3.621651	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T5-1.			dbh's	dbh dist	stems/ac	
Acer rubrum	26		2.9	0	0	79.09041 stems/ac
Acer rubrum	29		3.9	0	0	
Liriodendron tulipifera	15		4.9	0	0	
Liriodendron tulipifera	10		5.9	0	0	
Liriodendron tulipifera	13		6.9	0	0	
Liriodendron tulipifera	15		7.9	0	0	
Liquidambar styraciflua	12		8.9	0	0	
Nyssa sylvatica	13		9.9	0	0	
Fagus grandifolia	26		10.9	1	16.63003	
			11.9	1	13.8636	
			12.9	2	23.4683	
			13.9	0	0	
			14.9	2	17.44077	
			15.9	0	0	
			16.9	0	0	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	1	2.819624	
			26.9	1	2.610838	
			27.9	0	0	
			28.9	1	2.257262	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	
			51.9		0	

Sample Point #T5-2.		dbh's	dbh dist	stems/ac	
Quercus alba	17	2.9	0	0	582.7876 stems/ac
Acer rubrum	9	3.9	1	149.6703	
Ilex opaca	5	4.9	3	271.6238	
Ilex opaca	4	5.9	1	60.61027	
Ilex opaca	4	6.9	1	43.39552	
Ilex opaca	5	7.9	0	0	
Ilex opaca	3	8.9	2	50.75324	
Scarelt oak	7	9.9	0	0	
Quercus alba	9	10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	0	0	
		16.9	1	6.734474	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T5-3.		dbh's	dbh dist	stems/ac	
Quercus velutina	8	2.9	0	0	163.6144 stems/ac
Quercus alba	23	3.9	0	0	
Quercus alba	12	4.9	0	0	
Quercus alba	18	5.9	0	0	
Quercus coccinea	10	6.9	1	43.39552	
Quercus coccinea	15	7.9	0	0	
Quercus coccinea	18	8.9	2	50.75324	
Quercus coccinea	17	9.9	0	0	
Liquidambar styraciflua	14	10.9	1	16.63003	
Ilex opaca	7	11.9	1	13.8636	
Ilex opaca	9	12.9	0	0	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	3	17.96043	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	1	3.319983	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T5-4.		dbh's	dbh dist	stems/ac	
Quercus alba	12	2.9	0	0	172.5308 stems/ac
Quercus alba	13	3.9	0	0	
Quercus alba	8	4.9	0	0	
Quercus alba	9	5.9	0	0	
Quercus alba	11	6.9	1	43.39552	
Quercus alba	6	7.9	0	0	
Fagus grandifolia	15	8.9	1	25.37662	
Fagus grandifolia	12	9.9	1	20.31535	
Fagus grandifolia	14	10.9	1	16.63003	
Liquidambar styraciflua	21	11.9	1	13.8636	
Liquidambar styraciflua	16	12.9	2	23.4683	
		13.9	1	10.06014	
		14.9	1	8.720384	
		15.9	0	0	
		16.9	1	6.734474	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	1	3.966383	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T6-1.		dbh's	dbh dist	stems/ac	
Nyssa sylvatica	3	2.9	0	0	299.5975 stems/ac
Nyssa sylvatica	4	3.9	1	149.6703	
Quercus coccinea	8	4.9	1	90.54127	
Quercus coccinea	24	5.9	0	0	
Quercus alba	19	6.9	0	0	
Quercus alba	13	7.9	0	0	
Quercus rubra	11	8.9	1	25.37662	
		9.9	0	0	
		10.9	0	0	
		11.9	1	13.8636	
		12.9	1	11.73415	
		13.9	0	0	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	1	3.054495	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T6-2.		dbh's	dbh dist	stems/ac	
Quercus coccinea	16	2.9	0	0	42.61753 stems/ac
Quercus coccinea	22	3.9	0	0	
Quercus coccinea	20	4.9	0	0	
Quercus coccinea	18	5.9	0	0	
Quercus coccinea	17	6.9	0	0	
Pinus virginiana	17	7.9	0	0	
Quercus alba	17	8.9	0	0	
Quercus prinus	31	9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	1	6.734474	
		17.9	3	17.96043	
		18.9	0	0	
		19.9	1	4.821724	
		20.9	0	0	
		21.9	0	0	
		22.9	1	3.621651	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	1	1.847781	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	
		51.9	0	0	

Sample Point #T6-3.		dbh's	dbh dist	stems/ac	
Sassafras albidum	7	2.9	0	0	80.05144 stems/ac
Quercus alba	14	3.9	0	0	
Quercus alba	19	4.9	0	0	
Quercus alba	14	5.9	0	0	
Quercus coccinea	26	6.9	0	0	
Pinus virginiana	14	7.9	1	32.59486	
Pinus virginiana	19	8.9	0	0	
Quercus prinus	31	9.9	0	0	
Quercus rubra	23	10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	2	20.12028	
		14.9	1	8.720384	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	2	10.71416	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	1	3.319983	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	1	1.970933	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T6-4.		dbh's	dbh dist	stems/ac	
Pinus virginiana	8	2.9	0	0	174.6354 stems/ac
Pinus virginiana	11	3.9	0	0	
Pinus virginiana	11	4.9	0	0	
Pinus virginiana	8	5.9	0	0	
Pinus virginiana	10	6.9	0	0	
Pinus virginiana	9	7.9	2	65.18971	
Pinus virginiana	8	8.9	1	25.37662	
Quercus phellos	12	9.9	1	20.31535	
		10.9	3	49.89009	
		11.9	1	13.8636	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T7-1.	dbh (in)	dbh's	dbh dist	stems/ac	
Pinus virginiana	7	2.9	0	0	277.1601 stems/ac
Pinus virginiana	6	3.9	0	0	
Pinus virginiana	11	4.9	0	0	
Pinus virginiana	7	5.9	1	60.61027	
Pinus virginiana	7	6.9	1	43.39552	
Pinus virginiana	11	7.9	3	97.78457	
Pinus virginiana	6	8.9	0	0	
Liquidambar styraciflua	13	9.9	1	20.31535	
Liquidambar styraciflua	13	10.9	2	33.26006	
Liquidambar styraciflua	10	11.9	0	0	
		12.9	1	11.73415	
		13.9	1	10.06014	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #T7-2.	dbh (in)	dbh's	dbh dist	stems/ac	
Sassafras albidum	4	2.9	0	0	449.4542 stems/ac
Quercus coccinea	20	3.9	1	149.6703	
Quercus coccinea	21	4.9	3	271.6238	
Quercus alba	19	5.9	0	0	
Quercus rubra	15	6.9	0	0	
Quercus rubra	18	7.9	0	0	
Nyssa sylvatica	4	8.9	0	0	
Nyssa sylvatica	4	9.9	0	0	
Nyssa sylvatica	4	10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	1	8.720384	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	2	10.71416	
		19.9	0	0	
		20.9	2	8.725571	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Table 3
Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Phragmites australis</i>	Phragmites	Invasive
<i>Phytolacca americana</i>	Pokeweed	
<i>Plantago aristata</i>	Bracted plantain	
<i>Plantago lanceolata</i>	English plantain	
<i>Poa annua</i>	Annual bluegrass	
<i>Podophyllum peltatum</i>	May-apple	
<i>Polygonatum biflorum</i>	Solomon's seal	
<i>Polygonum arifolium</i>	Halberd-leaved tearthumb	
<i>Polygonum cespitosum</i>	Long-bristled smartweed	Invasive
<i>Polygonum convulvulus</i>	Black bindweed	
<i>Polygonum perfoliatum</i>	Mile-a-minute	Invasive
<i>Polygonum punctatum</i>	Water smartweed	
<i>Polystichum acrostichoides</i>	Christmas fern	
<i>Pontederia cordata</i>	Pickrel-weed	
<i>Potentilla recta</i>	Rough-fruited cinquefoil	
<i>Prenanthes serpentaria</i>	Lion's foot	
<i>Prunella vulgaris</i>	Selfheal	
<i>Ranunculus abortivus</i>	Kidney-leaved buttercup	
<i>Ranunculus bulbosus</i>	Bulbous buttercup	
<i>Rhexia mariana</i>	Maryland meadow beauty	
<i>Sagittaria latifolia</i>	Broad-leaved arrowhead	
<i>Sanicula canadensis</i>	Black snakeroot	
<i>Saururus cernuus</i>	Lizard's-tail	
<i>Schizachyrium scoparium</i>	Little bluestem	
<i>Scirpus cyperinus</i>	Woolgrass	
<i>Scirpus polyphyllus</i>	Many-leaved bulrush	
<i>Setaria faberii</i>	Faber's foxtail	
<i>Setaria glauca</i>	Yellow foxtail	
<i>Sisyrinchium angustifolium</i>	Blue-eyed grass	
<i>Smilacina racemosa</i>	False Solomon's seal	
<i>Solanum carolinense</i>	Horse nettle	
<i>Solanum dulcamara</i>	Nightshade	
<i>Solidago caesia</i>	Blue-stem goldenrod	
<i>Solidago nemoralis</i>	Gray goldenrod	
<i>Solidago rugosa</i>	Wrinkle-leaf goldenrod	
<i>Sorghum halepense</i>	Johnson grass	Invasive
<i>Stellaria media</i>	Common chickweed	Invasive
<i>Symplocarpus foetidus</i>	Skunk cabbage	
<i>Taraxacum officinale</i>	Common dandelion	
<i>Thelypteris noveboracensis</i>	New York fern	
<i>Thelypteris thelypteroides</i>	Marsh fern	
<i>Tovara virginiana</i>	Knotweed	
<i>Tridens flavus</i>	Purpletop grass	
<i>Typha latifolia</i>	Broad-leaved cattail	
<i>Uvularia perfoliata</i>	Perfoliate bellwort	
<i>Verbascum blattaria</i>	Moth mullien	
<i>Veronica officinalis</i>	Common speedwell	
<i>Vicia grandiflora</i>	Large-flowered vetch	
<i>Vinca minor</i>	Periwinkle	Invasive
<i>Viola blanda</i>	Sweet white violet	

Table 3

Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Viola cucullata</i>	Blue marsh violet	
<i>Viola papilionacea</i>	Common blue violet	
<i>Viola primulifolia</i>	Primrose-leaved violet	
<i>Viola sagittata</i>	Arrow-leaved violet	
<i>Woodwardia virginica</i>	Virginia chainfern	

Table 6

Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Acorus calamus</i>	Sweetflag	
<i>Adiantum pedatum</i>	Maidenhair fern	
<i>Agastache nepetoides</i>	Yellow giant hyssop	
<i>Agrostis perennans</i>	Autumn bent	
<i>Agrostis stolonifera</i>	Creeping bent	
<i>Alisma subcordatum</i>	Mud-plantain	
<i>Alliaria officinalis</i>	Garlic-mustard	Invasive
<i>Allium vineale</i>	Field garlic	Invasive
<i>Apios americana</i>	Ground-nut	
<i>Aplectrum hyemale</i>	Putty-root	
<i>Apocynum cannabinum</i>	Indian hemp	
<i>Arabis laevigata</i>	Smooth rockcress	
<i>Arisaema dracontium</i>	Green dragon	G5; S3
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	
<i>Aristida dichotoma</i>	Three-awn grass	
<i>Artemisia vulgaris</i>	Wormwood	Invasive
<i>Arthraxon hispidus</i>	Arthraxon	Invasive
<i>Asarum canadense</i>	Wild ginger	
<i>Ascyrum Hypericoides</i>	St. Andrew's cross	
<i>Asplenium platyneuron</i>	Ebony spleenwort	
<i>Aster ericoides</i>	Heath aster	
<i>Aster divaricatus</i>	White wood aster	
<i>Athyrium thelypteroides</i>	Silvery athyrium	
<i>Barbarea vulgaris</i>	Winter-cress	
<i>Bidens aristosa</i>	Tickseed-sunflower	
<i>Bidens coronata</i>	Tickseed-sunflower	G5; S2S3
<i>Bidens vulgata</i>	Beggar-ticks	
<i>Boehmeria cylindrica</i>	False nettle	
<i>Botrychium dissectum</i>	Cutleaf grapefern	
<i>Botrychium virginianum</i>	Rattlesnake fern	
<i>Calystegia sepium</i>	Hedge bindweed	
<i>Cardamine hirsuta</i>	Hairy bittercress	
<i>Carex albursina</i>	White bear sedge	G5; S3
<i>Carex crinita</i>	Tasseled sedge	
<i>Carex frankii</i>	Frank's sedge	
<i>Carex lurida</i>	Yellow-green sedge	
<i>Chaerophyllum procumbens</i>	Spreading chervil	
<i>Chelone glabra</i>	Turtlehead	
<i>Cicuta maculata</i>	Water hemlock	
<i>Cimicifuga racemosa</i>	Bugbane	
<i>Cinna arundinacea</i>	Wood reed	
<i>Claytonia virginica</i>	Spring beauty	
<i>Collinsonia canadensis</i>	Horse-balm	
<i>Commelina communis</i>	Asiatic dayflower	Invasive
<i>Commelina virginica</i>	Virginia dayflower	G5; S3
<i>Conopholis americana</i>	Squawroot	
<i>Corydalis flavula</i>	Pale corydalis	
<i>Cryptotaenia canadensis</i>	Honewort	
<i>Cuscuta gronovii</i>	Dodder	

Table 6

Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Cynoglossum virginianum</i>	Wild comfrey	
<i>Cyperus iria</i>	Yellow cyperus	
<i>Cyperus rivularis</i>	Shining cyperus	
<i>Cystopteris protrusa</i>	Lowland brittle fern	
<i>Dennstaedtia punctilobula</i>	Hay-scented fern	
<i>Dentaria laciniata</i>	Cut-leaved toothwort	
<i>Desmodium canescens</i>	Hoary tick-trefoil	
<i>Dicentra cucullaria</i>	Dutchman's breeches	
<i>Digitaria sanguinalis</i>	Crabgrass	
<i>Diodia teres</i>	Rough buttonweed	
<i>Dioscorea quaternata</i>	Wild yam	
<i>Duchesnea indica</i>	Indian strawberry	Invasive
<i>Echinochloa crus-galli</i>	Barnyard grass	Invasive
<i>Elymus villosus</i>	Slender wild rye	
<i>Epifagus virginiana</i>	Beechdrops	
<i>Equisetum arvense</i>	Common horsetail	
<i>Erigeron annuus</i>	Daisy fleabane	
<i>Erythronium americanum</i>	Trout lily	
<i>Eupatorium fistulosum</i>	Hollow-stem Joe-pye weed	
<i>Eupatorium hyssopifolium</i>	Hyssop-leaved thoroughwort	
<i>Eupatorium perfoliatum</i>	Boneset	
<i>Eupatorium rugosum</i>	White snakeroot	
<i>Eupatorium serotinum</i>	Late-flowering thoroughwort	
<i>Festuca elatior</i>	Meadow fescue	Invasive
<i>Galearis spectabilis</i>	Showy orchis	
<i>Galium aparine</i>	Cleavers	
<i>Galium asprellum</i>	Rough bedstraw	
<i>Galium circaezans</i>	Wild licorice	
<i>Geum canadense</i>	White avens	
<i>Geum virginianum</i>	Rough avens	
<i>Glechoma hederacea</i>	Ground-ivy	Invasive
<i>Glyceria striata</i>	Fowl manna grass	
<i>Gnaphalium obtusifolium</i>	Cudweed	
<i>Goodyera pubescens</i>	Rattlesnake plantain	
<i>Hedeoma hispida</i>	Rough pennyroyal	
<i>Hedera helix</i>	English ivy	Invasive
<i>Helenium autumnale</i>	Yellow sneezeweed	
<i>Heimerocallis fulva</i>	Day-lily	Invasive
<i>Hibiscus moscheutos</i>	Rose mallow	
<i>Hieracium venosum</i>	Rattle-snake weed	
<i>Houstonia caerulea</i>	Bluets	
<i>Houstonia longifolia</i>	Long-leaved bluet	
<i>Hystrix patula</i>	Bottle-brush grass	
<i>Impatiens capensis</i>	Jewelweed	
<i>Iris pseudacorus</i>	Yellow iris	Invasive
<i>Juncus effusus</i>	Soft rush	
<i>Juncus tenuis</i>	Path rush	
<i>Laportea canadensis</i>	Wood-nettle	
<i>Leersia oryzoides</i>	Rice cutgrass	
<i>Lespedeza cuneata</i>	Bush-clover	Invasive

Table 6
Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Ludwigia alternifolia</i>	Seedbox	
<i>Lycopodium lucidulum</i>	Shining clubmoss	
<i>Lycopus virginicus</i>	Virginia bugleweed	
<i>Lysimachia ciliata</i>	Fringed loosestrife	
<i>Medeola virginiana</i>	Indian cucumber-root	
<i>Microstegium viminium</i>	Stilt grass	Invasive
<i>Mikania scandens</i>	Climbing hempweed	
<i>Mimulus alatus</i>	Sharp-winged monkeyflower	
<i>Mitchella repens</i>	Partridge-berry	
<i>Mitella diphylla</i>	Miterwort	
<i>Monotropa uniflora</i>	Indian pipe	
<i>Myosotis macrosperma</i>	Large-seeded forget-me-not	G5; S1; T
<i>Nemophila aphylla</i>	Sm. fl. baby blue-eyes	G5; S1
<i>Nuphar advena</i>	Spatterdock	
<i>Onoclea sensibilis</i>	Sensitive fern	
<i>Osmorhiza claytoni</i>	Sweet cicely	
<i>Osmunda cinnamomea</i>	Cinnamon fern	
<i>Oxalis stricta</i>	Wood-sorrel	
<i>Panicum anceps</i>	Flat-stemmed panic grass	
<i>Panicum dichotomiflorum</i>	Spreading witch grass	
<i>Panicum virgatum</i>	Switchgrass	
<i>Peltandra virginica</i>	Arrow-arum	
<i>Penthorum sedoides</i>	Ditch stonecrop	
<i>Perilla frutescens</i>	Beefsteak mint	Invasive
<i>Phalaris arundinacea</i>	Reed canary grass	Invasive
<i>Phegopteris hexagonoptera</i>	Broad beech fern	
<i>Phryma leptostachya</i>	Lopseed	
<i>Phytolacca americana</i>	Pokeweed	
<i>Pilea pumila</i>	Clearweed	
<i>Podophyllum peltatum</i>	May-apple	
<i>Polygonatum biflorum</i>	Solomon's seal	
<i>Polygonum aviculare</i>	Knotweed	
<i>Polygonum cespitosum</i>	Long-bristled smartweed	Invasive
<i>Polygonum cuspidatum</i>	Japanese knotweed	Invasive
<i>Polygonum perfoliatum</i>	Mile-a-minute	Invasive
<i>Polygonum punctatum</i>	Water smartweed	
<i>Polygonum sagittatum</i>	Arrow-leaved tearthumb	
<i>Polymnia uvedalia</i>	Yellow-flowered leafcup	
<i>Polystichum acrostichoides</i>	Christmas fern	
<i>Pontederia cordata</i>	Pickereel-weed	
<i>Prunella vulgaris</i>	Selfheal	
<i>Ranunculus abortivus</i>	Kidney-leaved buttercup	
<i>Ranunculus micranthus</i>	Small-flowered crowfoot	G5; S3
<i>Ranunculus recurvatus</i>	Hooked crowfoot	
<i>Rudbeckia laciniata</i>	Green-headed coneflower	
<i>Sagittaria latifolia</i>	Broad-leaved arrowhead	
<i>Sanguinaria canadensis</i>	Bloodroot	
<i>Sanicula canadensis</i>	Black snakeroot	
<i>Saururus cernuus</i>	Lizard's-tail	
<i>Scirpus americanus</i>	Three-square	

Table 6
Piscataway Annex Herbaceous Plants

Scientific Name	Common Name	Status
<i>Scirpus atrovirens</i>	Green bulrush	
<i>Scirpus cyperinus</i>	Woolgrass	
<i>Scirpus polyphyllus</i>	Many-leaved bulrush	
<i>Scrophularia marilandica</i>	Maryland figwort	
<i>Scutellaria galericulata</i>	Marsh skullcap	G5; S1
<i>Sedum ternatum</i>	Wild stonecrop	
<i>Sisyrinchium angustifolium</i>	Blue-eyed grass	
<i>Solanum carolinense</i>	Horse nettle	
<i>Solidago caesia</i>	Blue-stem goldenrod	
<i>Solidago flexicaulis</i>	Zig-zag goldenrod	
<i>Solidago gigantea</i>	Giant goldenrod	
<i>Solidago rugosa</i>	Wrinkle-leaf goldenrod	
<i>Sorghum halpense</i>	Johnson grass	Invasive
<i>Stellaria media</i>	Common chickweed	Invasive
<i>Stellaria pubera</i>	Great chickweed	
<i>Symplocarpus foetidus</i>	Skunk cabbage	
<i>Sisyrinchium angustifolium</i>	Blue-eyed grass	
<i>Taraxacum officinale</i>	Common dandelion	
<i>Thelypteris noveboracensis</i>	New York fern	
<i>Thelypteris thelypteroides</i>	Marsh fern	
<i>Tipularia discolor</i>	Crane-fly orchid	
<i>Tovara virginiana</i>	Virginia knotweed	
<i>Tridens flavus</i>	Purpletop grass	
<i>Trillium sessile</i>	Toadshade	
<i>Triodanis perfoliata</i>	Venus's looking-glass	
<i>Typha angustifolia</i>	Narrow-leaved cattail	
<i>Typha latifolia</i>	Broad-leaved cattail	
<i>Uvularia perfoliata</i>	Perfoliate bellwort	
<i>Verbena urticifolia</i>	White vervain	
<i>Verbesina alternifolia</i>	Yellow ironweed	
<i>Vernonia noveboracensis</i>	New York ironweed	
<i>Vicia grandiflora</i>	Large-flowered vetch	
<i>Viola arvensis</i>	Field pansy	
<i>Viola cucullata</i>	Blue marsh violet	
<i>Viola pensylvanica</i>	Smooth yellow violet	
<i>Woodwardia areolata</i>	Chainfern	
<i>Zizania aquatica</i>	Wild rice	

Table 3
Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Dichanthelium spaerocarpon</i>	Round-fruited panic grass	
<i>Dipsacus laciniatus</i>	Teasel	Invasive
<i>Dryopteris intermedia</i>	Evergreen wood fern	
<i>Duchesnea indica</i>	Indian strawberry	Invasive
<i>Echinochloa crus-galli</i>	Barnyard grass	Invasive
<i>Eragrostis spectabilis</i>	Purple lovegrass	
<i>Erigeron annuus</i>	Daisy fleabane	
<i>Erythronium americanum</i>	Trout lily	
<i>Eupatorium coelestinum</i>	Mistflower	
<i>Eupatorium perfoliatum</i>	Boneset	
<i>Festuca elatior</i>	Meadow fescue	Invasive
<i>Galium aparine</i>	Cleavers	
<i>Glechoma hederacea</i>	Ground-ivy	Invasive
<i>Glyceria striata</i>	Fowl manna grass	
<i>Goodyera pubescens</i>	Rattlesnake plantain	
<i>Heuchera americana</i>	Alumroot	
<i>Hieracium pratense</i>	King devil	
<i>Houstonia caerulea</i>	Bluets	
<i>Hypochaeris radicata</i>	Cat's ear	
<i>Impatiens capensis</i>	Jewelweed	
<i>Iris pseudacorus</i>	Yellow iris	Invasive
<i>Juncus acuminatus</i>	Taper-tip rush	
<i>Juncus dichotomus</i>	Forked rush	
<i>Juncus effusus</i>	Soft rush	
<i>Juncus tenuis</i>	Path rush	
<i>Krigia virginica</i>	Dwarf dandelion	G5; S1; E
<i>Lactuca canadensis</i>	Wild lettuce	
<i>Lamium amplexicaule</i>	Henbit	Invasive
<i>Leersia oryzoides</i>	Rice cutgrass	
<i>Leersia virginica</i>	Whitegrass	
<i>Lespedeza cuneata</i>	Bush-clover	Invasive
<i>Lolium multiflorum</i>	Annual ryegrass	
<i>Ludwigia alternifolia</i>	Seedbox	
<i>Luzula echinata</i>	Sea-urchin woodrush	
<i>Lycopodium flabelliforme</i>	Ground pine	
<i>Lycopodium lucidulum</i>	Shining clubmoss	
<i>Lycopodium obscurum</i>	Tree clubmoss	
<i>Lycopus virginicus</i>	Virginia bugleweed	
<i>Lysimachia quadrifolia</i>	Whorled loosestrife	
<i>Maianthemum canadense</i>	Wild lily-of-the-valley	
<i>Medeola virginiana</i>	Indian cucumber-root	
<i>Microstegium viminium</i>	Stilt grass	Invasive
<i>Mitchella repens</i>	Partridge-berry	
<i>Onoclea sensibilis</i>	Sensitive fern	
<i>Ornithogalum umbellatum</i>	Star-of-Bethlehem	Invasive
<i>Osmunda cinnamomea</i>	Cinnamon fern	
<i>Osmunda regalis</i>	Royal fern	
<i>Oxalis stricta</i>	Wood-sorrel	
<i>Panicum leucothrix</i>	Panic grass	
<i>Perilla frutescens</i>	Beefsteak mint	Invasive

Table 3

Greenbelt National Park Herbaceous Plants

Scientific Name	Common Name	Status
<i>Agrostis stolonifera</i>	Creeping bent	
<i>Ajuga reptans</i>	Creeping bugleweed	Invasive
<i>Alisma subcordatum</i>	Mud-plantain	
<i>Alliaria officinalis</i>	Garlic-mustard	Invasive
<i>Allium vineale</i>	Field garlic	Invasive
<i>Ambrosia artemisiifolia</i>	Common ragweed	
<i>Andropogon virginicus</i>	Broomsedge	
<i>Anemone quinquefolia</i>	Wood anemone	
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	Invasive
<i>Apocynum cannabinum</i>	Indian hemp	
<i>Aralia nudicaulis</i>	Wild sarsaparilla	
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	
<i>Artemisia vulgaris</i>	Wormwood	Invasive
<i>Arthraxon hispidus</i>	Arthraxon	Invasive
<i>Asclepias syriaca</i>	Common milkweed	
<i>Ascyrum Hypericoides</i>	St. Andrew's cross	
<i>Asplenium platyneuron</i>	Ebony spleenwort	
<i>Aster cordifolius</i>	Common blue wood aster	
<i>Aster lateriflorus</i>	Calico aster	
<i>Aster vimineus</i>	Small white aster	
<i>Barbarea vulgaris</i>	Winter-cress	
<i>Boehmeria cylindrica</i>	False nettle	
<i>Botrychium dissectum</i>	Cutleaf grapefern	
<i>Botrychium virginianum</i>	Rattlesnake fern	
<i>Bromus mollis</i>	Soft chess	
<i>Calystegia sepium</i>	Hedge bindweed	
<i>Cardamine hirsuta</i>	Hairy bittercress	
<i>Carex bicknellii</i>	Bicknell's sedge	
<i>Carex crinita</i>	Tasseled sedge	
<i>Carex debilis</i>	Weak sedge	
<i>Carex folliculata</i>	Folliculed sedge	
<i>Carex lurida</i>	Yellow-green sedge	
<i>Carex tribuloides</i>	Blunt broom sedge	
<i>Chimaphila maculata</i>	Striped wintergreen	
<i>Cirsium arvense</i>	Canada thistle	Invasive
<i>Cirsium discolor</i>	Field thistle	
<i>Claytonia virginica</i>	Spring beauty	
<i>Commelina communis</i>	Asiatic dayflower	Invasive
<i>Convallaria majalis</i>	Lily-of-the-valley	
<i>Cryptotaenia canadensis</i>	Honewort	
<i>Cyperus odoratus</i>	Fragrant galingale	
<i>Cyperus strigosus</i>	Galingale	
<i>Cypripedium acaule</i>	Pink lady's slipper	
<i>Danthonia spicata</i>	Poverty grass	
<i>Datura stramonium</i>	Jimson weed	
<i>Daucus carota</i>	Queen Anne's lace	
<i>Dennstaedtia punctilobula</i>	Hay-scented fern	
<i>Dichanthelium acuminatum</i>	Hairy panic grass	
<i>Dichanthelium linearifolium</i>	Low panic grass	

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-1-1.			
Acer rubrum	4	1	1
Carya cordiformis	10	1	1
Fagus grandifolia	4	1	1
Fagus grandifolia	15	1	1
Quercus alba	13	1	1
Quercus alba	28	1	1
Quercus alba	11	1	1
Quercus falcata	17	1	1
Quercus michauxii	6	1	1
Quercus michauxii	27	1	1
Quercus michauxii	12	1	1
Quercus rubra	19	1	1
Quercus rubra	15	1	1
Quercus rubra	39	1	1
Quercus velutina	3	1	1
Sample Point #1-1-2.			
Acer rubrum	15	1	1
Carya cordiformis	17	1	1
Carya cordiformis	26	1	1
Carya cordiformis	24	1	1
Carya cordiformis	10	1	1
Carya cordiformis	15	1	1
Cercis canadensis	5	1	1
Fagus grandifolia	9	1	1
Liriodendron tulipifera	32	1	1
Quercus michauxii	10	1	1
Quercus michauxii	6	1	1
Quercus michauxii	13	1	1
Quercus rubra	16	1	1

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-1-3.			
Carya cordiformis	34	1	1
Carya sp.	25	1	1
Liriodendron tulipifera	20	1	1
Prunus sp.	2	1	1
Prunus sp.	3	1	1
Quercus michauxii	17	1	1
Sample Point #1-1-4.			
Acer rubrum	18	1	1
Carya cordiformis	17	1	1
Cornus florida	4	1	1
Cornus florida	2	1	1
Liriodendron tulipifera	25	1	1
Liriodendron tulipifera	22	1	1
Liriodendron tulipifera	24	1	1
Liriodendron tulipifera	36	1	1
Liriodendron tulipifera	24	1	1
Prunus sp.	4	1	1
Sample Point #1-1-5.			
Asimina triloba	2	1	1
Fagus grandifolia	17	1	1
Juglans nigra	12	1	1
Liriodendron tulipifera	24	1	1
Liriodendron tulipifera	29	1	1
Liriodendron tulipifera	14	1	1
Liriodendron tulipifera	24	1	1
Liriodendron tulipifera	35	1	1
Liriodendron tulipifera	17	1	1
Liriodendron tulipifera	18	1	1
Liriodendron tulipifera	24	1	1
Liriodendron tulipifera	23	1	1
Quercus rubra	24	1	1

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-1-6.			
Carpinus caroliniana	4	1	1
Carpinus caroliniana	3	1	1
Liriodendron tulipifera	16	1	1
Liriodendron tulipifera	23	1	1
Liriodendron tulipifera	21	1	1
Liriodendron tulipifera	16	1	1
Liriodendron tulipifera	20	1	1
Liriodendron tulipifera	32	1	1
Liriodendron tulipifera	15	1	1
Liriodendron tulipifera	19	1	1
Liriodendron tulipifera	17	1	1
Liriodendron tulipifera	18	1	1
Quercus prinus	22	1	1
Sample Point #1-2-1.			
Carya cordiformis	19	1	2
Carya cordiformis	19	1	2
Liriodendron tulipifera	16	1	2
Quercus michauxii	26	1	2
Quercus rubra	29	1	2
Sassafras albidum	2	1	2
Sample Point #1-2-2.			
Asimina triloba	5	1	2
Carya sp.	22	1	2
Cercis canadensis	2	1	2
Fagus grandifolia	27	1	2
Quercus alba	31	1	2
Robinia pseudoacacia	11	1	2
Ulmus sp.	1	1	2

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-2-3.			
Carya sp.	24	1	2
Fagus grandifolia	27	1	2
Liriodendron tulipifera	15	1	2
Quercus alba	4	1	2
Quercus rubra	15	1	2
Sample Point #1-2-4.			
Acer rubrum	17	1	2
Carya cordiformis	6	1	2
Carya cordiformis	7	1	2
Liriodendron tulipifera	25	1	2
Liriodendron tulipifera	26	1	2
Quercus alba	9	1	2
Quercus michauxii	15	1	2
Quercus michauxii	23	1	2
Quercus michauxii	15	1	2
Sample Point #1-2-5.			
Acer rubrum	18	1	2
Carya cordiformis	21	1	2
Fraxinus americana	13	1	2
Fraxinus americana	31	1	2
Liriodendron tulipifera	19	1	2
Liriodendron tulipifera	15	1	2
Liriodendron tulipifera	11	1	2
Liriodendron tulipifera	13	1	2

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-2-6.			
Carya cordiformis	16	1	2
Carya cordiformis	16	1	2
Liriodendron tulipifera	26	1	2
Prunus sp.	2	1	2
Quercus alba	26	1	2
Robinia pseudoacacia	16	1	2
Ulmus americana	7	1	2
Ulmus americana	9	1	2
Ulmus americana	6	1	2
Ulmus americana	5	1	2
Sample Point #1-3-1.			
Acer negundo	9	1	3
Acer negundo	13	1	3
Acer negundo	11	1	3
Liriodendron tulipifera	20	1	3
Liriodendron tulipifera	22	1	3
Robinia pseudoacacia	7	1	3
Ulmus sp.	13	1	3
Sample Point #1-3-2.			
Acer negundo	11	1	3
Acer negundo	11	1	3
Acer negundo	5	1	3
Fraxinus americana	13	1	3
Fraxinus americana	19	1	3
Liriodendron tulipifera	18	1	3
Liriodendron tulipifera	27	1	3
Platanus occidentalis	22	1	3
Quercus michauxii	19	1	3
Quercus michauxii	22	1	3

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-3-3.			
Acer rubrum	15	1	3
Carya sp.	20	1	3
Fraxinus americana	22	1	3
Liriodendron tulipifera	19	1	3
Quercus alba	17	1	3
Quercus alba	18	1	3
Quercus alba	22	1	3
Quercus michauxii	16	1	3
Quercus rubra	23	1	3
Quercus rubra	2	1	3
Sample Point #1-3-4.	dbh (in)		
Acer rubrum	13	1	3
Acer rubrum	7	1	3
Acer rubrum	12	1	3
Acer rubrum	13	1	3
Carya sp.	21	1	3
Quercus rubra	11	1	3
Quercus rubra	10	1	3
Robinia pseudoacacia	12	1	3
Sample Point #1-3-5.			
Asimina triloba	2	1	3
Carya sp.	20	1	3
Carya sp.	27	1	3
Carya sp.	19	1	3
Carya sp.	16	1	3
Carya sp.	37	1	3
Nyssa sylvatica	3	1	3
Nyssa sylvatica	13	1	3
Nyssa sylvatica	19	1	3
Nyssa sylvatica	4	1	3

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-3-6.			
Carya sp.	18	1	3
Carya sp.	22	1	3
Fraxinus americana	19	1	3
Fraxinus americana	26	1	3
Fraxinus americana	19	1	3
Liriodendron tulipifera	19	1	3
Liriodendron tulipifera	15	1	3
Quercus alba	28	1	3
Quercus alba	23	1	3
Quercus michauxii	9	1	3
Quercus rubra	28	1	3
Sample Point #1-4-1.			
Carya cordiformis	17	1	4
Liriodendron tulipifera	12	1	4
Liriodendron tulipifera	9	1	4
Liriodendron tulipifera	7	1	4
Paulownia tomentosa	12	1	4
Paulownia tomentosa	7	1	4
Platanus occidentalis	12	1	4
Prunus sp.	6	1	4
Quercus michauxii	4	1	4
Robinia pseudoacacia	20	1	4

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-4-2.			
Asminia triloba	3	1	4
Asminia triloba	3	1	4
Asminia triloba	3	1	4
Carya cordiformis	24	1	4
Carya cordiformis	20	1	4
Cornus florida	4	1	4
Fraxinus americana	3	1	4
Liriodendron tulipifera	22	1	4
Liriodendron tulipifera	23	1	4
Liriodendron tulipifera	30	1	4
Quercus alba	6	1	4
Quercus michauxii	50	1	4
Robinia pseudoacacia	10	1	4
Sample Point #1-4-3.			
Asimina triloba	2	1	4
Asimina triloba	2	1	4
Carya cordiformis	17	1	4
Carya sp.	15	1	4
Fagus grandifolia	38	1	4
Quercus alba	31	1	4
Quercus michauxii	50	1	4
Sample Point #1-4-4.			
Fagus grandifolia	25	1	4
Fraxinus americana	15	1	4
Fraxinus americana	17	1	4
Liriodendron tulipifera	22	1	4
Quercus alba	11	1	4
Quercus alba	25	1	4
Ulmus americana	7	1	4
Ulmus americana	9	1	4

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-4-5.			
Carya cordiformis	15	1	4
Carya cordiformis	27	1	4
Carya cordiformis	8	1	4
Fagus grandifolia	20	1	4
Fraxinus americana	10	1	4
Liriodendron tulipifera	32	1	4
Sample Point #1-4-6.			
Acer rubrum	8	1	4
Liriodendron tulipifera	14	1	4
Quercus rubra	26	1	4
Quercus rubra	28	1	4
Robinia pseudoacacia	16	1	4
Sample Point #1-5-1.			
Juglans nigra	21	1	5
Asimina triloba	2	1	5
Asimina triloba	2	1	5
Carya cordiformis	24	1	5
Carya cordiformis	24	1	5
Liriodendron tulipifera	21	1	5
Quercus michauxii	26	1	5
Quercus michauxii	14	1	5
Quercus michauxii	19	1	5
Quercus rubra	33	1	5
Quercus rubra	13	1	5

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #1-5-2.			
Acer negundo	4	1	5
Carya cordiformis	18	1	5
Carya cordiformis	18	1	5
Fraxinus americana	20	1	5
Fraxinus americana	17	1	5
Fraxinus americana	26	1	5
Quercus michauxii	31	1	5
Quercus rubra	38	1	5
Ulmus americana	17	1	5
Ulmus americana	8	1	5
Ulmus americana	27	1	5
Sample Point #1-5-3.			
Asimina triloba	4	1	5
Carya cordiformis	11	1	5
Fraxinus americana	18	1	5
Fraxinus americana	9	1	5
Liquidambar styraciflua	16	1	5
Quercus michauxii	15	1	5
Quercus michauxii	13	1	5
Quercus rubra	20	1	5
Quercus rubra	38	1	5
Ulmus americana	16	1	5
Ulmus americana	5	1	5
Ulmus americana	18	1	5
Ulmus americana	10	1	5

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #3-1-1.			
Acer rubrum	5	3	1
Carpinus caroliniana	3	3	1
Fagus grandifolia	7	3	1
Fagus grandifolia	10	3	1
Fraxinus americana	15	3	1
Liquidambar styraciflua	28	3	1
Liquidambar styraciflua	14	3	1
Liquidambar styraciflua	30	3	1
Liriodendron tulipifera	30	3	1
Liriodendron tulipifera	30	3	1
Liriodendron tulipifera	26	3	1
Liriodendron tulipifera	28	3	1
Liriodendron tulipifera	26	3	1
Liriodendron tulipifera	30	3	1
Nyssa sylvatica	11	3	1
Nyssa sylvatica	8	3	1
Nyssa sylvatica	12	3	1
Sample Point #3-1-2.			
Fagus grandifolia	22	3	1
Fagus grandifolia	18	3	1
Liquidambar styraciflua	6	3	1
Liquidambar styraciflua	9	3	1
Liriodendron tulipifera	29	3	1
Liriodendron tulipifera	26	3	1
Liriodendron tulipifera	22	3	1
Liriodendron tulipifera	30	3	1
Nyssa sylvatica	16	3	1
Quercus alba	28	3	1

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #3-1-3.			
Acer rubrum	35	3	1
Acer rubrum	2	3	1
Acer rubrum	2	3	1
Carya cordiformis	13	3	1
Carya cordiformis	14	3	1
Liriodendron tulipifera	5	3	1
Quercus alba	14	3	1
Quercus alba	19	3	1
Quercus alba	20	3	1
Quercus alba	24	3	1
Quercus alba	22	3	1
Quercus alba	19	3	1
Sample Point #3-1-4-.	dbh (in)		
Carya cordiformis	35	3	1
Carya cordiformis	7	3	1
Carya cordiformis	13	3	1
Fagus grandifolia	6	3	1
Fagus grandifolia	31	3	1
Juglans nigra	18	3	1
Liriodendron tulipifera	26	3	1
Liriodendron tulipifera	24	3	1
Liriodendron tulipifera	25	3	1
Liriodendron tulipifera	35	3	1
Liriodendron tulipifera	28	3	1
Prunus sp.	16	3	1

Piscataway Annex: Raw tree data for each sample point.

Sample point.	dbh (in)	Sample Area	Transect #
Sample Point #3-1-5.			
Acer rubrum	2	3	1
Acer rubrum	5	3	1
Fraxinus americana	9	3	1
Liriodendron tulipifera	15	3	1
Liriodendron tulipifera	20	3	1
Liriodendron tulipifera	13	3	1
Liriodendron tulipifera	35	3	1
Liriodendron tulipifera	28	3	1
Liriodendron tulipifera	10	3	1
Liriodendron tulipifera	25	3	1
Liriodendron tulipifera	23	3	1
Liriodendron tulipifera	23	3	1
Liriodendron tulipifera	24	3	1
Liriodendron tulipifera	22	3	1
Liriodendron tulipifera	24	3	1
Liriodendron tulipifera	24	3	1
Liriodendron tulipifera	17	3	1

Sample Point #1-1-1.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer rubrum	4		2.9	0	0	458.3645 stems/ac
Carya cordiformis	10		3.9	1	149.6703	
Fagus grandifolia	4		4.9	2	181.0825	
Fagus grandifolia	15		5.9	0	0	
Quercus alba	13		6.9	1	43.39552	
Quercus alba	28		7.9	0	0	
Quercus alba	11		8.9	0	0	
Quercus falcata	17		9.9	0	0	
Quercus michauxii	6		10.9	1	16.63003	
Quercus michauxii	27		11.9	1	13.8636	
Quercus michauxii	12		12.9	1	11.73415	
Quercus rubra	19		13.9	1	10.06014	
Quercus rubra	15		14.9	0	0	
Quercus rubra	39		15.9	2	15.26294	
Quercus velutina	3		16.9	0	0	
			17.9	1	5.98681	
			18.9	0	0	
			19.9	1	4.821724	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	1	2.424411	
			28.9	1	2.257262	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	1	1.175107	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-1-2.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer rubrum	15		2.9	0	0	238.9497 stems/ac
Carya cordiformis	17		3.9	0	0	
Carya cordiformis	26		4.9	1	90.54127	
Carya cordiformis	24		5.9	0	0	
Carya cordiformis	10		6.9	1	43.39552	
Carya cordiformis	15		7.9	0	0	
Cercis canadensis	5		8.9	0	0	
Fagus grandifolia	9		9.9	2	40.63071	
Liriodendron tulipifera	32		10.9	1	16.63003	
Quercus michauxii	10		11.9	0	0	
Quercus michauxii	6		12.9	0	0	
Quercus michauxii	13		13.9	1	10.06014	
Quercus rubra	16		14.9	1	8.720384	
			15.9	2	15.26294	
			16.9	0	0	
			17.9	1	5.98681	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	1	3.054495	
			25.9	1	2.819624	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	1	1.847781	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-1-3.	dbh (in)		dbh's	dbh dist	stems/ac	
Carya cordiformis	34		2.9	1	293.3537	458.9402 stems/ac
Carya sp.	25		3.9	1	149.6703	
Liriodendron tulipifera	20		4.9	0	0	
Prunus sp.	2		5.9	0	0	
Prunus sp.	3		6.9	0	0	
Quercus michauxii	17		7.9	0	0	
			8.9	0	0	
			9.9	0	0	
			10.9	0	0	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	0	0	
			16.9	1	6.734474	
			17.9	0	0	
			18.9	0	0	
			19.9	1	4.821724	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	1	2.819624	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	1	1.5404	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-1-4.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer rubrum	18		2.9	1	293.3537	500.6811 stems/ac
Carya cordiformis	17		3.9	0	0	
Cornus florida	4		4.9	2	181.0825	
Cornus florida	2		5.9	0	0	
Liriodendron tulipifera	25		6.9	0	0	
Liriodendron tulipifera	22		7.9	0	0	
Liriodendron tulipifera	24		8.9	0	0	
Liriodendron tulipifera	36		9.9	0	0	
Liriodendron tulipifera	24		10.9	0	0	
Prunus sp.	4		11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	2	11.97362	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	1	3.966383	
			22.9	0	0	
			23.9	0	0	
			24.9	2	6.10899	
			25.9	1	2.819624	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	1	1.376214	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-1-5.	dbh (in)		dbh's	dbh dist	stems/ac	
Asimina triloba	2		2.9	1	293.3537	352.5614 stems/ac
Fagus grandifolia	17		3.9	0	0	
Juglans nigra	12		4.9	0	0	
Liriodendron tulipifera	24		5.9	0	0	
Liriodendron tulipifera	29		6.9	0	0	
Liriodendron tulipifera	14		7.9	0	0	
Liriodendron tulipifera	24		8.9	0	0	
Liriodendron tulipifera	35		9.9	0	0	
Liriodendron tulipifera	17		10.9	0	0	
Liriodendron tulipifera	18		11.9	0	0	
Liriodendron tulipifera	24		12.9	1	11.73415	
Liriodendron tulipifera	23		13.9	1	10.06014	
Quercus rubra	24		14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	2	11.97362	
			18.9	1	5.35708	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	1	3.621651	
			23.9	2	6.639966	
			24.9	2	6.10899	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	1	2.257262	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	1	1.454839	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-1-6.	dbh (in)	dbh's	dbh dist	stems/ac	
	4	2.9	0	0	356.5453 stems/ac
Carpinus caroliniana	3	3.9	2	299.3405	
Liriodendron tulipifera	16	4.9	0	0	
Liriodendron tulipifera	23	5.9	0	0	
Liriodendron tulipifera	21	6.9	0	0	
Liriodendron tulipifera	16	7.9	0	0	
Liriodendron tulipifera	20	8.9	0	0	
Liriodendron tulipifera	32	9.9	0	0	
Liriodendron tulipifera	15	10.9	0	0	
Liriodendron tulipifera	19	11.9	0	0	
Liriodendron tulipifera	17	12.9	0	0	
Liriodendron tulipifera	18	13.9	0	0	
Quercus prinus	22	14.9	0	0	
		15.9	3	22.89441	
		16.9	0	0	
		17.9	2	11.97362	
		18.9	0	0	
		19.9	1	4.821724	
		20.9	2	8.725571	
		21.9	0	0	
		22.9	1	3.621651	
		23.9	1	3.319983	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	1	1.847781	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #1-2-1.	dbh (in)		dbh's	dbh dist	stems/ac	
Carya cordiformis	19		2.9	1	293.3537	316.6258 stems/ac
Carya cordiformis	19		3.9	0	0	
Liriodendron tulipifera	16		4.9	0	0	
Quercus michauxii	26		5.9	0	0	
Quercus rubra	29		6.9	0	0	
Sassafras albidum	2		7.9	0	0	
			8.9	0	0	
			9.9	0	0	
			10.9	0	0	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	1	7.63147	
			16.9	0	0	
			17.9	0	0	
			18.9	2	10.71416	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	1	2.819624	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	1	2.106821	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-2-2.	dbh (in)		dbh's	dbh dist	stems/ac	
Asimina triloba	5		2.9	2	586.7074	701.7725 stems/ac
Carya sp.	22		3.9	0	0	
Cercis canadensis	2		4.9	1	90.54127	
Fagus grandifolia	27		5.9	0	0	
Quercus alba	31		6.9	0	0	
Robinia pseudoacacia	11		7.9	0	0	
Ulmus sp.	1		8.9	0	0	
			9.9	0	0	
			10.9	1	16.63003	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	1	3.621651	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	1	2.424411	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	1	1.847781	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-2-3.	dbh (in)		dbh's	dbh dist	stems/ac	
Carya sp.	24		2.9	0	0	170.4121 stems/ac
Fagus grandifolia	27		3.9	1	149.6703	
Liriodendron tulipifera	15		4.9	0	0	
Quercus alba	4		5.9	0	0	
Quercus rubra	15		6.9	0	0	
			7.9	0	0	
			8.9	0	0	
			9.9	0	0	
			10.9	0	0	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	2	15.26294	
			16.9	0	0	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	1	3.054495	
			25.9	0	0	
			26.9	0	0	
			27.9	1	2.424411	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-2-4.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer rubrum	17		2.9	0	0	128.653 stems/ac
Carya cordiformis	6		3.9	0	0	
Carya cordiformis	7		4.9	0	0	
Liriodendron tulipifera	25		5.9	0	0	
Liriodendron tulipifera	26		6.9	1	43.39552	
Quercus alba	9		7.9	1	32.59486	
Quercus michauxii	15		8.9	0	0	
Quercus michauxii	23		9.9	1	20.31535	
Quercus michauxii	15		10.9	0	0	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	1	8.720384	
			15.9	1	7.63147	
			16.9	1	6.734474	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	1	3.621651	
			23.9	0	0	
			24.9	0	0	
			25.9	2	5.639248	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-2-5.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer rubrum	18		2.9	0	0	63.21384 stems/ac
Carya cordiformis	21		3.9	0	0	
Fraxinus americana	13		4.9	0	0	
Fraxinus americana	31		5.9	0	0	
Liriodendron tulipifera	19		6.9	0	0	
Liriodendron tulipifera	15		7.9	0	0	
Liriodendron tulipifera	11		8.9	0	0	
Liriodendron tulipifera	13		9.9	0	0	
			10.9	1	16.63003	
			11.9	0	0	
			12.9	1	11.73415	
			13.9	1	10.06014	
			14.9	0	0	
			15.9	1	7.63147	
			16.9	0	0	
			17.9	1	5.98681	
			18.9	1	5.35708	
			19.9	0	0	
			20.9	0	0	
			21.9	1	3.966383	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	1	1.847781	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-2-6.	dbh (in)		dbh's	dbh dist	stems/ac	
Carya cordiformis	16		2.9	1	293.3537	492.4537 stems/ac
Carya cordiformis	16		3.9	0	0	
Liriodendron tulipifera	26		4.9	0	0	
Prunus sp.	2		5.9	1	60.61027	
Quercus alba	26		6.9	2	86.79104	
Robinia pseudoacacia	16		7.9	0	0	
Ulmus americana	7		8.9	1	25.37662	
Ulmus americana	9		9.9	0	0	
Ulmus americana	6		10.9	0	0	
Ulmus americana	5		11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	1	7.63147	
			16.9	2	13.46895	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	2	5.221675	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-3-1.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer negundo	9		2.9	0	0	97.3562 stems/ac
Acer negundo	13		3.9	0	0	
Acer negundo	11		4.9	0	0	
Liriodendron tulipifera	20		5.9	0	0	
Liriodendron tulipifera	22		6.9	0	0	
Robinia pseudoacacia	7		7.9	1	32.59486	
Ulmus sp.	13		8.9	0	0	
			9.9	1	20.31535	
			10.9	0	0	
			11.9	1	13.8636	
			12.9	1	11.73415	
			13.9	1	10.06014	
			14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	0	0	
			18.9	0	0	
			19.9	1	4.821724	
			20.9	0	0	
			21.9	1	3.966383	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-3-2.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer negundo	11		2.9	0	0	158.3396 stems/ac
Acer negundo	11		3.9	0	0	
Acer negundo	5		4.9	1	90.54127	
Fraxinus americana	13		5.9	0	0	
Fraxinus americana	19		6.9	0	0	
Liriodendron tulipifera	18		7.9	0	0	
Liriodendron tulipifera	27		8.9	0	0	
Platanus occidentalis	22		9.9	0	0	
Quercus michauxii	19		10.9	1	16.63003	
Quercus michauxii	22		11.9	1	13.8636	
			12.9	0	0	
			13.9	1	10.06014	
			14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	1	5.98681	
			18.9	2	10.71416	
			19.9	0	0	
			20.9	0	0	
			21.9	2	7.932766	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	1	2.610838	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-3-3.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer rubrum	15		2.9	1	293.3537	342.3105 stems/ac
Carya sp.	20		3.9	0	0	
Fraxinus americana	22		4.9	0	0	
Liriodendron tulipifera	19		5.9	0	0	
Quercus alba	17		6.9	0	0	
Quercus alba	18		7.9	0	0	
Quercus alba	22		8.9	0	0	
Quercus michauxii	16		9.9	0	0	
Quercus rubra	23		10.9	0	0	
Quercus rubra	2		11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	2	15.26294	
			16.9	1	6.734474	
			17.9	1	5.98681	
			18.9	1	5.35708	
			19.9	0	0	
			20.9	1	4.362786	
			21.9	2	7.932766	
			22.9	0	0	
			23.9	1	3.319983	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-3-4.	dbh (in)		dbh's	dbh dist	stems/ac	
Acer rubrum	13		2.9	0	0	120.6581 stems/ac
Acer rubrum	7		3.9	0	0	
Acer rubrum	12		4.9	0	0	
Acer rubrum	13		5.9	0	0	
Carya sp.	21		6.9	0	0	
Quercus rubra	11		7.9	1	32.59486	
Quercus rubra	10		8.9	0	0	
Robinia pseudoacacia	12		9.9	1	20.31535	
			10.9	0	0	
			11.9	3	41.59079	
			12.9	1	11.73415	
			13.9	1	10.06014	
			14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	1	4.362786	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-3-5.	dbh (in)		dbh's	dbh dist	stems/ac	
Asimina triloba	2		2.9	1	293.3537	570.5209 stems/ac
Carya sp.	20		3.9	1	149.6703	
Carya sp.	27		4.9	1	90.54127	
Carya sp.	19		5.9	0	0	
Carya sp.	16		6.9	0	0	
Carya sp.	37		7.9	0	0	
Nyssa sylvatica	3		8.9	0	0	
Nyssa sylvatica	13		9.9	0	0	
Nyssa sylvatica	19		10.9	0	0	
Nyssa sylvatica	4		11.9	0	0	
			12.9	0	0	
			13.9	1	10.06014	
			14.9	0	0	
			15.9	1	7.63147	
			16.9	0	0	
			17.9	0	0	
			18.9	2	10.71416	
			19.9	1	4.821724	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	1	2.424411	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	1	1.303794	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-3-6.	dbh (in)		dbh's	dbh dist	stems/ac	
Carya sp.	18		2.9	0	0	68.43836 stems/ac
Carya sp.	22		3.9	0	0	
Fraxinus americana	19		4.9	0	0	
Fraxinus americana	26		5.9	0	0	
Fraxinus americana	19		6.9	0	0	
Liriodendron tulipifera	19		7.9	0	0	
Liriodendron tulipifera	15		8.9	1	25.37662	
Quercus alba	28		9.9	0	0	
Quercus alba	23		10.9	0	0	
Quercus michauxii	9		11.9	0	0	
Quercus rubra	28		12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	1	7.63147	
			16.9	0	0	
			17.9	1	5.98681	
			18.9	1	5.35708	
			19.9	2	9.643449	
			20.9	0	0	
			21.9	0	0	
			22.9	1	3.621651	
			23.9	1	3.319983	
			24.9	0	0	
			25.9	1	2.819624	
			26.9	0	0	
			27.9	1	2.424411	
			28.9	1	2.257262	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-4-1.	dbh (in)		dbh's	dbh dist	stems/ac	
Carya cordiformis	17		2.9	0	0	287.2152 stems/ac
Liriodendron tulipifera	12		3.9	0	0	
Liriodendron tulipifera	9		4.9	1	90.54127	
Liriodendron tulipifera	7		5.9	1	60.61027	
Paulownia tomentosa	12		6.9	0	0	
Paulownia tomentosa	7		7.9	2	65.18971	
Platanus occidentalis	12		8.9	0	0	
Prunus sp.	6		9.9	1	20.31535	
Quercus michauxii	4		10.9	0	0	
Robinia pseudoacacia	20		11.9	2	27.72719	
			12.9	1	11.73415	
			13.9	0	0	
			14.9	0	0	
			15.9	0	0	
			16.9	1	6.734474	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	1	4.362786	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-4-2.	dbh (in)		dbh's	dbh dist	stems/ac	
Asminia triloba	3		2.9	2	586.7074	1112.793 stems/ac
Asminia triloba	3		3.9	3	449.0108	
Asminia triloba	3		4.9	0	0	
Carya cordiformis	24		5.9	0	0	
Carya cordiformis	20		6.9	1	43.39552	
Cornus florida	4		7.9	0	0	
Fraxinus americana	3		8.9	0	0	
Liriodendron tulipifera	22		9.9	0	0	
Liriodendron tulipifera	23		10.9	1	16.63003	
Liriodendron tulipifera	30		11.9	0	0	
Quercus alba	6		12.9	0	0	
Quercus michauxii	50		13.9	0	0	
Robinia pseudoacacia	10		14.9	0	0	
			15.9	0	0	
			16.9	0	0	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	1	4.362786	
			21.9	0	0	
			22.9	1	3.621651	
			23.9	1	3.319983	
			24.9	1	3.054495	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	1	1.970933	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	1	0.718934	

Sample Point #1-4-3.	dbh (in)		dbh's	dbh dist	stems/ac	
Asimina triloba	2		2.9	2	586.7074	604.9439 stems/ac
Asimina triloba	2		3.9	0	0	
Carya cordiformis	17		4.9	0	0	
Carya sp.	15		5.9	0	0	
Fagus grandifolia	38		6.9	0	0	
Quercus alba	31		7.9	0	0	
Quercus michauxii	50		8.9	0	0	
			9.9	0	0	
			10.9	0	0	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	1	7.63147	
			16.9	1	6.734474	
			17.9	0	0	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	1	1.847781	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	1	1.303794	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	1	0.718934	

Sample Point #1-4-4.	dbh (in)		dbh's	dbh dist	stems/ac	
Fagus grandifolia	25		2.9	0	0	108.5162 stems/ac
Fraxinus americana	15		3.9	0	0	
Fraxinus americana	17		4.9	0	0	
Liriodendron tulipifera	22		5.9	0	0	
Quercus alba	11		6.9	1	43.39552	
Quercus alba	25		7.9	0	0	
Ulmus americana	7		8.9	1	25.37662	
Ulmus americana	9		9.9	0	0	
			10.9	1	16.63003	
			11.9	0	0	
			12.9	0	0	
			13.9	0	0	
			14.9	0	0	
			15.9	1	7.63147	
			16.9	0	0	
			17.9	1	5.98681	
			18.9	0	0	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	1	3.621651	
			23.9	0	0	
			24.9	1	3.054495	
			25.9	1	2.819624	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #1-4-5.	dbh (in)	dbh's	dbh dist	stems/ac	
Carya cordiformis	15	2.9	0	0	66.1367 stems/ac
Carya cordiformis	27	3.9	0	0	
Carya cordiformis	8	4.9	0	0	
Fagus grandifolia	20	5.9	0	0	
Fraxinus americana	10	6.9	0	0	
Liriodendron tulipifera	32	7.9	1	32.59486	
		8.9	0	0	
		9.9	0	0	
		10.9	1	16.63003	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	1	4.821724	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	1	1.847781	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #1-4-6.	dbh (in)	dbh's	dbh dist	stems/ac	
Acer rubrum	8	2.9	0	0	46.59657 stems/ac
Liriodendron tulipifera	14	3.9	0	0	
Quercus rubra	26	4.9	0	0	
Quercus rubra	28	5.9	0	0	
Robinia pseudoacacia	16	6.9	0	0	
		7.9	0	0	
		8.9	1	25.37662	
		9.9	0	0	
		10.9	0	0	
		11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	1	8.720384	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	0	0	
		28.9	1	2.257262	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #1-5-1.	dbh (in)	dbh's	dbh dist	stems/ac	
Juglans nigra	21	2.9	2	586.7074	631.7382 stems/ac
Asimina triloba	2	3.9	0	0	
Asimina triloba	2	4.9	0	0	
Carya cordiformis	24	5.9	0	0	
Carya cordiformis	24	6.9	0	0	
Liriodendron tulipifera	21	7.9	0	0	
Quercus michauxii	26	8.9	0	0	
Quercus michauxii	14	9.9	0	0	
Quercus michauxii	19	10.9	0	0	
Quercus rubra	33	11.9	0	0	
Quercus rubra	13	12.9	0	0	
		13.9	2	20.12028	
		14.9	0	0	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	1	5.35708	
		19.9	0	0	
		20.9	2	8.725571	
		21.9	0	0	
		22.9	0	0	
		23.9	1	3.319983	
		24.9	1	3.054495	
		25.9	1	2.819624	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	1	1.633736	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #1-5-2.	dbh (in)	dbh's	dbh dist	stems/ac	
Acer negundo	4	2.9	0	0	220.6494 stems/ac
Carya cordiformis	18	3.9	1	149.6703	
Carya cordiformis	18	4.9	0	0	
Fraxinus americana	20	5.9	0	0	
Fraxinus americana	17	6.9	0	0	
Fraxinus americana	26	7.9	1	32.59486	
Quercus michauxii	31	8.9	0	0	
Quercus rubra	38	9.9	0	0	
Ulmus americana	17	10.9	0	0	
Ulmus americana	8	11.9	0	0	
Ulmus americana	27	12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	0	0	
		16.9	2	13.46895	
		17.9	2	11.97362	
		18.9	0	0	
		19.9	1	4.821724	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	1	2.610838	
		27.9	1	2.424411	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	1	1.847781	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	1	1.236944	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #1-5-3.	dbh (in)		dbh's	dbh dist	stems/ac	
Asimina triloba	4		2.9	0	0	350.175 stems/ac
Carya cordiformis	11		3.9	1	149.6703	
Fraxinus americana	18		4.9	1	90.54127	
Fraxinus americana	9		5.9	0	0	
Liquidambar styraciflua	16		6.9	0	0	
Quercus michauxii	15		7.9	0	0	
Quercus michauxii	13		8.9	1	25.37662	
Quercus rubra	20		9.9	1	20.31535	
Quercus rubra	38		10.9	0	0	
Ulmus americana	16		11.9	1	13.8636	
Ulmus americana	5		12.9	1	11.73415	
Ulmus americana	18		13.9	0	0	
Ulmus americana	10		14.9	0	0	
			15.9	1	7.63147	
			16.9	2	13.46895	
			17.9	2	11.97362	
			18.9	0	0	
			19.9	0	0	
			20.9	1	4.362786	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	0	0	
			25.9	0	0	
			26.9	0	0	
			27.9	0	0	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	0	0	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	0	0	
			36.9	0	0	
			37.9	0	0	
			38.9	1	1.236944	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #3-1-1	dbh (in)	dbh's	dbh dist	stems/ac	
Acer rubrum	5	2.9	1	293.3537	503.2806 stems/ac
Carpinus caroliniana	3	3.9	0	0	
Fagus grandifolia	7	4.9	0	0	
Fagus grandifolia	10	5.9	1	60.61027	
Fraxinus americana	15	6.9	0	0	
Liquidambar styraciflua	28	7.9	2	65.18971	
Liquidambar styraciflua	14	8.9	0	0	
Liquidambar styraciflua	30	9.9	1	20.31535	
Liriodendron tulipifera	30	10.9	1	16.63003	
Liriodendron tulipifera	30	11.9	0	0	
Liriodendron tulipifera	26	12.9	1	11.73415	
Liriodendron tulipifera	28	13.9	1	10.06014	
Liriodendron tulipifera	26	14.9	0	0	
Liriodendron tulipifera	30	15.9	1	7.63147	
Nyssa sylvatica	11	16.9	0	0	
Nyssa sylvatica	8	17.9	0	0	
Nyssa sylvatica	12	18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	0	0	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	0	0	
		26.9	2	5.221675	
		27.9	0	0	
		28.9	2	4.514523	
		29.9	1	2.106821	
		30.9	3	5.9128	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #3-1-2.	dbh (in)	dbh's	dbh dist	stems/ac	
Fagus grandifolia	22	2.9	0	0	99.76415 stems/ac
Fagus grandifolia	18	3.9	0	0	
Liquidambar styraciflua	6	4.9	0	0	
Liquidambar styraciflua	9	5.9	0	0	
Liriodendron tulipifera	29	6.9	1	43.39552	
Liriodendron tulipifera	26	7.9	0	0	
Liriodendron tulipifera	22	8.9	1	25.37662	
Liriodendron tulipifera	30	9.9	0	0	
Nyssa sylvatica	16	10.9	0	0	
Quercus alba	28	11.9	0	0	
		12.9	0	0	
		13.9	0	0	
		14.9	0	0	
		15.9	1	7.63147	
		16.9	0	0	
		17.9	1	5.98681	
		18.9	0	0	
		19.9	0	0	
		20.9	0	0	
		21.9	2	7.932766	
		22.9	0	0	
		23.9	0	0	
		24.9	0	0	
		25.9	1	2.819624	
		26.9	0	0	
		27.9	0	0	
		28.9	2	4.514523	
		29.9	1	2.106821	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #3-1-3.	dbh (in)	dbh's	dbh dist	stems/ac	
Acer rubrum	35	2.9	2	586.7074	697.7658 stems/ac
Acer rubrum	2	3.9	0	0	
Acer rubrum	2	4.9	0	0	
Carya cordiformis	13	5.9	1	60.61027	
Carya cordiformis	14	6.9	0	0	
Liriodendron tulipifera	5	7.9	0	0	
Quercus alba	14	8.9	0	0	
Quercus alba	19	9.9	0	0	
Quercus alba	20	10.9	0	0	
Quercus alba	24	11.9	0	0	
Quercus alba	22	12.9	0	0	
Quercus alba	19	13.9	1	10.06014	
		14.9	2	17.44077	
		15.9	0	0	
		16.9	0	0	
		17.9	0	0	
		18.9	0	0	
		19.9	3	14.46517	
		20.9	0	0	
		21.9	0	0	
		22.9	1	3.621651	
		23.9	1	3.319983	
		24.9	0	0	
		25.9	0	0	
		26.9	0	0	
		27.9	0	0	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	1	1.5404	
		35.9	0	0	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	

Sample Point #3-1-4.	dbh (in)		dbh's	dbh dist	stems/ac	
Carya cordiformis	35		2.9	0	0	132.9325 stems/ac
Carya cordiformis	7		3.9	0	0	
Carya cordiformis	13		4.9	0	0	
Fagus grandifolia	6		5.9	1	60.61027	
Fagus grandifolia	31		6.9	0	0	
Juglans nigra	18		7.9	1	32.59486	
Liriodendron tulipifera	26		8.9	0	0	
Liriodendron tulipifera	24		9.9	0	0	
Liriodendron tulipifera	25		10.9	0	0	
Liriodendron tulipifera	35		11.9	0	0	
Liriodendron tulipifera	28		12.9	1	11.73415	
Prunus sp.	16		13.9	0	0	
			14.9	0	0	
			15.9	0	0	
			16.9	1	6.734474	
			17.9	0	0	
			18.9	1	5.35708	
			19.9	0	0	
			20.9	0	0	
			21.9	0	0	
			22.9	0	0	
			23.9	0	0	
			24.9	2	6.10899	
			25.9	0	0	
			26.9	1	2.610838	
			27.9	1	2.424411	
			28.9	0	0	
			29.9	0	0	
			30.9	0	0	
			31.9	1	1.847781	
			32.9	0	0	
			33.9	0	0	
			34.9	0	0	
			35.9	2	2.909678	
			36.9	0	0	
			37.9	0	0	
			38.9	0	0	
			39.9	0	0	
			40.9	0	0	
			41.9	0	0	
			42.9	0	0	
			43.9	0	0	
			44.9	0	0	
			45.9	0	0	
			46.9	0	0	
			47.9	0	0	
			48.9	0	0	
			49.9	0	0	
			50.9	0	0	

Sample Point #3-1-5.	dbh (in)	dbh's	dbh dist	stems/ac	
Acer rubrum	2	2.9	1	293.3537	481.5004 stems/ac
Acer rubrum	5	3.9	0	0	
Fraxinus americana	9	4.9	1	90.54127	
Liriodendron tulipifera	15	5.9	0	0	
Liriodendron tulipifera	20	6.9	0	0	
Liriodendron tulipifera	13	7.9	0	0	
Liriodendron tulipifera	35	8.9	1	25.37662	
Liriodendron tulipifera	28	9.9	0	0	
Liriodendron tulipifera	10	10.9	1	16.63003	
Liriodendron tulipifera	25	11.9	0	0	
Liriodendron tulipifera	23	12.9	0	0	
Liriodendron tulipifera	23	13.9	1	10.06014	
Liriodendron tulipifera	24	14.9	1	8.720384	
Liriodendron tulipifera	22	15.9	0	0	
Liriodendron tulipifera	24	16.9	0	0	
Liriodendron tulipifera	24	17.9	1	5.98681	
Liriodendron tulipifera	17	18.9	0	0	
		19.9	0	0	
		20.9	1	4.362786	
		21.9	1	3.966383	
		22.9	0	0	
		23.9	2	6.639966	
		24.9	3	9.163485	
		25.9	1	2.819624	
		26.9	0	0	
		27.9	1	2.424411	
		28.9	0	0	
		29.9	0	0	
		30.9	0	0	
		31.9	0	0	
		32.9	0	0	
		33.9	0	0	
		34.9	0	0	
		35.9	1	1.454839	
		36.9	0	0	
		37.9	0	0	
		38.9	0	0	
		39.9	0	0	
		40.9	0	0	
		41.9	0	0	
		42.9	0	0	
		43.9	0	0	
		44.9	0	0	
		45.9	0	0	
		46.9	0	0	
		47.9	0	0	
		48.9	0	0	
		49.9	0	0	
		50.9	0	0	