

Attachment B
CORRESPONDENCE

Elsasser, Marian

From: rtk47@verizon.net
Sent: Monday, June 17, 2013 9:58 AM
To: Elsasser, Marian
Cc: dan.benz@comcast.net; josephcroce@yahoo.com; jgenevish@medstarmontgomery.org; jfreedy@netzero.net; mpkanner@yahoo.com; sslyman@comcast.net; nicholas.benz@fda.hhs.gov; jet1@nrc.gov; stevet44@gmail.com; jvittone@frb.gov; sarah@vittone.com
Subject: Hiker-Biker Trail Extension

Good morning, Ms. Elsasser. On behalf of the North Creek community and civic association, we would like to express our strong support for the hiker-biker trail extension to be discussed by the Montgomery County Department of Parks/Planning Commission on Thursday, June 27. North Creek is located off Emory Lane, near Muncaster Mill Road. Residents currently have no direct access to the Rock Creek/North Branch bike trail. Walking/biking the path which parallels the ICC leaves an extremely treacherous stretch of Needwood Road to be navigated to access the Rock Creek trail.

Should you need more information, please contact me at rtk47@verizon.net or 301-801-6160. Thank you for conveying the interest of North Creek residents.

Rich Kopanda

Elsasser, Marian

From: jfreedy@netzero.net
Sent: Saturday, June 15, 2013 9:55 AM
To: Elsasser, Marian
Subject: Re: Planning Board Meeting on the proposed North Branch Trail

Dear Marian S. Elsasser,

I am sorry I can not attend this meeting due to a mandatory meeting for me from 9:00 until 12:30. I would like to let you know that I am in favor of this proposed plan and look forward to future information updates.

Best Regards,
James G. Freedy

Elsasser, Marian

From: Ethan Cohen <nate2003dc@yahoo.com>
Sent: Saturday, June 15, 2013 12:28 PM
To: Elsasser, Marian
Subject: Re: Planning Board Meeting on the proposed North Branch Trail

Marian:

Does the Meadowside Nature Center know about what is going on? It seems they are a critical stakeholder.

Quite frankly at the moment, I have seen virtually no change in the amount of bike traffic on this path...which is next to nil.

This could change if they add the next section, but I personally think making the next section another asphalt path will disenfranchise more hikers, than aid bikers. Then we have the polyaromatic cyclic hydrocarbon issue of building an asphalt path right next to a water source. One thing I do see at Lake Frank is a lot of fisherman (fisherpersons?). The county even made a bill banning the stuff in driveway sealant...love to see their answer to this one.

http://www6.montgomerycountymd.gov/content/council/pdf/bill/2012/Packets/20120717_7.pdf

Ethan.

Elsasser, Marian

From: Chris Moriarity <chrismor@cpcug.org>
Sent: Thursday, June 13, 2013 8:59 PM
To: Elsasser, Marian
Subject: Re: Planning Board Meeting on the proposed North Branch Trail

I am pleased that Montgomery County is proposing initiatives that expand recreational space for pedestrians and bicyclists in our county. I am pleased that this proposed trail would make connections between existing pedestrian/bicyclist areas. I recommend that the North Branch Trail be constructed.

thank you
Chris Moriarity
200 Spring Avenue
Takoma Park, MD 20912

On 06/13/2013 09:05 AM, Elsasser, Marian wrote:

> To all,
>
> Attached is the notice for the Montgomery County Planning Board
> Meeting for the North Branch Hiker-Biker Trail to be held on June 27, 2013.
> Please send to me any correspondence that you would like included in
> the Planning Board Packet. If you would like to testify, please see
> meeting notice for instructions. Next week, staff report will be
> posted at http://www.montgomeryplanningboard.org/meetings_archive/
>
> Sincerely,
>
> Marian S. Elsasser
> Landscape Architect
> Park Development Division
> Montgomery County Department of Parks
> M-NCPPC
> Parkside Headquarters
> 9500 Brunett Avenue
> Silver Spring, MD 20901
> *www.ParkProjects.org* <<http://www.ParkProjects.org>>

Elsasser, Marian

From: Lauren Farah <laurenf0808@gmail.com>
Sent: Friday, May 17, 2013 3:05 PM
To: Elsasser, Marian
Subject: Fwd: Opposed to proposed extension of North Branch Trail & Kirk Lane

----- Forwarded message -----

From: **Lauren Farah** <laurenf0808@gmail.com>
Date: Fri, May 17, 2013 at 1:53 PM
Subject: Opposed to proposed extension of North Branch Trail & Kirk Lane
To: sam.arora@house.state.md.us
Cc: marian.elsassor@montgomeryparks.org, bfalcigno@goca.org

Dear Delegate Arora:

As residents of 17600 Kirk Lane since December 2008, my family and I are adamantly opposed to the proposed extension of the North Branch Trail Bike Path through/to Kirk Lane and or Ridge Road as well as the proposed paving and parking lot. My Husband, Frederick, and I chose to move to this hidden gem of a neighborhood largely due to the abundance of privacy and the serene ambiance. The unpaved gravel stretches of Ridge Road and Kirk Lane add to the charm and character of our oasis and now as the parents to toddlers, we take comfort in knowing that if we hear or see a vehicle pass by it is most likely a neighbor or an infrequent delivery. Conventionally such projects result with a cost that would be levied in some capacity on the owners of this community. This will render our ability to stay in our home a practical impossibility. The sales price will plummet as no one would want to buy an encumbered property. We fervently object to and reject this and any other proposal which would change the quality of life we chose and immensely enjoy. Thank you for your time and efforts in helping our neighborhood voice our opposition to this "improvement".

Sincerely,

Lauren Farah
[443-865-9705](tel:443-865-9705)

P.S Please add my email address to the group email list. Thank you.

Elsasser, Marian

From: Elizabeth Azarian <eazarian713@gmail.com>
Sent: Wednesday, April 10, 2013 6:57 PM
To: Elsasser, Marian
Subject: GOCA Meeting Remarks
Attachments: Scan0003.jpg

Hi Marianne

,After hearing the proposal tonight, there is great concern about our natural wetlands and forest protection back here. There are designated forest preservation areas clearly marked, that the Parks has given easements already to some when building permits were obtained. Also paving Kirk would have to include Brooks, Stone, and Kirk as they are all connected. Also there would have to be fairness to Olney Lane. We were promised if these homes were built further development would be limited. There is a huge sediment control issue with a paved road. The builder of Rock Creek Preserve should not have any say in what happens in my neighborhood. There are many things that need to be taken into consideration before offering residents a road free of charge. Sounded like a bribe when it was announced that they would pave the road free of charge. I was here when they paved Ridge, and now it is about \$200 a foot for front footage assessed fee. Also of note there is a road between Ridge and Olney Lane that is actually on the map but not cut yet. As you know Kirk is a "non dedicated" road. It would have to be brought to county standards and culverts would need to be re[placed, and widened, many trees along the entire road would have to come down and this would ruin the quiet, rustic character we enjoy now. Also we were told today by a mcps employee that the road connection to The Preserve at Rock Creek was the real plan and they were just using the trail. Some of the things mentioned last night makes me believe this as it was suggested parking could be at Sequoyah, that along with the dangers of Bready did not resignate with anyone and went unanswered. Also bike riding is legal in Olney so if the trail was really the issue there are much better routes economically and less damaging of the wetlands. I am attaching a large turtle laying eggs at the bottom of Kirk. The loss of many other wildlife will be terribly disturbed. When they built Norbeck Grove the streams were affected and never recovered because of the run off of the silt that caused. It might also be mentioned that this is all well and septic back here and the water will be affected. We will be looking for more information on Kirk Lane and possibly consulting an attorney as this is much more than just a bike trail extension. Thank you Elizabeth Azarian (Kirk), Joe Villella (Brooks, Stone and Kirk) , Keith Hall(Kirk), Steve Santaiti (Kirk), Gretchen and Vasili Triantos (Brooks and Kirk), Joe and Nancy Mornini (Stone and Kirk). George Paxton (Kirk), Mike Chakwin Ridge and Kirk), Ann and Gary Culver (Ridge), Paul and Marianne Strieziac(Ridge)(, Linda Morgan (Kirk) Harold White Kirk Ridge. There are others that were not given flyers to and we are informing them also. .

Elsasser, Marian

From: Vicki Dabbondanza <vickidab@hotmail.com>
Sent: Monday, April 08, 2013 11:38 AM
To: Elsasser, Marian
Subject: Response to North Branch Trail

Dear Marian Elsasser,

Our family is responding to the possible connection of the North Branch Trail to either Kirk Rd or Ridge Rd. We have lived in our neighborhood for 27 years. We purchased the land and built our house in this area because of the dead end streets. We wanted to have an enclosed neighborhood with not a lot of traffic. We have enjoyed living this way for all these years. We totally reject any connection of other roads coming into our community. We want to keep it safe from unnecessary traffic and pollution. Please do not disturb what is working well. Figure our something else. Thank you.

Sincerely,
Louis Dabbondanza
Vicki Dabbondanza
Carolyn Brinkman (our mother living with us)
17619 Ridge Dr.

Elsasser, Marian

From: Hraber, Michael T <Michael.T.Hraber@schinnerer.com>
Sent: Thursday, January 10, 2013 11:26 AM
To: Elsasser, Marian; Kines, Charles; councilmember.andrews@montgomerycountymd.gov
Cc: councilmember.andrews@montgomerycountymd.gov
Subject: North Branch Trail

As an avid hiker living in Rockville, I am very excited about the North Branch Trail project. I am writing to strongly support connecting the north end of the trail being built by the developers of the Preserve at Rock Creek to Ridge Road or Kirk Lane, which will make the trail so much more useful. Please make that short connection now rather than some distant time in the future.

Thanks,

Mike

Michael T. Hraber, CPCU, RPLU
Senior Account Executive
Victor O. Schinnerer & Co., Inc. | Two Wisconsin Circle | Chevy Chase, MD 20815
Phone: 301-951-5492 | Fax: 301-951-5444 | Mobile: 301-312-9407

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Elsasser, Marian

From: Phillip Staub <ptstaub@gmail.com>
Sent: Monday, October 15, 2012 4:40 PM
To: Elsasser, Marian
Subject: North Branch Hiker Biker Train

Follow Up Flag: Follow up
Flag Status: Completed

First of all, thank you for the informative materials posted at the Montgomery Parks website. I'm very excited to see progress toward a much-anticipated project for my neighborhood and many others in Olney. What we hope for is a safe riding/walking option from Barnsley Manor Estates & Olney Mill to Freeman Fields, Needwood (and its trails) and Olney Manor Park. Portions of this network exist. For example, there is paved bike trail that winds through Olney Mill (south of 108), then Norbeck Grove, but dead-ends on Bowie Mill Road, near Bluebell Lane. Although this is tantalizingly close to Bowie Mill Park--one and a half miles--the only current option is not really an option: to continue on busy and narrow Bowie Mill Rd. Integrating the neighborhood trail with the paths you are working on would greatly increase the number of people who could access your trails.

Please add me to the mailing list for project developments, if there is one.

Thanks again,
Phill Staub

Elsasser, Marian

From: Frits Wybenga <FWybenga@dgac.org>
Sent: Wednesday, September 19, 2012 8:10 PM
To: Elsasser, Marian
Subject: Lake Frank trail

Marian - I am sorry I could not make your meeting this evening. I and my two adult children jog around Lake Frank on a daily basis and we are concerned about the next phase of construction. I have been jogging this path for some 27 years. We are concerned about how the construction work and ultimately the completed path will impact our daily activities.

When the first part was being done we were able to make do with the construction work because it did not directly affect the lake trail. The construction workers were very considerate and safety conscious in watching out for us and we respected their need to be on the path.

Concerning the extension of the path to Bowie Mill Park - we are opposed. Bikers already have easy access to the bike trail to Washington. But I assume that decision has already been made as the biker lobby seems to be very strong and there is little citizens who walk and jog can do to resist.

We are concerned that the new construction will affect our running trail directly and will disturb our activities for the extended period the trail will be under construction. In addition we believe having pedestrians on a biker path - with bikers usually in a hurry commuting to Washington - will pose serious safety concerns, particularly at the time we are out - early in the morning with low light conditions at this time of year. It is our opinion that there should be separate paths so that both can use the park safely. I hope you will address this as you make your plans.

Sincerely,
Frits Wybenga

Barbara Falcigno
President
OLNEY OAKS

June 12, 2013

John Webster
Executive Vice President
MANOR OAKS

Marian Elsasser
Park Development Division
Montgomery County Department of Parks
9500 Brunett Avenue
Silver Spring, MD 20901

Howard Greif
First Vice President
NORBECK GROVE

Kathy Curtis
Second Vice President
LAKE HALLOWELL

Mark Hill
Recording Secretary
CAMELBACK VILLAGE

Dear Ms Elsasser:

Greg Intoccia
Corresponding Secretary
ASHLEY HOLLOW

The Greater Olney Civic Association (GOCA) met on June 11, 2013 and unanimously approved the following motion:

Ruth Laughner
Treasurer
WILLIAMSBURG VILLAGE

GOCA supports the original master plan alignment for the North Branch Trail between the Preserve at Rock Creek Trail and Bowie Mill Road. There was a proposal to cross the stream further south and connect directly to either Kirk Lane or Ridge Road. GOCA does not support this proposed route for several reasons. First, there is no cost savings due to the steep topography of the stream area which will require a large bridge. The extensive wetlands in the area will also require much of the trail to be elevated. In addition, GOCA feels the trail route should stay off of area roads which do not have a shoulder or sidewalk making it unsafe for users.

Connecting the trail is important to the Olney community as it is a missing piece of a larger network. GOCA feels the master plan alignment that keeps the trail within the natural area is preferred over directing users onto roads. Although a connection to Kirk or Ridge Road is shorter, it is not less expensive and therefore there is no advantage of this proposed route.

Sincerely,

Barbara Falcigno

Barbara Falcigno
President
Greater Olney Civic Association

Attachment C

NRI / FSD REPORT AND PLAN

Forest Stand Delineation Report for

North Branch Trail



GPI Project Number: 20011040.01

Prepared for:

M-NCPPC

Marian Elsasser

9500 Brunett Avenue

Silver Spring, Maryland 20901

Prepared by:

GPI

GREENMAN AND PEDERSEN, INC.

10977 Guilford Road

Annapolis Junction, Maryland 20701

January, 2013

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I. INTRODUCTION

This forest stand delineation report has been prepared as part of the planning, engineering, surveying, and environmental studies associated with construction of a hiker-biker trail. Impervious surface removal will also be part of this project in an area where an unused parking lot will be eliminated and the area not used for the trail will be reforested. The site is zoned RZ and is located on Montgomery County Tax Map Number HS21 and HS23.

The project area is within a Montgomery County Regional Park. Rock Creek Regional Park includes Meadowside Nature Center, Smith Environmental Center, and one historic site, Muncaster Mill, to the south of Muncaster Mill Road. Lake Bernard Frank and Rock Creek North Branch are hydrological features in the park. The segment of the park north of Muncaster Mill Road is in the Rock Creek Special Protection Area. The trail in this area will connect to an existing hiker/ biker trail along MD 200 (ICC) and terminating at a proposed trail in The Preserve at Rock Creek development to the north.

Numerous existing paved and natural surface trails exist within the park. Some of the existing trails are connected to bike trails outside the park in the south, west and north as well as smaller connections to adjacent residential areas around the park. Topography at the project site is sloped from the east and west draining into Rock Creek North Branch and Lake Bernard Frank. The lake is dammed at the southern end.

The purpose of this forest stand delineation report is to document forested habitats located within the project boundaries that are subject to the *State Forest Conservation Technical Manual, Third Edition, 1997* pursuant to the Maryland Forest Conservation Act, 1990.

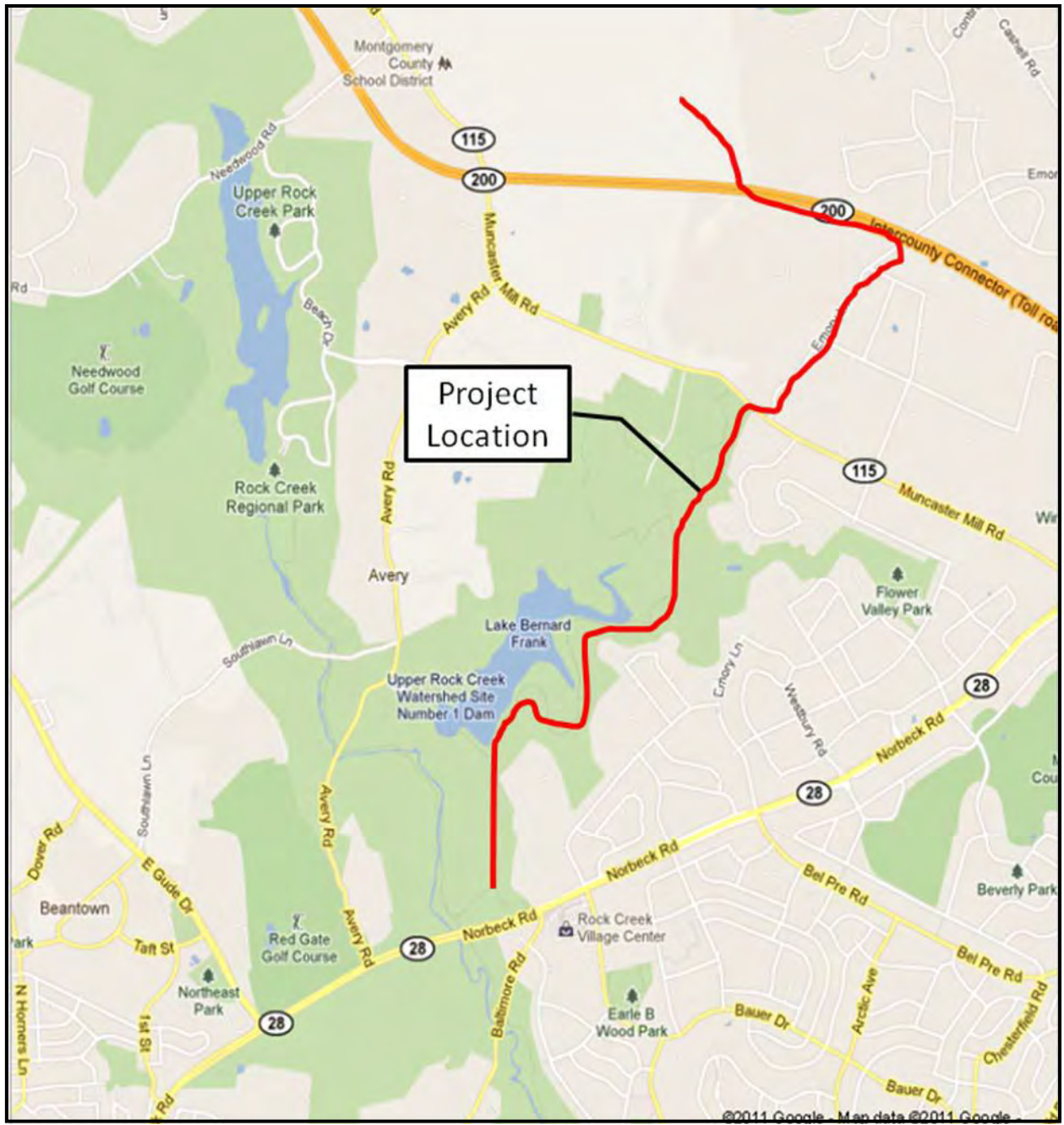


Figure 1: Map of Project Location

II. METHODOLOGY

The forest stands delineated in the field were performed in accordance with the methodology described in the *State Forest Conservation Technical Manual, Third Edition, 1997* pursuant to the Maryland Forest Conservation Act, 1990. The biotope analysis includes the delineation of mapped soil types, hydrologic resources, upland and bottomland areas, and slope aspects. On-site wetland investigations for this site were also done and included in this report.

Our initial office investigation was performed using available aerial photography, GIS information, and the *Soil Survey of Montgomery County, Maryland*. Preliminary sampling points were identified in random locations for use during the on-site investigation.

The on-site forest stand investigation involved the verification of the field mapping and the delineation of forest stand areas based on the composition, stand density, stand age, and biotope. In each forest stand, sampling was conducted to estimate the number of trees per acre and the average tree diameter at breast height (DBH = 4.5 feet above ground level) for the stand. Data for random sample plots were collected using the tenth acre circle sampling method.

The following data were compiled and recorded for each sample point forest stand on the Forest Stand Determination Data Sheets located in Appendix B:

- Area Description,
- Stand Designation,
- Vegetative Species Profile,
- Dominance and Co-dominance Ranking of Each Species,
- Frequency and Average Class Range, and
- Understory Layer Description.

The forest structure for each stand was assessed and a value calculated by recording canopy coverage, herbaceous ground cover, downed woody debris, invasive or exotic plant cover, and qualitative evaluation of the shrub layer. The forest structure value is beneficial in determining the retention potential of the stand. The preservation potential of a stand is based on those areas that produce the highest environmental functional values. The forest structure forms are included as Appendix D.

Specimen tree candidates were selected by size. The trunk diameter should be at least 30 inches at breast height or 75 percent of the DBH of a County, State, or National Champion Tree.

A list of all specimen tree candidates observed on site is included on the Forest Stand Delineation Map and provided in Appendix A. The specimen tree candidates are evaluated on three (3) criteria established by Greenman-Pedersen foresters.

1. The tree should be in very good health.

To determine if a tree is in very good health, it was examined for condition that would contribute to mechanical failure or mortality. Indicators of conditions that would contribute to mechanical failure of a tree, such as limb breakage and blow-down, are as follows:

- A lean greater than 10 degrees;
- The wind firmness of the tree (this includes consideration of the species and its typical rooting pattern, the crown shape and size, the location of the tree on the slope, the direction of prevailing winds, and the relationship between the trunk and crown diameter); and
- Evidence of disease (this includes indicators such as conks, and other obvious signs of decay that would not necessarily cause death, but would predispose the tree or a limb to breakage).

Indicators of conditions that would contribute to the mortality of the tree are:

- Evidence of disease, such as conks, butt swelling, weeping, disconfiguration, carpenter ants, and holes;
- Signs of insect infestation, including insects or woodpecker activity; and
- Crown vigor - This was evaluated based on the percentage of dieback as follows:

<u>Rating</u>	-	<u>Percentage of Dieback</u>
Excellent	-	less than 15
Good	-	16-25
Fair	-	26-35
Unacceptable	-	greater than 35

2. The tree should have a wide and reasonably balanced crown. Dominant trees with crowns less than 30 feet in diameter were not considered in the Specimen Tree Determination. Trees with smaller crown diameters would probably not be able to withstand the addition sunlight and wind loading that they would be subject to after the removal of adjacent trees. In addition, trees with crowns containing Y-branching that potentially would result in instability

were rejected. The angles of the branches in the crown were also considered. Branching at a 60-90 degree angle from the trunk results in a more unstable crown than branching at less than a 60-degree angle from the trunk; therefore, trees with branching at higher angles were rejected.

3. The species of the tree should be considered. Some tree species are more suitable to be left standing through and after development because they are relatively less sensitive to construction damage and site changes.

To be selected as specimen trees, further evaluation should be conducted on each tree, and consideration given to (1) the probability of the tree surviving at least 20 years, risk of damage; (2) injury from the tree relative to the proposed use of the property and adjacent property, and the tree's present and expected post-construction condition; (3) the contribution of the tree to overall property values; (4) the area required to preserve the tree; and (5) costs of preservation and maintenance over the expected life of the tree compared to replacement/additional trees.

III. FOREST STAND DETERMINATION

III.A. OFF-SITE DETERMINATION

An office investigation was conducted to determine the potential number of forest stands, surrounding land uses, and the presence of any wetlands or waters of the US within the study area.

III.A.1. Hydrology

The Montgomery Topographic Map, the National Wetlands Inventory (NWI) map, and the USDA Natural Resources Conservation Service, Soil Survey of Montgomery County (Soils Map), identify the presence of Lake Bernard Frank, Rock Creek North Branch and several wetlands. Wetlands and waterways are shown on the available mapping.

III.A.2. Soil Characteristics

A review of the Montgomery County Soil Survey revealed the presence of numerous types of soils. The project area is largely within the Blocktown channery silt loam and Gaila silt loam soils (Figure 2). Table 1 identifies the soils and their characteristics. Further descriptions of the soils in relationship to the forest stands identified on site can be found in the forest stand descriptions.

TABLE 1. SOIL CHARACTERISTICS*

Soil Name	Highly Erodible	Prime Farmland	Hydric	Infiltratable
Gaila silt loam, 3 to 8 percent slopes (1B)	No	Yes	Partial	Yes
Gaila silt loam, 8 to 15 percent slopes (1C)	No	No	Partial	Yes
Glenelg silt loam, 3 to 8 percent slopes (2B)	No	Yes	Partial	Yes
Glenelg silt loam, 8 to 15 percent slopes (2C)	No	No	Partial	Yes
Glenelg-Urban Land Complex, 0 to 8 percent slopes (2UB)	No	No	Partial	No
Glenville silt loam, 0 to 3 percent slopes (5A)	No	No	Partial	No
Baile silt loam, 0 to 3 percent slopes (6A)	No	No	Yes	No
Brinklow-Blocktown channery silt loams, 8 to 15 percent slopes (16C)Yes	No	No	Partial	Yes
Brinklow-Blocktown channery silt loams, 15 to 25 percent slopes (16D)	Yes	No	Partial	Yes
Occoquan loam, 8 to 15 percent slopes (17C)	No	No	Partial	Yes
Neshaminy silt loam, 3 to 8 percent slopes (27B)	No	Yes	No	Yes
Hatboro silt loam, 0 to 3 percent slopes, frequently flooded (54A)	No	No	Yes	No
Blocktown channery silt loam, 8 to 15 percent slopes, very rocky, (116C)	No	No	Partial	No
Blocktown channery silt loam, 15 to 25 percent slopes, very rocky, (116D)	No	No	Partial	No
Blocktown channery silt loam, 25 to 45 percent slopes, very rocky, (116E)	Yes	No	Partial	No

* Soil information has been obtained from the *Soil Survey of Montgomery County and the USDA Natural Resources Conservation Service*. Date accessed: January 10, 2013.

III.A.3. Vegetation

Available aerial photography from the US Department of Agriculture Web Soil Survey, and National Wetlands Inventory, both identify primarily forested cover with small areas of non-forested vegetative cover. On-site analysis will verify the extent of the existing forest cover.

III.A.4. Results

The results of the off-site forest stand investigation determined that the project area is likely forested on both sides of the Lake Bernard Frank and that these areas are likely to be upland communities with shallow to moderate slopes and various slope aspects.

III.B. FOREST STAND DESCRIPTIONS

Twenty (20) different forest stands were identified during on-site investigations. Forest Stands 1-16 were investigated in December, 2012; Forest Stands 17-20 in July, 2012. These stands were delineated based on differences in the composition of tree species, understory layer, and herbaceous layer. Differences between the stands are described in the narratives that follow. Forest Stand 1 is near the southern end of our study area, and stand numbers generally increase in a northern direction. A total of 420 significant and specimen tree candidates were identified within the project study area. Of these, 167 significant tree candidates and 100 specimen tree candidates were identified within the forest stand boundaries.

Refer to the Forest Stand Delineation Map for forest stand boundaries, sample point locations, specimen tree candidate locations, and mapped soil boundaries.

III.B.1. FOREST STAND 1

Forest Stand 1 is an unmanaged early successional floodplain forest of approximately 0.55 acres. It is located along the southern edge of Lake Bernard Frank. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils have a hydrologic classification of C, and are a very rocky, well-drained soil type.

Stand 1 has an estimated 3 tree species and 43 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9" inches. Silver maple (*Acer saccharinum*) and Red maple (*Acer rubrum*) are both the dominant and a co-dominant species. Green ash (*Fraxinus pennsylvanica*) was the third tree species within the forest stand, but was observed far less frequently than the maples. The average cover of the understory was approximately 12% and consisted solely of Red maples. Herbaceous and woody ground coverage within Forest Stand 1

was about 62% and primarily composed of Japanese stiltgrass (*Microstegium vimineum*) and Multiflora rose (*Rosa multiflora*). The trees in Stand 1 appear to be in good condition. One (1) significant tree was identified within Stand 1; no specimen tree candidates were identified. This stand has a Good Forest Structure rating with a value of 9. This Good Forest Structural diversity and its value as a buffer qualifies Stand 1 as a Moderate priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.2. FOREST STAND 2

Forest Stand 2 is an unmanaged mid-successional upland forest with approximately 2.42-acres within the study area borders. It is located near the southern end of the study area and borders Lake Bernard Frank on its western side. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils have a hydrologic classification of C, and are a very rocky, well-drained soil type. Vegetation native to the area such as Red Oak (*Quercus rubra*), Tulip poplar (*Liriodendron tulipifera*), Ironwood (*Carpinus caroliniana*), American beech (*Fagus grandifolia*), and Mockernut hickory (*Carya alba*) were observed during the site inspection.

Stand 2 has an estimated 12 tree species and 387 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. Tulip poplar and Sycamore (*Platanus occidentalis*) comprise the dominant species in Forest Stand 2. Tulip poplar and Red oak are the co-dominant species. Numerous Blackgum (*Nyssa sylvatica*), American beech, and Hickories (*Carya* spp.) are also present. Understory species include Ironwood, American beech, and American holly (*Ilex opaca*), but this layer is relatively lacking in this forest stand, with an average coverage of only 16 percent. Herbaceous and woody ground cover was primarily composed of Japanese honeysuckle (*Lonicera japonica*), Japanese barberry (*Berberis thunbergii*), Partridgeberry (*Michella repens*), and Japanese stiltgrass.

The trees in Stand 2 appear to be in a good condition. A total of 4 specimen tree candidates and an additional 17 significant trees were identified within Stand 2. This stand has a Priority Forest Structure rating with a value of 12. This Priority Forest Structural diversity and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.3. FOREST STAND 3

Forest Stand 3 is an unmanaged mid-successional upland forest with approximately 1.97-acres within the study area borders. It is located near the southern end of the study area and borders Lake Bernard Frank on its western side. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils have a hydrologic classification of C, and are a very rocky, well-drained soil type. Vegetation native to the area such as Tulip poplar, Red oak, and White oak (*Quercus alba*) were observed during the site inspection.

Stand 3 has an estimated 10 tree species and 360 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. White oak and Tulip poplar are the dominant species in Forest Stand 3; Red oak and White oak are the co-dominant species. The understory was relatively sparse (on average coverage was 36%) and mainly consisted of Ironwood, Flowering dogwood (*Cornus florida*), and Red maple. The sparse herbaceous and woody ground cover within Forest Stand 3 was primarily composed of Japanese honeysuckle and Multiflora rose.

The trees in Stand 3 appear to be in a good condition. A total of 12 specimen tree candidates and an additional 11 significant trees were identified within Stand 3. This stand has a Priority Forest Structure rating with a value of 12. This Priority Forest Structural diversity and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.4. FOREST STAND 4

Forest Stand 4 is an unmanaged mid-successional upland forest with approximately 2.34-acres within the study area borders. It is located near the southern end of the study area and borders Lake Bernard Frank on its western side. The majority of the soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils have a hydrologic classification of C, and are a very rocky, well-drained soil type. This Stand has a relatively less dense canopy, a lot of downed woody debris, and a scrub/shrub layer that includes many invasive plant species.

Stand 4 has an estimated 8 tree species and 235 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. Tulip poplar is the dominant species in Forest Stand 4. Other tree species present included Virginia pine (*Pinus virginiana*), Mockernut hickory, Red maple, and Ironwood. The understory was relatively sparse (on average coverage was 36%) and mainly consisted of American beech, American holly, Spicebush (*Lindera benzoin*), and Viburnums. The herbaceous and woody ground coverage within Forest Stand 4 was primarily composed of Viburnums and Japanese barberry.

The trees in Stand 4 appear to be in a good condition. A total of 8 specimen tree candidates and an additional 22 significant trees were identified within Stand 4. This stand has a Priority Forest Structure rating with a value of 12. This Priority Forest Structural diversity and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.5. FOREST STAND 5

Forest Stand 5 is an unmanaged mid-successional upland forest with approximately 4.12-acres within the study area borders. The majority of soil for this stand is Gaila silt loam, 3 to 8 percent slopes. Gaila silt loam has a B classification and is a very deep, well-drained soil. This stand has a canopy of predominantly Tulip poplars, much downed woody debris due to wind damage in storms, and areas that include many vines and invasives. Stand 5 has an estimated 3 tree species and 233 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches. Tulip poplar is both the dominant and co-dominant species. The next most common tree species in Stand 5 is Osage orange (*Maclura pomifera*). Species observed in the understory include Flowering dogwood, Spicebush, and Osage orange. The herbaceous and woody ground coverage was on average 68% within Forest Stand 5 was primarily composed of Multiflora rose and Japanese honeysuckle.

The trees in Stand 5 appear to be in a good condition. A total of 8 specimen tree candidates and an additional 8 significant trees were identified within Stand 5. This stand has a Good Forest Structure rating with a value of 9. This Good Forest Structural diversity and the presence of significant and specimen tree candidates within the project study area qualify this as

a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.6. FOREST STAND 6

Forest Stand 6 is an unmanaged early to mid-successional area with approximately 1.87-acres within the study area borders. It is mostly a low-lying area containing an intermittent stream (WUS E). The soils for this area are Baile silt loam, 0 to 3 percent slopes (6A) and Occoquan loam 8 to 15 percent slopes (17C). Baile silt loams have a hydrologic classification of D, and Occoquan loam is classified as a B soil. Baile silt loam is poorly drained soil type, and Occoquan loam is well drained.

Stand 6 has an estimated 8 tree species and 255 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. Sycamores are scattered throughout as a dominant in the canopy. Red maple, Silver maple, and Green ash are abundant. Species observed in the understory include Spicebush, Osage orange, and Multiflora rose. The herbaceous and woody ground coverage was on average 68% within Forest Stand 5 was primarily composed of Japanese honeysuckle and grasses that were unidentifiable due to time of year.

The trees in Stand 6 appear to be in a good condition. A total of 3 specimen tree candidates and an additional 5 significant trees were identified within Stand 6. This stand has a Priority Forest Structure rating with a value of 11. This Priority Forest Structural diversity, the presence of an intermittent stream, and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.7. FOREST STAND 7

Forest Stand 7 is an unmanaged mid-successional upland forest with approximately 0.65-acres within the study area borders. It begins just north of the entrance at Trailway Drive. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils have a hydrologic classification of C, and are a very rocky, well-drained soil type. In this Stand, tree, understory, and herbaceous and woody ground cover layers are all present. Mature Tulip poplars and Sycamores are scattered throughout the area.

Stand 7 has an estimated 15 tree species and 240 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. Tulip poplar is the both the dominant and co-dominant species. The next most common tree species in Stand 5 is Sycamore. Species observed in the understory include Flowering dogwood, Spicebush, Ironwood and White oak. The herbaceous and woody ground coverage was on average 30% within Forest Stand 7 was primarily composed of Multiflora rose and Japanese honeysuckle.

The trees in Stand 7 appear to be in a good condition. A total of 2 specimen tree candidates and an additional 2 significant trees were identified within Stand 5. This stand has a Priority Forest Structure rating with a value of 13. This Priority Forest Structural diversity, the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.8. FOREST STAND 8

Forest Stand 8 is an unmanaged mid-successional upland forest with approximately 7.39-acres within the study area borders. It is a large forest stand on either side of the existing trail on the east side at the head of Lake Bernard Frank. The majority of the soil for this property is Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils have a hydrologic classification of C, and are a very rocky, well-drained soil type. In this Stand tree, understory, and herbaceous and woody ground cover layers are all present. Mature Tulip Poplars and Red Oaks are scattered throughout the area. Recent wind damage added to woody debris on ground.

Stand 8 has an estimated 14 tree species and 310 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. Tulip poplar is the dominant species with Red oak the co-dominant species. Numerous Hickories were also observed. Species observed in the understory include Ironwood, American holly, Mountain laurel (*Kalmia latifolia*) and Eastern red cedar (*Juniperus virginiana*). The herbaceous and woody ground coverage was on average 5% within Forest Stand 8 and was primarily composed of Japanese barberry.

The trees in Stand 8 appear to be in a good condition. A total of 21 specimen tree candidates and an additional 46 significant trees were identified within Stand 8. This stand has a Priority Forest Structure rating with a value of 12. This Priority Forest Structural diversity and

the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.9. FOREST STAND 9

Forest Stand 9 is an unmanaged mid-successional upland forest with approximately 1.35-acres within the study area borders. It is an upland area east of Rock Creek North Branch. The soils for this stand are Blocktown channery silt loam, 15 to 25 percent slopes (116D) and Gaila silt loam, 8 to 15 percent slopes (1C). Blocktown channery silt loam soils have a hydrologic classification of C and Gaila silt loam has a B classification. Blocktown channery silt loam is a very rocky, well-drained soil type and the Gaila silt loam is a very deep, well drained soil.

Stand 9 has an estimated 7 tree species and 210 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. Tulip poplar and Sycamore are the dominant species with Tulip poplar and Green ash the co-dominant species. This stand has a rather open canopy, a scrubby understory and herbaceous and woody ground cover is made up of many invasives such as Japanese barberry, Multiflora rose, Japanese stiltgrass, and Smilax (*Smilax rotundifolia*). There is a high presence of vines such as Poison ivy (*Toxicodendron radicans*) and Grape (*Vitis* spp.). Other species observed in the understory include Ironwood, Flowering dogwood, and Spicebush.

The trees in Stand 9 appear to be in a good condition. One (1) specimen tree candidate and an additional 2 significant trees were identified within Stand 8. This stand has a Priority Forest Structure rating with a value of 12. This Priority Forest Structural diversity qualifies this as a Moderate priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.10. FOREST STAND 10

Forest Stand 10 is an unmanaged early to mid-successional upland forest with approximately 0.78-acres within the study area borders. It is an upland area east of Rock Creek North Branch. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils has a hydrologic classification of C and is a very rocky, well-drained soil type.

Stand 10 has an estimated 6 tree species and 230 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches. Tulip poplar is the dominant and co-dominant species. This stand has a rather open canopy, a scrubby understory and herbaceous and woody ground cover is made up of many invasives such as Japanese barberry, Multiflora rose, and Smilax. There is a high presence of vines such Grape. Other species observed in the understory include Ironwood, Flowering dogwood, American holly and Autumn-olive (*Elaeagnus umbellata*).

The trees in Stand 10 appear to be in fair to good condition. A total of 2 specimen tree candidates and an additional 3 significant trees were identified within Stand 10. This stand has a Good Forest Structure rating with a value of 8. This Priority Forest Structural diversity qualifies this as a Moderate priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.11. FOREST STAND 11

Forest Stand 11 is an unmanaged mid-successional upland forest with approximately 2.15-acres within the study area borders. It is located on either side of the existing trail adjacent to Rock Creek North Branch. The soil for this stand is largely Blocktown channery silt loam, 15 to 25 percent slopes (116D) with a small section extending into Hatboro silt loam, 0 to 3 percent slopes (54A). Blocktown channery silt loam soils has a hydrologic classification of C and Hatboro silt loam is classified as a D soil. Blocktown channery silt loam is a very rocky, well-drained soil type and Hatboro is shallow soil that is frequently flooded. Tree, understory, and herbaceous and woody ground cover layers are all present in this stand.

Stand 11 has an estimated 9 tree species and 300 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches. Tulip poplar and Red oak are the dominant species. Numerous Blackgum and Hickory trees were also observed. Species observed in the understory include Ironwood, Red maple, and American beech. The herbaceous and woody ground coverage was on average 64% within Forest Stand 11 and was primarily composed of Christmas fern (*Polystichum acrostichoides*) and Sedge (*Carex spp.*).

The trees in Stand 11 appear to be in a good condition. A total of 3 specimen tree candidates and an additional 25 significant trees were identified within Stand 11. This stand has a Priority Forest Structure rating with a value of 12. This Priority Forest Structural diversity, the

presence of a wetland in this stand, and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.12. FOREST STAND 12

Forest Stand 12 is an unmanaged early-successional area of approximately 0.70-acres within the study area. It is located along Lake Bernard Frank north of Trailway Drive. The soil for this stand is largely Blocktown channery silt loam, 15 to 25 percent slopes (116D). Blocktown channery silt loam soils has a hydrologic classification of C soil. Blocktown channery silt loam is a very rocky, well-drained soil type. The canopy is thin and dominated by very few large trees, such as Black cherry (*Prunus serotina*) and Tulip poplar, which are sparsely scattered. Understory/co-dominants of Red maple, Eastern red cedar and other early successional tree species are common. Groundcover mainly consists of Japanese honeysuckle. Stand 12 has an estimated 7 tree species and 280 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches.

The trees in Stand 12 appear to be in a good condition. One (1) specimen tree candidate and an additional 2 significant trees were identified within Stand 12. This stand has a Good Forest Structure rating with a value of 7. This Good Forest Structural diversity, its value as a buffer, and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.13. FOREST STAND 13

Forest Stand 13 is an unmanaged mid-successional upland forest with approximately 3.51-acres within the study area borders. The soil for this stand is Blocktown channery silt loam, 25 to 45 percent slopes (116E) and Hatboro silt loam, 0 to 3 percent slopes (54A). Blocktown channery silt loam soils has a hydrologic classification of C and Hatboro silt loam is classified as a D soil. Blocktown channery silt loam is a very rocky, well-drained soil type and Hatboro is shallow soil that is frequently flooded.

Stand 13 contains large dominant mature White oaks in the canopy along with Tulip poplars, Mockernut hickory and Blackgums. The understory is comprised of numerous American beech, Ironwood, and some Mountain laurel. The herbaceous and woody ground coverage was

sparse. Stand 13 has an estimated 8 tree species and 280 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches.

The trees in Stand 13 appear to be in a good condition. A total of 7 specimen tree candidates and an additional 16 significant trees were identified within Stand 13. This stand has a Priority Forest Structure rating with a value of 11. This Priority Forest Structural diversity and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.14. FOREST STAND 14

Forest Stand 14 is an unmanaged mid-successional upland forest with approximately 2.26-acres within the study area borders. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D) and Hatboro silt loam, 0 to 3 percent slopes (54A). Blocktown channery silt loam soils has a hydrologic classification of C and Hatboro silt loam is classified as a D soil. Blocktown channery silt loam is a very rocky, well-drained soil type and Hatboro is shallow soil that is frequently flooded.

Stand 14 is predominantly Tulip poplars with some large mature Oaks and Sycamores scattered within. The understory is comprised of Ironwood, Flowering dogwood, Spicebush, and Eastern red cedars, and species observed in the herbaceous and woody groundcover include Japanese barberry and Sedge. Stand 14 has an estimated 11 tree species and 307 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches.

The trees in Stand 14 appear to be in a good condition. A total of 15 specimen tree candidates and an additional 10 significant trees were identified within Stand 14. This stand has a Priority Forest Structure rating with a value of 11. This Priority Forest Structural diversity and the presence of significant and specimen tree candidates within the project study area qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.15. FOREST STAND 15

Forest Stand 15 is an unmanaged early-successional upland area with approximately 1.56-acres within the study area borders. The soils for this stand are Blocktown channery silt loam, 15 to 25 percent slopes (116D) and Gaila silt loam, 8 to 15 percent slopes (1C). Blocktown

channery silt loam soils have a hydrologic classification of C and Gaila silt loam has a B classification. Blocktown channery silt loam is a very rocky, well-drained soil type and the Gaila silt loam is a very deep, well-drained soil.

Stand 15 has a rather open canopy and is comprised mostly of Eastern red cedars, with some dominant Tulip poplars and Sycamores scattered throughout. Downed woody debris and vines present such as Grape and Poison ivy are abundant. Species observed in the understory include Spicebush and Japanese barberry. Species observed in the herbaceous and woody groundcover include unidentifiable grasses and invasives such as Japanese stiltgrass, Japanese honeysuckle, and Garlic mustard (*Alliaria petiolata*). Stand 15 has an estimated 7 tree species and 350 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches.

The trees in Stand 15 appear to be in a fair condition. A total of 2 specimen tree candidates and an additional 3 significant trees were identified within Stand 14. This stand has a Good Forest Structure rating with a value of 9. This Good Forest Structural diversity qualifies this as a Moderate priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.16. FOREST STAND 16

Forest Stand 16 is an unmanaged early-successional floodplain forest with approximately 0.92-acres within the study area borders. The soil for this stand is largely Blocktown channery silt loam, 25 to 45 percent slopes (116E) and Hatboro silt loam, 0 to 3 percent slopes (54A). Blocktown channery silt loam soils has a hydrologic classification of C and Hatboro silt loam is classified as a D soil. Blocktown channery silt loam is a very rocky, well-drained soil type and Hatboro is shallow soil that is frequently flooded.

Stand 16 has a rather open canopy and is comprised mostly of Red maples and Green ash, with some dominant Sycamores scattered without. Species observed in the understory include Spicebush and Japanese barberry. The herbaceous and woody groundcover is predominantly unidentifiable grasses and Japanese honeysuckle. Stand 16 has an estimated 7 tree species and 280 trees per acre. The average DBH of the dominant trees in this forest stand is greater than 20 inches.

The trees in Stand 16 appear to be in a good condition. Three (3) specimen tree candidates and no significant trees were identified within Stand 14. This stand has a Priority Forest Structure rating with a value of 11. This Priority Forest Structural diversity, and the presence of an intermittent stream (WUS A) and Wetland AA and their respective buffers qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.17. FOREST STAND 17

Forest Stand 17 is an unmanaged early-successional forest with approximately 1.60-acres within the study area borders. The soil for this stand is largely Blocktown channery silt loam, 15 to 25 percent slopes (116D) and Occoquan loam, 8 to 15 percent slopes (17C). Blocktown channery silt loam soils has a hydrologic classification of C and Occoquan loam is classified as a B soil. Blocktown channery silt loam is a very rocky, well-drained soil type and Occoquan loam is well drained.

Red maple and Black cherry are the dominant species in the canopy of Stand 17. Species observed in a sparse understory include Spicebush, Green ash, and Japanese barberry. The herbaceous and woody groundcover is predominantly Garlic mustard and Japanese stiltgrass. There is a rather high presence of vines such as Wisteria and Grape smothering trees in this stand. Stand 16 has an estimated 11 tree species and 260 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches.

The trees in Stand 17 appear to be in a good condition. A total of 6 specimen tree candidates and an additional 2 significant trees were identified within Stand 17. This stand has a Good Forest Structure rating with a value of 11. This Good Forest Structural diversity, and the presence of an intermittent stream and wetland and their respective buffers qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.18. FOREST STAND 18

Forest Stand 18 is an unmanaged mid-successional forest with approximately 0.32-acres within the study area borders. Wetlands A and B are within this stand. The soil for this stand is Hatboro silt loam, 0 to 3 percent slopes (54A) and Occoquan loam, 8 to 15 percent slopes (17C). Hatboro silt loam soils have a hydrologic classification of D and Occoquan loam is classified as a B soil. Hatboro is shallow soil that is frequently flooded and Occoquan loam is well drained.

Box elder (*Acer negundo*) and Green ash are the dominant species and Red maple is a co-dominant species in the canopy of Stand 18. Species observed in a sparse understory include Shingle oak (*Quercus imbricaria*) and Red maple. The herbaceous and woody groundcover is predominantly Common woodreed (*Cinna arundinacea*), Garlic mustard, and Japanese stiltgrass. Stand 18 has an estimated 3 tree species and 185 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches.

The trees in Stand 18 appear to be in a good condition. Two (2) specimen tree candidates and no significant trees were identified within Stand 18. This stand has a Good Forest Structure rating with a value of 8. This Good Forest Structural diversity and the presence of Wetland A and its buffer qualify this as a High priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.19. FOREST STAND 19

Forest Stand 19 is an unmanaged mid- successional forest of approximately 0.50-acres within the study area. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D) and Glenelg silt loam, 8 to 15 percent slopes (2C). Blocktown channery silt loam soils has a hydrologic classification of C and Glenelg silt loam is classified as a B soil. Blocktown channery silt loam is a very rocky, well-drained soil type and Glenelg is well drained.

Red maple and Black cherry are the dominant species in Stand 19. Species observed in the understory include Spicebush, Japanese barberry, and Flowering dogwood. The herbaceous and woody groundcover is predominantly Virginia creeper (*Parthenocissus quinquefolia*) and Grape. Stand 19 has an estimated 6 tree species and 350 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches.

The trees in Stand 19 appear to be in good condition. No specimen tree candidates or significant trees were identified within Stand 19. This stand has a Good Forest Structure rating with a value of 9. This Good Forest Structural diversity qualifies this as a Moderate priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.B.20. FOREST STAND 20

Forest Stand 20 is an unmanaged mid-successional forest of approximately 0.85-acres within the study area. The soil for this stand is Blocktown channery silt loam, 15 to 25 percent slopes (116D) and Glenelg silt loam, 8 to 15 percent slopes (2C). Blocktown channery silt loam

soils has a hydrologic classification of C and Glenelg silt loam is classified as a B soil. Blocktown channery silt loam is a very rocky, well-drained soil type and Glenelg is well drained.

Kentucky coffeetree (*Gymnocladus dioicus*) and Honey locust (*Gleditsia triacanthos*) are the dominant species and Black walnut (*Juglans nigra*) is a co-dominant species in the canopy of Stand 20. Species observed in the understory include Japanese barberry, Spicebush, and Bush honeysuckle (*Lonicera maackii*). The herbaceous and woody groundcover is predominantly Garlic mustard and Japanese stiltgrass. Stand 20 has an estimated 6 tree species and 250 trees per acre. The average DBH of the dominant trees in this forest stand is 7-19.9 inches.

The trees in Stand 20 appear to be in a good condition. One (1) significant tree was identified within Stand 20. This stand has a Good Forest Structure rating with a value of 13. This Good Forest Structural diversity qualifies this as a Moderate priority area by Montgomery County standards outlined in Trees: Approved Technical Manual.

III.C. WETLAND INVESTIGATION

According to the National Wetlands Inventory (NWI) maps, four (4) wetlands were within our study area. Our on-site investigation determined that of these, two (2) were confirmed as wetlands, and an additional six (6) wetlands were present, to make a total of eight (8) wetlands within the project study area. Each Wetland is briefly described below. See Forest Stand Delineation Map for locations. Wetlands were classified according to the Cowardin system. The wetland identification procedures were conducted in accordance with the US Army Corps of Engineers Wetland Delineation Manual (USACE 1987) and the Regional Supplement for Eastern Mountains and Piedmont Region (USACE EMP). USACE EMP Wetland Determination Forms were filled out for each upland and wetland sample location and are presented in Appendix E of this report

III.C.1. WETLAND A

While not identified on the NWI map, our on-site investigation determined that Wetland A met all three wetland criteria (Appendix E). Wetland A is classified as a palustrine, broad-leaved deciduous forest system with mineral soil that is intermittently flooded/temporary (PFO1Wn). It is a floodplain wetland near a stream remnant, soil saturation was present in the test pit at a depth of about 15 inches. The dominant vegetation includes Common woodreed

(*Cinna arundinacea* FACW) and Skunk-cabbage (*Symplocarpus foetidus* OBL). The hydric soil indicator is a thin dark surface (S9).

III.C.2. WETLAND B

Wetland B was not identified on the NWI map, but our on-site investigation determined that it met all three wetland criteria (Appendix E). Wetland B is classified as a palustrine, persistent emergent system with mineral soil that is intermittently flooded/temporary (PEM1Wn). Skunk-cabbage (OBL) is the dominant plant species. The hydric soil indicator is a thin dark surface (S9).

III.C.3. WETLAND C

Wetland C was not identified on the NWI map, but our on-site investigation determined that it met all three wetland criteria (Appendix E). Wetland C is classified as a palustrine, broad-leaved deciduous forest system with mineral soil that is seasonally flooded/saturated (PFO1En). Dominant vegetation includes Arrow-leaf tearthumb (*Persicaria sagittata* OBL), Sweet wood-reed (FACW), and Broad-leaf cat-tail (*Typha latifolia* OBL). Free water was observed in the soil test pit at about 14 inches as were oxidized rhizopheres on living roots. The hydric soil indicator is sandy redox (S5).

III.C.4. WETLAND AA

Wetland AA was not identified on the NWI map, but our on-site investigation determined that it met all three wetland criteria (Appendix E). Wetland AA is classified as a palustrine, broad-leaved deciduous forest system with mineral soil that is intermittently flooded/temporary (PFO1Wn). It is a low area in a floodplain that receives surface water from a back-water ox-bow along the toe of slope to the northwest. Dominant vegetation includes Red maple (FAC) and Deer-tongue grass (*Dichanthelium clandestinum* FAC). Hydrologic indicators present include oxidized rhizopheres on living roots and reduced iron in the soil. The hydric soil indicator is redox depressions (F8).

III.C.5. WETLAND BB

Wetland BB was not identified on the NWI map, but our on-site investigation determined that it met all three wetland criteria (Appendix E). Wetland BB is classified as a palustrine, broad-leaved deciduous forest system with mineral soil that is intermittently flooded/temporary (PFO1Wn). It is a small depression created by Park Drive. It collects run-off from Trailway

Drive, which drains to a culvert under Park Drive. Dominant vegetation includes Red maple (FAC) and a grass that could not be positively identified due to the time of investigation. Despite lack of identifiable hydric herbaceous indicators, the strong hydrologic and soil indicators with the tree species indicated this area is a wetland. Hydrologic indicators present include surface water in the area, water-stained leaves, and drift deposits. Hydric soil indicators present are stratified layers (A5) and a depleted matrix (F3). Soil also exhibits evidence of historic hydric characteristics with water- born layering from more recent disturbance.

III.C.6. WETLAND CC

Wetland CC was identified on the NWI map and classified as a palustrine, persistent emergent system that is seasonally flooded and has been diked or impounded (PEM1Ch). Our on-site investigation confirmed this and determined that it met all three wetland criteria (Appendix E). It is a floodplain wetland running between the edge of Lake Bernard Frank and a steep slope along Park Drive. Dominant vegetation includes Red maple (FAC) and a grass that could not be positively identified due to the time of investigation. Despite lack of identifiable hydric herbaceous indicators, the strong hydrologic and soil indicators with the tree species indicated this area is a wetland. Hydrologic indicators present include soil saturation at a depth of about 3 inches and free water in the soil pit of about 12 inches, water-stained leaves, and drift deposits. Hydric soil indicator present is stratified layers (A5).

III.C.7. WETLAND DD

Wetland DD was identified on the NWI map and classified as a seasonally flooded lacustrine littoral system that had been diked or impounded with an unconsolidated shore (L2USCh). Our on-site investigation determined that it met all three wetland criteria (Appendix E). It is classified it as a palustrine, broad-leaved deciduous forest system with mineral soil that is intermittently flooded/temporary (PFO1Wn). It is a floodplain wetland. Dominant vegetation includes Black willow (*Salix nigra* OBL) and Arrow-leaf tearthumb (OBL). Hydrologic indicators present include saturation at the soil surface, water-stained leaves, and oxidized rhizopheres on living roots. Hydric soil indicators present are a hydrogen sulfide odor (A4) and a depleted matrix (F3).

III.C.8. WETLAND EE

Wetland EE was not identified on the NWI map. Our on-site investigation determined that it met all three wetland criteria (Appendix E), and classified it as a palustrine, broad-leaved deciduous forest system with mineral soil that is intermittently flooded/temporary (PFO1Wn). It is a floodplain wetland along the North Branch. Dominant vegetation includes Red maple (FAC) and Skunk-cabbage (OBL). Hydrologic indicators present include saturation at the soil surface, water-stained leaves, and oxidized rhizopheres on living roots. Hydric soil indicators present are a hydrogen sulfide odor (A4) and a depleted matrix (F3).

III.D. WATERS OF THE US INVESTIGATION

Wetlands and Waters of the US (WUS) were classified according to the Cowardin system and WUS were identified by name and hydrologic class.

III.D.1. WUS A

WUS A has traits common to a riverine, upper perennial (R3UB1) stream with an unconsolidated bottom and is identified as Rock Creek North Branch. The approximate average depth and width are 1 foot and 15 feet respectively. Much of the stream channel banks are well vegetated. The substrate of the stream channel generally consists cobble and gravel with some large boulders.

III.D.2. WUS B

WUS B has traits common to a riverine, intermittent stream (R4SB4). The approximate average depth and width are 3-6 inches and 4-5 feet respectively. Much of the stream channel banks are steep but well vegetated. The substrate of the streambed generally consists of sand with some gravel.

III.D.3. WUS C

WUS C has traits common to a riverine, intermittent stream (R4SB3). The approximate average depth and width are 6-12 inches and 15 feet respectively. Much of the stream channel banks are moderately incised but well vegetated. The substrate of the streambed generally consists of cobble- gravel with some boulders.

III.D.4. WUS D

WUS D has traits common to a riverine, intermittent stream (R4SB3). There was no water present at the time of the investigation. The average width is approximately 4 feet. Much

of the stream channel banks are incised and vertical and moderately vegetated. The substrate of the streambed generally consists of cobble-gravel.

III.D.5. WUS E

WUS E has traits common to a riverine, intermittent stream (R4SB3). There was no water present at the time of the investigation. The approximate average depth and width are 3-6 inches and 3-5 feet respectively. Much of the stream channel banks are incised, eroding, and poorly vegetated. The substrate of the streambed generally consists of cobble-gravel, but transitions to gravel-sand downstream.

III.D.6. WUS F

WUS F is a stream that begins at a culvert north of the ICC with traits common to a riverine, intermittent (R4SB4) stream. The approximate average depth and width are 1-3 inches and 1-3 feet respectively. Much of the stream channel banks are vegetated. The substrate of the stream channel generally consists of sand with some cobble and gravel.

**IV. APPENDIX A – SIGNIFICANT AND SPECIMEN TREE
CANDIDATE TABLE**

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
1	28	Sycamore	<i>Platanus occidentalis</i>	Fair	Uneven crown, vines, 10 degree lean
2	28	Sycamore	<i>Platanus occidentalis</i>	Fair	Lots of vines, dead branches in crown, point taken 4' due S of tree
3	28	White oak	<i>Quercus alba</i>	Good	
4	41	White oak	<i>Quercus alba</i>	Fair	10 degree lean, dead branches, poison ivy
5	26	Sycamore	<i>Platanus occidentalis</i>	Fair	Covered in vines, but otherwise looks good, point taken 1' E
6	27	Sycamore	<i>Platanus occidentalis</i>	Fair	Greater than 10 degree lean, half of roots exposed in stream
7	29	Korean pine	<i>Pinus koraiensis</i>	Fair	Neighbor tree fell and took half of the limbs
8	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
9	44	Green ash	<i>Fraxinus pennsylvanica</i>	Mostly dead	1 main branch missing, covered in poison ivy
10	40	Black walnut	<i>Juglans nigra</i>	Fair	Covered in vines, dead branches throughout
11	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
12	47	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
13	32	Red oak	<i>Quercus rubra</i>	Poor	Half of crown missing, remainder has dead branches
14	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	Uneven crown, covered in ivy, 10 degree lean
15	26	Red maple	<i>Acer rubrum</i>	Good	
16	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
17	25	Cottonwood	<i>Populus deltoides</i>	Good	
18	45	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
19	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
20	29	Sycamore	<i>Platanus occidentalis</i>	Excellent	
21	26	Red maple	<i>Acer rubrum</i>	Good	
22	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	1 trunk of double, uneven crown, 5 degree lean
23	41	White oak	<i>Quercus alba</i>	Excellent	
24	44	White oak	<i>Quercus alba</i>	Poor	Poison ivy covered, 1 trunk dead
25	29	Red oak	<i>Quercus rubra</i>	Good	
26	32	White oak	<i>Quercus alba</i>	Good	
27	25	Sycamore	<i>Platanus occidentalis</i>	Good	
28	24	Sycamore	<i>Platanus occidentalis</i>	Good	
29	33	White oak	<i>Quercus alba</i>	Good	
30	33	White oak	<i>Quercus alba</i>	Good	
31	33	White oak	<i>Quercus alba</i>	Fair	Broken branches, leaning from growing under #29
32	44	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
33	35	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
34	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
35	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
36	40	Black walnut	<i>Juglans nigra</i>	Poor	Covered in ivy, broken branches
37	25	Sycamore	<i>Platanus occidentalis</i>	Fair	Covered in ivy
38	25	Sycamore	<i>Platanus occidentalis</i>	Fair	Covered in ivy, strong lean
39	26	Korean pine	<i>Pinus koraiensis</i>	Excellent	
40	24	Red maple	<i>Acer rubrum</i>	Fair	
41	27	Scarlet oak	<i>Quercus coccinea</i>	Good	
42	27	Scarlet oak	<i>Quercus coccinea</i>	Good	
43	25	Scarlet oak	<i>Quercus coccinea</i>	Fair	Strong lean from growing under #41
44	30	White oak	<i>Quercus alba</i>	Excellent	
45	27	White oak	<i>Quercus alba</i>	Fair	14 degree lean but otherwise healthy
46	26	Pignut hickory	<i>Carya glabra</i>	Fair	Hollow
47	25	White oak	<i>Quercus alba</i>	Good	
48	30	Red oak	<i>Quercus rubra</i>	Fair	Several dead branches in crown
49	33	White oak	<i>Quercus alba</i>	Good	
50	28	White oak	<i>Quercus alba</i>	Good	
51	31	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
52	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
53	27	Pignut hickory	<i>Carya glabra</i>	Good	
54	35	Korean pine	<i>Pinus koraiensis</i>	Excellent	
55	31	Korean pine	<i>Pinus koraiensis</i>	Excellent	
56	31	River birch	<i>Betula nigra</i>	Good	
57	36	Red oak	<i>Quercus rubra</i>	Excellent	
58	27	Korean pine	<i>Pinus koraiensis</i>	Good	
59	34	Korean pine	<i>Pinus koraiensis</i>	Poor	Trunk splitting and rotting to base
60	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
61	38	Southern red oak	<i>Quercus falcata</i>	Good	
62	29	White oak	<i>Quercus alba</i>	Excellent	
63	33	Scarlet oak	<i>Quercus coccinea</i>	Excellent	
64	31	Scarlet oak	<i>Quercus coccinea</i>	Excellent	
65	32	Mockernut hickory	<i>Carya alba</i>	Excellent	
66	25	Mockernut hickory	<i>Carya alba</i>	Fair	Lopsided crown, lean toward open water
67	27	Mockernut hickory	<i>Carya alba</i>	Fair	Broken branches in crown
68	26	Red oak	<i>Quercus rubra</i>	Poor	9 degree lean, uneven crown, broken branches in crown
69	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
70	27	Mockernut hickory	<i>Carya alba</i>	Excellent	
71	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
72	29	Pignut hickory	<i>Carya glabra</i>	Excellent	
73	29	Red maple	<i>Acer rubrum</i>	Good	
74	29	Red oak	<i>Quercus rubra</i>	Poor	Broken/dead branches in crown
75	25	Tulip	<i>Liriodendron tulipifera</i>	Good	
76	35	Red oak	<i>Quercus rubra</i>	Good	
77	26	Red oak	<i>Quercus rubra</i>	Fair	Dead branches in crown
78	37	Red oak	<i>Quercus rubra</i>	Good	
79	30	White oak	<i>Quercus alba</i>	Poor	Half of crown missing
80	26	Green ash	<i>Fraxinus pennsylvanica</i>	Good	
81	40	White oak	<i>Quercus alba</i>	Fair	Uneven crown, strong lean in crown
82	29	Red oak	<i>Quercus rubra</i>	Good	
83	31	Pignut hickory	<i>Carya glabra</i>	Fair	Double trunk above DBH
84	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
85	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
86	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
87	44	White oak	<i>Quercus alba</i>	Fair	Broken branches in crown
88	33	Red oak	<i>Quercus rubra</i>	Good	
89	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
90	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
91	31	Red oak	<i>Quercus rubra</i>	Good	
92	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
93	24	Mockernut hickory	<i>Carya alba</i>	Excellent	
94	26	Pignut hickory	<i>Carya glabra</i>	Excellent	
95	25	White oak	<i>Quercus alba</i>	Fair	Strong lean, uneven crown
96	25	Red oak	<i>Quercus rubra</i>	Good	
97	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
98	26	Pignut hickory	<i>Carya glabra</i>	Excellent	
99	32	Red oak	<i>Quercus rubra</i>	Good	
100	24	White oak	<i>Quercus alba</i>	Fair	Strong lean, uneven crown
101	26	White oak	<i>Quercus alba</i>	Excellent	
102	25	White oak	<i>Quercus alba</i>	Good	
103	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
104	25	White oak	<i>Quercus alba</i>	Excellent	
105	24	White oak	<i>Quercus alba</i>	Good	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
106	24	Swamp white oak	<i>Quercus bicolor</i>	Good	
107	34	Red oak	<i>Quercus rubra</i>	Good	
108	34	White oak	<i>Quercus alba</i>	Fair	Double trunk above DBH, dead branches in crown
109	25	Red oak	<i>Quercus rubra</i>	Fair	Strong lean in canopy
110	30	Red oak	<i>Quercus rubra</i>	Good	
111	38	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
112	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
113	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
114	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
115	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown with broken branches
116	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
117	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
118	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
119	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown with strong lean
120	29/28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
121	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
122	39	Sycamore	<i>Platanus occidentalis</i>	Fair	Leaning strongly
123	25	Red maple	<i>Acer rubrum</i>	Good	
124	32	Sycamore	<i>Platanus occidentalis</i>	Excellent	
125	33	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
126	25/21	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Split trunk below DBH
127	32	Red maple	<i>Acer rubrum</i>	Fair	Strong lean, vines
128	36	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
129	37	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
130	26	Red maple	<i>Acer rubrum</i>	Good	
131	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown with dead branches
132	35	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Vines, dead branches
133	31	Red oak	<i>Quercus rubra</i>	Excellent	
134	27	Red oak	<i>Quercus rubra</i>	Poor	
135	24	White oak	<i>Quercus alba</i>	Good	
136	26	Red maple	<i>Acer rubrum</i>	Good	
137	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
138	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
140	25/26/27	Red oak	<i>Quercus rubra</i>	Fair	Trunk damage, broken branches
141	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Dead branches in crown
142	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
143	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
144	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Strong lean, on stream bank
145	32	Sycamore	<i>Platanus occidentalis</i>	Fair	Uneven crown, vines
146	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
147	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
148	27/33	Red oak	<i>Quercus rubra</i>	Excellent	
149	30	White oak	<i>Quercus alba</i>	Fair	Uneven crown, trunk damage
150	26	White oak	<i>Quercus alba</i>	Fair	Trunk damage
151	26	White oak	<i>Quercus alba</i>	Good	
152	33	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
153	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Broken branches in crown
154	27	Red oak	<i>Quercus rubra</i>	Good	
155	26	White oak	<i>Quercus alba</i>	Fair	Slight lean, trunk damage
156	27	White oak	<i>Quercus alba</i>	Poor	Uneven crown, trunk hollow
157	34	Red oak	<i>Quercus rubra</i>	Excellent	
158	39	Red oak	<i>Quercus rubra</i>	Fair	Dead branches, split trunk above DBH
159	29	White oak	<i>Quercus alba</i>	Fair	Dead branches, split trunk above DBH
160	35	Red oak	<i>Quercus rubra</i>	Good	
161	31	Red oak	<i>Quercus rubra</i>	Poor	Hollow base of trunk, broken branches
162	41	Red oak	<i>Quercus rubra</i>	Fair	Dead/broken branches in crown
163	34/35	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
164	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown, dead branches
165	26	White oak	<i>Quercus alba</i>	Excellent	
166	27	Red oak	<i>Quercus rubra</i>	Good	
167	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
168	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Dead/broken branches in crown
169	28	Red oak	<i>Quercus rubra</i>	Good	
170	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	Dead/broken branches in crown
171	27	White oak	<i>Quercus alba</i>	Good	
172	27	White oak	<i>Quercus alba</i>	Poor	Broken/dead branches in crown
173	25	Red oak	<i>Quercus rubra</i>	Fair	Broken branches in crown
174	26	White oak	<i>Quercus alba</i>	Good	
175	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
176	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
177	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown
178	28	Red oak	<i>Quercus rubra</i>	Good	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
179	27	Red oak	<i>Quercus rubra</i>	Poor	Dead branches, uneven crown
180	29	Red oak	<i>Quercus rubra</i>	Good	
181	97	Red oak	<i>Quercus rubra</i>	Good	4 trunks above 4.5', larger than county & state champion
182	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
183	26	White oak	<i>Quercus alba</i>	Good	
184	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Vines, dead branches
185	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
186	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
187	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
188	31	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown
189	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
190	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
191	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
192	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown
193	38	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
194	31	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Uneven crown
195	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
196	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
197	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
198	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Vines, uneven crown
199	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Broken branches in crown
200	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
201	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
202	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
203	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Broken branches in crown
204	39	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	Hollow trunk, broken branches in crown
205	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
206	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Broken branches in crown
207	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
208	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
209	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
210	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
211	27	Green ash	<i>Fraxinus pennsylvanica</i>	Fair	Broken branches in crown
212	25	White oak	<i>Quercus alba</i>	Good	
213	35	White oak	<i>Quercus alba</i>	Good	
214	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
215	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
216	27	White oak	<i>Quercus alba</i>	Good	
217	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
218	25	White oak	<i>Quercus alba</i>	Good	
219	36	White oak	<i>Quercus alba</i>	Fair	Broken branches in crown
220	24	Green ash	<i>Fraxinus pennsylvanica</i>	Fair	Dead branches, vines
221	33	Sycamore	<i>Platanus occidentalis</i>	Fair	On streambank, roots exposed, lean
222	38	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Vines
223	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	Strong lean, moss covered
224	40	Sycamore	<i>Platanus occidentalis</i>	Fair	Dead branches, vines
225	38	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Vines
226	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
227	25	White oak	<i>Quercus alba</i>	Good	
228	31	White oak	<i>Quercus alba</i>	Fair	Broken branches in crown, vines
229	27	Sycamore	<i>Platanus occidentalis</i>	Fair	Stream bank, roots exposed
230	25	White oak	<i>Quercus alba</i>	Good	
231	32	Red oak	<i>Quercus rubra</i>	Good	
232	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
233	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
234	32	Red oak	<i>Quercus rubra</i>	Good	
235	25	White oak	<i>Quercus alba</i>	Good	
236	42	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
237	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
238	24	River birch	<i>Betula nigra</i>	Poor	Strong lean, on stream bank
239	31	Sycamore	<i>Platanus occidentalis</i>	Good	
240	26	Sycamore	<i>Platanus occidentalis</i>	Poor	Hollow trunk, crooked leader
241	32	Sycamore	<i>Platanus occidentalis</i>	Good	
242	35	Green ash	<i>Fraxinus pennsylvanica</i>	Fair	Dead branches, vines
243	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
244	42	White oak	<i>Quercus alba</i>	Good	
245	29	White oak	<i>Quercus alba</i>	Good	
246	34	White oak	<i>Quercus alba</i>	Good	
247	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
248	44	Red oak	<i>Quercus rubra</i>	Good	
249	29	White oak	<i>Quercus alba</i>	Good	
250	35	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Hollow trunk

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
251	37	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
252	32	Sycamore	<i>Platanus occidentalis</i>	Good	
253	28	Sycamore	<i>Platanus occidentalis</i>	Fair	Dead branches in crown
254	27	Eastern red cedar	<i>Juniperus virginiana</i>	Poor	Hollow trunk, dead branches
255	25	Sycamore	<i>Platanus occidentalis</i>	Fair	Uneven crown, broken branches
256	24/25	Sycamore	<i>Platanus occidentalis</i>	Fair	Split
257	35	Sycamore	<i>Platanus occidentalis</i>	Good	
258	25	Sycamore	<i>Platanus occidentalis</i>	Poor	Uneven crown, broken branches
259	26	Tulip	<i>Liriodendron tulipifera</i>	Good	
260	39	Tulip	<i>Liriodendron tulipifera</i>	Good	
261	33	White oak	<i>Quercus alba</i>	Good	
262	33	Sycamore	<i>Platanus occidentalis</i>	Good	
263	25	Tulip	<i>Liriodendron tulipifera</i>	Poor	Split/hollow trunk, poison ivy
264	37	Tulip	<i>Liriodendron tulipifera</i>	Good	
270	30	Silver maple	<i>Acer saccharinum</i>	Excellent	
271	25	Silver maple	<i>Acer saccharinum</i>	Good	
272	24	Sycamore	<i>Platanus occidentalis</i>	Good	
273	26	Sycamore	<i>Platanus occidentalis</i>	Excellent	
274	32	Silver maple	<i>Acer saccharinum</i>	Fair	split into 3 @ 8'-1 part broken, covered in vines
275	34.5/34	Osage orange	<i>Maclura pomifera</i>	Good	
276	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
277	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
278	31	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	Topped in storm - no canopy
279	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	Topped in storm - no canopy
280	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	Topped in storm -no canopy
281	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	vines, small canopy, broken branches
282	35	Osage orange	<i>Maclura pomifera</i>	Fair	broken branches, leaning 45 degrees
283	31	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
284	30/ 26	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	
285	40	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
286	28	Pignut hickory	<i>Carya glabra</i>	Fair	uneven canopy, broken branches
287	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	uneven canopy, broken branches
288	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
289	27	Sycamore	<i>Platanus occidentalis</i>	Excellent	
290	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
291	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
292	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
293	24	Mockernut hickory	<i>Carya alba</i>	Dead	
294	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
295	28			Dead	
296	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
297	29	Red maple	<i>Acer rubrum</i>	Excellent	
298	25	Red maple	<i>Acer rubrum</i>	Good	
299	24	Mockernut hickory	<i>Carya alba</i>	Good	
300	27	White oak	<i>Quercus alba</i>	Fair	uneven canopy
301	25	White oak	<i>Quercus alba</i>	Good	
302	27	White oak	<i>Quercus alba</i>	Fair	uneven canopy, smooth patch disease
303	31	White oak	<i>Quercus alba</i>	Good	
304	26	White oak	<i>Quercus alba</i>	Fair	uneven canopy, dead branches
305	32	White oak	<i>Quercus alba</i>	Good	
306	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
307	26	White oak	<i>Quercus alba</i>	Good	
308	32	White oak	<i>Quercus alba</i>	Good	
309	27	White oak	<i>Quercus alba</i>	Excellent	
310	34	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
311	29	White oak	<i>Quercus alba</i>	Good	
312	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
313	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
314	32	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
315	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
316	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
317	31	Red oak	<i>Quercus rubra</i>	Good	
318	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	topped in storm
319	24.5/ 24.5	Sycamore	<i>Platanus occidentalis</i>	Excellent	
320	25	Red maple	<i>Acer rubrum</i>	Fair	dead branches, diseased
321	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
322	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
323	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
324	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
325	24	Sycamore	<i>Platanus occidentalis</i>	Excellent	
326	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	sparse canopy, dead branches
327	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
328	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
329	27	Red maple	<i>Acer rubrum</i>	Poor	sparse canopy, dead branches
330	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
331	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
332	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
333	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
334	29	Red oak	<i>Quercus rubra</i>	Good	
335	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	diseased
336	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
337	28	Red oak	<i>Quercus rubra</i>	Excellent	
338	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
339	33	Pignut hickory	<i>Carya glabra</i>	Good	
340	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
341	38	White oak	<i>Quercus alba</i>	Excellent	
342	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
343	35	White oak	<i>Quercus alba</i>	Good	
344	41	White oak	<i>Quercus alba</i>	Good	
345	28	White oak	<i>Quercus alba</i>	Fair	sparse canopy
346	31	White oak	<i>Quercus alba</i>	Fair	sparse canopy, dead branches, white patch disease
347	24	White oak	<i>Quercus alba</i>	Good	
348	31	White oak	<i>Quercus alba</i>	Fair	uneven canopy, broken branches
349	30	White oak	<i>Quercus alba</i>	Fair	choked by poison ivy
350	34	White oak	<i>Quercus alba</i>	Good	
351	50	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
352	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
353	25	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
354	29	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
355	38	Tulip poplar	<i>Liriodendron tulipifera</i>	Poor	topped in storm, center trunk rot
356	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
357	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
358	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
359	30	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
360	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
361	28	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	sparse canopy
362	26	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
363	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Fair	twin @ 5', sparse canopy

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
364	27/ 25	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
365	47	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
366	25	Red oak	<i>Quercus rubra</i>	Good	
367	42	Red maple	<i>Acer rubrum</i>	Poor	dead branches, sparse canopy
368	24	Red maple	<i>Acer rubrum</i>	Poor	mostly dead
369	25	Mockernut hickory	<i>Carya alba</i>	mostly dead	
370	47	White oak	<i>Quercus alba</i>	Good	
371	27	White oak	<i>Quercus alba</i>	Good	
372	30	White oak	<i>Quercus alba</i>	Good	
373	33	Red oak	<i>Quercus rubra</i>	Fair	topped in storm
374	28	Scarlet oak	<i>Quercus coccinea</i>	Fair	10% lean, vines
375	34	White oak	<i>Quercus alba</i>	Good	
376	31	Scarlet oak	<i>Quercus coccinea</i>	Fair	twin-half dead
377	24	Korean pine	<i>Pinus koraiensis</i>	Excellent	
378	33	Sycamore	<i>Platanus occidentalis</i>	Excellent	
379	30	Sycamore	<i>Platanus occidentalis</i>	Excellent	
380	32	Sycamore	<i>Platanus occidentalis</i>	Good	
381	28	Sycamore	<i>Platanus occidentalis</i>	Dead	
382	35	Sycamore	<i>Platanus occidentalis</i>	Excellent	
383	33	Sycamore	<i>Platanus occidentalis</i>	Good	
384	29	Sycamore	<i>Platanus occidentalis</i>	Good	
385	33	Green ash	<i>Fraxinus pennsylvanica</i>	Good	
386	28	Sycamore	<i>Platanus occidentalis</i>	Good	
387	26	Sycamore	<i>Platanus occidentalis</i>	Good	
388	29	Sycamore	<i>Platanus occidentalis</i>	Good	
389	28	Korean pine	<i>Pinus koraiensis</i>	Good	
390	24+	Black cherry	<i>Prunus serotina</i>	Poor	covered in poison ivy, dead branches
391	39	Sycamore	<i>Platanus occidentalis</i>	Excellent	
392	45	Sycamore	<i>Platanus occidentalis</i>	Fair	broken branches, sparse canopy, vines
393	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Good	
394	32	Sycamore	<i>Platanus occidentalis</i>	Excellent	
395	35	Sycamore	<i>Platanus occidentalis</i>	Good	
396	56	Sycamore	<i>Platanus occidentalis</i>	Good	
397	27	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
398	24	Tulip poplar	<i>Liriodendron tulipifera</i>	Excellent	
399	28	Red oak	<i>Quercus rubra</i>	Good	

Tree #	Size DBH	Common name	Scientific name	Condition	Comments
400	28	Korean pine	<i>Pinus koraiensis</i>	Excellent	
401	39	Silver Maple	<i>Acer saccharinum</i>	Good	
434	33	Box Elder	<i>Acer negundo</i>	Good	
433	33	Shingle Oak	<i>Quercus imbricaria</i>	Good	
432	39	Sycamore	<i>Platanus occidentalis</i>	Poor	
431	29	Red Maple	<i>Acer rubrum</i>	Poor	
430	40	Shingle Oak	<i>Quercus imbricaria</i>	Good	
429	33	White oak	<i>Quercus alba</i>	Good	
428	29	White oak	<i>Quercus alba</i>	Fair	
427	39	White oak	<i>Quercus imbricaria</i>	Good	
426	31	Shingle Oak	<i>Quercus imbricaria</i>	Poor	
425	37	Sycamore	<i>Platanus occidentalis</i>	Poor	
424	26	Sycamore	<i>Platanus occidentalis</i>	Fair	
423	28	Sycamore	<i>Platanus occidentalis</i>	Fair	
422	29	Sycamore	<i>Platanus occidentalis</i>	Good	
421	27/33	White oak	<i>Quercus alba</i>	Fair	
420	40	White oak	<i>Quercus alba</i>	Good	
419	62	Sycamore	<i>Platanus occidentalis</i>	Poor	
418	24	Honey Locust	<i>Gleditsia tricanthos</i>	Poor	
419	25	Tulip Poplar	<i>Liriodendron tulipifera</i>	Good	
420	37	White oak	<i>Quercus alba</i>	Fair	

V. APPENDIX B - FOREST STAND DELINEATION DATA SHEETS

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 1			Plot #: A			Plot Size: $\frac{1}{10}ac = r 37.24ft$					Date: 12/3/2012								
Successional Stage: early					Basal Area (sf/ac): 70					Sheet 1 of 1									
Tree Species (1 = >24")	Size class of trees > 20' height within sample plot															Total			
				<3"			3 - 6.9"			7 - 19.9"			20" +						
Crown Position				Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other				
<i>Acer rubrum</i>						8			15		4	7				34			
<i>Acer saccharinum</i>						2			2	2	1					7			
<i>Fraxinus pennsylvanica</i>						1		1	3		1	2				8			
Total # Trees / Class:				11			21			17			0			49			
# / Size Standing Dead:				4			1			0			0			5			
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Acer rubrum</i>										<i>Microstegium vimineum</i>					<i>Allium canadense</i>				
										<i>Rubus phoenicolasius</i>									
										<i>Ilex opaca</i>									
										<i>Vitis sp.</i>									
										<i>Rosa multiflora</i>									
										<i>Lonicera japonica</i>									
										<i>Hedera helix</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
$\frac{1}{10}$	100	95	95	80	100	94%	20	0	10	60	0	18%	100	5	100	80	10	59%	
$\frac{1}{20}$	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	100	0	100	80	0	56%	2	0	1	4	0	1	2	80	20	40	80	44%	

Forest Sampling Data Worksheet

Property: North Branch Trail Prepared By: J. Cummings & C. Perfit
 Stand #: 1 Plot #: B Plot Size: 1/10ac = r 37.24ft 1/20ac = r 25.28ft Date: 12/3/2012
 Successional Stage: early Basal Area (sf/ac): 90 Sheet 1 of 1

Tree Species (1 = >24")	Size class of trees > 20' height within sample plot															Total
				< 3"			3 - 6.9"			7 - 19.9"			20" +			
Crown Position				Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
<i>Acer rubrum</i>						5		2	8		2	7				24
<i>Acer saccharinum</i>						1			1	1	5	2	1			11
<i>Fraxinus pennsylvanica</i>									1							1
Total # Trees / Class:						6			12			17			1	36
# / Size Standing Dead:						7			0			2			0	9

Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
										<i>Microstegium vimineum</i>									
										<i>Alliaria petiolata</i>									
										<i>Allium canadense</i>									
										<i>Rosa multiflora</i>									

Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	80	100	95	85	80	88%	0	20	0	5	2	5%	100	80	35	60	50	65%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* =	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
Invasive	100	80	35	60	50	65%	0	1	0	0	1	0	75	90	90	75	100	86%

Forest Sampling Data Worksheet

Property: North Branch Trail Prepared By: J. Cummings & C. Perfit
 Stand #: 2 Plot #: A Plot Size: $\frac{1}{10}ac = r 37.24ft$ $\frac{1}{20}ac = r 25.28ft$ Date: 12/3/2012
 Successional Stage: early Basal Area (sf/ac): 140 Sheet 1 of 1

Tree Species (1 = >24")	Size class of trees > 20' height within sample plot															Total
	< 3"			3- 6.9"			7 - 19.9"			20" +						
Crown Position	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
<i>Acer rubrum</i>			4			4			1		5				14	
<i>Carpinus caroliniana</i>			3			4									7	
<i>Carya alba</i>			1			2			1		4				8	
<i>Cornus florida</i>			2												2	
<i>Diospyros virginiana</i>											1				1	
<i>Fagus grandifolia</i>			1			2									3	
<i>Liriodendron tulipifera</i>						1					1		1		3	
<i>Nyssa sylvatica</i>						1									1	
<i>Platanus occidentalis</i>									1				1		2	
<i>Quercus rubra</i>											2				2	
Total # Trees / Class:			11			14			16		2				43	
# / Size Standing Dead:			1			0			0		0				1	

Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):					
<i>Acer rubrum</i>						<i>Berberis thunbergii</i>					<i>Allium canadense</i>
<i>Carpinus caroliniana</i>						<i>Euonymus alatus</i>					
<i>Cornus florida</i>						<i>Ilex opaca</i>					
<i>Rubus sp.</i>						<i>Carpinus caroliniana</i>					
						<i>Rosa multiflora</i>					
						<i>Lonicera japonica</i>					
						<i>Mitchella repens</i>					

Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
$\frac{1}{10}$	100	100	85	100	100	97%	20	5	30	50	75	36%	50	80	10	60	90	58%
$\frac{1}{20}$	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* =	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
Invasive	30	75	8	40	50	41%	3	3	2	4	3	3	10	5	10	15	10	10%

Paved path runs through eastern edge; lake along western edge.

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 2			Plot #: B			Plot Size: $\frac{1}{10}ac = r 37.24ft$					1/20ac = r 25.28ft					Date: 12/3/2012			
Successional Stage: Mid					Basal Area (sf/ac): 150					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Acer rubrum</i>				2			2			2						6			
<i>Carpinus caroliniana</i>				2			1									3			
<i>Carya alba</i>							1									1			
<i>Carya ovata</i>							1			1						2			
<i>Fagus grandifolia</i>				4			4			3						11			
<i>Ilex opaca</i>				1												1			
<i>Liriodendron tulipifera</i>									3	1	5	3	1			13			
<i>Nyssa sylvatica</i>				3			3		1							7			
<i>Quercus rubra</i>							1						1			2			
Total # Trees / Class:		12			13			16			5			46					
# / Size Standing Dead:		3			0			2			0			5					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Carpinus caroliniana</i>										<i>Berberis thunbergii</i>									
<i>Fagus grandifolia</i>										<i>Polystichum acrostichoides</i>									
<i>Ilex opaca</i>										<i>Rubus phoenicolasius</i>									
										<i>Lonicera japonica</i>									
										<i>Mitchella repens</i>									
										<i>Ilex opaca</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
$\frac{1}{10}$	100	85	90	95	70	88%	0	20	5	10	10	9%	80	40	5	10	30	33%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* =	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
Invasive	5	5	0	5	25	8%	0	1	1	1	1	1	5	20	15	10	80	26%	
Tree #334 in southern edge of plot																			

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 2			Plot #: C			Plot Size: $1/10ac = r 37.24ft$ $1/20ac = r 25.28ft$					Date: 12/4/2012								
Successional Stage: Mid					Basal Area (sf/ac): 140					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Acer rubrum</i>							1												
<i>Carya alba</i>				1			2												
<i>Fagus grandifolia</i>				3			3			3									
<i>Liriodendron tulipifera</i>									1	3	6	2							
<i>Quercus rubra</i>							1			1									
Total # Trees / Class:		4			7			8			8			27					
# / Size Standing Dead:		2			1			0			0			3					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Carpinus caroliniana</i>										<i>Berberis thunbergii</i>					<i>Waldsteinia fragarioides</i>				
<i>Fagus grandifolia</i>										<i>Polystichum acrostichoides</i>					<i>Microstegium vimineum</i>				
<i>Ilex opaca</i>										<i>Rubus phoenicolasius</i>					<i>Alliaria petiolata</i>				
<i>Carya alba</i>										<i>Smilax sp.</i>									
										<i>Mitchella repens</i>									
										<i>Ilex opaca</i>									
										<i>Lonicera japonica</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
$1/10$	100	100	100	80	95	95%	0	0	5	0	10	3%	20	5	10	50	50	27%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* =	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
Invasive	15	4	10	50	30	22%	0	0	1	0	4	1	25	20	40	65	10	32%	

Saplings and mature trees; Japanese stilt grass and mitchella repens ground cover; not much of a shrub layer at all; similar to plot B; plot A is down the slope to the lake, so slightly different: more shrubs and red maples

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 3			Plot #: A			Plot Size: 1/10ac = r 37.24ft					1/20ac = r 25.28ft					Date: 12/4/2012			
Successional Stage: Mid					Basal Area (sf/ac): 90					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Acer rubrum</i>				2			2			1						5			
<i>Carpinus caroliniana</i>				5			5									10			
<i>Carya alba</i>				2			2			2						6			
<i>Cornus florida</i>				1												1			
<i>Fagus grandifolia</i>				1			1									2			
<i>Liriodendron tulipifera</i>													1			1			
<i>Nyssa sylvatica</i>							1			3						4			
<i>Quercus alba</i>										1	3					4			
<i>Quercus rubra</i>													1			1			
Total # Trees / Class:		11			11			7			5			34					
# / Size Standing Dead:		6			0			0			0			6					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Carpinus caroliniana</i>										<i>Berberis thunbergii</i>									
<i>Cornus florida</i>										<i>Polystichum acrostichoides</i>									
										<i>Rubus phoenicolasius</i>									
										<i>Rosa multiflora</i>									
										<i>Allium canadense</i>									
										<i>Lonicera japonica</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
1/10	100	100	100	100	100	100%	30	15	0	80	30	31%	15	10	0	5	60	18%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	10	8	0	5	30	11%	1	2	0	1	2	1	2	10	2	10	5	6%	

Saplings and mature trees, really no shrub layer at all.

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 4			Plot #: A			Plot Size: $\frac{1}{10}ac = r 37.24ft$					1/20ac = r 25.28ft					Date: 12/4/2012			
Successional Stage: early-mid					Basal Area (sf/ac): 90					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Acer rubrum</i>				1			2			7						10			
<i>Carya alba</i>				2			2			3						7			
<i>Fagus grandifolia</i>				1			2			1						4			
<i>Liriodendron tulipifera</i>													3			3			
<i>Pinus virginiana</i>										3						3			
																0			
																0			
																0			
																0			
Total # Trees / Class:		4			6			14			3			27					
# / Size Standing Dead:		3			0			2			0			5					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Carpinus caroliniana</i>										<i>Berberis thunbergii</i>				<i>Ilex opaca</i>					
<i>Fagus grandifolia</i>										<i>Polystichum acrostichoides</i>				<i>Waldsteinia fragarioides</i>					
<i>Ilex opaca</i>										<i>Rubus phoenicolasius</i>				<i>Microstegium vimineum</i>					
<i>Viburnum sp.</i>										<i>Viburnum sp.</i>				<i>Rubus spp.</i>					
										<i>Smilax sp.</i>				<i>Allium canadense</i>					
										<i>Lonicera japonica</i>									
										<i>Mitchella repens</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
$\frac{1}{10}$	95	90	80	100	95	92%	25	50	40	10	20	29%	80	60	60	80	80	72%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* =	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
Invasive	35	40	20	50	60	41%	3	2	2	2	2	2	5	50	10	75	15	31%	

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 4			Plot #: B			Plot Size: <u>1/10</u> ac = r 37.24ft					1/20ac = r 25.28ft					Date: 12/4/2012			
Successional Stage: early-mid					Basal Area (sf/ac): 90					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3- 6.9"			7- 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Acer rubrum</i>				1			2			4						7			
<i>Carpinus caroliniana</i>										1						1			
<i>Carya alba</i>				1			1			1						3			
<i>Cornus florida</i>				1			1									2			
<i>Fagus grandifolia</i>							1									1			
<i>Ilex opaca</i>				3												3			
<i>Liriodendron tulipifera</i>											2					2			
<i>Pinus virginiana</i>										1						1			
																0			
Total # Trees / Class:		0			6			5			7			2			20		
# / Size Standing Dead:		0			1			4			1			0			6		
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Fagus grandifolia</i>										<i>Berberis thunbergii</i>					<i>Vitis sp.</i>				
<i>Ilex opaca</i>										<i>Rubus spp.</i>					<i>Hedera helix</i>				
<i>Lindera benzoin</i>										<i>Rubus phoenicolasius</i>									
<i>Viburnum sp.</i>										<i>Viburnum sp.</i>									
										<i>Smilax sp.</i>									
										<i>Lonicera japonica</i>									
										<i>Mitchella repens</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
<u>1/10</u>	60	100	80	60	90	78%	40	50	30	60	30	42%	25	75	70	85	90	69%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* =	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
Invasive	15	50	65	60	60	50%	4	3	3	2	1	3	25	40	100	100	100	73%	
Plot A&B: lot of scrubby shrub layer, dead wood, tall dead pines, invasives, openish canopy																			

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 5			Plot #: A			Plot Size: 1/10ac = r 37.24ft					1/20ac = r 25.28ft					Date: 12/5/2012			
Successional Stage: Mid-late					Basal Area (sf/ac): 130					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Liriodendron tulipifera</i>											2	1	7	4	2		16		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
Total # Trees / Class:		0			0			10			6			16					
# / Size Standing Dead:		1			1			0			0			2					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Crataegus sp.</i>										<i>Alliaria petiolata</i>					<i>Rosa multiflora</i>				
<i>Cornus florida</i>										<i>Polystichum acrostichoides</i>									
<i>Lindera benzoin</i>										<i>Rubus phoenicolasius</i>									
										<i>Waldsteinia fragarioides</i>									
										<i>Allium canadense</i>									
										<i>Lonicera japonica</i>									
										<i>Vitis spp.</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
1/10	100	100	90	90	95	95%	80	0	20	100	20	44%	60	100	80	10	80	66%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	40	50	60	5	45	40%	1	0	1	1	1	1	40	10	15	1	60	25%	
mostly mature tulip trees and spicebush shrub layer approx 0-10' high																			

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 5			Plot #: B			Plot Size: 1/10ac = r 37.24ft					1/20ac = r 25.28ft					Date: 12/5/2012			
Successional Stage: mid					Basal Area (sf/ac): 160					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Liriodendron tulipifera</i>				4			4	6	3	14	1	1					33		
<i>Maclura pomifera</i>							3										3		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
																	0		
Total # Trees / Class:		4			7			23			2			36					
# / Size Standing Dead:		12			0			1			0			13					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Cornus florida</i>										<i>Berberis thunbergii</i>					<i>Rosa multiflora</i>				
<i>Lindera benzoin</i>										<i>Polystichum acrostichoides</i>					<i>Waldsteinia fragarioides</i>				
<i>Maclura pomifera</i>										<i>Rubus phoenicolasius</i>					<i>Rubus spp.</i>				
<i>Mahonia sp.</i>										<i>Hedera helix</i>									
										<i>Allium canadense</i>									
										<i>Lonicera japonica</i>									
										<i>Vitis spp.</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
1/10	90	90	100	90	95	93%	30	20	20	0	0	14%	80	90	60	40	90	72%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	75	75	30	35	70	57%	1	1	1	0	0	1	30	25	5	10	25	19%	

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 5			Plot #: C			Plot Size: 1/10ac = r 37.24ft					1/20ac = r 25.28ft					Date: 12/5/2012			
Successional Stage: early-mid					Basal Area (sf/ac): 90					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Lindera benzoin</i>				1												1			
<i>Liriodendron tulipifera</i>									1	1	1	2				5			
<i>Maclura pomifera</i>				2			5			5						12			
																0			
																0			
																0			
																0			
																0			
																0			
																0			
Total # Trees / Class:		3			5			7			3			18					
# / Size Standing Dead:		0			6			1			0			7					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Cornus florida</i>										<i>Alliaria petiolata</i>				unknown grass					
<i>Lindera benzoin</i>										<i>Waldsteinia fragarioides</i>									
<i>Maclura pomifera</i>										<i>Rosa multiflora</i>									
										<i>Hedera helix</i>									
										<i>Allium canadense</i>									
										<i>Lonicera japonica</i>									
										<i>Vitis spp.</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
1/10	100	90	95	80	90	91%	10	30	15	0	30	17%	80	65	90	50	50	67%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	50	50	40	40	45	45%	1	1	1	0	2	1	10	20	10	10	2	10%	

Tree #11 in our plot. Plot has a lot of grape vines, Osage orange, dead trees, grass, and invasives, pretty open canopy/on edge.

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 6			Plot #: A			Plot Size: $\frac{1}{10}ac = r 37.24ft$					1/20ac = r 25.28ft					Date: 12/5/2012			
Successional Stage: early-mid					Basal Area (sf/ac): 70					Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Acer negundo</i>										1									
<i>Acer rubrum</i>				2			2			9									
<i>Fraxinus pennsylvanica</i>				1			2			3									
<i>Maclura pomifera</i>				1						2									
<i>Platanus occidentalis</i>													2						
<i>Prunus serotina</i>										1									
Total # Trees / Class:		4			4			16			2			26					
# / Size Standing Dead:		2			1			0			0			3					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Cornus florida</i>										<i>Alliaria petiolata</i>					<i>Berberis thunbergii</i>				
<i>Lindera benzoin</i>										<i>Waldsteinia fragarioides</i>					<i>Toxicodendron radicans</i>				
<i>Maclura pomifera</i>										<i>Rosa multiflora</i>					<i>Rubus spp.</i>				
										<i>Polystichum acrostichoides</i>					unknown grass				
										<i>Allium canadense</i>									
										<i>Lonicera japonica</i>									
										<i>Vitis spp.</i>									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
$\frac{1}{10}$	95	95	100	100	100	98%	20	60	10	0	30	24%	30	20	30	10	40	26%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	25	8	25	10	40	22%	1	1	1	0	2	1	20	10	15	2	15	12%	

Forest Sampling Data Worksheet

Property: North Branch Trail										Prepared By: J. Cummings & C. Perfit									
Stand #: 6			Plot #: B			Plot Size: 1/10ac = r 37.24ft					1/20ac = r 25.28ft					Date: 12/5/2012			
Successional Stage: early-mid						Basal Area (sf/ac): 90						Sheet 1 of 1							
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot															Total		
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other			
<i>Acer negundo</i>													2				2		
<i>Acer saccharinum</i>				4			5						6		1		16		
<i>Fraxinus pennsylvanica</i>													1				1		
<i>Liriodendron tulipifera</i>													2				2		
<i>Maclura pomifera</i>																1	1		
<i>Platanus occidentalis</i>												1		1	1		3		
																	0		
																	0		
																	0		
Total # Trees / Class:		4			5			12			4			25					
# / Size Standing Dead:		1			1			0			0			2					
Understory Species (3' - 20'):										Herbaceous Species (0' - 3'):									
<i>Rosa multiflora</i>										<i>Alliaria petiolata</i>									
<i>Lindera benzoin</i>										<i>Smilax sp.</i>									
										<i>Rosa multiflora</i>									
										<i>Lonicera japonica</i>									
										unknown grass									
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
1/10	100	85	60	80	90	83%	30	60	40	10	0	28%	50	70	100	40	70	66%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	50	50	60	40	50	50%	1	1	1	0	0	1	20	1	0	10	50	16%	

area is along stream and had been flooded lately; lots of unidentifiable grasses/ground cover; tree #273 in plot

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	7	Plot #:	A	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 110			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				2			1							3				
<i>Acer saccharinum</i>							2			1				3				
<i>Carpinus caroliniana</i>				1										1				
<i>Carya alba</i>				3			4							7				
<i>Cornus florida</i>				2										2				
<i>Fagus grandifolia</i>							2							2				
<i>Liriodendron tulipifera</i>								1	1	2				4				
<i>Nyssa sylvatica</i>				1										1				
<i>Platanus occidentalis</i>								1			2			3				
<i>Quercus alba</i>							2							2				
<i>Quercus falcata</i>									1					1				
<i>Quercus rubra</i>									1					1				
Total # Trees / Class:		9			11			8			2		30					
# / Size Standing Dead:		3			3			2			0		8					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Lindera benzoin</i>						<i>Smilax</i> spp.												
<i>Viburnum</i> spp.						<i>Lonicera japonica</i>												
<i>Carpinus caroliniana</i>						<i>Toxicodendron radicans</i>												
<i>Cornus florida</i>						<i>Rosa multiflora</i>												
<i>Quercus alba</i>						<i>Ilex crenata</i>												
<i>Ilex opaca</i>						<i>Allium canadense</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	70	50	100	50	100	74%	40	10	20	50	0	24%	10	15	5	10	5	9%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	10	10	5	10	5	8%	1	2	2	1	2	2	5	20	20	25	20	18%
Just west of tree #31																		

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	7	Plot #:	B	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 130			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer negundo</i>										1			1					
<i>Carya alba</i>				2			2			1			5					
<i>Carya glabra</i>										1			1					
<i>Cornus florida</i>				2									2					
<i>Fagus grandifolia</i>							1						1					
<i>Liriodendron tulipifera</i>										1	3	1	5					
<i>Nyssa sylvatica</i>							1						1					
<i>Prunus serotina</i>										1			1					
<i>Quercus alba</i>							1						1					
Total # Trees / Class:		4			5			5			4		18					
# / Size Standing Dead:		2			0			0			0		2					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Cornus florida</i>						<i>Lonicera japonica</i>						<i>Polystichum acrostichoides</i>						
<i>Lindera benzoin</i>						<i>Carex spp.</i>												
<i>Carpinus caroliniana</i>						<i>Waldesteinia fragaroides</i>												
<i>Viburnum spp/</i>						<i>Smilax spp.</i>												
<i>Carya alba</i>						<i>Rubus phoenicolasius</i>												
<i>Fagus grandifolia</i>						<i>Viburnum spp.</i>												
<i>Quercus alba</i>						<i>Vitis spp.</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	70	100	60	80	60	74%	40	70	20	40	10	36%	20	60	10	10	40	28%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	15	10	10	5	10	10%	2	1	2	3	3	2	10	20	15	10	30	17%
<p>Tree #32 is next to plot center. All 3 layers Tree, Understory, and Herbaceous are present; very large White Oaks scattered around periphery of plot; recent wind damage to Tulip Poplars caused down woody debris.</p>																		

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	8	Plot #:	A	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 130			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				2			2							4				
<i>Carya alba</i>							10							10				
<i>Carya ovata</i>							1							1				
<i>Ilex opaca</i>				1			2							3				
<i>Juniperus virginiana</i>							2							2				
<i>Liriodendron tulipifera</i>							2	1	2					5				
<i>Nyssa sylvatica</i>				3			2			2				7				
<i>Prunus serotina</i>							1							1				
<i>Quercus alba</i>											1			1				
<i>Quercus rubra</i>									1					1				
Total # Trees / Class:		6			22			6			1		35					
# / Size Standing Dead:		1			3			1			0		5					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Ilex opaca</i>						<i>Carex spp.</i>												
<i>Nyssa sylvatica</i>						<i>Lonicera japonica</i>												
<i>Juniperus virginiana</i>						<i>Lonicera tatarica</i>												
<i>Prunus serotina</i>																		
<i>Acer rubrum</i>																		
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	90	90	100	50	30	72%	40	30	10	10	100	38%	0	0	5	20	0	5%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
		0	5	1	0	2%	2	0	1	3	1	1	10	30	5	5	20	14%

Mostly saplings and mature trees, not much groundcover or shrub layer at all.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	8	Plot #:	B	Plot Size:	1/10 ac = r 37.24ft	1/20 ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 110				Sheet 1 of 1										
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				2			2			4				8				
<i>Carpinus caroliniana</i>				5			6							11				
<i>Carya alba</i>							2							2				
<i>Cornus florida</i>				1										1				
<i>Liriodendron tulipifera</i>										1	1			2				
<i>Nyssa sylvatica</i>										1				1				
<i>Quercus alba</i>									1				1	2				
<i>Quercus rubra</i>										1				1				
														0				
														0				
														0				
														0				
Total # Trees / Class:		8			10			8			2		28					
# / Size Standing Dead:		0			2			1			0		3					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Carpinus caroliniana</i>						<i>Lonicera japonica</i>												
<i>Kalmia latifolia</i>						unknown grass												
<i>Fagus grandifolia</i>						<i>Ilex opaca</i>												
						<i>Rubus phoenicolasius</i>												
						<i>Ligustrum spp</i>												
						<i>Hedera helix</i>												
						<i>Carex spp.</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	20	60	100	50	20	50%	80	70	100	30	100	76%	0	0	0	5	0	1%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	0	0	0	5	0	1%	1	0	0	2	0	1	15	15	60	25	15	26%
Not much of a groundcover or shrub layer at all																		

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	8	Plot #:	C	Plot Size:	1/10 ac = r 37.24ft	1/20 ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 130			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>										2			2					
<i>Carpinus caroliniana</i>				4			5						9					
<i>Carya alba</i>							1				1		2					
<i>Fagus grandifolia</i>							2						2					
<i>Liriodendron tulipifera</i>							2		1	5			8					
<i>Nyssa sylvatica</i>							2						2					
<i>Quercus alba</i>										1			1					
<i>Quercus falcata</i>											1		1					
<i>Quercus rubra</i>									1		2		3					
													0					
													0					
													0					
Total # Trees / Class:		4			12			10			4		30					
# / Size Standing Dead:		1									0		1					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Carpinus caroliniana</i>						<i>Waldsteinia fragaroides</i>												
						<i>Alliaria petiolata</i>												
						<i>Polystichum acrostichoides</i>												
						<i>Lonicera japonica</i>												
						<i>Euonymus alatus</i>												
						<i>Berberis thunbergii</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	50	50	100	50	40	58%	100	100	30	100	25	71%	5	35	5	0	1	9%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	5	5	1	0	1	2%	2	1	1	1	0	1	10	30	10	5	10	13%

All 3 plots very similar: no real groundcover or shrub layer present, hickory, oak, tulips; wind damage from recent storm added to woody debris on ground

Forest Sampling Data Worksheet

Property: North Branch Trail					Prepared By: J. Cummings & D. Merkey													
Stand #:	9	Plot #:	A	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: early-mid				Basal Area (sf/ac): 130			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>							1							1				
<i>Carpinus caroliniana</i>				2										2				
<i>Cornus florida</i>				1										1				
<i>Fraxinus pennsylvanica</i>							1		1					2				
<i>Liriodendron tulipifera</i>				2			3		2	1	3			11				
<i>Platanus occidentalis</i>								1						1				
<i>Prunus serotina</i>							2			1				3				
														0				
Total # Trees / Class:		5			7			6			3		21					
# / Size Standing Dead:		4			4			4			0		12					
Understory Species (3' - 20'):							Herbaceous Species (0' - 3'):											
<i>Carpinus caroliniana</i>							<i>Polystichum acrostichoides</i>							<i>Carex spp.</i>				
<i>Acer rubrum</i>							<i>Microstegium vimineum</i>							<i>Waldesteinia fragaroides</i>				
<i>Quercus rubra</i>							<i>Rubus phoenicolasius</i>							<i>Vitis spp.</i>				
<i>Cornus florida</i>							<i>Smilax spp.</i>							<i>Toxicodendron radicans</i>				
<i>Berberis thunbergii</i>							<i>Berberis thunbergii</i>											
<i>Fagus grandifolia</i>							<i>Rosa multiflora</i>											
<i>Lindera benzoin</i>							<i>Alliaria petiolata</i>											
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	50	30	60	95	60	59%	0	30	100	0	10	28%	80	100	100	75	80	87%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	60	100	100	75	80	83%	0	0	2	0	1	1	15	5	20	10	25	15%
Area is very scrubby, has lots of grape and poison ivy vines and invasives such as Japanese stilt grass.																		

Forest Sampling Data Worksheet

Property: North Branch Trail							Prepared By: J. Cummings & D. Merkey												
Stand #: 10		Plot #: A		Plot Size: 1/10ac = r 37.24ft			1/20ac = r 25.28ft			Date: 12/12/2012									
Successional Stage: early-mid							Basal Area (sf/ac): 120			Sheet 1 of 1									
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total						
		< 3"			3 - 6.9"			7 - 19.9"			20" +								
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other						
<i>Carpinus caroliniana</i>				1			1							2					
<i>Cornus florida</i>				3										3					
<i>Liriodendron tulipifera</i>				2			3	6	1		1			13					
<i>Nyssa sylvatica</i>							1							1					
<i>Quercus palustris</i>										3				3					
<i>Quercus rubra</i>							1							1					
														0					
														0					
														0					
Total # Trees / Class:		6			6			10			1		23						
# / Size Standing Dead:		3			4			0			0		7						
Understory Species (3' - 20'):							Herbaceous Species (0' - 3'):												
<i>Cornus florida</i>							<i>Lonicera japonica</i>												
<i>Eleaegnus umbellata</i>							<i>Berberis thunbergii</i>												
<i>Ilex opaca</i>							<i>Allium canadense</i>												
<i>Carpinus caroliniana</i>							<i>Rosa multiflora</i>												
<i>Quercus rubra</i>							<i>Smilax spp.</i>												
							<i>Vitis spp.</i>												
							unknown grass												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')						
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
1/10	60	80	20	50	75	57%	0	0	100	50	0	30%	50	75	50	30	100	61%	
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris						
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean	
	50	75	50	30	75	56%	1	0	2	1	1	1	15	15	0	5	5	8%	

Similar to scrubby community of FSD plot 9A, but there is an open canopy/scrub layer in between the 2 areas.

Forest Sampling Data Worksheet

Property: North Branch Trail -						Prepared By: J. Cummings & D. Merkey												
Stand #:	11	Plot #:	A	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: Mid				Basal Area (sf/ac): 90			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				4			4			1			9					
<i>Carya alba</i>							1						1					
<i>Fagus grandifolia</i>										1			1					
<i>Liriodendron tulipifera</i>				1			1				1		3					
<i>Nyssa sylvatica</i>				4			10						14					
<i>Prunus serotina</i>							1						1					
<i>Quercus alba</i>										2			2					
<i>Quercus rubra</i>				1						2	1		4					
Total # Trees / Class:		10			17			6			2		35					
# / Size Standing Dead:		2			2			0			0		4					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Carpinus caroliniana</i>						<i>Lonicera japonica</i>												
<i>Nyssa sylvatica</i>						<i>Vitis spp.</i>												
<i>Fagus grandifolia</i>						<i>Polystichum acrostichoides</i>												
<i>Prunus serotina</i>						<i>Carex spp.</i>												
<i>Acer rubrum</i>						unknown grass												
<i>Kalmia latifolia</i>																		
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	50	60	100	30	0	48%	50	100	5	100	100	71%	10	0	5	40	60	23%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	0	0	0	40	0	8%	1	1	2	2	2	2	50	5	10	5	20	18%

Area is made up of saplings and mature Oaks and Tulips, not much of a shrub or groundcover layer apparent, lots of large trees have fallen down, Large multi-trunk Red oak at eastern border of plot

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	11	Plot #:	B	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: Mid				Basal Area (sf/ac): 100			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				1			2			2	1			6				
<i>Carpinus caroliniana</i>				3			2							5				
<i>Carya alba</i>							1							1				
<i>Fagus grandifolia</i>				1										1				
<i>Liriodendron tulipifera</i>										1				1				
<i>Nyssa sylvatica</i>				2			3			2				7				
<i>Prunus serotina</i>							1							1				
<i>Quercus alba</i>											1			1				
<i>Quercus rubra</i>							1			1				2				
														0				
														0				
Total # Trees / Class:		7			10			6			2		25					
# / Size Standing Dead:		0			2			0			0		2					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Acer rubrum</i>						<i>Lonicera japonica</i>												
<i>Carpinus caroliniana</i>						<i>Berberis thunbergii</i>												
<i>Hamamelis virginiana</i>						<i>Carex spp.</i>												
<i>Prunus serotina</i>						<i>Polystichum acrostichoides</i>												
<i>Liriodendron tulipifera</i>						unknown grass												
<i>Fagus grandifolia</i>																		
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	30	100	0	90	75	59%	100	10	50	25	100	57%	0	0	5	0	40	9%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	1	5	5	0	30	8%	2	1	3	1	3	2	5	10	5	5	10	7%

Same as community in A; exposed bed rock in the plot

Forest Sampling Data Worksheet

Property: North Branch Trail							Prepared By: D. Merkey											
Stand #:	12	Plot #:	A	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/12/2012										
Successional Stage: early				Basal Area (sf/ac): 110			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				5			6							11				
<i>Acer saccharinum</i>				1			1							2				
<i>Juniperus virginiana</i>				1			1			1				3				
<i>Liriodendron tulipifera</i>								1	3					4				
<i>Nyssa sylvatica</i>							3			1				4				
<i>Pinus strobus</i>											1			1				
<i>Prunus serotina</i>							1	1				1		3				
														0				
Total # Trees / Class:		7			12			7			2		28					
# / Size Standing Dead:		0			1			0			0		1					
Understory Species (3' - 20'):							Herbaceous Species (0' - 3'):											
<i>Acer rubrum</i>							<i>Lonicera japonica</i>											
<i>Juniperus virginiana</i>							<i>Ilex verticillata</i>											
<i>Lonicera spp.</i>							<i>Allium spp.</i>											
<i>Eleaegnus umbellata</i>																		
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	50	100	30	40	40	52%	50	30	30	80	40	46%	40	20	30	10	50	30%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	40	20	30	10	40	28%	0	1	3	3	2	2	5	5	1	5	15	6%

Early successional area between park road and Lake Frank. Canopy is thin and dominated by very few large trees sparsely scattered. Understory/co-dominants of red maple and other early successional tree species are common. Groundcover mainly consists of Japanese honeysuckle.

Forest Sampling Data Worksheet

Property: North Branch Trail					Prepared By: J. Cummings													
Stand #:	13	Plot #:	A	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/18/2012										
Successional Stage: Mid				Basal Area (sf/ac): 150			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				2									2					
<i>Carya alba</i>										3			3					
<i>Fagus grandifolia</i>							1						1					
<i>Nyssa sylvatica</i>				1			6			5			12					
<i>Quercus alba</i>									1	2	2		5					
<i>Quercus rubra</i>											1	1	2					
													0					
													0					
													0					
Total # Trees / Class:		3			7			11			4		25					
# / Size Standing Dead:		0			0			3			0		3					
Understory Species (3' - 20'):							Herbaceous Species (0' - 3'):											
<i>Kalmia latifolia</i>							<i>Carex spp.</i>											
<i>Acer rubrum</i>							<i>Berberis thunbergii</i>											
							<i>Fagus grandifolia</i>											
							<i>Lonicera japonica</i>											
							unknown grass - see pic											
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	75	90	90	100	65	84%	0	0	0	0	75	15%	25	20	45	10	10	22%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	0	0	0	0	0	0%	0	0	0	0	2	0	0	45	25	35	10	23%

Stand contains large mature oaks in the canopy, hickory and black gums in the subcanopy, and numerous beech, ironwood, and some mountain laurel. Tulips run along the path in this plot and increase as the stand goes north. Not much of a shrub or ground cover layer at all.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings												
Stand #:	13	Plot #:	B	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/19/2012										
Successional Stage: Mid				Basal Area (sf/ac): 110			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				1			3			1				5				
<i>Carpinus caroliniana</i>				4			1							5				
<i>Carya alba</i>							1							1				
<i>Fagus grandifolia</i>				2										2				
<i>Liriodendron tulipifera</i>				4			6		4	3				17				
<i>Nyssa sylvatica</i>				2			4							6				
<i>Quercus alba</i>								1						1				
Total # Trees / Class:		13			15			9			0		37					
# / Size Standing Dead:		1			0			0			0		1					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Carpinus caroliniana</i>						<i>Berberis thunbergii</i>												
<i>Fagus grandifolia</i>						<i>Polystichum acrostichoides</i>												
<i>Liriodendron tulipifera</i>						<i>Lonicera japonica</i>												
						<i>Carex spp.</i>												
						<i>Ilex opaca</i>												
						unknown grass												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	75	80	55	80	50	68%	0	0	0	95	75	34%	0	50	50	0	30	26%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	15	35	30	0	20	20%	0	0	0	1	1	0	0	15	10	50	55	26%
See Plot A																		

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings												
Stand #:	13	Plot #:	C	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/19/2012										
Successional Stage: Mid				Basal Area (sf/ac): 110			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				2			9							11				
<i>Liriodendron tulipifera</i>				1				1	2	4	2			10				
<i>Quercus rubra</i>								1						1				
														0				
														0				
														0				
														0				
Total # Trees / Class:		3			9			8			2		22					
# / Size Standing Dead:		0			1			1			0		2					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Carpinus caroliniana</i>						<i>Berberis thunbergii</i>												
<i>Acer rubrum</i>						<i>Polystichum acrostichoides</i>												
<i>Berberis thunbergii</i>						<i>Lonicera japonica</i>												
						<i>Carex spp.</i>												
						<i>Waldsteinia fragarioides</i>												
						<i>Allium canadense</i>												
						unknown grass												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	100	75	65	95	65	80%	0	65	0	0	85	30%	40	15	75	20	15	33%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	25	5	0	0	15	9%	0	1	0	0	2	1	25	15	20	10	15	17%

See Plot A. Tree 208 and 209 in plot. This Plot has a more open canopy, down trees, dead unknown grass, and exposed bedrock.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings												
Stand #:	14	Plot #:	A	Plot Size:	1/10 ac = r 37.24ft	1/20 ac = r 25.28ft	Date:	12/18/2012										
Successional Stage: early-mid				Basal Area (sf/ac): 120				Sheet 1 of 1										
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer negundo</i>							1							1				
<i>Acer rubrum</i>				4			2							6				
<i>Carpinus caroliniana</i>				10			8			2				20				
<i>Carya alba</i>							1							1				
<i>Fraxinus pennsylvanica</i>									1					1				
<i>Liriodendron tulipifera</i>				1			4	6	4	3				18				
Total # Trees / Class:		15			16			16			0		47					
# / Size Standing Dead:		0			5			0			0		5					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Carpinus caroliniana</i>						<i>Rosa multiflora</i>						<i>Waldsteinia fragarioides</i>						
<i>Berberis thunbergii</i>						<i>Berberis thunbergii</i>						<i>Ilex opaca</i>						
<i>Cornus florida</i>						<i>Carex spp.</i>						<i>Vitis spp.</i>						
						<i>Allium canadense</i>						unknown grass						
						<i>Lonicera japonica</i>												
						<i>Microstegium vimineum</i>												
						<i>Alliaria petiolata</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	60	100	85	100	85	86%	0	60	0	40	50	30%	40	40	45	35	50	42%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	35	35	25	25	40	32%	0	2	1	2	1	1	5	25	40	15	15	20%
<p>This plot has a rather open canopy made up of mostly Tulip poplars and a scrubby layer made up of grasses, <i>Carex</i> spp., and Japanese barberry. There is a lot of downed woody debris, dead Eastern red cedars, and grape vines as well. Mature large Oaks begin to mix in just to the north of plot.</p>																		

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings												
Stand #:	14	Plot #:	C	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/19/2012										
Successional Stage: mid				Basal Area (sf/ac): 100				Sheet 1 of 1										
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Carpinus caroliniana</i>				2			5							7				
<i>Cornus florida</i>							1							1				
<i>Juniperus virginiana</i>							1							1				
<i>Liriodendron tulipifera</i>				1			2	2	1	1	1			8				
<i>Platanus occidentalis</i>								1	1		1			3				
														0				
Total # Trees / Class:		3			9			6			2		20					
# / Size Standing Dead:		0			3			1			0		4					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Lindera benzoin</i>						<i>Microstegium vimineum</i>						<i>Alliaria petiolata</i>						
<i>Cornus florida</i>						<i>Lonicera japonica</i>						<i>Toxicodendron radicans</i>						
<i>Berberis thunbergii</i>						unknown grass												
						<i>Berberis thunbergii</i>												
						<i>Allium canadense</i>												
						<i>Vitis spp.</i>												
						<i>Carex spp.</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	50	85	85	65	75	72%	25	0	0	25	0	10%	30	65	45	0	55	39%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	5	0	25	25	10	13%	1	1	0	0	0	0	30	35	25	35	15	28%

Plot in similar to B, but also has a lot of downed woody debris. Tree #258 in plot. *Tree #257 at top of hill and start of blue trail makes end of FSD 14 and beginning of FSD 15

Forest Sampling Data Worksheet

Property: North Branch Trail					Prepared By: J. Cummings													
Stand #:	15	Plot #:	A	Plot Size:	1/10 ac = r 37.24ft	1/20 ac = r 25.28ft	Date:	12/20/2012										
Successional Stage: early				Basal Area (sf/ac): 90			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Juniperus virginiana</i>				1			14			5				20				
<i>Liriodendron tulipifera</i>								2		1	1			4				
<i>Nyssa sylvatica</i>							1							1				
<i>Platanus occidentalis</i>											1			1				
<i>Prunus serotina</i>							1							1				
														0				
														0				
														0				
														0				
Total # Trees / Class:		1			16			8			2		27					
# / Size Standing Dead:		0			8			1			0		9					
Understory Species (3' - 20'):							Herbaceous Species (0' - 3'):											
<i>Berberis thunbergii</i>							<i>Alliaria petiolata</i>							<i>Toxicodendron radicans</i>				
<i>Lindera benzoin</i>							<i>Microstegium vimineum</i>											
							<i>Lonicera japonica</i>											
							<i>Berberis thunbergii</i>											
							<i>Allium canadense</i>											
							<i>Rosa multiflora</i>											
							<i>Vitis spp.</i>											
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	100	45	70	45	40	60%	0	0	0	0	10	2%	25	90	10	60	40	45%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	10	80	5	50	30	35%	0	0	0	0	1	0	45	10	50	70	20	39%

Rather open canopy mostly Eastern red cedars, Tulips, some dominant Sycamores; few to no shrubs and grass/Japanese stiltgrass; a lot of downed woody debris and vines. Tree #256 in plot.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings												
Stand #:	16	Plot #:	A	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	12/20/2012										
Successional Stage: early				Basal Area (sf/ac): 80				Sheet 1 of 1										
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				5			18			11		1		35				
<i>Liriodendron tulipifera</i>										1		1		2				
<i>Platanus occidentalis</i>											1			1				
														0				
														0				
														0				
														0				
														0				
														0				
Total # Trees / Class:		5			18			12			3		38					
# / Size Standing Dead:		1			0			0			0		1					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Berberis thunbergii</i>						<i>Lonicera japonica</i>												
						unknown grass												
						<i>Carex spp.</i>												
						<i>Rosa multiflora</i>												
						<i>Vitis spp.</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	75	95	95	75	100	88%	0	0	0	0	40	8%	90	85	80	45	80	76%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	45	5	50	25	40	33%	0	0	0	0	1	0	10	20	30	15	20	19%

Floodplain area with mature Sycamores and stand of Red maples; no understory; groundcover is made up of unknown grass and very few Japanese barberry.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings												
Stand #:	16	Plot #:	B	Plot Size:	1/10 ac = r 37.24ft	1/20 ac = r 25.28ft	Date:	12/20/2012										
Successional Stage: early				Basal Area (sf/ac): 80				Sheet 1 of 1										
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				1			2			5				8				
<i>Carpinus caroliniana</i>							1							1				
<i>Fraxinus pennsylvanica</i>				1					1	3				5				
<i>Juniperus virginiana</i>							1							1				
<i>Platanus occidentalis</i>											1			1				
<i>Prunus serotina</i>							1			1				2				
														0				
														0				
Total # Trees / Class:		2			5			10			1		18					
# / Size Standing Dead:		1			2			2			0		5					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Lindera benzoin</i>						<i>Rosa multiflora</i>						<i>Carex spp.</i>						
<i>Fraxinus pennsylvanica</i>						unknown grass												
						<i>Vitis spp.</i>												
						<i>Lonicera japonica</i>												
						<i>Waldsteinia fragaroidies</i>												
						<i>Berberis thunbergii</i>												
						<i>Toxicodendron radicans</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	20	80	50	80	60	58%	90	0	10	0	10	22%	90	100	90	40	70	78%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	0	0	40	20	5	13%	2	0	1	0	1	1	5	20	5	20	15	13%

Floodplain area; groundcover of grasses, no small shrubs, but rather large spicebush are common, understory of small trees such as red maples, black cherry, and ash; canopy is rather open

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	17	Plot #:	1	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	7/10/2012										
Successional Stage: early				Basal Area (sf/ac): 120			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>						1	6	3	11					21				
<i>Quercus bicolor</i>							1							1				
<i>Nyssa sylvatica</i>							1							1				
<i>Cornus florida</i>				1			1							2				
<i>Prunus serotina</i>								1				1		2				
														0				
														0				
														0				
Total # Trees / Class:		1			10			15			1		27					
# / Size Standing Dead:		0			0			2			0		2					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Berberis thunbergii</i>						<i>Acer rubrum</i>												
						<i>Alliaria petiolata</i>												
						<i>Parthenocissus quinquefolia</i>												
						<i>Arisaema triphyllum</i>												
						<i>Wisteria spp.</i>												
						<i>Microstegium vimineum</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	50	30	35	90	85	58%	0	0	0	30	15	9%	3	27	3	20	2	11%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	1	80	1	15	5	20%	NA	NA	NA	NA	NA	#####	7	55	7	40	3	22%

A lot of Wisteria spp. and Vitis spp. present smothering trees. Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data. We originally combined Ground Cover & Cover Down Woody Debris; as a general rule we split the coverage 2/3 as Ground Cover and 1/3 Woody Debris.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	17	Plot #:	2	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	7/10/2012										
Successional Stage: early				Basal Area (sf/ac): 120			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer negundo</i>							1		1					2				
<i>Acer rubrum</i>					1		4	1						6				
<i>Carya alba</i>							2							2				
<i>Carya glabra</i>							1							1				
<i>Fraxinus pennsylvanica</i>							1							1				
<i>Liriodendron tulipifera</i>											1			1				
<i>Prunus serotina</i>								10		1				11				
<i>Quercus imbricaria</i>							1							1				
														0				
														0				
														0				
Total # Trees / Class:		0			11			13			1		25					
# / Size Standing Dead:		0			0			5			0		5					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Lindera benzoin</i>						<i>Microstegium vimineum</i>												
<i>Fraxinus pennsylvanica</i>						<i>Polygonum spp.</i>												
<i>Vitis spp.</i>						<i>Persicaria perfoliata</i>												
						<i>Arisaema triphyllum</i>												
						<i>Alliaria petiolata</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	85	90	90	50	0	63%	0	0	0	10	40	10%	28	10	20	31	26	23%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	75	5	25	5	20	26%	NA	NA	NA	NA	NA	#####	57	20	40	64	54	47%

Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data. We originally combined Ground Cover & Cover Down Woody Debris; as a general rule we split the coverage 2/3 as Ground Cover and 1/3 Woody Debris.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	18	Plot #:	1	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	7/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 160			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer negundo</i>							1		1	1				3				
<i>Fraxinus pennsylvanica</i>								5			1			6				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
Total # Trees / Class:		0			1			7			1		9					
# / Size Standing Dead:		0			0			0			0		0					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Quercus imbricaria</i>						<i>Microstegium vimineum</i>												
						<i>Polygonum hydropiperoides</i>												
						<i>Cinna arundinacea</i>												
						<i>Symplocarpus foetidus</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	0	95	50	35	30	42%	0	0	5	0	0	1%	0	40	18	67	67	38%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	0	1	0	60	1	12%	NA	NA	NA	NA	NA	#####	0	20	37	33	33	25%

Common invasive species found : *Microstegium vimineum*. Eastern half of the plot is standing water and mud. No understory is present. Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data. We originally combined Ground Cover & Cover Down Woody Debris; as a general rule we split the coverage 2/3 as Ground Cover and 1/3 Woody Debris.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #: 18		Plot #: 2		Plot Size: 1/10ac = r 37.24ft				1/20ac = r 25.28ft				Date: 7/12/2012						
Successional Stage: mid						Basal Area (sf/ac): 100				Sheet 1 of 1								
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot												Total				
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer negundo</i>							3	2	1	1				7				
<i>Acer rubrum</i>				3			7		1	2				13				
<i>Fraxinus pennsylvanica</i>								6			2			8				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
														0				
Total # Trees / Class:		3			10			13			2			28				
# / Size Standing Dead:		0			0			0			0			0				
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Acer rubrum</i>						<i>Microstegium vimineum</i>												
						<i>Polygonum hydropiperoides</i>												
						<i>Cinna arundinacea</i>												
						<i>Symplocarpus foetidus</i>												
						<i>Boehmeria spp.</i>												
						<i>Alliaria petiolata</i>												
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	0	60	60	40	25	37%	0	0	100	0	0	20%	0	13	60	67	67	41%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	0	5	5	0	10	4%	NA	NA	NA	NA	NA	#####	0	27	30	33	33	25%

Common invasive species found : *Microstegium vimineum*, *Alliaria petiolata*. Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data. We originally combined Ground Cover & Cover Down Woody Debris; as a general rule we split the coverage 2/3 as Ground Cover and 1/3 Woody Debris.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	19	Plot #:	1	Plot Size:	1/10ac = r 37.24ft	1/20ac = r 25.28ft	Date:	7/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 100			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Acer rubrum</i>				5			5	5	6	3				24				
<i>Cornus florida</i>							1							1				
<i>Lindera benzoin</i>				2										2				
<i>Nyssa sylvatica</i>									1					1				
<i>Prunus serotina</i>								5	1					6				
<i>Quercus imbricaria</i>							1							1				
														0				
														0				
														0				
														0				
														0				
Total # Trees / Class:		7			7			21			0		35					
# / Size Standing Dead:		0			0			1			0		1					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Lindera benzoin</i>						<i>Parthenocissus quinquefolia</i>												
<i>Beberis thunbergii</i>						<i>Vitis spp.</i>												
<i>Cornus florida</i>																		
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	80	95	50	5	25	51%	10	100	30	0	25	33%	23	3	37	67	67	39%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* = Invasive	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
	30	100	50	100	100	76%	NA	NA	NA	NA	NA	#####	12	2	18	33	33	20%

Invasive species present: *Microstegium vimineum* (abundant), *Berberis thunbergii* (abundant), *Alliaria petiolata*, and *Persicaria perfoliata*.

Forest stand bordered by more open canopy, lower stem density, wooded areas dominated by *Gleditsia triacanthos* and *Juglans nigra*. Forest stand dominated by pioneer *Prunus serotina* with *Acer rubrum* co-dominant. Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data. We originally combined Ground Cover & Cover Down Woody Debris; as a general rule we split the coverage 2/3 as Ground Cover and 1/3 Woody Debris.

Forest Sampling Data Worksheet

Property: North Branch Trail						Prepared By: J. Cummings & D. Merkey												
Stand #:	20	Plot #:	1	Plot Size:	1/10 ^{ac} = r 37.24ft	1/20 ^{ac} = r 25.28ft	Date:	7/12/2012										
Successional Stage: mid				Basal Area (sf/ac): 100			Sheet 1 of 1											
Tree Species (1 = >24")		Size class of trees > 20' height within sample plot											Total					
		< 3"			3 - 6.9"			7 - 19.9"			20" +							
Crown Position		Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other					
<i>Celtis occidentalis</i>										2			2					
<i>Gleditsia triacanthos</i>								4					4					
<i>Gymnocladus dioicus</i>							6	5	1		2		14					
<i>Juglans nigra</i>									1	1			2					
<i>Magnolia acuminata</i>										1			1					
<i>Prunus serotina</i>								1		1			2					
													0					
													0					
													0					
													0					
													0					
Total # Trees / Class:		0			6			17			2		25					
# / Size Standing Dead:		0			0			5			0		5					
Understory Species (3' - 20'):						Herbaceous Species (0' - 3'):												
<i>Berberis thunbergii</i>						<i>Microstegium vimineum</i>												
<i>Lindera benzoin</i>						<i>Alliaria petiolata</i>												
<i>Lonicera mackii</i>						<i>Lonicera mackii</i>												
<i>Acer rubrum</i>																		
<i>Gymnocladus dioicus</i>																		
Prism Scale	% Canopy Cover						% Understory Cover						% Ground Cover (0' - 3')					
	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
1/10	40	50	70	20	30	42%	40	40	25	5	5	23%	33	60	47	54	60	51%
1/20	% Invasive Cover						# Understory Species						% Cover Down Woody Debris					
* =	C	N	E	S	W	Mean	C	N	E	S	W	Mean	C	N	E	S	W	Mean
Invasive	40	70	50	70	80	62%	NA	NA	NA	NA	NA	#####	17	30	23	26	30	25%

Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data. We originally combined Ground Cover & Cover Down Woody Debris; as a general rule we split the coverage 2/3 as Ground Cover and 1/3 Woody Debris.

VI. APPENDIX C – FOREST STAND SUMMARY WORKSHEETS

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 1
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings & C. Perfit	ADC Map# 29	Grid Coordinates: H 2-3
Stand Variable		
Dominant Tree Species:	Silver Maple (<i>Acer saccharinum</i>)	
Co-Dominant Tree Species:	Red Maple (<i>Acer rubrum</i>)	
	Silver Maple (<i>Acer saccharinum</i>)	
Successional Stage:	Early	
Average % Tree Canopy Closure:	91%	
Average Size Class of Dominant Tree Species:	7-19.9"	
Number of Tree Species per Acre:	3	
Average Number of Trees per Acre:	43	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	3	
Number of Trees >24" DBH:	1	
Basal Area (sf/ac):	80	
Common Understory Species (3' - 20'):	Red Maple (<i>Acer rubrum</i>)	
% of Understory Cover (3' - 20'):	12%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	1	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Japanese stiltgrass (<i>Microstegium vimineum</i>)	
	Multiflora rose (<i>Rosa multiflora</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	62%	
Dominant Invasive Plant Species:	Japanese stiltgrass (<i>Microstegium vimineum</i>)	
	Multiflora rose (<i>Rosa multiflora</i>)	
Average % Cover of Invasives:	61%	
Number of Standing Dead Trees per 1/10 acre:	7	
Average % Woody Debris Ground Cover:	65%	
Forest Structure Value:	9: Mar-Apr: Good Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 2
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings & C. Perfit	ADC Map# 29	Grid Coordinates: H 2-3
Stand Variable		
Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)	
	American Sycamore (<i>Platanus occidentalis</i>)	
Co-Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)	
	Red Oak (<i>Quercus rubra</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	93%	
Average Size Class of Dominant Tree Species:	20" +	
Number of Tree Species per Acre:	12	
Average Number of Trees per Acre:	387	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	9	
Number of Trees >24" DBH:	21	
Basal Area (sf/ac):	143	
Common Understory Species (3' - 20'):	Ironwood (<i>Carpinus caroliniana</i>)	
	American Beech (<i>Fagus grandifolia</i>)	
	American Holly (<i>Ilex opaca</i>)	
% of Understory Cover (3' - 20'):	16%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	4	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Patridgeberry (<i>Mitchella repens</i>)	
	Japanese Barberry (<i>Berberis thunbergii</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	39%	
Dominant Invasive Plant Species:	Japanese Barberry (<i>Berberis thunbergii</i>)	
	Japanese Honeysuckle (<i>Lonicera japonica</i>)	
Average % Cover of Invasives:	24%	
Number of Standing Dead Trees per 1/10 acre:	3	
Average % Woody Debris Ground Cover:	23%	
Forest Structure Value:	12: Mar-Apr: Priority Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 3
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings & C. Perfit	ADC Map# 29	Grid Coordinates: H2-3
Stand Variable		
Dominant Tree Species:	White Oak (<i>Quercus alba</i>)	
	Tulip Poplar (<i>Liriodendron tulipifera</i>)	
Co-Dominant Tree Species:	Red Oak (<i>Quercus rubra</i>)	
	White Oak (<i>Quercus alba</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	99%	
Average Size Class of Dominant Tree Species:	20" +	
Number of Tree Species per Acre:	10	
Average Number of Trees per Acre:	360	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	6	
Number of Trees >24" DBH:	23	
Basal Area (sf/ac):	95	
Common Understory Species (3' - 20'):	Flowering Dogwood (<i>Cornus florida</i>)	
	Ironwood (<i>Carpinus caroliniana</i>)	
	Red Maple (<i>Acer rubrum</i>)	
% of Understory Cover (3' - 20'):	36%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	3	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Japanese Honeysuckle (<i>Lonicera japonica</i>)	
	Multiflora Rose (<i>Rosa multiflora</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	16%	
Dominant Invasive Plant Species:	Japanese Honeysuckle (<i>Lonicera japonica</i>)	
	Multiflora Rose (<i>Rosa multiflora</i>)	
Average % Cover of Invasives:	10%	
Number of Standing Dead Trees per 1/10 acre:	5	
Average % Woody Debris Ground Cover:	20%	
Forest Structure Value:	12: Mar-Apr: Priority Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 4
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings & C. Perfit	ADC Map# 29	Grid Coordinates: H2-3
Stand Variable		
Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)	
Co-Dominant Tree Species:		
Successional Stage:	Early - Mid	
Average % Tree Canopy Closure:	85%	
Average Size Class of Dominant Tree Species:	20" +	
Number of Tree Species per Acre:	8	
Average Number of Trees per Acre:	235	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	6	
Number of Trees >24" DBH:	30	
Basal Area (sf/ac):	90	
Common Understory Species (3' - 20'):	American Beech (<i>Fagus grandifolia</i>)	
	American Holly (<i>Ilex opaca</i>)	
	Viburnum spp.	
	Spicebush (<i>Lindera benzoin</i>)	
% of Understory Cover (3' - 20'):	36%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	4	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Japanese Barberry (<i>Berberis thunbergii</i>)	
	Viburnum spp.	
% Herbaceous and Woody Ground Cover (0' - 3'):	71%	
Dominant Invasive Plant Species:	Japanese Barberry (<i>Berberis thunbergii</i>)	
	Wineberry (<i>Rubus phoenicolasius</i>)	
Average % Cover of Invasives:	46%	
Number of Standing Dead Trees per 1/10 acre:	6	
Average % Woody Debris Ground Cover:	52%	
Forest Structure Value:	12: Mar-Apr: Priority Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 5
Town: Rockville	County: Montgomery	Sheet # 1 of # 1
Prepared By: J. Cummings & C. Perfit	ADC Map# 29	Grid Coordinates: H2-3
Stand Variable		
Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)	
Co-Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	93%	
Average Size Class of Dominant Tree Species:	7-19.9"	
Number of Tree Species per Acre:	3	
Average Number of Trees per Acre:	233	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	2	
Number of Trees >24" DBH:	16	
Basal Area (sf/ac):	127	
Common Understory Species (3' - 20'):	Flowering Dogwood (<i>Cornus florida</i>)	
	Spicebush (<i>Lindera benzoin</i>)	
	Osage Orange (<i>Maclura pomifera</i>)	
% of Understory Cover (3' - 20'):	25%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	3	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Multiflora rose (<i>Rosa multiflora</i>)	
	Japanese Honeysuckle (<i>Lonicera japonica</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	68%	
Dominant Invasive Plant Species:	Multiflora rose (<i>Rosa multiflora</i>)	
	Japanese Honeysuckle (<i>Lonicera japonica</i>)	
Average % Cover of Invasives:	47%	
Number of Standing Dead Trees per 1/10 acre:	7	
Average % Woody Debris Ground Cover:	18	
Forest Structure Value:	9: Mar-Apr: Good Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 6
Town: Rockville	County: Montgomery	Sheet # 1 of # 1
Prepared By: J. Cummings & C. Perfit	ADC Map# 29	Grid Coordinates: H2-3
Stand Variable		
Dominant Tree Species:	American Sycamore (<i>Platanus occidentalis</i>)	
Co-Dominant Tree Species:	American Sycamore (<i>Platanus occidentalis</i>) Silver Maple (<i>Acer saccharinum</i>)	
Successional Stage:	early-mid	
Average % Tree Canopy Closure:	91%	
Average Size Class of Dominant Tree Species:	20"+	
Number of Tree Species per Acre:	8	
Average Number of Trees per Acre:	255	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	8	
Number of Trees >24" DBH:	8	
Basal Area (sf/ac):	80	
Common Understory Species (3' - 20'):	Spicebush (<i>Lindera benzoin</i>)	
	Multiflora rose (<i>Rose multiflora</i>)	
	Osage Orange (<i>Maclura pomifera</i>)	
% of Understory Cover (3' - 20'):	26%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	3	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Japanese Honeysuckle (<i>Lonicera japonica</i>)	
	unknown grasses	
% Herbaceous and Woody Ground Cover (0' - 3'):	46%	
Dominant Invasive Plant Species:	Multiflora rose (<i>Rose multiflora</i>)	
	Japanese Honeysuckle (<i>Lonicera japonica</i>)	
Average % Cover of Invasives:	26%	
Number of Standing Dead Trees per 1/10 acre:	3	
Average % Woody Debris Ground Cover:	14%	
Forest Structure Value:	11: Mar-Apr: Priority Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 7	
Town: Rockville	County: Montgomery		Sheet # 1 of #1
Prepared By: J. Cummings & D. Merkey	ADC Map# 29	Grid Coordinates: J-K, 1-2	
Stand Variable			
Dominant Tree Species:	Tulip poplar (<i>Liriodendron tulipifera</i>)		
	American Syamore (<i>Platanus occidentalis</i>)		
Co-Dominant Tree Species:	Tulip poplar (<i>Liriodendron tulipifera</i>)		
	Red Oak (<i>Quercus rubra</i>)		
Successional Stage:	Mid		
Average % Tree Canopy Closure:	74%		
Average Size Class of Dominant Tree Species:	20"+		
Number of Tree Species per Acre:	15		
Average Number of Trees per Acre:	240		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)			
Number of Tree Species >7" DBH:	9		
Number of Trees >24" DBH:	4		
Basal Area (sf/ac):	120		
Common Understory Species (3' - 20'):	Flowering dogwood (<i>Cornus florida</i>)		
	Spicebush (<i>Lindera benzoin</i>)		
	Ironwood (<i>Carpinus caroliniana</i>)		
	White Oak (<i>Quercus alba</i>)		
% of Understory Cover (3' - 20'):	30%		
Number of Understory Species (3' - 20') in 1/10ac Plot:	7		
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	Japanese Honeysuckle (<i>Lonicera japonica</i>)		
	Multiflora rose (<i>Rosa multiflora</i>)		
% Herbaceous and Woody Ground Cover (0' - 3'):	19%		
Dominant Invasive Plant Species:	Japanese Honeysuckle (<i>Lonicera japonica</i>)		
	Multiflora rose (<i>Rosa multiflora</i>)		
Average % Cover of Invasives:	9%		
Number of Standing Dead Trees per 1/10 acre:	5		
Average % Woody Debris Ground Cover:	18%		
Forest Structure Value:	13: Mar-Apr: Priority Forest Structure		
Comments:			

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 8	
Town: Rockville	County: Montgomery		Sheet # 1 of #1
Prepared By: J.Cummings & D. Merkey	ADC Map# 29	Grid Coordinates: J-K, 1-2	
Stand Variable			
Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
	Red Oak (<i>Quercus rubra</i>)		
Co-Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
	Red Oak (<i>Quercus rubra</i>)		
Successional Stage:			
Average % Tree Canopy Closure:	60%		
Average Size Class of Dominant Tree Species:	20" +		
Number of Tree Species per Acre:	14		
Average Number of Trees per Acre:	310		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)			
Number of Tree Species >7" DBH:	7		
Number of Trees >24" DBH:	67		
Basal Area (sf/ac):	123		
Common Understory Species (3' - 20'):	Ironwood (<i>Carpinus caroliniana</i>)		
	American Holly (<i>Ilex opaca</i>)		
	Mountain Laurel (<i>Kalmia latifolia</i>)		
	Eastern Red Cedar (<i>Juniperus virginiana</i>)		
% of Understory Cover (3' - 20'):	62%		
Number of Understory Species (3' - 20') in 1/10ac Plot:	3		
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Japanese Barberry (<i>Berberis thunbergii</i>)		
	<i>Carex</i> spp.		
% Herbaceous and Woody Ground Cover (0' - 3'):	5%		
Dominant Invasive Plant Species:	Japanese Barberry (<i>Berberis thunbergii</i>)		
	Garlic Mustard (<i>Alliaria petiolata</i>)		
Average % Cover of Invasives:	2%		
Number of Standing Dead Trees per 1/10 acre:	3		
Average % Woody Debris Ground Cover:	18%		
Forest Structure Value:	12: Mar-Apr: Priority Forest Structure		
Comments:			

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 9	
Town: Rockville	County: Montgomery		Sheet # 1 of #1
Prepared By: J. Cummings & D. Merkey	ADC Map# 29	Grid Coordinates: J-K, 1-2	
Stand Variable			
Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
	Sycamore (<i>Platanus occidentalis</i>)		
Co-Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
	Green Ash (<i>Fraxinus pennsylvanica</i>)		
Successional Stage:	early-mid		
Average % Tree Canopy Closure:	59%		
Average Size Class of Dominant Tree Species:	20"+		
Number of Tree Species per Acre:	7		
Average Number of Trees per Acre:	210		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)			
Number of Tree Species >7" DBH:	4		
Number of Trees >24" DBH:	3		
Basal Area (sf/ac):	130		
Common Understory Species (3' - 20'):	Ironwood (<i>Carpinus caroliniana</i>)		
	Flowering Dogwood (<i>Cornus florida</i>)		
	Spicebush (<i>Lindera benzoin</i>)		
	Japanese Barberry (<i>Berberis thunbergii</i>)		
% of Understory Cover (3' - 20'):	28%		
Number of Understory Species (3' - 20') in 1/10ac Plot:	7		
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	Japanese Stiltgrass (<i>Microstegium vimineum</i>)		
	<i>Vitis</i> spp.		
% Herbaceous and Woody Ground Cover (0' - 3'):	87%		
Dominant Invasive Plant Species:	Japanese Stiltgrass (<i>Microstegium vimineum</i>)		
	Japanese Barberry (<i>Berberis thunbergii</i>)		
Average % Cover of Invasives:	83%		
Number of Standing Dead Trees per 1/10 acre:	12		
Average % Woody Debris Ground Cover:	15%		
Forest Structure Value:	12: Mar-Apr: Priority Forest Structure		
Comments:			

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 10	
Town: Rockville	County: Montgomery		Sheet # 1 of #1
Prepared By: J. Cummings & D. Merkey	ADC Map# 29	Grid Coordinates: J-K, 1-2	
Stand Variable			
Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
Co-Dominant Tree Species:	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
Successional Stage:	early-mid		
Average % Tree Canopy Closure:	57%		
Average Size Class of Dominant Tree Species:	7-19.9"		
Number of Tree Species per Acre:	6		
Average Number of Tree per Acre:	230		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)	NA		
Number of Tree Species >7" DBH:	2		
Number of Trees >24" DBH:	5		
Basal Area (sf/ac):	120		
Common Understory Species (3' - 20'):	Flowering dogwood (<i>Cornus florida</i>)		
	Autumn-olive (<i>Elaeagnus umbellata</i>)		
	American holly (<i>Ilex opaca</i>)		
	Ironwood (<i>Carpinus caroliniana</i>)		
% of Understory Cover (3' - 20'):	30%		
Number of Understory Species (3' - 20') in 1/10ac Plot:	5		
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	<i>Vitis</i> spp.		
	Japanese Barberry (<i>Berberis thunbergii</i>)		
% Herbaceous and Woody Ground Cover (0' - 3'):	61%		
Dominant Invasive Plant Species:	Japanese Barberry (<i>Berberis thunbergii</i>)		
	Japanese Honeysuckle (<i>Lonicera japonica</i>)		
Average % Cover of Invasives:	56%		
Number of Standing Dead Trees per 1/10 acre:	7		
Average % Woody Debris Ground Cover:	8%		
Forest Structure Value:	8: Mar-Apr: Good Forest Structure		
Comments:			

Forest Stand Summary Worksheet

Property Name: North Branch Trail				Stand ID: 11	
Town: Rockville		County: Montgomery		Sheet # 1 of #1	
Prepared By: J. Cummings & D. Merkey		ADC Map# 29	Grid Coordinates: J-K, 1-2		
Stand Variable					
Dominant Tree Species:			Tulip poplar (<i>Liriodendron tulipifera</i>)		
			Red oak (<i>Quercus rubra</i>)		
Co-Dominant Tree Species:					
Successional Stage:			Mid		
Average % Tree Canopy Closure:			54%		
Average Size Class of Dominant Tree Species:			20"+		
Number of Tree Species per Acre:			9		
Average Number of Trees per Acre:			300		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)					
Number of Tree Species >7" DBH:			6		
Number of Trees >24" DBH:			28		
Basal Area (sf/ac):			95		
Common Understory Species (3' - 20'):			Ironwood (<i>Carpinus carolinana</i>)		
			Red maple (<i>Acer rubrum</i>)		
			American beech (<i>Fagus grandifolia</i>)		
% of Understory Cover (3' - 20'):			64%		
Number of Understory Species (3' - 20') in 1/10ac Plot:			6		
Common Herbaceous and Woody Ground Cover Species (0' - 3'):			<i>Carex</i> spp.		
			Christmas fern (<i>Polystichum acrostichoides</i>)		
% Herbaceous and Woody Ground Cover (0' - 3'):			16%		
Dominant Invasive Plant Species:			Japanese honeysuckle (<i>Lonicera japonica</i>)		
			Japanese barberry (<i>Berberis thunbergii</i>)		
Average % Cover of Invasives:			8%		
Number of Standing Dead Trees per 1/10 acre:			3		
Average % Woody Debris Ground Cover:			13%		
Forest Structure Value:			12: Mar-Apr: Priority Forest Structure		
Comments:					

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 12	
Town: Rockville	County: Montgomery		Sheet # 1 of #1
Prepared By: D. Merkey	ADC Map# 29	Grid Coordinates: J-K, 1-2	
Stand Variable			
Dominant Tree Species:	Black Cherry (<i>Prunus serotina</i>)		
	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
Co-Dominant Tree Species:	Black Cherry (<i>Prunus serotina</i>)		
	Tulip Poplar (<i>Liriodendron tulipifera</i>)		
Successional Stage:	Early		
Average % Tree Canopy Closure:	52%		
Average Size Class of Dominant Tree Species:	7-19.9"		
Number of Tree Species per Acre:	7		
Average Number of Tree per Acre:	280		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)			
Number of Tree Species >7" DBH:	5		
Number of Trees >24" DBH:	3		
Basal Area (sf/ac):	110		
Common Understory Species (3' - 20'):	Eastern red cedar (<i>Juniperus virginiana</i>)		
	Red Maple (<i>Acer rubrum</i>)		
	Autumn olive (<i>Elaeagnus umbellata</i>)		
% of Understory Cover (3' - 20'):	46%		
Number of Understory Species (3' - 20') in 1/10ac Plot:	4		
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	Japanese honeysuckle (<i>Lonicera japonica</i>)		
	<i>Allium</i> spp.		
% Herbaceous and Woody Ground Cover (0' - 3'):	30%		
Dominant Invasive Plant Species:	Japanese honeysuckle (<i>Lonicera japonica</i>)		
Average % Cover of Invasives:	28%		
Number of Standing Dead Trees per 1/10 acre:	1		
Average % Woody Debris Ground Cover:	6%		
Forest Structure Value:	7: Mar-Apr: Good Forest Structure		
Comments:			

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 13
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings	ADC Map# 29	Grid Coordinates: J-K, 1-2
Stand Variable		
Dominant Tree Species:	White oak (<i>Quercus alba</i>)	
	Tulip poplar (<i>Liriodendron tulipifera</i>)	
Co-Dominant Tree Species:	Tulip poplar (<i>Liriodendron tulipifera</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	77%	
Average Size Class of Dominant Tree Species:	20" +	
Number of Tree Species per Acre:	8	
Average Number of Trees per Acre:	280	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	6	
Number of Trees >24" DBH:	23	
Basal Area (sf/ac):	123	
Common Understory Species (3' - 20'):	Ironwood (<i>Carpinus caroliniana</i>)	
	Mountain Laurel (<i>Kalmia latifolia</i>)	
	American beech (<i>Fagus grandifolia</i>)	
% of Understory Cover (3' - 20'):	26%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	3	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Japanese barberry (<i>Berberis thunbergii</i>)	
	<i>Carex</i> spp.	
% Herbaceous and Woody Ground Cover (0' - 3'):	27%	
Dominant Invasive Plant Species:	Japanese barberry (<i>Berberis thunbergii</i>)	
	Japanese honeysuckle (<i>Lonicera japonica</i>)	
Average % Cover of Invasives:	10%	
Number of Standing Dead Trees per 1/10 acre:	2	
Average % Woody Debris Ground Cover:	22%	
Forest Structure Value:	11: Mar-Apr: Priority Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 14
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings	ADC Map# 20	Grid Coordinates: K13
Stand Variable		
Dominant Tree Species:	Tulip poplar (<i>Liriodendron tulipifera</i>)	
	Sycamore (<i>Platanus occidentalis</i>)	
Co-Dominant Tree Species:	Tulip poplar (<i>Liriodendron tulipifera</i>)	
	White oak (<i>Quercus alba</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	81%	
Average Size Class of Dominant Tree Species:	7-19.9"	
Number of Tree Species per Acre:	11	
Average Number of Trees per Acre:	307	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	6	
Number of Trees >24" DBH:	25	
Basal Area (sf/ac):	103	
Common Understory Species (3' - 20'):	Ironwood (<i>Carpinus caroliniana</i>)	
	Flowering dogwood (<i>Cornus florida</i>)	
	Japanese barberry (<i>Berberis thunbergii</i>)	
	Spicebush (<i>Lindera benzoin</i>)	
% of Understory Cover (3' - 20'):	31%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	3	
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	Japanese barberry (<i>Berberis thunbergii</i>)	
	unknown grass	
% Herbaceous and Woody Ground Cover (0' - 3'):	42%	
Dominant Invasive Plant Species:	Japanese barberry (<i>Berberis thunbergii</i>)	
	Japanese honeysuckle (<i>Lonicera japonica</i>)	
Average % Cover of Invasives:	33%	
Number of Standing Dead Trees per 1/10 acre:	4	
Average % Woody Debris Ground Cover:	25%	
Forest Structure Value:	11: Mar-Apr: Priority Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 15	
Town: Rockville	County: Montgomery		Sheet # 1 of #1
Prepared By: J. Cummings	ADC Map# 20	Grid Coordinates: K13	
Stand Variable			
Dominant Tree Species:	Tulip poplar (<i>Liriodendron tulipifera</i>)		
	Sycamore (<i>Platanus occidentalis</i>)		
Co-Dominant Tree Species:	Tulip poplar (<i>Liriodendron tulipifera</i>)		
	Sycamore (<i>Platanus occidentalis</i>)		
Successional Stage:	Early		
Average % Tree Canopy Closure:	60%		
Average Size Class of Dominant Tree Species:	7-19.9"		
Number of Tree Species per Acre:	7		
Average Number of Trees per Acre:	350		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)			
Number of Tree Species >7" DBH:	3		
Number of Trees >24" DBH:	5		
Basal Area (sf/ac):	115		
Common Understory Species (3' - 20'):	Japanese barberry (<i>Berberis thunbergii</i>)		
	Spicebush (<i>Lindera benzoin</i>)		
	Eastern red cedar (<i>Juniperus virginiana</i>)		
% of Understory Cover (3' - 20'):	11%		
Number of Understory Species (3' - 20') in 1/10ac Plot:	2		
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	Japanese stiltgrass (<i>Microstegium vimineum</i>)		
	Garlic mustard (<i>Alliaria petiolata</i>)		
% Herbaceous and Woody Ground Cover (0' - 3'):	47%		
Dominant Invasive Plant Species:	Japanese barberry (<i>Berberis thunbergii</i>)		
	Japanese stiltgrass (<i>Microstegium vimineum</i>)		
Average % Cover of Invasives:	38%		
Number of Standing Dead Trees per 1/10 acre:	12		
Average % Woody Debris Ground Cover:	33		
Forest Structure Value:	9: Mar-Apr: Good Priority Structure		
Comments:			

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 16
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings	ADC Map# 20	Grid Coordinates: K13
Stand Variable		
Dominant Tree Species:	Sycamore (<i>Platanus occidentalis</i>)	
Co-Dominant Tree Species:	Green ash (<i>Fraxinus pennsylvanica</i>)	
	Red maple (<i>Acer rubrum</i>)	
Successional Stage:	Early	
Average % Tree Canopy Closure:	73%	
Average Size Class of Dominant Tree Species:	20"+	
Number of Tree Species per Acre:	7	
Average Number of Trees per Acre:	280	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)		
Number of Tree Species >7" DBH:	5	
Number of Trees >24" DBH:	3	
Basal Area (sf/ac):	80	
Common Understory Species (3' - 20'):	Spicebush (<i>Lindera benzoin</i>)	
	Green ash (<i>Fraxinus pennsylvanica</i>)	
	Japanese barberry (<i>Berberis thunbergii</i>)	
% of Understory Cover (3' - 20'):	15%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	2	
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	unknown grass	
	Japanese honeysuckle (<i>Lonicera japonica</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	77%	
Dominant Invasive Plant Species:	Japanese honeysuckle (<i>Lonicera japonica</i>)	
	Japanese barberry (<i>Berberis thunbergii</i>)	
Average % Cover of Invasives:	23%	
Number of Standing Dead Trees per 1/10 acre:	3	
Average % Woody Debris Ground Cover:	16%	
Forest Structure Value:	11: Mar-Apr: Priority Forest Structure	
Comments:		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 17	
Town: Rockville	County: Montgomery		Sheet # 1 of #1
Prepared By: J. Cummings & D. Merkey	ADC Map# 20	Grid Coordinates: K12	
Stand Variable			
Dominant Tree Species:	Red Maple (<i>Acer rubrum</i>)		
	Black cherry (<i>Prunus serotina</i>)		
Co-Dominant Tree Species:	Red Maple (<i>Acer rubrum</i>)		
	Black cherry (<i>Prunus serotina</i>)		
Successional Stage:	early		
Average % Tree Canopy Closure:	61%		
Average Size Class of Dominant Tree Species:	7-19.9"		
Number of Tree Species per Acre:	11		
Average Number of Trees per Acre:	260		
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)	NA		
Number of Tree Species >7" DBH:	4		
Number of Trees >24" DBH:	8		
Basal Area (sf/ac):	120		
Common Understory Species (3' - 20'):	Spicebush (<i>Lindera benzoin</i>)		
	Green ash (<i>Fraxinus pennsylvanica</i>)		
	Japanese barberry (<i>Berberis thunbergii</i>)		
% of Understory Cover (3' - 20'):	10%		
Number of Understory Species (3' - 20') in 1/10ac Plot:	2		
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	Japanese stiltgrass (<i>Microstegium vimineum</i>)		
	Garlic mustard (<i>Alliaria petiolata</i>)		
% Herbaceous and Woody Ground Cover (0' - 3'):	17%		
Dominant Invasive Plant Species:	Japanese stiltgrass (<i>Microstegium vimineum</i>)		
	Garlic mustard (<i>Alliaria petiolata</i>)		
Average % Cover of Invasives:	23%		
Number of Standing Dead Trees per 1/10 acre:	4		
Average % Woody Debris Ground Cover:	35%		
Forest Structure Value:	11: Apr - Oct: Good Forest Structure*		
Comments: *Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data.			

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 18
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings & D. Merkey	ADC Map# 20	Grid Coordinates: K12
Stand Variable		
Dominant Tree Species:	Box elder (<i>Acer negundo</i>)	
	Green Ash (<i>Fraxinus pennsylvanica</i>)	
Co-Dominant Tree Species:	Box elder (<i>Acer negundo</i>)	
	Red Maple (<i>Acer rubrum</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	40%	
Average Size Class of Dominant Tree Species:	7-19.9"	
Number of Tree Species per Acre:	3	
Average Number of Trees per Acre:	185	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)	NA	
Number of Tree Species >7" DBH:	3	
Number of Trees >24" DBH:	2	
Basal Area (sf/ac):	130	
Common Understory Species (3' - 20'):	Shingle Oak (<i>Quercus imbricaria</i>)	
	Red Maple (<i>Acer rubrum</i>)	
% of Understory Cover (3' - 20'):	11%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	1	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Common Woodreed (<i>Cinna arundinacea</i>)	
	Japanese stiltgrass (<i>Microstegium vimineum</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	40%	
Dominant Invasive Plant Species:	Japanese stiltgrass (<i>Microstegium vimineum</i>)	
	Garlic mustard (<i>Alliaria petiolata</i>)	
Average % Cover of Invasives:	8%	
Number of Standing Dead Trees per 1/10 acre:	0	
Average % Woody Debris Ground Cover:	25%	
Forest Structure Value:	8: Apr - Oct: Good Forest Structure*	
Comments: *Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data.		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 19
Town: Rockville	County: Montgomery	
Prepared By: J. Cummings & D. Merkey		ADC Map# 20
Grid Coordinates: K12		
Stand Variable		
Dominant Tree Species:	Red Maple (<i>Acer rubrum</i>)	
	Black cherry (<i>Prunus serotina</i>)	
Co-Dominant Tree Species:	Red Maple (<i>Acer rubrum</i>)	
	Black cherry (<i>Prunus serotina</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	51%	
Average Size Class of Dominant Tree Species:	7-19.9"	
Number of Tree Species per Acre:	6	
Average Number of Trees per Acre:	350	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)	NA	
Number of Tree Species >7" DBH:	3	
Number of Trees >24" DBH:	0	
Basal Area (sf/ac):	100	
Common Understory Species (3' - 20'):	Spicebush (<i>Lindera benzoin</i>)	
	Japanese Barberry (<i>Berberis thunbergii</i>)	
	Flowering dogwood (<i>Cornus florida</i>)	
% of Understory Cover (3' - 20'):	33%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	3	
Common Herbaceous and Woody Ground Cover Species (0' -3'):	Vitis spp.	
	Virginia creeper (<i>Parthenocissus quinquefolia</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	39%	
Dominant Invasive Plant Species:	Japanese Stiltgrass (<i>Microstegium vimineum</i>)	
	Japanese Barberry (<i>Berberis thunbergii</i>)	
Average % Cover of Invasives:	76%	
Number of Standing Dead Trees per 1/10 acre:	1	
Average % Woody Debris Ground Cover:	20%	
Forest Structure Value:	9: Apr - Oct: Good Forest Structure*	
Comments: *Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data.		

Forest Stand Summary Worksheet

Property Name: North Branch Trail		Stand ID: 20
Town: Rockville	County: Montgomery	Sheet # 1 of #1
Prepared By: J. Cummings & D. Merkey	ADC Map# 20	Grid Coordinates: K12
Stand Variable		
Dominant Tree Species:	Kentucky Coffeetree (<i>Gymnocladus dioicus</i>)	
	Honey Locust (<i>Gleditsia triacanthos</i>)	
Co-Dominant Tree Species:	Kentucky Coffeetree (<i>Gymnocladus dioicus</i>)	
	Black walnut (<i>Juglans nigra</i>)	
Successional Stage:	Mid	
Average % Tree Canopy Closure:	42%	
Average Size Class of Dominant Tree Species:	7-19.9"	
Number of Tree Species per Acre:	6	
Average Number of Trees per Acre:	250	
% Canopy Closure for Trees DBH > 7" (only Apr-Oct)	NA	
Number of Tree Species >7" DBH:	6	
Number of Trees >24" DBH:	1	
Basal Area (sf/ac):	100	
Common Understory Species (3' - 20'):	Japanese Barberry (<i>Berberis thunbergii</i>)	
	Spicebush (<i>Lindera benzoin</i>)	
	Bush honeysuckle (<i>Lonicera maackii</i>)	
% of Understory Cover (3' - 20'):	23%	
Number of Understory Species (3' - 20') in 1/10ac Plot:	5	
Common Herbaceous and Woody Ground Cover Species (0' - 3'):	Japanese Stiltgrass (<i>Microstegium vimineum</i>)	
	Garlic mustard (<i>Alliaria petiolata</i>)	
% Herbaceous and Woody Ground Cover (0' - 3'):	51%	
Dominant Invasive Plant Species:	Japanese Stiltgrass (<i>Microstegium vimineum</i>)	
	Japanese Barberry (<i>Berberis thunbergii</i>)	
Average % Cover of Invasives:	62%	
Number of Standing Dead Trees per 1/10 acre:	5	
Average % Woody Debris Ground Cover:	25%	
Forest Structure Value:	13: Apr - Oct: Good Forest Structure*	
Comments: *Original data was collected using different data forms. Data has been transferred over for consistency, however not all of this form can be completed with the original data.		

VII. APPENDIX D – FOREST STRUCTURE ANALYSIS WORKSHEETS

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	1	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3		
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	9	9	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
% Score		# Score		% Score		
70 - 100 3		3 or more 3 3		75 - 100 3		
40 - 69 2		2 2		25 - 74 2		
10 - 39 1		1 1		5 - 24 1		
0 - 9 0		0 0		0 - 4 0		
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
# Score		% Score		# Score		
>15 3		15 - 100 3 3		6 or more 3		
10 - 15 2		5 - 14 2		4 - 5 2		
5 - 10 1		1 - 4 1		2 - 4 1 1		
0 - 5 0 0		0 0		0 - 1 0		

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	2	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	12	12	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
%	Score	#	Score	%	Score	
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
#	Score	%	Score	#	Score	
>15	3	15 - 100	3	3	6 or more	3
10 - 15	2	5 - 14	2	2	4 - 5	2
5 - 10	1	1 - 4	1	1	2 - 4	1
0 - 5	0	0	0	0	0 - 1	0

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	3	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	12	12	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
%	Score	#	Score	%	Score	
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
#	Score	%	Score	#	Score	
>15	3	15 - 100	3	3	6 or more	3
10 - 15	2	5 - 14	2	2	4 - 5	2
5 - 10	1	1 - 4	1	1	2 - 4	1
0 - 5	0	0	0	0	0 - 1	0

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	4	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	12	12	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
%	Score	#	Score	%	Score	
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
#	Score	%	Score	#	Score	
>15	3	15 - 100	3	3	6 or more	3
10 - 15	2	5 - 14	2	2	4 - 5	2
5 - 10	1	1 - 4	1	1	2 - 4	1
0 - 5	0	0	0	0	0 - 1	0

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	5	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3		
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	9	9	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
% Score		# Score		% Score		
70 - 100 3		3 or more 3 3		75 - 100 3		
40 - 69 2		2 2		25 - 74 2		
10 - 39 1		1 1		5 - 24 1		
0 - 9 0		0 0		0 - 4 0		
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
# Score		% Score		# Score		
>15 3		15 - 100 3 3		6 or more 3		
10 - 15 2		5 - 14 2		4 - 5 2		
5 - 10 1		1 - 4 1		2 - 4 1 1		
0 - 5 0 0		0 0		0 - 1 0		

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	6	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	11	11	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
%	Score	#	Score	%	Score	
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
#	Score	%	Score	#	Score	
>15	3	15 - 100	3	6 or more	3	3
10 - 15	2	5 - 14	2	2	2	
5 - 10	1	1 - 4	1	1	1	
0 - 5	0	0	0	0	0	

Forest Structure Analysis and Candidate Specimen Trees							
Forest Structure Analysis				Stand #	7		
Structure Rating	Time of Year		5) Size Class of Dominant Trees				
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score			
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3		
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2			
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1			
Total Stand Score:	13	13	< 3	0			
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover			
% Score		# Score		% Score			
70 - 100	3	3 or more	3	3	75 - 100	3	
40 - 69	2	2	2		25 - 74	2	
10 - 39	1	1	1		5 - 24	1	
0 - 9	0	0	0		0 - 4	0	
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot			
# Score		% Score		# Score			
>15	3	15 - 100	3	3	6 or more	3	3
10 - 15	2	5 - 14	2		4 - 5	2	
5 - 10	1	1 - 4	1		2 - 4	1	
0 - 5	0	0	0		0 - 1	0	

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	8	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	12	12	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
%	Score	#	Score	%	Score	
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
#	Score	%	Score	#	Score	
>15	3	15 - 100	3	3	6 or more	3
10 - 15	2	5 - 14	2	2	4 - 5	2
5 - 10	1	1 - 4	1	1	2 - 4	1
0 - 5	0	0	0	0	0 - 1	0

Forest Structure Analysis and Candidate Specimen Trees							
Forest Structure Analysis				Stand #	9		
Structure Rating	Time of Year		5) Size Class of Dominant Trees				
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score			
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3		
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2			
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1			
Total Stand Score:	12	12	< 3	0			
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover			
% Score		# Score		% Score			
70 - 100	3	3 or more	3	3	75 - 100	3	
40 - 69	2	2	2		25 - 74	2	
10 - 39	1	1	1		5 - 24	1	
0 - 9	0	0	0		0 - 4	0	
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot			
# Score		% Score		# Score			
>15	3	15 - 100	3	3	6 or more	3	
10 - 15	2	5 - 14	2		4 - 5	2	2
5 - 10	1	1 - 4	1		2 - 4	1	
0 - 5	0	0	0		0 - 1	0	

Forest Structure Analysis and Candidate Specimen Trees					
Forest Structure Analysis				Stand #	10
Structure Rating	Time of Year		5) Size Class of Dominant Trees		
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score	
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2	
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1	
Total Stand Score:	8	8	< 3	0	
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover	
% Score		# Score		% Score	
70 - 100 3		3 or more 3 3		75 - 100 3	
40 - 69 2		2 2		25 - 74 2	
10 - 39 1		1 1		5 - 24 1	
0 - 9 0		0 0		0 - 4 0	
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot	
# Score		% Score		# Score	
>15 3		15 - 100 3		6 or more 3	
10 - 15 2		5 - 14 2 2		4 - 5 2	
5 - 10 1		1 - 4 1		2 - 4 1 1	
0 - 5 0 0		0 0		0 - 1 0	

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	11	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	12	12	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
%	Score	#	Score	%	Score	
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
#	Score	%	Score	#	Score	
>15	3	15 - 100	3	6 or more	3	3
10 - 15	2	5 - 14	2	2	2	2
5 - 10	1	1 - 4	1	1	1	1
0 - 5	0	0	0	0	0	0

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	12	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3		
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	7	7	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
% Score		# Score		% Score		
70 - 100 3		3 or more 3		75 - 100 3		
40 - 69 2		2 2		25 - 74 2		
10 - 39 1		1 1 1		5 - 24 1		
0 - 9 0		0 0		0 - 4 0		
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
# Score		% Score		# Score		
>15 3		15 - 100 3		6 or more 3		
10 - 15 2		5 - 14 2 2		4 - 5 2 2		
5 - 10 1		1 - 4 1		2 - 4 1		
0 - 5 0 0		0 0		0 - 1 0		

Forest Structure Analysis and Candidate Specimen Trees					
Forest Structure Analysis				Stand #	13
Structure Rating	Time of Year		5) Size Class of Dominant Trees		
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score	
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2	
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1	
Total Stand Score:	11	11	< 3	0	
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover	
%	Score	#	Score	%	Score
70 - 100	3	3 or more	3	75 - 100	3
40 - 69	2	2	2	25 - 74	2
10 - 39	1	1	1	5 - 24	1
0 - 9	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot	
#	Score	%	Score	#	Score
>15	3	15 - 100	3	6 or more	3
10 - 15	2	5 - 14	2	4 - 5	2
5 - 10	1	1 - 4	1	2 - 4	1
0 - 5	0	0	0	0 - 1	0

Forest Structure Analysis and Candidate Specimen Trees					
Forest Structure Analysis				Stand #	14
Structure Rating	Time of Year		5) Size Class of Dominant Trees		
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score	
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2	
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1	
Total Stand Score:	11	11	< 3	0	
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover	
% Score		# Score		% Score	
70 - 100 3		3 or more 3 3		75 - 100 3	
40 - 69 2		2 2		25 - 74 2	
10 - 39 1		1 1		5 - 24 1	
0 - 9 0		0 0		0 - 4 0	
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot	
# Score		% Score		# Score	
>15 3		15 - 100 3 3		6 or more 3 3	
10 - 15 2		5 - 14 2		4 - 5 2	
5 - 10 1		1 - 4 1		2 - 4 1	
0 - 5 0 0		0 0		0 - 1 0	

Forest Structure Analysis and Candidate Specimen Trees					
Forest Structure Analysis				Stand #	15
Structure Rating	Time of Year		5) Size Class of Dominant Trees		
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score	
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2	
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1	
Total Stand Score:	9	9	< 3	0	
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover	
% Score		# Score		% Score	
70 - 100 3		3 or more 3 3		75 - 100 3	
40 - 69 2		2 2		25 - 74 2	
10 - 39 1		1 1		5 - 24 1	
0 - 9 0		0 0		0 - 4 0	
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot	
# Score		% Score		# Score	
>15 3		15 - 100 3 3		6 or more 3	
10 - 15 2		5 - 14 2		4 - 5 2	
5 - 10 1		1 - 4 1		2 - 4 1 1	
0 - 5 0 0		0 0		0 - 1 0	

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	16	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	11	11	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
%	Score	#	Score	%	Score	
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
#	Score	%	Score	#	Score	
>15	3	15 - 100	3	3	6 or more	3
10 - 15	2	5 - 14	2	2	4 - 5	2
5 - 10	1	1 - 4	1	1	2 - 4	1
0 - 5	0	0	0	0	0 - 1	0

Forest Structure Analysis and Candidate Specimen Trees					
Forest Structure Analysis				Stand #	17
Structure Rating	Time of Year		5) Size Class of Dominant Trees		
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score	
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2	
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1	
Total Stand Score:	11	10	< 3	0	
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover	
% Score		# Score		% Score	
70 - 100 3		3 or more 3 3		75 - 100 3	
40 - 69 2		2 2		25 - 74 2	
10 - 39 1		1 1		5 - 24 1 1	
0 - 9 0 NA		0 0		0 - 4 0	
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot	
# Score		% Score		# Score	
>15 3		15 - 100 3 3		6 or more 3	
10 - 15 2		5 - 14 2		4 - 5 2 2	
5 - 10 1		1 - 4 1		2 - 4 1	
0 - 5 0 0		0 0		0 - 1 0	

Forest Structure Analysis and Candidate Specimen Trees					
Forest Structure Analysis				Stand #	18
Structure Rating	Time of Year		5) Size Class of Dominant Trees		
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score	
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2	
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1	
Total Stand Score:	8	6	< 3	0	
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover	
% Score		# Score		% Score	
70 - 100	3	3 or more	3	75 - 100	3
40 - 69	2	2	2	25 - 74	2 2
10 - 39	1	1	1	5 - 24	1
0 - 9	0 NA	0	0 0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot	
# Score		% Score		# Score	
>15	3	15 - 100	3 3	6 or more	3
10 - 15	2	5 - 14	2	4 - 5	2
5 - 10	1	1 - 4	1	2 - 4	1 1
0 - 5	0 0	0	0	0 - 1	0

Forest Structure Analysis and Candidate Specimen Trees					
Forest Structure Analysis				Stand #	19
Structure Rating	Time of Year		5) Size Class of Dominant Trees		
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score	
Priority Forest Structure	15 - 21	11 - 15	20 or more	3	
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2	
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1	
Total Stand Score:	9	7	< 3	0	
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover	
% Score		# Score		% Score	
70 - 100 3		3 or more 3		75 - 100 3	
40 - 69 2		2 2		25 - 74 2 2	
10 - 39 1		1 1 1		5 - 24 1	
0 - 9 0 NA		0 0		0 - 4 0	
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot	
# Score		% Score		# Score	
>15 3		15 - 100 3 3		6 or more 3	
10 - 15 2		5 - 14 2		4 - 5 2	
5 - 10 1		1 - 4 1		2 - 4 1 1	
0 - 5 0 0		0 0		0 - 1 0	

Forest Structure Analysis and Candidate Specimen Trees						
Forest Structure Analysis				Stand #	20	
Structure Rating	Time of Year		5) Size Class of Dominant Trees			
	April - October	March - April (Measure 2, 3, 4, 5, 7)	DBH	Score		
Priority Forest Structure	15 - 21	11 - 15	20 or more	3		
Good Forest Structure	7 - 14	6 - 10	7 - 19.9	2 2		
Poor Forest Structure	0 - 6	0 - 6	3 - 6.9	1		
Total Stand Score:	13	11	< 3	0		
1) Percent Canopy Closure for Trees with DBH >7"		3) Number of Standing Dead Trees per 1/10ac Plot		6) Percent Woody and Herbaceous Ground Cover		
% Score		# Score		% Score		
70 - 100	3	3 or more	3	3	75 - 100	3
40 - 69	2	2	2	2	25 - 74	2 2
10 - 39	1	1	1	1	5 - 24	1
0 - 9	0 NA	0	0	0	0 - 4	0
2) Number of Understory Species in 1/10ac Plot		4) Percent of Dead and Downed Woody Material		7) Number of Tree Species with a DBH > 7" per Plot		
# Score		% Score		# Score		
>15	3	15 - 100	3	3	6 or more	3 3
10 - 15	2	5 - 14	2	2	4 - 5	2
5 - 10	1	1 - 4	1	1	2 - 4	1
0 - 5	0 0	0	0	0	0 - 1	0

**VIII. APPENDIX E – WETLAND DETERMINATION DATA
WORKSHEET**

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 13-Jul-12
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: WL A
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hatboro Silt Loam NWI classification: NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks: Original data was collected using the 1987 COE Routine Wetland Determination Data Form. Data has been transferred over for consistency, however not all of this form can be completed with the original data.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species across All Strata: _____ (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ (A/B)
1 <u>Acer negundo</u>	_____	_____	FAC	
2 <u>Quercus bicolor</u>	_____	_____	FACW	
3 <u>Fraxinus pennsylvanica</u>	_____	_____	FACW	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	0 = Total Cover
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	0 = Total Cover
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% _____ Prevalence Index is < or = 3.0* _____ Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Cinna arundinacea</u>	_____	_____	FACW	
2 <u>Microstegium vimineum</u>	_____	_____	FAC	
3 <u>Symplocarpus foetidus</u>	_____	_____	OBL	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	0 = Total Cover
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X**</u> No _____
1 NA	_____	_____	_____	
2 _____	_____	_____	_____	

Remarks: (include photo numbers here or on a separate sheet.)
 **Absolute coverage was not originally collected. 6 of the 6 species observed are FAC, FACW or OBL, this indicates Hydrophytic Vegetation is present.

SOIL								Sampling Point:	WL A
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
0-.5								Organic matter	
.5-2	7.5YR 4/3						clayey silt		
2-15	10YR 5/3		5YR 4/6				silty clay		
15+	7.5YR 4/6		5YR 3/4				coarse sandy silt		
			10YR 2.5/1					organic streaks	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:				
<input type="checkbox"/> Histostol (A1)	<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)					
<input type="checkbox"/> Black Histic (A3)	<input checked="" type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)								
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)								
<input type="checkbox"/> Stripped Matrix (S6)				***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Restrictive Layer (if observed):									
Type:				Hydric Soils					
Depth (inches):				Present?	Yes	<input checked="" type="checkbox"/>	No		
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)					
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)				<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)				<input type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Microtopographic Relief (D4)					
				<input type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:									
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Saturation Present?	Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Depth (inches) 15						
(includes capillary fringe)									
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: Flood plain wetland with diverse conditions. Soil pit dug approximately 10 feet away from stream remnant, flowing water, but pit was mostly dry until about 15 inches.									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 13-Jul-12
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: A Upland
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes _____ No X
 Hydric Soil Present? Yes _____ No X Wetland?
 Wetland Hydrology Present? Yes _____ No X

Remarks: Original data was collected using the 1987 COE Routine Wetland Determination Data Form. Data has been transferred over for consistency, however not all of this form can be completed with the original data.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species across All Strata: _____ (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ (A/B)
1 <u>Acer rubrum</u>	_____	_____	FAC	
2 <u>Prunus serotina</u>	_____	_____	FACU	
3 <u>Liriodendron tulipifera</u>	_____	_____	FACU	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	0 = Total Cover
Sapling/Shrub Stratum (Plot size: _____)				
1 <u>Berberis thunbergii</u>	_____	_____	FACU	Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2 <u>Acer rubrum</u>	_____	_____	FAC	
3 <u>Asimina triloba</u>	_____	_____	FAC	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
Herb Stratum (Plot size: _____)				
1 <u>Persicaria hydropiperoides</u>	_____	_____	OBL	Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% _____ Prevalence Index is < or = 3.0* _____ Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Alliaria petiolata</u>	_____	_____	FACU	
3 <u>Arisaema triphyllum</u>	_____	_____	FACW	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
Woody Vine Stratum (Plot size: _____)				
1 <u>Vitis riparia</u>	_____	_____	FACW	Hydrophytic Vegetation Present? Yes <u>X**</u> No _____
2 _____	_____	_____	_____	
= Total Cover				

Remarks: (include photo numbers here or on a separate sheet.)

**Absolute coverage was not originally collected. 6 of the 10 species observed are FAC, FACW or OBL. However, hydric soil and hydrologic indicators are not present.

SOIL								Sampling Point:	A Upland
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
0-0.5								organic matter	
0.5-1	10R 2.5/1						fine sandy silt		
1+	5YR 5/4						fine sandy clay		
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:				
<input type="checkbox"/> Histostol (A1)	<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)								
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)								
<input type="checkbox"/> Stripped Matrix (S6)				***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Restrictive Layer (if observed):									
Type: _____				Hydric Soils					
Depth (inches): _____				Present?	Yes	No		X	
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)				<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)				<input type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Microtopographic Relief (D4)					
				<input type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:					Wetland Hydrology Present?				
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Yes		No		X	
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: <u>No hydrologic or hydric soil indicators present.</u>									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 13-Jul-12
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: WL B
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Blocktown Channery silt loams NWI classification: NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks: Original data was collected using the 1987 COE Routine Wetland Determination Data Form. Data has been transferred over for consistency, however not all of this form can be completed with the original data.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species across All Strata: _____ (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ (A/B)
1 <u>Fraxinus pennsylvanica</u>	_____	_____	FACW	
2 <u>Acer negundo</u>	_____	_____	FAC	
3 <u>Juglans nigra</u>	_____	_____	FACU	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
0 = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50% Prevalence Index is < or = 3.0* Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Symplocarpus foetidus</u>	_____	_____	OBL	
2 <u>Pilea fontana</u>	_____	_____	FACW	
3 <u>Arthraxon hispidus</u>	_____	_____	FAC	
4 <u>Persicaria perfoliata</u>	_____	_____	FAC	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
0 = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X**</u> No _____
1 <u>Toxicodendron radicans</u>	_____	_____	FAC	
2 _____	_____	_____	_____	
= Total Cover				

Remarks: (include photo numbers here or on a separate sheet.)
 **Absolute coverage was not originally collected. 7 of the 8 species observed are FAC, FACW or OBL, this indicates Hydrophytic Vegetation is present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 13-Jul-12
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: B Upland
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes _____ No X
 Hydric Soil Present? Yes _____ No X Wetland?
 Wetland Hydrology Present? Yes _____ No X

Remarks: Original data was collected using the 1987 COE Routine Wetland Determination Data Form. Data has been transferred over for consistency, however not all of this form can be completed with the original data.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species across All Strata: _____ (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ (A/B)
1 <u>Acer negundo</u>	_____	_____	FAC	
2 <u>Acer rubrum</u>	_____	_____	FAC	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
0 = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% _____ Prevalence Index is < or = 3.0* _____ Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Persicaria sagittata</u>	_____	_____	OBL	
2 <u>Polygonum persicaria</u>	_____	_____	FACW	
3 <u>Arthraxon hispidus</u>	_____	_____	FAC	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
0 = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X**</u> No _____
1 _____	_____	_____	_____	
2 _____	_____	_____	_____	
= Total Cover				

Remarks: (include photo numbers here or on a separate sheet.)
 **Absolute coverage was not originally collected. 5 of the 5 species observed are FAC, FACW or OBL. However, hydric soil and hydrologic indicators are not present.

SOIL								Sampling Point:	B Upland	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Matrix			Redox Features							
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks		
0-0.5								organic matter		
0.5-1	10R 2.5/1						fine sandy silt			
1+	5YR 5/4						fine sandy clay			
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.										
**Location: PL= Pore Lining, M= Matrix										
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:					
<input type="checkbox"/> Histostol (A1)	<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)						
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)						
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)						
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)									
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)									
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)									
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)									
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)									
<input type="checkbox"/> Stripped Matrix (S6)				***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
Restrictive Layer (if observed):										
Type: _____				Hydric Soils						
Depth (inches): _____				Present?	Yes	No	X			
Remarks:										
HYDROLOGY										
Wetland Hydrology Indicators:										
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)						
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)						
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)						
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Iron Deposits (B5)				<input type="checkbox"/> Stunted or Stressed Plants (D1)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)				<input type="checkbox"/> Geomorphic Position (D2)						
<input type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Microtopographic Relief (D4)						
				<input type="checkbox"/> FAC-Neutral Test (D5)						
Field Observations:					Wetland Hydrology Present?					
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)							
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)							
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Yes			No			X
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: <u>No hydrologic or hydric soil indicators present.</u>										

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 13-Jul-12
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: WL C
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hatboro Silt Loam NWI classification: NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks: Original data was collected using the 1987 COE Routine Wetland Determination Data Form. Data has been transferred over for consistency, however not all of this form can be completed with the original data.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1 NA				
2				
3				
4				
5				
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1 <i>Acer rubrum</i>			FAC	
2				
3				
4				
5				
0 = Total Cover				
Herb Stratum (Plot size: _____)				
1 <i>Persicaria sagittata</i>			OBL	
2 <i>Cinna arundinacea</i>			FACW	
3 <i>Amphicarpaea bracteata</i>			FAC	
4 <i>Symplocarpus foetidus</i>			OBL	
5 <i>Typha latifolia</i>			OBL	
6 <i>Alisma triviale</i>			OBL	
7				
8				
9				
10				
0 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1 NA				
2				
= Total Cover				

Dominance Test worksheet:
 Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)
 Total Number of Dominant Species across All Strata: _____ (B)
 Percent of Dominant Species that are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet
 Total % Cover of: _____ Multiply by:
 OBL species _____ x 1 _____
 FACW species _____ x 2 _____
 FAC species _____ x 3 _____
 FACU species _____ x 4 _____
 UPL species _____ x 5 _____
 Column Totals: _____ (A) _____ (B)
 Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is < or = 3.0*
 Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation*(Explain)
 *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X** No _____

Remarks: (include photo numbers here or on a separate sheet.)

**Absolute coverage was not originally collected. 7 of the 7 species observed are FAC, FACW or OBL, this indicates Hydrophytic Vegetation is present.

SOIL							Sampling Point:	WLC
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Matrix			Redox Features					
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks
0-1.5							organic matter	
1.5-3	5YR 3/1						fine sandy silt	
3-13	Gley 1/5 10Y		5YR 3/4				sandy loam	
13-14							cobble	
14							impenetrable cobble	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.								
**Location: PL= Pore Lining, M= Matrix								
Hydric Soil Indicators:							Indicators for Problematic Hydric Soils***:	
<input type="checkbox"/> Histostol (A1)			<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)					
<input checked="" type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)					
<input type="checkbox"/> Stripped Matrix (S6)								
***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if observed):								
Type:	Cobble					Hydric Soils Present?		
Depth (inches):	14					Yes	<input checked="" type="checkbox"/>	No
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>			
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		
<input checked="" type="checkbox"/> Saturation (A3)			<input checked="" type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Iron Deposits (B5)						<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Aquatic Fauna (B13)						<input type="checkbox"/> Microtopographic Relief (D4)		
						<input type="checkbox"/> FAC-Neutral Test (D5)		
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/>	Depth (inches)				
Water Table Present?	Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	Depth (inches) 14				
Saturation Present? (includes capillary fringe)	Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	Depth (inches) 0	Yes	<input checked="" type="checkbox"/>	No	
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: <u>Used <i>Amphicarpaea bracteata</i> as delineator. Conditions appear normal now but the sewer line runs through the floodplain.</u>								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 13-Jul-12
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: C Upland
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Yes _____ No X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? Yes _____ No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes _____ No X
 Hydric Soil Present? Yes _____ No X Wetland?
 Wetland Hydrology Present? Yes _____ No X

Remarks: Original data was collected using the 1987 COE Routine Wetland Determination Data Form. Data has been transferred over for consistency, however not all of this form can be completed with the original data.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species across All Strata: _____ (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ (A/B)
1 <u>Juglans nigra</u>	_____	_____	FACU	
2 <u>Quercus alba</u>	_____	_____	FACU	
3 <u>Platanus occidentalis</u>	_____	_____	FACW	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 <u>Cornus florida</u>	_____	_____	FACU	
2 <u>Lindera benzoin</u>	_____	_____	FAC	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
0 = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50% Prevalence Index is < or = 3.0* Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Persicaria hydropiperoides</u>	_____	_____	OBL	
2 <u>Rosa multiflora</u>	_____	_____	FACU	
3 <u>Microstegium vimineum</u>	_____	_____	FAC	
4 <u>Parthenocissus quinquefolia</u>	_____	_____	FACU	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
0 = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X**</u> No _____
1 <u>Toxicodendron radicans</u>	_____	_____	FAC	
2 _____	_____	_____	_____	
= Total Cover				

Remarks: (include photo numbers here or on a separate sheet.)
 **Absolute coverage was not originally collected. 5 of the 10 species observed are FAC, FACW or OBL. However, hydric soil and hydrologic indicators are not present.

SOIL								Sampling Point:	C Upland
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
0-1	10R 3/1						sandy loam		
1-12	7.5YR 4/4						loamy sand		
12+							impenetrable cobble/gravel layer		
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:							Indicators for Problematic Hydric Soils***:		
<input type="checkbox"/> Histostol (A1)			<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)			
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)			
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)						
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)						
<input type="checkbox"/> Stripped Matrix (S6)					***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
Restrictive Layer (if observed):									
Type:	<u>impenetrable cobble/gravel layer</u>					Hydric Soils			
Depth (inches):	12					Present?	Yes	No	X
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)					<input type="checkbox"/> Stunted or Stressed Plants (D1)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Aquatic Fauna (B13)					<input type="checkbox"/> Microtopographic Relief (D4)				
						<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					Wetland Hydrology Present?				
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)			Yes		No	X
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: <u>No hydrologic or hydric soil indicators present.</u>									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 7-Jan-13
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: WL AA
 Investigator(s): D. Merkey Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hatboro silt loam/Blocktown Channery silt loam NWI classification: NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ 5 (A) Total Number of Dominant Species across All Strata: _____ 6 (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ 83% (A/B)
1 <u>Acer rubrum</u>	95	Yes	FAC	
2 <u>Platanus occidentalis</u>	5	No	FACW	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	100 = Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 <u>Smilax rotundifolia</u>	5	Yes	FAC	
2 <u>Berberis thunbergii</u>	5	Yes	FACU	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	10 = Total Cover			
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is < or = 3.0* Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Dichanthelium clandestinum</u>	20	Yes	FAC	
2 <u>Lonicera japonica</u>	10	Yes	FAC	
3 <u>Juncus effusus</u>	10	Yes	FACW	
4 <u>Carex spp.</u>	5	No	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
	45 = Total Cover			
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1 NA	_____	_____	_____	
2 _____	_____	_____	_____	
	_____ = Total Cover			

Remarks: (include photo numbers here or on a separate sheet.)

SOIL								Sampling Point:	WL AA
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
0-18+	7.5YR 5/3	60	2.5YR 3/6	30	D	M	clay loam		
			2.5YR 8/1	10	MS	M			
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:				
<input type="checkbox"/> Histostol (A1)	<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)								
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)								
<input type="checkbox"/> Stripped Matrix (S6)				***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Restrictive Layer (if observed):									
Type:				Hydric Soils					
Depth (inches):				Present?	Yes	<input type="checkbox"/> No			
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)			<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)				<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)				<input checked="" type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Microtopographic Relief (D4)					
				<input type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:									
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Saturation Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
(includes capillary fringe)									
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: Low area receives surface water from backwater on bow along toe of slope to the northwest.									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 7-Jan-13
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: AA Upland
 Investigator(s): D. Merkey Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes _____ No X
 Hydric Soil Present? Yes _____ No X Wetland?
 Wetland Hydrology Present? Yes _____ No X

Remarks: upland sample point near proposed trail.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ 9 (A) Total Number of Dominant Species across All Strata: _____ 11 (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ 82% (A/B)
1 <u>Fraxinus pennsylvanica</u>	25	Yes	FACW	
2 <u>Prunus serotina</u>	20	Yes	FACU	
3 <u>Acer rubrum</u>	20	Yes	FAC	
4 <u>Carpinus caroliniana</u>	20	Yes	FAC	
5 <u>Juniperus virginiana</u>	15	No	FACU	
	100	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 <u>Eleaegnus umbellata</u>	25	Yes	FAC	
2 <u>Rosa multiflora</u>	10	Yes	FACU	
3 <u>Carpinus caroliniana</u>	10	Yes	FAC	
4 <u>Berberis thunbergii</u>	5	No	FACU	
5 _____				
	50	= Total Cover		
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation X _____ Dominance Test is >50% _____ Prevalence Index is < or = 3.0* _____ Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Unknown grass</u>	60	NA	NA	
2 <u>Microstegium vimineum</u>	60	Yes	FAC	
3 _____				
4 _____				
5 _____				
6 _____				
	60	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1 <u>Smilax rotundifolia</u>	20	Yes	FAC	
2 <u>Lonicera japonica</u>	10	Yes	FAC	
3 <u>Toxicodendron radicans</u>	10	Yes	FAC	
4 <u>Vitis riparia</u>	5	No	FACW	
5 _____				
6 _____				
7 _____				
	45	= Total Cover		

Remarks: (include photo numbers here or on a separate sheet.)

SOIL								Sampling Point:	AA upland
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
1-4	10YR 3/3	100					loam		
4-12	7.5YR 4/4	100					loamy sand	with gravel	
12+	10YR 4/6	100					sandy loam	with gravel	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:				
<input type="checkbox"/> Histostol (A1)	<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)								
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)								
<input type="checkbox"/> Stripped Matrix (S6)				***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Restrictive Layer (if observed):									
Type:				Hydric Soils					
Depth (inches):				Present?	Yes	No	X		
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)				<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)				<input type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Microtopographic Relief (D4)					
				<input type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:									
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Wetland Hydrology Present?					
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: No evidence of hydrology (wetland) although drainage from uphill swale may travel through area.									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 7-Jan-13
 Applicant/Owner: MNCPPC State: _____ Sampling Point: WL BB
 Investigator(s): D. Merkey Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Blocktown Channery Silt loam NWI classification: _____ NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ 3 (A) Total Number of Dominant Species across All Strata: _____ 4 (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ 75% (A/B)
1 <u>Acer rubrum</u>	75	Yes	FAC	
2 <u>Platanus occidentalis</u>	5	No	FACW	
3 _____				
4 _____				
5 _____	80	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 <u>Rosa multiflora</u>	10	Yes	FACU	
2 _____				
3 _____				
4 _____				
5 _____	10	= Total Cover		
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation <u>X</u> Dominance Test is >50% Prevalence Index is < or = 3.0* Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Unknown grass</u>	80	NA	NA	
2 <u>Lonicera japonica</u>	10	Yes	FAC	
3 <u>Juncus effusus</u>	5	Yes	FACW	
4 <u>Carex spp.</u>	5	NA	NA	
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____	15	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1 <u>NA</u>				
2 _____				
		= Total Cover		

Remarks: (include photo numbers here or on a separate sheet.)
 Despite lack of identifiable hydric herbaceous indicators, the strong hydrologic and soil indicators with the tree species indicated this area is a wetland.

SOIL								Sampling Point:	WL BB
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
1-5	7.5YR 5/2	100					clay loam		
5-8	2.5YR 5/8	80					coarse sand with gravel		
8+	10YR 6/1	80	5YR 5/8	20	RM	M	loam		
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:				
<input type="checkbox"/> Histostol (A1)	<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)					
<input checked="" type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)								
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)								
<input type="checkbox"/> Stripped Matrix (S6)				***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Restrictive Layer (if observed):									
Type:				Hydric Soils					
Depth (inches):				Present?	Yes	<input checked="" type="checkbox"/>	No		
Remarks: Soil exhibits evidence of historic hydric characteristics (grey @ 8+) with water born layering from more recent disturbance.									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)					
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)				<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)				<input type="checkbox"/> Geomorphic Position (D2)					
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Microtopographic Relief (D4)					
						<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:									
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Wetland Hydrology Present?					
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Yes <input checked="" type="checkbox"/> No					
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: Small depression created by the park road. Collects runoff from Trailway Drive which drains to culvert under park road.									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 7-Jan-13
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: BB Upland
 Investigator(s): D. Merkey Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes _____ No X
 Hydric Soil Present? Yes _____ No X Wetland?
 Wetland Hydrology Present? Yes _____ No X

Remarks: upland sample point near proposed trail.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1 <u>Acer rubrum</u>	30	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ 6 (A) Total Number of Dominant Species across All Strata: _____ 8 (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ 75% (A/B)
2 <u>Platanus occidentalis</u>	10	Yes	FACW	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	40	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1 <u>Lindera benzoin</u>	15	Yes	FAC	Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2 <u>Acer rubrum</u>	10	Yes	FAC	
3 <u>Rosa multiflora</u>	10	Yes	FACU	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	35	= Total Cover		
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1 <u>Lonicera japonica</u>	25	Yes	FAC	Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation X _____ Dominance Test is >50% _____ Prevalence Index is < or = 3.0* _____ Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 <u>Rosa multiflora</u>	15	Yes	FACU	
3 <u>Allium canadense</u>	10	No	FACU	
4 <u>Waldestenia fragaroides</u>	10	No	NA	
5 _____	_____	_____	_____	
	60	= Total Cover		
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
2 <u>Vitis riparia</u>	10	Yes	FACW	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
	10	= Total Cover		

Remarks: (include photo numbers here or on a separate sheet.)

SOIL							Sampling Point:	BB upland
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Matrix			Redox Features					
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks
1-6	7.5YR 4/3	100					sandy loam	
6-10	10YR 4/2	100					clayey loam	
10+								impenetrable gravel and clay
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.								
**Location: PL= Pore Lining, M= Matrix								
Hydric Soil Indicators:							Indicators for Problematic Hydric Soils***:	
<input type="checkbox"/> Histostol (A1)			<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)					
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)					
<input type="checkbox"/> Stripped Matrix (S6)								
Restrictive Layer (if observed):								
Type:	impenetrable gravel and clay		Hydric Soils		Present?	Yes	No	X
Depth (inches):	10							
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>			
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Iron Deposits (B5)					<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)					<input type="checkbox"/> Microtopographic Relief (D4)			
					<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:								
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Wetland Hydrology Present?				
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)					
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: No hydric indicators.								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 10-Jan-13
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: WL CC
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Baile silt loam NWI classification: PEM1Ch
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks: Wetland lies between toe of steep slope down from park road and Lake Frank. Due to this & upland vegetation visible on upslope area there is no need to do an upland test pit.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ <u>1</u> (A) Total Number of Dominant Species across All Strata: _____ <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ <u>50%</u> (A/B)
1 <u>Acer rubrum</u>	50	Yes	FAC	
2 <u>Acer saccharinum</u>	10	No	FACW	
3 <u>Platanus occidentalis</u>	5	No	FACW	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	65 = Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 NA				
2 _____				
3 _____				
4 _____				
5 _____				
	0 = Total Cover			
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation X _____ Dominance Test is >50% _____ Prevalence Index is < or = 3.0* _____ Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Unknown grass</u>	75	NA	NA	
2 <u>Mitchella repens</u>	50	Yes	FACU	
3 <u>Carex spp.</u>	25	NA	NA	
4 _____				
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
	50 = Total Cover			
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1 NA				
2 _____				
	= Total Cover			

Remarks: (include photo numbers here or on a separate sheet.)
Despite lack of identifiable hydric herbaceous indicators due to time of year, the strong hydrologic and soil indicators with the tree species indicated this area is a wetland.

SOIL								Sampling Point:	WL CC
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
0-3	7.5YR 3/1	100					loamy clay		
3-11	7.5YR 4/6	100					coarse sand		
11+	7.5YR 4/6	85	Gley1 5/5GY	15	RM	M	loamy sand		
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:							Indicators for Problematic Hydric Soils***:		
<input type="checkbox"/> Histostol (A1)			<input type="checkbox"/> Dark Surfaces (S7)		<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)		<input type="checkbox"/> Piedmont Floodplain Soils (F19)				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)		<input type="checkbox"/> (MLRA 136, 147)				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Red Parent Material (TF2)				
<input checked="" type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)			<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)						
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)						
<input type="checkbox"/> Stripped Matrix (S6)									
Restrictive Layer (if observed):									
Type:					Hydric Soils				
Depth (inches):					Present?	Yes	<input checked="" type="checkbox"/> No		
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> True Aquatic Plants (B14)		<input type="checkbox"/> Surface Soil Cracks (B6)				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)				
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Water Marks (B1)			<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Moss Trim Lines (B16)				
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input checked="" type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Iron Deposits (B5)					<input type="checkbox"/> Stunted or Stressed Plants (D1)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> Geomorphic Position (D2)				
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Aquatic Fauna (B13)					<input type="checkbox"/> Microtopographic Relief (D4)				
					<input type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations:					Wetland Hydrology Present?				
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)			Yes		<input checked="" type="checkbox"/> No	
Water Table Present?	Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Depth (inches) 12						
Saturation Present? (includes capillary fringe)	Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Depth (inches) 3						
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 10-Jan-13
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: WL DD
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hatboro Silt Loam NWI classification: L2USCh
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks: Wetland lies between toe of steep slope down from park road and Lake Frank. Due to this & upland vegetation visible on upslope area there is no need to do an upland test pit.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ 4 (A) Total Number of Dominant Species across All Strata: _____ 4 (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ 100% (A/B)
1 <u>Salix nigra</u>	10	Yes	OBL	
2 <u>Platanus occidentalis</u>	5	Yes	FACW	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	15 = Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 <u>Spiraea tomentosa</u>	35	Yes	FACW	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	35 = Total Cover			
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid Test for Hydrophytic Vegetation X _____ Dominance Test is >50% _____ Prevalence Index is < or = 3.0* _____ Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Persicaria sagittata</u>	80	Yes	OBL	
2 <u>Unknown grass</u>	30	NA	NA	
3 <u>Mitchella repens</u>	15	No	FACU	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
	95 = Total Cover			
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1 <u>NA</u>	_____	_____	_____	
2 _____	_____	_____	_____	
	_____ = Total Cover			

Remarks: (include photo numbers here or on a separate sheet.)

SOIL								Sampling Point:	WL DD
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
<u>Matrix</u>			<u>Redox Features</u>						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
0-5	7.5YR 4/2	85	7.5YR 4/6	15			silty clay	faint oxidized rhizopheres	
5+	5Y 5/1	80	10R 4/8	20			silt	faint oxidized rhizopheres	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:				
<input type="checkbox"/> Histostol (A1)		<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)				
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> Stratified Layers (A5)		<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)		<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)			***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)		<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)							
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)							
<input type="checkbox"/> Stripped Matrix (S6)									
Restrictive Layer (if observed):									
Type:				Hydric Soils					
Depth (inches):				Present?	Yes	<input checked="" type="checkbox"/>	No		
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)				
<input type="checkbox"/> High Water Table (A2)		<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)				
<input checked="" type="checkbox"/> Saturation (A3)		<input checked="" type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Water Marks (B1)		<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)				
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input checked="" type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Iron Deposits (B5)					<input type="checkbox"/> Stunted or Stressed Plants (D1)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> Geomorphic Position (D2)				
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Aquatic Fauna (B13)					<input type="checkbox"/> Microtopographic Relief (D4)				
					<input type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations:									
Surface Water Present?	Yes	<input type="checkbox"/> No	<input type="checkbox"/> Depth (inches)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Water Table Present?	Yes	<input type="checkbox"/> No	<input type="checkbox"/> Depth (inches)						
Saturation Present?	Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Depth (inches) 0						
(includes capillary fringe)									
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: North Branch Trail City/County: Rockville, Montgomery Sampling Date: 10-Jan-13
 Applicant/Owner: MNCPPC State: Maryland Sampling Point: WL EE
 Investigator(s): D. Merkey & J. Cummings Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Blocktown Channery Silt Loams NWI classification: NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in remarks)
 Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes X
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? No _____
 (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Is the Sampled Area within a Yes X No _____
 Hydric Soil Present? Yes X No _____ Wetland?
 Wetland Hydrology Present? Yes X No _____

Remarks: Wetland lies between toe of steep slope down from park road and NBT. Due to this & upland vegetation visible on upslope area there is no need to do an upland test pit.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: _____ 4 (A) Total Number of Dominant Species across All Strata: _____ 5 (B) Percent of Dominant Species that are OBL, FACW, or FAC: _____ 80% (A/B)
1 <u>Acer rubrum</u>	50	Yes	FAC	
2 <u>Carpinus caroliniana</u>	5	No	FAC	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	55 = Total Cover			
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet Total % Cover of: _____ Multiply by: OBL species _____ x 1 _____ FACW species _____ x 2 _____ FAC species _____ x 3 _____ FACU species _____ x 4 _____ UPL species _____ x 5 _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1 <u>Lindera benzoin</u>	10	Yes	FAC	
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	
4 _____	_____	_____	_____	
5 _____	_____	_____	_____	
	10 = Total Cover			
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is < or = 3.0* Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation*(Explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 <u>Symplocarpus foetidus</u>	35	Yes	OBL	
2 <u>Unknown moss</u>	25	NA	NA	
3 <u>Polystichum acrostichoides</u>	15	Yes	FACU	
4 <u>Unknown grass</u>	5	NA	NA	
5 <u>Lonicera japonica</u>	5	No	FAC	
6 _____	_____	_____	_____	
7 _____	_____	_____	_____	
8 _____	_____	_____	_____	
9 _____	_____	_____	_____	
10 _____	_____	_____	_____	
	55 = Total Cover			
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1 <u>Toxicodendron radicans</u>	7	Yes	FAC	
2 _____	_____	_____	_____	
	7 = Total Cover			

Remarks: (include photo numbers here or on a separate sheet.)

SOIL								Sampling Point:	WL EE
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Matrix			Redox Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type*	Loc**	Texture	Remarks	
0-4	10YR 4/2	100					clayey silt		
4+	10YR 6/2	70	5YR 4/6	30	RM	both	fine sandy silt		
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.									
**Location: PL= Pore Lining, M= Matrix									
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils***:				
<input type="checkbox"/> Histostol (A1)	<input type="checkbox"/> Dark Surfaces (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> (MLRA 136, 147)					
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surfaces (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)			***Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Material (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)								
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19), (MLRA 148)								
<input type="checkbox"/> Stripped Matrix (S6)									
Restrictive Layer (if observed):									
Type:					Hydric Soils				
Depth (inches):					Present?	Yes	<input checked="" type="checkbox"/>	No	
Remarks:									
HYDROLOGY									
Wetland Hydrology Indicators:									
<u>Primary Indicators (minimum of one is required; check all that apply)</u>					<u>Secondary Indicators (minimum of two is required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizopheres on Living Roots (C3)			<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Moss Trim Lines (B16)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)				<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)				<input type="checkbox"/> Geomorphic Position (D2)					
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)				<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Microtopographic Relief (D4)					
						<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:									
Surface Water Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No					
Water Table Present?	Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Depth (inches)						
Saturation Present?	Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Depth (inches) 0						
(includes capillary fringe)									
Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									

IX. APPENDIX F – PHOTOS



Forest Stand 1



Forest Stand 2



Forest Stand 3



Forest Stand 4



Forest Stand 5



Forest Stand 6



Forest Stand 7



Forest Stand 8



Forest Stand 9



Forest Stand 10



Forest Stand 11



Forest Stand 13



Forest Stand 14



Forest Stand 15



Forest Stand 16



Forest Stand 17



Forest Stand 18

APPENDIX D

DNR_FS Response Letter/ DNR_WH Response Letter/ USDI Response Letter



Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Joseph P. Gill, Deputy Secretary

August 31, 2011

Dr. David H. Merkey
Greenman-Pedersen, Inc.
10977 Guilford Road
Annapolis Junction, MD 20701

RE: Environmental Review for North Branch Trail Preliminary Design – Aspen Hill and Olney, Montgomery County, Maryland.

Dear Dr. Merkey:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. As a result, we have no specific comments or requirements pertaining to protection measures at this time. Please note however that the utilization of state funds, the need to obtain a state-authorized permit, or changes to the plan might warrant additional evaluations that could lead to protection or survey recommendations by the Wildlife and Heritage Service. Please contact us again for further coordination if this project falls into one of those categories.

We would also like to point out that our initial evaluation of this project should not be interpreted as meaning that it is not possible for rare, threatened or endangered species to be present. Certain species could be present without documentation because adequate surveys may not have been conducted in the past. Although the Wildlife and Heritage Service is not requiring any surveys, we would like to bring to your attention that our Natural Heritage database records do indicate that the species listed below are known to occur within close proximity of the project site. If the appropriate habitat is present for these species they could potentially occur on the project site itself. Since populations of these native plants have declined historically we would encourage efforts to help conserve them across the state. Feel free to contact us if you would like technical assistance regarding the conservation of these important species. They are:

<u>Scientific Name</u>	<u>Common Name</u>	<u>State Status</u>
<i>Calystegia spithamea</i>	Low Bindweed	Rare
<i>Melica nutica</i>	Two-flowered Melicgrass	Threatened
<i>Iris cristata</i>	Crested Iris	Endangered
<i>Castanea dentata</i>	American Chestnut	Rare

Habitat for Low Bindweed is described as: Fields, roadsides and calcareous slopes (Fernald 1950); dry, rocky, or sandy soil, fields and open woods (Gleason & Cronquist 1991). Habitat for Two-flowered Melicgrass is described as: Dry woods and road banks (Radford et al 1968); dry open woods and thickets (Fernald 1950); rocky woods (Terrell 1970); floodplain or upland rocky woods (MDNHP).

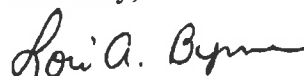
Habitat for Crested Iris is described as: Rich wooded slopes (Radford et al 1968); rich woods, wooded bottoms and ravines or bluffs (Fernald 1950); rocky woods, floodplain forests (MDNHP). Habitat for American Chestnut is described as: Rich woods (Radford et al 1968); dry, rich, usually acid, gravelly or rocky ground, often of uplands (Hough 1983).

Our analysis of the information provided also suggests that the forested area on or adjacent to the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird Species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of FIDS habitat is strongly encouraged by the Department of Natural Resources. The following guidelines will help minimize the project's impacts on FIDS and other native forest plants and wildlife:

1. Avoid placement of new trails or related construction in the forest interior. If forest loss or disturbance is absolutely unavoidable, restrict development to the perimeter of the forest (i.e., within 300 feet of the existing forest edge), and avoid trail placement in areas of high quality FIDS habitat (e.g., old-growth forest). Maximize the amount of remaining contiguous forested habitat.
2. Do not remove or disturb forest habitat during April-August, the breeding season for most FIDS. This seasonal restriction may be expanded to February-August if certain early nesting FIDS (e.g., Barred Owl) are present.
3. Maintain forest habitat as close as possible to the trail, and maintain canopy closure where possible.
4. Maintain grass height at least 10" during the breeding season (April-August).

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,



Lori A. Byrne
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER # 2011.1039.mo
Cc: D. Brinker, DNR



Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Joseph P. Gill, Deputy Secretary

13-MIS-128

February 13, 2013

Carol Perfit
Greenman-Pedersen
10977 Guilford Road
Annapolis Junction, MD 20701

Subject: Fisheries Information for the Proposed North Branch Trail, from the Rock Creek Trail Connection to the Preserve at Rock Creek, in Aspen Hill and Olney, Maryland.

Dear Ms. Perfit,

The above referenced project has been reviewed to determine fisheries species in the vicinity of the proposed project. The proposed activities include the construction of the North Branch Trail, from the Rock Creek Trail Connection to the Preserve at Rock Creek, in Aspen Hill and Olney, Maryland.

North Branch Rock Creek (Washington Metropolitan River Basin) and tributaries near the site are classified as either Use III streams (Natural Trout Waters) or Use IV streams (Recreational Trout Waters). Generally, no instream work is permitted in Use III streams during the period of October 1 through April 30, inclusive, during any year, and no instream work is permitted in Use IV streams during the period of March 1 through May 31, inclusive, during any year.

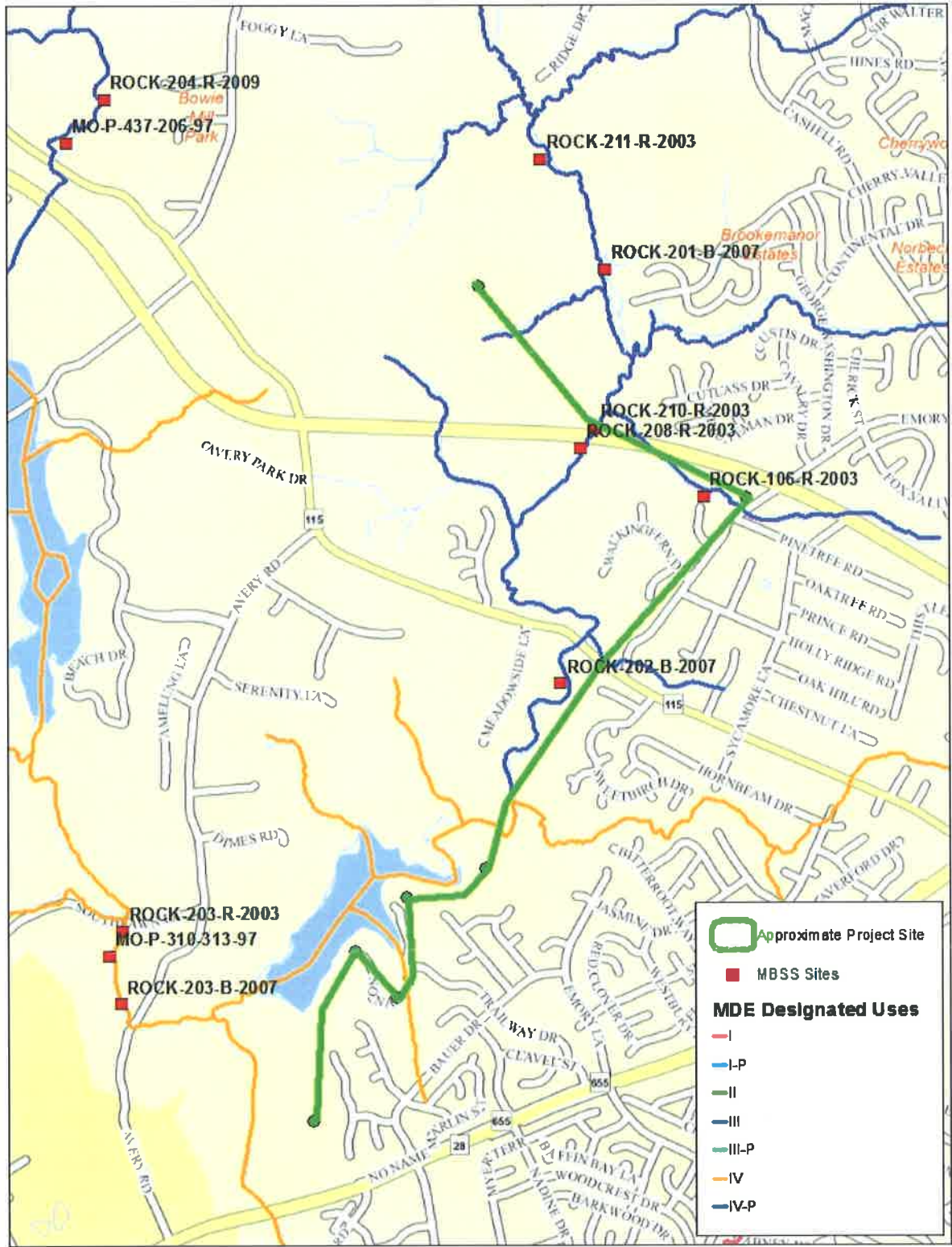
No anadromous fish have been documented near the project site. However, these streams may support many resident fish species documented by our Maryland Biological Stream Survey. There are Maryland Biological Stream Survey (MBSS) stations near the project location. The species collected at one of these stations has been itemized in the attached list. MBSS data can be accessed via the MDDNR web page at <http://mdimap.towson.edu/streamhealth/>, allowing access to resource surveys in neighboring tributaries.

If you have further questions, please contact the Environmental Review Program at 410-260-8799.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Yetman".

Ken Yetman
Environmental Review Program

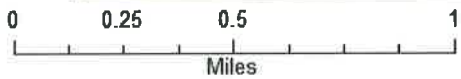


Approximate Project Site

MBSS Sites

MDE Designated Uses

- I
- I-P
- II
- III
- III-P
- IV
- IV-P



The following fishes were collected at ROCK-202-B-2007

Common name	Percent of total
<u>LARGEMOUTH BASS</u>	26.7
<u>LONGNOSE DACE</u>	26.3
<u>POTOMAC SCULPIN</u>	14.4
<u>BLACKNOSE DACE</u>	9.1
<u>YELLOW BULLHEAD</u>	9.1
<u>SPOTTAIL SHINER</u>	3.5
<u>WHITE SUCKER</u>	3.2
<u>MARGINED MADTOM</u>	2.1
<u>TESSELLATED DARTER</u>	2.1
<u>CUTLIP MINNOW</u>	1.4
<u>FALLFISH</u>	1.1
<u>NORTHERN HOGSUCKER</u>	0.7
<u>BLUNTNOSE MINNOW</u>	0.4



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401
<http://www.fws.gov/chesapeakebay>

September 20, 2011

Greenman-Pedersen, Inc.
10977 Guilford Road
Annapolis Junction, MD 20701

RE: North Branch Trail

Dear Dr. David H. Merkey:

This responds to your letter, received August 9, 2011, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above reference project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

Effective August 8, 2007, under the authority of the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service (Service) removed (delist) the bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife. However, the bald eagle will still be protected by the Bald and Golden Eagle Protection Act, Lacey Act and the Migratory Bird Treaty Act. As a result, starting on August 8, 2007, if your project may cause "disturbance" to the bald eagle, please consult the "National Bald Eagle Management Guidelines" dated May 2007.



If any planned or ongoing activities cannot be conducted in compliance with the National Bald Eagle Management Guidelines (Eagle Management Guidelines), please contact the Chesapeake Bay Ecological Services Field Office at 410-573-4573 for technical assistance. The Eagle Management Guidelines can be found at:

<http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>.

In the future, if your project can not avoid disturbance to the bald eagle by complying with the Eagle Management Guidelines, you will be able to apply for a permit that authorizes the take of bald and golden eagles under the Bald and Golden Eagle Protection Act, generally where the take to be authorized is associated with otherwise lawful activities. This proposed permit process will not be available until the Service issues a final rule for the issuance of these take permits under the Bald and Golden Eagle Protection Act.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Devin Ray at (410) 573-4531.

Sincerely,

A handwritten signature in blue ink, appearing to read "Leopoldo Miranda".

Leopoldo Miranda
Supervisor

APPENDIX E

Community Meeting Minutes



MEETING REPORT

MEETING DATE: September 19, 2012, 7:00 p.m., Shady Grove Training Room

STAFF ATTENDING:

Marian Elsasser	Mitra Pedoeem
Kim Paniati	Tricia McManus
Doug Ludwig	Grace Yick
Dave Merkey	Steve Kelly
Chuck Kines	Jim Humerick

SUBJECT: Public Meeting for North Branch Trail Facility Plan

The staff and consultant team presented a PowerPoint presentation that provided an overview of the scope of the project, the proposed alignment, and alternatives for connections. The trail will extend from the east side of the dam at Lake Frank to Muncaster Mill Road and generally follows the alignment of the existing road and trail on the east side of Lake Frank. The existing parking lots and road on the east side of Lake Frank would be removed and planted. A small trailhead and parking area would be provided on the south side of Muncaster Mill Road near the intersection with Emory Road.

The trail will cross Muncaster Mill Road and continue along Emory Road. This crossing and trail along Emory Road will be constructed by the Montgomery County Department of Transportation (DOT). This section of trail will connect to an existing trail and the bikeway along the Intercounty Connector (ICC). A new park trail segment will connect the ICC trail under a highway bridge and extend north through parkland to a future trail that will be built by the developer of the Preserve at Rock Creek, terminating at Sequoyah Elementary School. The trail will be ten feet wide with two-foot wide grass shoulders on each side. The trail cross section may become narrower in sensitive environmental areas with a minimum proposed width of eight feet wide with no shoulders. Railings may be required if there are steep drops in grade immediately adjacent to the trail.

Approximately 20-25 people attended the meeting. The following topics were discussed after the presentation.

- The safety of the trail crossing at Muncaster Mill Road was discussed. Alternatives for providing a traffic light or pedestrian refuge will be studied by DOT. The trail along Muncaster Mill Road would be separated and set back from the road, and traffic calming measures on Muncaster Mill Road may also be provided to slow down the traffic in this area.
- There was a question as to whether the parking lots along Lake Frank should remain, so that they could be used in the future. Staff indicated that the removal of the parking lots was part of the previous Planning Board approval for the Lake Frank trail connector, and that a commitment had been made to the community to remove the parking lots as part of this project.

- There was a suggestion to consider different types of natural habitat that might be created when the parking lots are removed. There are bluebirds nesting in the open parking lot areas, and they prefer meadow habitat. It would be nice to provide both meadow and forested areas.
- There was a question of whether a fishing pier would be provided at Lake Frank. This facility is included in the master plan, but staff does not have plans to build it as part of this project. Staff asked whether the community would want this facility to be included in the project. The response was that this facility would be used, but it would increase the traffic and parking in the neighborhood and would not be desirable. There was a question as to whether the concrete boat ramp would be removed. Park staff indicated that the boat ramp is needed for maintenance access to the riser in the lake.
- There was a suggestion that trail amenities be considered, including benches, picnic tables, and a drinking fountain with a dog dish and water bottle filling spout.
- There was a question whether a natural surface trail would be provided parallel to the Lake Frank hard surface trail, as recommended in the Rock Creek Regional Park Master Plan. Staff indicated that building two trails within the same corridor has not been a common practice in the Department of Parks in recent years, because it results in unnecessary environmental impact. Staff indicated that this could be studied if the community felt there was a compelling need to provide a second trail.
- There was discussion of other future trails and a question as to the timing of the DOT project to build an off-road trail from the ICC bikeway to Lake Needwood and over the causeway on Needwood Road.
- The segment of the future trail north of the Lake Frank parking lots includes a lot of blind curves and there could be safety issues with cyclists and hikers using the same trail. The intent for the new trail would be to widen the existing trail, straighten it, and clear lower-growing shrubby vegetation immediately adjacent to the trail to increase sight distances for user safety.
- There was a suggestion that there should be a vehicular turn-around built at the terminus of Trailway Drive with a few parking spaces for cyclists and fishermen who currently park there. This would allow some parking further removed from the homes at the end of the street.
- There was a request that the concrete piers that supported road guardrails and old drinking fountains that no longer work be removed when the existing roads and parking lots at Lake Frank are removed. There will be a new drinking fountain provided at the new parking lot and trailhead.
- There was discussion of environmental issues and constraints, including erosion that is occurring where the existing trail crosses the stream. There will likely be some stream stabilization work that occurs in this location, as well as providing a bridge as part of the project.
- On the northeast side of Lake Frank there are beavers, waterfowl and eagles and a concern that the new trail will cut off access for the beavers to habitat. The project will investigate habitat issues. The consultant's preliminary assessment is that the trail should not adversely affect the beavers, since there is already an existing trail in this location. Beavers

tend to be nocturnal, so there is usually not a lot of contact or conflict with users. The consultant will determine whether there is a specific resource that wildlife would be trying to reach on the other side of the trail and supplement habitat as necessary.

- A proposal was presented by staff to provide a new pedestrian bridge crossing of the stream at the location of the stepping stone crossing to provide access to natural surface trails that lead to Meadowside Nature Center. The intent is that this would be a hiking only access point to fairly steep trails that lead to the nature center. Bike racks would be provided in this location with signage instructing people to dismount from bikes before crossing the bridge. There was a suggestion that this bridge be narrow in width.
- There is an additional optional trail connection that could be made further to the north that would provide a hard surface trail and another bridge crossing of the stream. This connection would provide an accessible, paved access route from the main trail to the driveway that leads to the nature center. The connection point to the driveway would be roughly halfway between Muncaster Mill Road and the Smith Environmental Center. Cyclists could stay on the driveway to access the Smith Center and Meadowside Nature Center. They could also access the existing paved trail on Muncaster Mill Road that leads west towards Avery Road. A paved sidewalk would be provided along the edge of the driveway for pedestrian access to the nature center.
- Several individuals commented that there should be paved access provided for families with young children, disabled users and cyclists to the nature center. Others expressed a preference for natural surface trails and means to ensure that cyclists follow the rules and stay off the hiking only trails. There was discussion of the need to post signage and rely on people to follow the rules. A cyclist mentioned that many people using the park have their dogs off leash and are not following the rules.
- There was a request for a natural surface trail for bicycles to use on east side the stream in addition to the hard surface trail, so that mountain bikers won't be tempted to use the natural surface trails near the nature center on the west side of the stream.
- Park staff clarified that the Department has two use classifications for natural surface trails; hiking only, and trails open to all users, including hikers, cyclists and equestrians.
- There was a question about the timing for completion of work by the Maryland State Highway (SHA) within the park. Staff mentioned that there is a leak in a large WSSC sewer line and that SHA will finish restoring the southern parking lot as soon as sewer work is completed.
- There was a question about the duration of the construction project to build the new trail along the east side of Lake Frank. Staff estimated that the construction would take a year or less, but the project would likely be built in sections that would be opened for use as each section is completed. The project schedule proposes to complete the facility plan study by next summer, and present it to the Montgomery County Planning Board for review. If the project is approved, it would be placed in the Department of Parks Capital Improvements Program next fall to obtain construction funding in the Fiscal Year 2015-2020 program. It may take several years before construction funding is obtained.
- There were questions about whether the trail could be striped with a white hatched line down the middle to have users stay to the right with cyclist passing on the left. Staff will

consider this suggestion but mentioned that the trail should be at least ten feet wide to be striped.

- There were also questions about existing steep locations of the trail that are slick when wet. Staff will address these areas in the design of the trail. In addition, the trail would be built with a cross slope to drain the trail so that it sheds water.
- There were questions on what provisions would be made to accommodate maintenance vehicles. Staff responded that trails and bridges are built to accommodate a 10,000 lb. load for pick-up trucks for general maintenance, access for the tree crews, and access for park police vehicles.

The meeting concluded, and community members were encouraged to follow up by submitting additional comments to the Park Project Manager by e-mail.

From: [Pam and Curt Neidhart](#)
To: [Elsasser, Marian](#)
Subject: North Branch Hiker-Biker Trail
Date: Tuesday, June 25, 2013 1:44:30 PM

Ms. Elsasser,

I received the public notice about the upcoming meeting to discuss the North Branch Hiker-Biker Trail. I would like to submit my requests about this project. I live at 16612 Summertree Ct. which backs to the North Branch Stream that feeds into Lake Frank. Since the plan has been modified, I would really like the board to consider establishing a stream crossing from the east side of the stream to the west side and attaching to the trail that is being discussed. This is the area to the north of the ICC, where there is currently a natural surface trail on the east side of the stream. I have been hiking on these trails since my family moved here in 2006 and have always wanted there to be a permanent structure built to cross the stream. There are often simple rocks and trees thrown across it to facilitate getting over it. Unfortunately, this method often deteriorates the flow of the stream. Thank you for considering my request.

Sincerely,
Kevin Neidhart
301-260-2541