CLEVELAND METROPARKS Plant Community Assessment Program: Quality Control Form Cleveland Metroparks

Project Label: PCAP **Plot No:** 1267 **Date Sampled:** 7-31-12 **Lead:** Barton

				Comment required if item answer is NO
Parking/Access outside of Park Boundaries:		Y	N	If yes, write details in Comments section below
Field journals completed		Y	N	
Site sketch made on 1:3000 map?		Y	N	
Check cover page	X-axis Bearing of plot recorded	Y	N	
	GPS coords. Recorded	Y	N	
	North direction recorded	Y	N	
	Photographs taken?	Y	N	
Plot No., Date agreement on all pages?		Y	N	
Header data completed all pages?		Y	N	
Cover classes recorded in all Intensive modules		Y	N	
Browse Level By Species		Y	N	
Woody stem quality control check		Y	N	
Invasive plant quality control check		Y	N	
Ash trees mapped		Y	N	N/A
Cover by Strata? (confirm cover type)		Y	N	
Soil samples collected with matching plot #.		Y	N	
Vouchers labeled on datasheet with initials and number		Y	N	
Vouchers labeled on collection bag		Y	N	
Pink flags removed		Y	N	
Data sheet QA before leaving site?		Y	N	
Common equipment returned to tub.		Y	N	
Data sheets scanned?				Enter date to left SE 8/3/12
Final data sheets scanned?				Enter date to left
Buffer Widths measured?		Y	N	KEL 7-3-12
Web Soil Survey		Y	N	SE 8/3/12
Voucher Location	Refrigerator	Y	N	
(# vouchers collected)	Press (#)			Enter number to left
	Drier	Y	N	
	Identified	Y	N	
	Mounted	Y	N	
	Thrown away	Y	N	

GRTS point verification: Is plot sampleable?	
☑ Yes	Original GRTS point is sampleable
☐ No	Original GRTS point lands in a non-sampleable area (fill in category below)
	☐ Point falls in a water (i.e. river, lake)
	☐ Managed mowed area (i.e. golf course, picnic area, right-of-way)
	☐ Paved area (i.e. parkinglot, road)
	☐ Unsafe to sample (i.e. steep slope)
	☐ Other

Additional Comments:

Park at Northcoast Healthcare

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

Do not Pin - Bring Pins!

GENERAL INFORMATION

Project Label: PCAP

Project Name: OIBe2012

Plot Name: What, no sumac?

Plot No.: 1267

- ☐ Level 4 (no nested corners sampled)
- ■ Level 5 (nested corners sampled)

Date (mm/dd/yyyy): 7/31/12

End date (if > 1 day): / /

Party	Role**
Z. Barton	Plot leader
A. Young	Bot. Asst.
J. Cotella	Woody/Soils
N. Zimmerman	"

** Roles: Co-leader, Asst., Guide, Owner, Taxonomist, etc.

PLOT NOT SAMPLED: ☐ Other

☐ Perm. water ☐ Paved ☐ Slope ☐ Safety

SAMPLING QUALITY*

Effort Level:

- ✓ Very thorough
- ☐ Accurate
- ☐ Hurried

SEE 8-23-12

subjective evaluation of how much effort put into sampling. Hurried plots may still provide good data

TAXONOMIC ACCURACY

	high	modera.	low	not smpl
vascul.	X			n/a
bryo			X	
lichen				X

TAXONOMIC STANDARD

Authority: G&C Pub Date: 1998

LOCATION

Cuyhoga

State: OH County: ~~Northfield~~

Quadrangle: Northfield

Local Place Names: Park at Northcoast Healthcare - 60m across Sagamore Rd

Landowner: CM

Data Confidentiality:

Check one: ✓ Public data ☐ Private Data

☐ Fuzz 100m ☐ Fuzz 250m ☐ Fuzz 500m

Reason:

If data not public why?

Source of coordinates ☐ MAP ■ GPS

Coordinate system: ■ Lat/Long ☐ UTM ☐ StatePlane ☐ Other (*specify*)

Coord. Units: ■ deg ☐ deg min ■ m ☐ ft ☐ ___

Datum: ■ NAD83/WGS84 ☐ NAD27

GPS location in plot x=0 to 5, y=-1,0,+1):

x = 0 y = 0 (base of plot x=0, y=0)

Latitude: 41.35136

Longitude: 81.57704

Coord. Accuracy: ✓ m ☐ ft 1.2 +-

GPS File Name: 1267A

Plot size for cover data: 0.1 (hectares)

X-axis Bearing of plot: [30] °

Depth: (1-5): 4

Intensive modules: 2, 3, 8, 9 (EDIT IF MODIFIED)

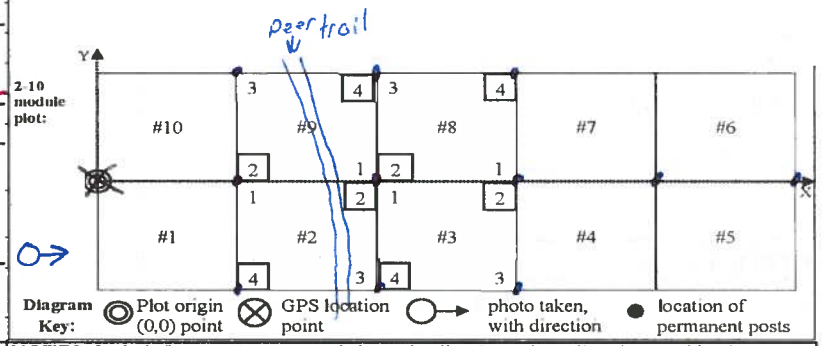
Camera No.: 4

Photo Nos.: 0196

Plot placement: ✓ GRTS ☐ Representative

☐ Random ☐ Stratified Random ☐ Transect component

☐ Systematic (grid) ☐ Capture specific feature ☐ Other



NOTES: Include **Layout** (any unusual shape details), **Location** (directions and landscape content), **Rationale** (why here), and **Veg Characterization** (description of community, dominants, strata, BROWSE). Additional notes in space on back.

Layout: 2x5

Location: 60m from Northcoast healthcare Park at Northcoast Healthcare, 60 m across Sagamore Rd

Rational: GRTS Point

Veg Char: Canopy - Acer rubrum, Sassafras albidum, Liriodendron tulipifera, Platanus occidentalis, Quercus rubra, Acer saccharum, Acer saccharinum, Tsuga canadensis, Nyssa sylvatica

Shrub - Acer rubrum, Lonicera Maackii, Lonicera morrowii, Rosa multiflora, Carpinus caroliniana, ostrya virginiana, Amelanchier sp.

Herb - Frax. seedlings, Cornus sp., Solidago caesia, Carex sp.

Minimum required fields in Bold and Underlined

*Definitions and values in CM PCAP FOM v. 1.0 and CVS Field Guide

OVER

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet 2a Page 1 of 3

Project Label: PCAP Project name: OIBe2012 Plot no.: 1267

Total modules: 10 Intensive modules: 4 Plot configuration: 2x5 Plot area (ha): 0,1

Cleveland Metroparks

Br = Browse Level. Use cover classes to describe amount of browse per species over entire plot

Strata - Cov. entire plot

Estimate for each intensive module:
%open water
%unvegetated open water
%unveg. ground (bare soil)
%unveg. litter (bare litter)

T	S	H	(F)	(A)	Br	Species	c	Voucher #	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner
									2	4	2	2	3	4	3	2	8	4	8	2	9	4	9	2	R	R
									depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
						%open water			1	0			1	0			1	0			1	0				
						%unvegetated open water			1	0			1	0			1	0			1	0				
						%unveg. ground (bare soil)			1	1			1	1			1	1			1	1				
						%unveg. litter (bare litter)			1	9			1	9			1	9			1	9				
6		2			.6	Sassafras albidum			2	6	3		4	5			2	1			3	7	4			
8	4				3+	Acer rubrum			4	9	4		4	9	4		4	8	4		4	9	3			
4						Platanus occidentalis					2	7	2	2							1	6				
4						Ulmus americana			1	6			4	3												
8		2			.9	Liriodendron tulipifera					4	3			4	8			4	8	4	6				
		2			8.	Cornus sp.			4	2					2	2	3	2	2							
		2			5	Carya cordiformis			3	2	2				2	2					2	2				
		2			8.	Rubus sp.			3	2					2	2										
4		2			.3	Prunus serotina			3	2	3		2	2	2		2	2	3		3	2	3			
		2				Toxicodendron radicans			2	2			2	2	2								2	2		
		2				Rhamnus frangula			3	2	2		2	1	2				3	2	2	2	4			
		2			7.	Fraxinus (seedlings) sp.			2	2	3		3	2	3				4	2	4	2	3			
		2				Galium sp.			2	2	2		4	2			2	2			2	2				
		2			2	Lonicera maackii			2	1			2	2									2	2		
		2			9	Crataegus sp.			2	2	2		2	2	2				2	2						
		2			D.	Asteraceae link dicot Asteraceae SE			2	2									2	1						
		2				Galium aparine ZSB 9-25-12	X	ZSB157	2	2	2												2	2		
		2				Leersia virginica			2	2			1	2+												
		2				Parthenocissus quinquefolia			2	2	2				2	2	2	2	2				3	2		
		2			2.	Oxalis stricta			2	2	2		2	2									2	2		
		2				Carex sp. (no repro)		SRL-9-23-12	2		2	3									4	2				
		2				Vitis seedlings Vitis sp. seedlings SE			1				2	2			2	2	2				2	2		
		2				Acer seedlings			1	2+					2	2							3	2		
		2			2.	Eupatorium rugosum			3	2	4		2	2	2								3	2		
		2				Geranium robertianum ?		ZSB158	1	2+			3	2												

got sticky

trailing hooked stem

thin ins.

data entry stopped here 8/10/12 UNH ✓

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet 2a Page 2 of 3

Project Label: PCAP Project name: 2012 Plot no.: 1267

Total modules: Intensive modules: Plot configuration: Plot area (ha):

Cleveland Metroparks

Br = Browse Level. Use cover classes to describe amount of browse per species over entire plot

Strata - Cov. entire plot

Estimate for each intensive module:

	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner
	2	4	2	2	3	4	3	2	8	4	8	2	9	4	9	2	R	R		
	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
%open water	1				1				1				1							
%unvegetated open water	1				1				1				1							
%unveg. ground (bare soil)	1				1				1				1							
%unveg. litter (bare litter)	1				1				1				1							

T	S	H	(F)	(A)	Br	Species	Voucher #	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
		2				Unknown dicot (woody) Robinia pseudoacacia	C4-0197			2	2					1	1										
		2				Carex sp. (no caps)				2	3	1	2					3	2	1	2						
		2			2+	Lonicera morrowii				2	2					2	2					2	2				
		2				Torilis sp.				2	2	1	2+			2	2			1	2						
		2				Circaea lutetiana				2	1									4		4	2				
		1				Pinus seedlings				2	1									1	1						
		2				Geum sp.				2	1	1	2														
		2				Alliaria petiolata				2	2											2	2				
		2				Unknown dicot 2 Hackelia virginiana 10-9-12	C4-0198			2	1	2	2			3	2					2	2				
		1				Quercus seedlings		1	1																		
		2				Unknown dicot 3 Lysimachia ciliata ZSB 10-9-12	C4-0199	1	2													2	1				
		1				Pycnanthemum sp.		1	2													2	1				
5	4	2			8+	Fagus grandifolia						2	1			2	1			1	1						
5		2			8+	Nyssa sylvatica								2	2	2	5			1	1						
		2			9	Solidago caesia								2	1			2	2	2	2	2					
		2				Ulmus seedlings								2	2			3	2	1	1						
		2				Polygonum ~~virginianum~~ virginianum sp. ZSB 10-9-12	C4-0200							2	1												
8	3					Acer saccharinum						1	4														
		2				Hackelia virginiana						1	2			2	2					2	2				
		1				Rubus occidentalis						1	1														
		2				Carex swanii						1	2														
		2				Moss sp.						1	2									2	1				
	1	2			9+	Rosa multiflora										2	2										
	4					Acer saccharum												2	5								
		1				Unk. (fern) ZSB 9-25-12	X ZSB159													2	1						

Duplicate Species 10-10-12 SRE

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet 2a Page 3 of 3

Project Label: PCAP Project name: 0113e 2012 Plot no.: 1267

Total modules: _____ Intensive modules: _____ Plot configuration: _____ Plot area (ha): _____

Cleveland Metroparks

Br = Browse Level. Use cover classes to describe amount of browse per species over entire plot

Strata - Cov. entire plot

Estimate for each intensive module:

	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner
													9	4	9	2	R	R
	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
%open water	1				1				1				1					
%unvegetated open water	1				1				1				1					
%unveg. ground (bare soil)	1				1				1				1					
%unveg. litter (bare litter)	1				1				1				1					

T	S	H	(F)	(A)	Br	Species	c	Voucher #	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
		2				Ligustrum vulgare													2	2						
		2				Unknown poaceae													2		2	2				
		2				Panicum sp. (no repro)													1	2						
		2				Taraxacum officinale																	R	2		
		P				Asclepias sp.																	R	1		
		1				Berberis thunbergii																	R	1		
		1			a	Populus (seedlings) sp.																	R	1		
		1				Picea abies																	R	1		
		2				Veronica officinalis																	R	2		
	2					Quercus rubra																	R	2		
	2	1				Amelanchier sp.																	R	2		
		1				Ginko biloba																	R	1		
	2					Carpinus caroliniana																	R	2		
	4					Ostrya virginiana																	R	5		
3	~~12~~					Tsuga canadensis																	R	4		
		2				Maianthemum racemosum																	R	2		
		1				Equisetum arvense																	R	1		
		1				Lindera benzoin																	R	1		

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Cleveland Metroparks

Project Label: PCAP Project Name: OIBe2012 Plot No.: 1267 Page: 1 of 3

Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0-1.4m browsed	% sub or super sample	# shrub clumps	size class (cm) woody stems >1.4m 1 0-<1	2 1-<2.5	3 2.5-<5	4 5-<10	5 10 - <15	6 15 - <20	7 20 - <25	8 25 - <30	9 30 - <35	10 35 - <40	11 >40 (record each tree)
1	Acer rubrum								••	••	•	•					
1	Standing dead								•	••	•						
1	Sassafras albidum											••	•	•			
1	Lonicera morrowii					X											
1	Fraxinus sp.			•													
1	Rosa multiflora			•													
1	Populus sp.			•													
2	Standing dead						•	•		••							
2	Sassafras albidum											•					
2	Acer rubrum									•			•	•			
2	Platinus occidentalis														•		
2	Fraxinus sp.			•													
2	Lonicera morrowii					••											
2	Cornus sp.			•													
3	Acer rubrum										•		•				
3	Standing dead									•							
3	Acer saccharinum										•						
4	Acer rubrum								•			•					
4	Liriodendron tulipifera											•		•		•	54.0
4	Acer saccharum							••	••	••	•						
4	Standing dead								•		•						
4	Prunus serotina												•				
4	Rosa multiflora			•		•											
4	Fraxinus sp.			•													

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Cleveland Metroparks

Project Label: PCAP Project Name: 01 Be 2012 Plot No.: 1267 Page: 2 of 3

Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0-1.4m browsed	% sub or super sample	# shrub clumps	size class (cm) woody stems >1.4m 1 0-<1	2 1-<2.5	3 2.5-<5	4 5-<10	5 10 - <15	6 15 - <20	7 20 - <25	8 25 - <30	9 30 - <35	10 35 - <40	11 >40 (record each tree)
5	Acer rubrum								•								
5	Quercus rubra									••							
5	standing dead						•		•	••	•				X		
5	Sassafras albidum													•	•	•	48.4
5	Fagus grandifolia			•				••	•	••	•						
5	Ostrya virginiana									•							
5	Lonicera morrowii			•													
6	Fagus grandifolia			••				•	••		•						
6	Standing dead							••	••	•	•						
6	Liriodendron tulipifera																55.2, 59.3
6	Ostrya virginiana							•		•							
6	Acer rubrum								•	••	•						
6	Acer saccharum							•									
6	Sassafras albidum										•						
6	Amelanchier sp.							•									
6	Nyssa sylvatica			•													
7	Sassafrass albidum										•	•					
7	Acer rubrum			•					•	••		•	•				
7	standing dead							•	••								
7	Acer saccharum							•	•	•							
7	Liriodendron tulipifera																63.2
7	Rosa multiflora			•													
8	Rosa multiflora			⊠		∴											
8	Liriodendron tulipifera			•												•	

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Cleveland Metroparks

Project Label: PCAP Project Name: OIBe 2012 Plot No.: 1267 Page: 3 of 3

Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0-1.4m browsed	% sub or super sample	# shrub clumps	size class (cm) woody stems >1.4m 1 0-<1	2 1-<2.5	3 2.5-<5	4 5-<10	5 10 - <15	6 15 - <20	7 20 - <25	8 25 - <30	9 30 - <35	10 35 - <40	11 >40 (record each tree)
8	standing dead								•	•							
8	Nyssa sylvatica								X			•					
8	Acer saccharum								•								
8	Acer rubrum									X		•	•				
8	Fraxinus sp			•													
9	Liriodendron tulipifera			•									•		•		
9	Acer rubrum									••		•	•	•			
9	standing dead								•	•	••	•	•				
9	Sassafrass albidum			•:							•		•				
9	Lonicera morrowii			•		•											
9	Prunus serotina			•													
9	Lonicera maackii			•													
9	Nyssa sylvatica			•													
9	Ligustrum vulgare					•											
10	standing dead									•							
10	Lonicera morrowii					•:											
10	Nyssa sylvatica			•										•			
10	Acer rubrum											•	•				
10	Liriodendron tulipifera													•			57.4
10	Fraxinus sp			•													
10	Rosa multiflora			•													
10	Lonicera maackii			•		•											
10	Populus sp.			•													
10	Lindera benzoin			•													

CLEVELAND METROPARKS Plant Community Assessment Program - Plant Cover and Earth Surface

Project Label: PCAP Project Name: OIBC2012 Plot No.: 1267

Cleveland Metroparks

STANDING BIOMASS (required for emergent wetlands): collected in 0.1m clip plots (32x32 cm) from corners 1 and 3 in each intensive module. Required for VIBI-E score calculation. C?=check when collected

Module #	C?	Corner	Corner

CLASSIFICATION

(FIT = excellent g Fit and Confidence

Hydrogeomorphic class (WETLANDS ONLY):

- □ DEPRESSION Fit=___ Conf=___
- □ IMPOUNDMENT □ Beaver □ Human Fit=___ Conf=___
- □ RIVERINE □ Headwater □ Mainstem □ Channel Fit=___ Conf=___
- □ SLOPE (ground water hydrology or on a physical slop) Fit=___ Conf=___
- □ FRINGING □ Reservoir □ Natural Lake Fit=___ Conf=___
- □ COASTAL (specify subclass) Fit=___ Conf=___
- □ BOG (strongly, moderately, weekly ombrotrophic) Fit=___ Conf=___

Ohio EPA VIBI Plant Community Class (WETLANDS ONLY):

- □ FOREST □ swamp forest □ bog forest □ forest seep Fit=___ Conf=___
- □ EMERGENT □ marsh □ wet meadow □ open bog Fit=___ Conf=___
- □ SHRUB □ shrub swamp □ tall sh. bog □ tall sh. fen Fit=___ Conf=___

McNAB INDICES (degrees) + for up - for down

(FILLED OUT USING GIS PROGRAM - DO NOT FILL OUT IN FIELD)

		LFI*	TSI**
At aspect	N		
+45 degrees	NE		
+90 degrees	E		
+135 degrees	SE		
+180 degrees	S		
+225 degrees	SW		
+270 degrees	W		
+315 degrees	NW		

LFI is angle of plot to the horizon. TSI is angles formed by local slopes. For TSI measure angle from recorders eye to eye of person standing ~10 m away.

* Landform Index (position within landscape)

** Terrain Shape Index (site microtopographic shape)

MICROTOPOGRAPHIC FEATURE COUNTS - Intensive modules only

Ranks for microhabitat features. Select one or select two and average the score.NOTE: If mod falls on a slope automatically gets ranked based on steepness (1-3) to begin + any features present

Slope 1 = slight elevational grade across module (hill) **Slope 2** = falls on slope ~20° **Slope 3** = maximum steepness that can be safely sampled ~45°

0 feature is absent or functionally absent from the wetland

3 feature is present in the wetland in very small amounts or if more common, of low quality

7 feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality

10 feature is present in moderate or greater amounts and of highest quality

c.w.d. - count for pieces with minimum 1m length

mod#	corner	no. of tussocks depth 3 1x1m (count)	no. of hummocks uplands (Tip-Ups) depth 2 3.16x3.16m (count)	no. macro. depressions depth 1 10x10m (count)	c.w.d (2-12 cm) depth 1 10x10m (count)	c.w.d (12-40cm) depth 1 10x10m (count)	c.w.d >40 cm depth 1 10x10m (count)	microhab. interspers. depth 1 10x10m (rank)	microhab. SLOPE 10x10m (rank)
2		0	0	2	15	0	0	2	1
3		0	0	1	18	0	0	2	0
8		0	0	1	30	0	0	2	1
9		0	0	1	27	0	0	2	1

NOTE: tussock and hummocks are counted in BOTH nested quadrat corners but counts are aggregated.

CROWN COVER (DENSIOMETER): Make 4 readings per module facing N, S, E, W. Place dot count in corresponding space. (4 dots per grid square)

Module	N	S	E	W
2	5	7	6	4
3	12	7	6	3
8	6	6	11	12
9	3	6	5	2

CLEVELAND METROPARKS Plant Community Assessment Program - Soils, Crown Cover, Standing Biomass Data Sheet 6a

Project label: PCAP Project Name: OIBE2012 Plot No.: 1267

SOIL PIT DESCRIPTION: Excavate 20 cm plug with shovel. Describe using Munsell chart, visual exam, texture, and odor.

Soil pit module # 8 (one per entire plot)

5 cm	matrix color	10YR 3/3
	mottle color	n/a
	%mottle	0
	oxid roots	Y (N)
	texture*	1
	redox features**	Y (N)
	hydr. cond.***	I S M (D)
20 cm	matrix color	10YR3/3
	mottle color	n/a
	%mottle	0
	oxid roots	Y (N)
	texture*	1
	redox features**	(Y) N
	hydro. cond.***	I S (M) D

* refer to texture classes on reverse side

** e.g. hydrogen sulfide odor, gleying, etc.

*** Circle one: I=indundated S=saturated M=moist D=dry

Notes: include evidence of earthworms (worms, castings, middens)

no evidence of earthworms

SOIL SAMPLES Standard procedure: collect a soil sample of the top 10 cm of soil from center of each intensive module and composite the sample

Soil Collection Module	Horizon (A, B, C)
2,3,8,9 composited	A

Well soil Survey Information

Soil Series/Type: Fitchville silt loam

Soil Series Source: Ohio Soil Survey

Landform type: Glacier lakes, knolls on terraces

Depth to rest. Layer: >80"

Parent Material: Lacustrine deposits

DRAINAGE

- ☐ Excessively dr.
- ☐ Somewhat excessively
- ☐ Well drained
- ☐ Moderately well dr.
- ☒ Somewhat poorly dr.
- ☐ Very poorly dr.
- ☐ Impermeable surface

SE 8/3/12

SOIL DEPTH MEASUREMENT: Measure to the nearest 0.1 cm in center of intensive modules. If >30.5 cm, record as >30

mod#	1 litter+ organic depth (cm)	2 litter depth (cm)	water depth (cm)	depth sat soil (cm)
2	2	1.9	0	>30
~~2~~3	2	1.9	0	>30
8	4.5	4	0	>30
9	3.5	3	0	>30

EARTH SURFACE & GROUND COVER

Underlying Earth Surface*		Ground Cover	
(Sum = 100%)	percent	(Each ≤ 100%)	percent
Histosol	0	Coarse Woody Debris***	5
Mineral Soil	100	Fine Woody Debris****	2
Gravel-Cobble*	0	Litter	97
Boulder**	0	Duff (Ferm + Humus)	97
Bedrock	0	Bryophyte- Lichen	1
* Gravel-Cobble = 1/16-10"		Water	0
**Boulder = > 10 in		Bare Soil	2
*** >5 cm in diameter		Road/Trail	2
**** <5 cm in diameter		Other	

TRAIL INFORMATION:

record type and cover for each

Type	%Cover
☐ All Purpose	
☐ Bridle	
☐ Hiking sanctioned	
☒ ~~Bootleg unsanctioned~~	
☐ Gravel	
☒ Deer	2 SE

COVER BY STRATA %

estimate using midpoints of 5,ex:3, 8, 13

Strata	Height Range (m)	Total Cover (%)
Tree	5 -	93
Shrub	.5 - 5	43
Herb	- .5	13
(Floating)*	-	0
(Aquatic)*	-	0

* rooted and floating or slightly emersed

** submersed, most plant mass below surface

SEE BACK OF PAGE FOR "TYPICAL"STRATA DESCRIPTIONS. STRATA CAN VARY BY COVER TYPE.

STAND SIZE

- ☐ >600 x plot size
- ☐ > 100 x plot size
- ☐ 10-100 x plot size
- ☐ 3-10 x plot size
- ☒ 1-3 x plot size
- ☐ < plot size

CLEVELAND METROPARKS Plant Community Assessment Program: Invasive Species Survey Cleveland Metroparks

Tier 1: Early detection/ Rapid response		Presence				GPS
		NE	SE	SW	NW	
Microstegium vimineum	Japanese stiltgrass					
Ranunculus ficaria	Lesser Celandine					
Cynanchum louiseae (vine)	Black Swallow-wort					
Butomus umbellatus (wetland)	Flowering Rush					
Heracleum mantegazzianum	Giant Hogweed					

Tier 2: Assess as Needed		# of Plants				comments
		NE	SE	SW	NW	
Acer platanoides	Norway Maple					
Ailanthus altissima	Tree of Heaven					
Lonicera japonica (vine)	Japanese Honeysuckle		4	1	1	
Lythrum salicaria (wetland)	Purple Loosestrife					
Aegopodium podagraria (G-cover)	Bishop's Goutweed					
Celastrus orbiculatus (vine)	Asian Bittersweet					
Torilis sp.	Hedgeparsley	1	1	1	1	
Conium maculatum	Poison Hemlock					
Rhamnus cathartica	Common Buckthorn (shrub)					
Berberis thunbergii	Japanese Barberry (shrub)	1	1			
Alnus glutinosa	European Alder					
Dipsacus laciniatus	Cut-leaf Teasel					
Elaeagnus umbellata	Autumn Olive (shrub)					
Lonicera maackii	Amur Honeysuckle (shrub)	2	4	*23	B4	
Euonymus fortunei	Wintercreeper					

Tier 3: Presence is of Interest		# of Plants				comments
		NE	SE	SW	NW	
Convallaria majalis (G-cover)	Lily of the Valley					
Coronilla varia (G-cover)	Crown Vetch					
Eleutherococcus pentaphyllus	Five-leaf Aralia (shrub)					
Pachysandra terminalis (G-cover)	Japanese Pachysandra					
Philadelphus coronarius	Mock Orange (shrub)					
Pulmonaria officinalis (G-cover)	Lungwort					
Rubus phoenicolasius	Wineberry					
Iris pseudacorus (wetland)	Yellow Flag Iris					
Ornithogalum umbellatum	Star of Bethlehem					
Viburnum opulus var. opulus	European Cranberry (shrub)				1	
Viburnum plicatum	Doublefile Viburnum (shrub)					

Tier 4: Widespread and abundant		Presence				comments
		NE	SE	SW	NW	
Alliaria petiolata	Garlic Mustard	4	4	*1	*2	
Ligustrum vulgare	Common Privet (shrub)	1	3	*1	*1	
L. morrowii, L. tatarica	Bush Honeysuckles (shrub)	2	4	*2	*2	
Phalaris arundinacea	Reed Canarygrass			*1		
Phragmites australis (wetland)	Phragmites					
Polygonum cuspidatum	Japanese Knotweed					
Frangula alnus	Glossy Buckthorn (shrub)	*1	1	*1		
Rosa multiflora	Multiflora Rose (shrub)	2	4	*24	5	
Typha angustifolia, T. x.glauca	Cattails (wetland)					
Cirsium arvense	Canada thistle			*1		
Dipsacus fullonum	Common Teasel					
Hesperis matronalis	Dame's Rocket					
Vinca minor (G-cover)	Periwinkle					

Presence
X: yes

of Plants
1: 1-10
2: 11-50.
3: 51-100
4: 101-1,000
5: >1,000

SRE 8-23-12

of Plants
1: 1-10
2: 11-50.
3: 51-100
4: 101-1,000
5: >1,000

Presence
X: yes

Note: For Ground-cover plants record "stem #" but in comment field describe # of colonies and patch size (S,M, L)

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (Initial): _____

Site ID: PCAP Be 1267 DATE: 07/31/2012

Location: ● AA Center ○ N ○ S ○ E ○ W

Fill in bubble(s) if plot(s) could not be sampled and flag → ○ Plot 1 ○ Plot 2 ○ Plot 3

Buffer Natural Cover Strata

Fill in bubbles for all that apply: Canopy Type: D = Deciduous; E = Evergreen. Leaf Type: B = Broadleaf; N = Needle Leaf. Absent: No tree canopy.
Strata Section: Fill in appropriate cover class bubble for each strata type for each plot. 0 = Absent; 1 = Sparse(<10%); 2=Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (>75%)

Buffer Plot 1	Canopy Type: ● E	Absent: ○	Buffer Plot 2	Canopy Type: D E	Absent: ○	Buffer Plot 3	Canopy Type: D E	Absent: ○
	Leaf Type: ● N	Flag		Leaf Type: B N	Flag		Leaf Type: B N	Flag
Big Trees (>0.3m DBH)	4		Big Trees (>0.3m DBH)			Big Trees (>0.3m DBH)		
Small Trees (<0.3m DBH)	3		Small Trees (<0.3m DBH)			Small Trees (<0.3m DBH)		
Woody Shrubs, Saplings (0.5m-5m HIGH)	0		Woody Shrubs, Saplings (0.5m-5m HIGH)			Woody Shrubs, Saplings (0.5m-5m HIGH)		
Woody Shrubs, Saplings (<0.5m HIGH)	1		Woody Shrubs, Saplings (<0.5m HIGH)			Woody Shrubs, Saplings (<0.5m HIGH)		
Herbs, Forbs and Grasses	1		Herbs, Forbs and Grasses			Herbs, Forbs and Grasses		
Bare ground	0		Bare ground			Bare ground		
Litter, duff	4		Litter, duff			Litter, duff		
Rock	0		Rock			Rock		
Water	0		Water			Water		
Submerged Vegetation	0		Submerged Vegetation			Submerged Vegetation		

Stressor Presence/Absence - Confirm that a filled data bubble indicates presence and an unfilled bubble indicates absence by filling this bubble. ●

Residential and Urban Stressors					Hydrology Stressors					Agricultural & Rural Stressors				
Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present - Plot	1	2	3	Flag
Road - gravel	○	○	○		Ditches, Channelization	○	○	○		Pasture/Hay	○	○	○	
Road - two lane	○	○	○		Dike/Dam/Road/RR Bed (IMPEDE FLOW)	○	○	○		Range	○	○	○	
Road - four lane	○	○	○		Water Level Control Structure	○	○	○		Row Crops	○	○	○	
Parking Lot/Pavement	○	○	○		Excavation, Dredging	○	○	○		Fallow Field (RECENT-RESTING ROW CROP FIELD)	○	○	○	
Golf Course	○	○	○		Fill/Spoil Banks	○	○	○		Fallow Field (OLD - GRASS, SHRUBS, TREES)	○	○	○	
Lawn/Park	○	○	○		Freshly Deposited Sediment (UNVEGETATED)	○	○	○		Nursery	○	○	○	
Suburban Residential	○	○	○		Soil Loss/Root Exposure	○	○	○		Dairy	○	○	○	
Urban/Multifamily	○	○	○		Wall/Riprap	○	○	○		Orchard	○	○	○	
Landfill	○	○	○		Inlets, Outlets	○	○	○		Confined Animal Feeding	○	○	○	
Dumping	○	○	○		Point Source/Pipe (EFFLUENT OR STORMWATER)	○	○	○		Rural Residential	○	○	○	
Trash	○	○	○		Impervious surface input (SHEETFLOW)	○	○	○		Gravel Pit	○	○	○	
Other: _____	○	○	○		Other: _____	○	○	○		Irrigation	○	○	○	
Other: _____	○	○	○		Other: _____	○	○	○		Other: _____	○	○	○	

Industrial Development Stressors					Habitat/Vegetation Stressors									
Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present - Plot	1	2	3	Flag
Oil Drilling	○	○	○		Forest Clear Cut	○	○	○		Herbicide Use	○	○	○	
Gas Wells	○	○	○		Forest,Selective Cut	○	○	○		Mowing/Shrub Cutting	○	○	○	
Mine (surface)	○	○	○		Tree Plantation	○	○	○		Trails	○	○	○	
Mine (underground)	○	○	○		Tree Canopy Herbivory (INSECT)	○	○	○		Soil Compaction (ANIMAL OR HUMAN)	○	○	○	
Military	○	○	○		Shrub Layer Browsed (WILD OR DOMESTIC)	●	○	○		Offroad vehicle damage	○	○	○	
Other: _____	○	○	○		Highly Grazed Grasses (OVERALL <3" HIGH)	○	○	○		Soil erosion (FROM WIND, WATER, OR OVERUSE)	○	○	○	
Other: _____	○	○	○		Recently Burned Forest Canopy	○	○	○		Other: _____	○	○	○	
Other: _____	○	○	○		Recently Burned Grassland (BLACKENED)	○	○	○		Other: _____	○	○	○	

Flag codes: K = No measurement made, U = Suspect measurement., F1,F2, etc. = misc. flags assigned by each field crew.
Explain all flags in comment section on the back of this form

2428168304

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (Initial): _____

Site ID: PCAPBe1267 DATE: 07 / 31 / 2012

Location: ○ AA Center ● N ○ S ○ E ○ W

Fill in bubble(s) if plot(s) could not be sampled and flag → ○ Plot 1 ○ Plot 2 ● Plot 3

Buffer Natural Cover Strata

Fill in bubbles for all that apply: Canopy Type: D = Deciduous; E = Evergreen. Leaf Type: B = Broadleaf; N = Needle Leaf. Absent: No tree canopy.
Strata Section: Fill in appropriate cover class bubble for each strata type for each plot. 0 = Absent; 1 = Sparse(<10%); 2=Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (>75%)

Buffer Plot 1	Canopy Type: D E / Leaf Type: B N	Absent: ○	Flag	Buffer Plot 2	Canopy Type: D E / Leaf Type: B N	Absent: ○	Flag	Buffer Plot 3	Canopy Type: D E / Leaf Type: B N	Absent: ○	Flag
						2				4	
Big Trees (>0.3m DBH)	0 1 2 ● 4			Big Trees (>0.3m DBH)	0 1 ● 3 4			Big Trees (>0.3m DBH)	0 1 2 3 4		
Small Trees (<0.3m DBH)	0 1 2 ● 4			Small Trees (<0.3m DBH)	0 1 2 ● 4			Small Trees (<0.3m DBH)	0 1 2 3 4		
Woody Shrubs, Saplings (0.5m-5m HIGH)	0 1 ● 3 4			Woody Shrubs, Saplings (0.5m-5m HIGH)	0 1 ● 3 4			Woody Shrubs, Saplings (0.5m-5m HIGH)	0 1 2 3 4		
Woody Shrubs, Saplings (<0.5m HIGH)	0 ● 2 3 4			Woody Shrubs, Saplings (<0.5m HIGH)	0 ● 2 3 4			Woody Shrubs, Saplings (<0.5m HIGH)	0 1 2 3 4		
Herbs, Forbs and Grasses	0 ● 2 3 4			Herbs, Forbs and Grasses	0 ● 2 3 4			Herbs, Forbs and Grasses	0 1 2 3 4		
Bare ground	0 1 ● 3 4			Bare ground	0 1 ● 3 4			Bare ground	0 1 2 3 4		
Litter, duff	0 1 2 ● 4			Litter, duff	0 1 2 ● 4			Litter, duff	0 1 2 3 4		
Rock	0 ● 2 3 4			Rock	● 1 2 3 4			Rock	0 1 2 3 4		
Water	● 1 2 3 4			Water	● 1 2 3 4			Water	0 1 2 3 4		
Submerged Vegetation	● 1 2 3 4			Submerged Vegetation	● 1 2 3 4			Submerged Vegetation	0 1 2 3 4		

Stressor Presence/Absence - Confirm that a filled data bubble indicates presence and an unfilled bubble indicates absence by filling this bubble. ●

Residential and Urban Stressors					Hydrology Stressors					Agricultural & Rural Stressors				
Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present Plot	1	2	3	Flag
Road - gravel	○	○	○		Ditches, Channelization	○	○	○		Pasture/Hay	○	○	○	
Road - two lane	○	○	○		Dike/Dam/Road/RR Bed (IMPEDE FLOW)	○	○	○		Range	○	○	○	
Road - four lane	○	○	○		Water Level Control Structure	○	○	○		Row Crops	○	○	○	
Parking Lot/Pavement	○	○	○		Excavation, Dredging	○	○	○		Fallow Field (RECENT-RE IN ROW CROP FIELD)	○	○	○	
Golf Course	○	○	○		Fill/Spoil Banks	○	○	○		Fallow Field (OLD - GRASS, SHRUBS, TREES)	○	○	○	
Lawn/Park	○	○	○		Freshly Deposited Sediment (UNVEGETATED)	○	○	○		Nursery	○	○	○	
Suburban Residential	○	○	○		Soil Loss/Root Exposure	○	●	○		Dairy	○	○	○	
Urban/Multifamily	○	○	○		Wall/Riprap	○	○	○		Orchard	○	○	○	
Landfill	○	○	○		Inlets, Outlets	○	○	○		Confined Animal ee ing	○	○	○	
Dumping	○	○	○		Point Source/Pipe (EFFLUENT OR STORMWATER)	○	○	○		Rural Residentia	○	○	○	
Trash	○	○	○		Impervious surface input (SHEETFLOW)	○	○	○		Gravel Pit	○	○	○	
Other:	○	○	○		Other:	○	○	○		Irrigation	○	○	○	
Other:	○	○	○		Other:	○	○	○		Other:	○	○	○	

Industrial Development Stressors					Habitat/Vegetation Stressors									
Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present - Plot	1	2	3	Flag	Fill bubble if present - Plot	1	2	3	Flag
Oil Drilling	○	○	○		Forest Clear Cut	○	○	○		Herbicide Use	○	○	○	
Gas Wells	○	○	○		Forest Selective Cut	○	○	○		Mowing/Shrub Cutting	○	○	○	
Mine (surface)	○	○	○		Tree Plantation	○	○	○		Trails	●	○	○	1
Mine (underground)	○	○	○		Tree Canopy Herbivory (INSECT)	○	○	○		Soil Compaction (ANIMAL OR HUMAN)	●	○	○	
Military	○	○	○		Shrub Layer rowsed (WILD OR DOMESTIC)	●	○	○		Offroad vehicle damage	○	○	○	
Other:	○	○	○		Highly Grazed Grasses (OVERALL <3" HIGH)	○	○	○		Soil erosion (FROM WIND, WATER, OR OVERUSE)	○	●	○	
Other:	○	○	○		Recently Burned Forest Canopy	○	○	○		Other:	○	○	○	
Other:	○	○	○		Recently Burned Grassland (BLACKENED)	○	○	○		Other:	○	○	○	

● **Flag codes: K = No measurement made, U = Suspect measurement., F1,F2, etc. = misc. flags assigned by each field crew.**
Explain all flags in comment section on the back of this form

4 1 8304

FORM B-1: NWCA BUFFER SAMPLE PLOTS (From)

Reviewed by (initial): _____

Site ID: NWCA11- PCAPBe1267

DATE: 07 / 31 / 2013

Location: ○ AA Center ○ N ○ S ● E ○ W

Fill in bubble(s) if plot(s) could not be sampled and flag → ○ Plot 1 ○ Plot 2 ○ Plot 3

Buffer Natural Cover Strata

Fill in bubbles for all that apply: Canopy Type: D = Deciduous; E = Evergreen. Leaf Type: B = Broadleaf; N = Needle Leaf. Absent: No tree canopy.
Strata Section: Fill in appropriate cover class bubble for each strata type for each plot. 0 = Absent; 1 = Sparse(<10%); 2=Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (>75%)

Buffer Plot 1	Canopy Type: D ○ E ○ Absent: ○ Leaf Type: B ○ N					Flag
Big Trees (>0.3m DBH)	0	1	2	3	●	
Small Trees (<0.3m DBH)	0	1	●	3	4	
Woody Shrubs, Saplings (0.5m-5m HIGH)	0	1	●	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	0	●	2	3	4	
Herbs, Forbs and Grasses	0	1	●	3	4	
Bare ground	0	●	2	3	4	
Litter, duff	0	1	2	3	●	
Rock	●	1	2	3	4	
Water	●	1	2	3	4	
Submerged Vegetation	●	1	2	3	4	

Buffer Plot 2	Canopy Type: D ○ E ○ Absent: ○ Leaf Type: B ○ N					Flag
Big Trees (>0.3m DBH)	0	1	2	●	4	
Small Trees (<0.3m OBH)	0	1	2	●	4	
Woody Shrubs, Saplings (0.5m-5m HIGH)	0	1	●	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	0	●	2	3	4	
Herbs, Forbs and Grasses	0	1	2	3	●	
Bare ground	0	●	2	3	4	
Litter, duff	0	1	2	●	4	
Rock	0	●	2	3	4	
Water	●	⊗	2	3	4	
Submerged Vegetation	●	1	2	3	4	

Buffer Plot 3	Canopy Type: D ○ E ○ Absent: ○ Leaf Type: B ○ N					Flag
Big Trees (>0.3m DBH)	0	1	●	3	4	
Small Trees (<0.3m DBH)	0	1	2	●	●	
Woody Shrubs, Saplings (0.5m-5m HIGH)	●	●	●	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	●	●	2	3	4	
Herbs, Forbs and Grasses	0	●	2	3	4	
Bare ground	0	1	2	3	●	
Litter, duff	0	●	2	3	4	
Rock	●	1	2	3	4	
Water	●	1	2	3	4	
Submerged Vegetation	●	1	2	3	4	

Stressor Presence/Absence - Confirm that a filled data bubble indicates presence and an unfilled bubble indicates absence by filling this bubble. ●

Residential and Urban Stressors

Fill bubble if present - Plot	1	2	3	Flag
Road - gravel	○	○	○	
Road - two lane	○	○	○	
Road - four lane	○	○	○	
Parking Lot/Pavement	○	○	○	
Golf Course	○	○	○	
Lawn/Park	○	○	○	
Suburban Residential	○	○	○	
Urban/Multifamily	○	○	○	
Landfill	○	○	○	
Dumping	○	○	○	
Trash	○	○	○	
Other: _____	○	○	○	
Other: _____	○	○	○	

Hydrology Stressors

Fill bubble if present - Plot	1	2	3	Flag
Ditches, Channelization	○	○	○	
Dike/Dam/Road/RR Bed (IMPEDE FLOW)	●	○	○	
Water Level Control Structure	○	○	○	
Excavation, Dredging	○	○	○	
Fill/Spoil Banks	○	○	○	
Freshly Deposited Sediment (UNVEGETATED)	○	○	○	
Soil Loss/Root Exposure	○	○	○	
Wall/Riprap	○	○	○	
Inlets, Outlets	○	○	○	
Point Source/Pipe (EFFLUENT OR STORMWATER)	○	○	○	
Impervious surface input (SHEETFLOW)	○	○	○	
Other: Headwater stream	○	●	○	
Other: _____	○	○	○	

Agricultural & Rural Stressors

Fill bubble if present - Plot	1	2	3	Flag
Pasture/Hay	○	○	○	
Range	○	○	○	
Row Crops	○	○	○	
Fallow Field (RECENT-RESTING ROW CROP FIELD)	○	○	○	
Fallow Field (OLD - GRASS, SHRUBS, TREES)	○	○	○	
Nursery	○	○	○	
Dairy	○	○	○	
Orchard	○	○	○	
Confined Animal Feeding	○	○	○	
Rural Residential	○	○	○	
Gravel Pit	○	○	○	
Irrigation	○	○	○	
Other: _____	○	○	○	

Industrial Development Stressors

Fill bubble if present - Plot	1	2	3	Flag
Oil Drilling	○	○	○	
Gas Wells	○	○	○	
Mine (surface)	○	○	○	
Mine (underground)	○	○	○	
Military	○	○	○	
Other: GAS PIPELINE	●	○	○	/
Other: _____	○	○	○	
Other: _____	○	○	○	

Habitat/Vegetation Stressors

Fill bubble if present - Plot	1	2	3	Flag
Forest Clear Cut	○	○	○	
Forest Selective Cut	○	○	○	
Tree Plantation	○	○	○	
Tree Canopy Herbivory (INSECT)	○	○	○	
Shrub Layer Browsed (WILD OR DOMESTIC)	●	●	●	
Highly Grazed Grasses (OVERALL <3" HIGH)	○	○	○	
Recently Burned Forest Canopy	○	○	○	
Recently Burned Grassland (BLACKENED)	○	○	○	

Fill bubble if present - Plot	1	2	3	Flag
Herbicide Use	○	○	○	
Mowing/Shrub Cutting	○	○	○	
Trails	○	○	○	
Soil Compaction (ANIMAL OR HUMAN)	○	○	○	
Offroad vehicle damage	○	○	○	
Soil erosion (FROM WIND, WATER, OR OVERUSE)	○	○	○	
Other: _____	○	○	○	
Other: _____	○	○	○	

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAPBe1267 DATE: 07/31/2012

Location: ○ AA Center ○ N ● S ○ E ○ W

Fill in bubble(s) if plot(s) could not be sampled and flag → ○ Plot 1 ● Plot 2 ● Plot 3 | 2

Buffer Natural Cover Strata

Fill in bubbles for all that apply. Canopy Type: D = Deciduous; E = Evergreen. Leaf Type: B = Broadleaf; N = Needle Leaf. Absent: No tree canopy.
Strata Section: Fill in appropriate cover class bubble for each strata type for each plot. 0 = Absent; 1 = Sparse(<10%); 2=Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (>75%)

Buffer Plot 1	Canopy Type: ● E	Absent: ○	Buffer Plot 2	Canopy Type: ○ E	Absent: ○	Buffer Plot 3	Canopy Type: ○ E	Absent: ○
	Leaf Type: ● N	Flag		Leaf Type: ○ N	Flag		Leaf Type: ○ N	Flag

	Plot 1	Plot 2	Plot 3
Big Trees (>0.3m DBH)	2	0	0
Small Trees (<0.3m DBH)	3	0	0
Woody Shrubs, Saplings (0.5m-5m HIGH)	2	0	0
Woody Shrubs, Saplings (<0.5m HIGH)	1	0	0
Herbs, Forbs and Grasses	3	0	0
Bare ground	1	0	0
Litter, duff	3	0	0
Rock	0	0	0
Water	0	0	0
Submerged Vegetation	0	0	0

Stressor Presence/Absence - Confirm that a filled data bubble indicates presence and an unfilled bubble indicates absence by filling this bubble. ●

Residential and Urban Stressors

Fill bubble if present - Plot	1	2	3	Flag
Road - gravel	○	○	○	
Road - two lane	●	○	○	3
Road - four lane	○	○	○	
Parking Lot/Pavement	○	○	○	
Golf Course	○	○	○	
Lawn/Park	○	○	○	
Suburban Residential	○	○	○	
Urban/Multifamily	○	○	○	
Landfill	○	○	○	
Dumping	○	○	○	
Trash	●	○	○	
Other:	○	○	○	
Other:	○	○	○	

Hydrology Stressors

Fill bubble if present - Plot	1	2	3	Flag
Ditches, Channelization	●	○	○	
Dike/Dam/Road/RR Bed (IMPEDE FLOW)	○	○	○	
Water Level Control Structure	○	○	○	
Excavation, Dredging	○	○	○	
Fill/Spoil Banks	○	○	○	
Freshly Deposited Sediment (UNVEGETATED)	○	○	○	
Soil Loss/Root Exposure	○	○	○	
Wall/Riprap	○	○	○	
Inlets, Outlets	○	○	○	
Point Source/Pipe (EFFLUENT OR STORMWATER)	○	○	○	
Impervious surface input (SHEETFLOW)	○	○	○	
Other:	○	○	○	
Other:	○	○	○	

Agricultural & Rural Stressors

Fill bubble if present - Plot	1	2	3	Flag
Pasture/Hay	○	○	○	
Range	○	○	○	
Row Crops	○	○	○	
Fallow Field (RECENT-RESTING ROW CROP FIELD)	○	○	○	
Fallow Field (OLD - GRASS, SHRUBS, TREES)	○	○	○	
Nursery	○	○	○	
Dairy	○	○	○	
Orchard	○	○	○	
Confined Animal Feeding	○	○	○	
Rural Residential	○	○	○	
Gravel Pit	○	○	○	
Irrigation	○	○	○	
Other:	○	○	○	

Industrial Development Stressors

Fill bubble if present - Plot	1	2	3	Flag
Oil Drilling	○	○	○	
Gas Wells	○	○	○	
Mine (surface)	○	○	○	
Mine (underground)	○	○	○	
Military	○	○	○	
Other:	○	○	○	
Other:	○	○	○	
Other:	○	○	○	

Habitat/Vegetation Stressors

Fill bubble if present - Plot	1	2	3	Flag
Forest Clear Cut	○	○	○	
Forest Selective Cut	●	○	○	
Tree Plantation	○	○	○	
Tree Canopy Herbivory (INSECT)	○	○	○	
Shrub Layer Browsed (WILD OR DOMESTIC)	●	○	○	
Highly Grazed Grasses (OVERALL <3" HIGH)	○	○	○	
Recently Burned Forest Canopy	○	○	○	
Recently Burned Grassland (BLACKENED)	○	○	○	

Fill bubble if present - Plot	1	2	3	Flag
Herbicide Use	○	○	○	
Mowing/Shrub Cutting	●	○	○	
Trails	●	○	○	1
Soil Compaction (ANIMAL OR HUMAN)	○	○	○	
Offroad vehicle damage	○	○	○	
Soil erosion (FROM WIND, WATER, OR OVERUSE)	○	○	○	
Other:	○	○	○	
Other:	○	○	○	

Flag codes: K = No measurement made, U = Suspect measurement., F1,F2, etc. = misc. flags assigned by each field crew.
Explain all flags in comment section on the back of this form

FORM B-1: NWCA BUFFER SAMPLE PLOTS (Form)

Reviewed by (initial): _____

Site ID: NWCA11- PCAPBe1267

DATE: 07 / 31 / 2012

Location:
○ AA Center ○ N ○ S ○ E ● W

Fill in bubble(s) if plot(s) could not be sampled and flag →
○ Plot 1 ○ Plot 2 ○ Plot 3

Buffer Natural Cover Strata

Fill in bubbles for all that apply: Canopy Type: D = Deciduous; E = Evergreen. Leaf Type: B = Broadleaf; N = Needle Leaf. Absent: No tree canopy.
Strata Section: Fill in appropriate cover class bubble for each strata type for each plot. 0 = Absent; 1 = Sparse(<10%); 2=Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (>75%)

Buffer Plot 1	Canopy Type: D ● E ○ Absent: ○ Leaf Type: B ● N					Flag
Big Trees (>0.3m DBH)	0	1	● 2	3	4	
Small Trees (<0.3m DBH)	0	1	2	● 3	4	
Woody Shrubs, Saplings (0.5m-5m HIGH)	0	1	● 2	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	0	● 1	2	3	4	
Herbs, Forbs and Grasses	0	1	2	● 3	4	
Bare ground	● 0	1	2	3	4	
Litter, duff	0	1	2	3	● 4	
Rock	● 0	1	2	3	4	
Water	● 0	1	2	3	4	
Submerged Vegetation	● 0	1	2	3	4	

Buffer Plot 2	Canopy Type: D ● E ○ Absent: ○ Leaf Type: B ● N					Flag
Big Trees (>0.3m DBH)	0	1	● 2	3	4	
Small Trees (<0.3m DBH)	0	1	2	● 3	4	
Woody Shrubs, Saplings (0.5m-5m HIGH)	0	● 1	2	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	0	1	● 2	3	4	
Herbs, Forbs and Grasses	0	1	2	3	● 4	
Bare ground	0	● 1	2	3	4	
Litter, duff	0	1	2	3	● 4	
Rock	0	● 1	2	3	4	
Water	● 0	1	2	3	4	
Submerged Vegetation	● 0	1	2	3	4	

Buffer Plot 3	Canopy Type: D ● E ○ Absent: ○ Leaf Type: B ● N					Flag
Big Trees (>0.3m DBH)	0	1	2	● 3	4	
Small Trees (<0.3m DBH)	0	1	● 2	3	4	
Woody Shrubs, Saplings (0.5m-5m HIGH)	0	● 1	2	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	0	1	2	● 3	4	
Herbs, Forbs and Grasses	0	1	● 2	3	4	
Bare ground	0	● 1	2	3	4	
Litter, duff	0	1	2	3	● 4	
Rock	● 0	1	2	3	4	
Water	● 0	1	2	3	4	
Submerged Vegetation	● 0	1	2	3	4	

Stressor Presence/Absence - Confirm that a filled data bubble indicates presence and an unfilled bubble indicates absence by filling this bubble. ●

Residential and Urban Stressors

Fill bubble if present - Plot	1	2	3	Flag
Road - gravel	○	○	○	
Road - two lane	○	○	○	
Road - four lane	○	○	○	
Parking Lot/Pavement	○	○	○	
Golf Course	○	○	○	
Lawn/Park	○	○	○	
Suburban Residential	○	○	○	
Urban/Multifamily	○	○	○	
Landfill	○	○	○	
Dumping	○	○	○	
Trash	●	●	●	
Other: _____	○	○	○	
Other: _____	○	○	○	

Hydrology Stressors

Fill bubble if present - Plot	1	2	3	Flag
Ditches, Channelization	○	○	○	
Dike/Dam/Road/RR Bed (IMPEDE FLOW)	○	○	○	
Water Level Control Structure	○	○	○	
Excavation, Dredging	○	○	○	
Fill/Spoil Banks	○	○	○	
Freshly Deposited Sediment (UNVEGETATED)	○	○	○	
Soil Loss/Root Exposure	○	○	○	
Wall/Riprap	○	○	○	
Inlets, Outlets	○	○	○	
Point Source/Pipe (EFFLUENT OR STORMWATER)	○	○	○	
Impervious surface input (SHEETFLOW)	○	○	○	
Other: _____	○	○	○	
Other: _____	○	○	○	

Agricultural & Rural Stressors

Fill bubble if present - Plot	1	2	3	Flag
Pasture/Hay	○	○	○	
Range	○	○	○	
Row Crops	○	○	○	
Fallow Field (RECENT-RESTING ROW CROP FIELD)	○	○	○	
Fallow Field (OLD - GRASS, SHRUBS, TREES)	○	○	○	
Nursery	○	○	○	
Dairy	○	○	○	
Orchard	○	○	○	
Confined Animal Feeding	○	○	○	
Rural Residential	○	○	○	
Gravel Pit	○	○	○	
Irrigation	○	○	○	
Other: _____	○	○	○	

Industrial Development Stressors

Fill bubble if present - Plot	1	2	3	Flag
Oil Drilling	○	○	○	
Gas Wells	○	○	○	
Mine (surface)	○	○	○	
Mine (underground)	○	○	○	
Military	○	○	○	
Other: _____	○	○	○	
Other: _____	○	○	○	
Other: _____	○	○	○	

Habitat/Vegetation Stressors

Fill bubble if present - Plot	1	2	3	Flag
Forest Clear Cut	○	○	○	
Forest Selective Cut	○	○	○	
Tree Plantation	○	○	○	
Tree Canopy Herbivory (INSECT)	○	○	○	
Shrub Layer Browsed (WILD OR DOMESTIC)	●	●	●	
Highly Grazed Grasses (OVERALL <3" HIGH)	○	○	○	
Recently Burned Forest Canopy	○	○	○	
Recently Burned Grassland (BLACKENED)	○	○	○	

Fill bubble if present - Plot	1	2	3	Flag
Herbicide Use	○	○	○	
Mowing/Shrub Cutting	○	○	○	
Trails	○	○	○	
Soil Compaction (ANIMAL OR HUMAN)	○	○	○	
Offroad vehicle damage	○	○	○	
Soil erosion (FROM WIND, WATER, OR OVERUSE)	○	○	○	
Other: _____	○	○	○	
Other: _____	○	○	○	