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

Project Label: PCAP **Plot No:** 1219 **Date Sampled:** 6/20/12 **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)	Made sketch on available map
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?		6/22/12	Enter date to left NZ
Final data sheets scanned?			Enter date to left
Buffer Widths measured?		(Y) N	JTP 6-22-2012
Web Soil Survey		(Y) N	AY 6-21-2012
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:

Parked on Berm by Bridal trail off Hawthorn parkway @ about 430m from plot

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

GENERAL INFORMATION

Project Label: PCAP

Project Name: 01Be 2012

Plot Name: Don't Sass me!

Plot No.: 1219

☐ Level 4 (no nested corners sampled)

■ Level 5 (nested corners sampled)

Date (mm/dd/yyyy): 6/20/2012

End date (if > 1 day): / /

Party	Role**
Z. Barton	Plot leader
N. Zimmerman	Bot. Asst.
J. Pettit	Woody/soil
L. Huffman	Woody soil

** 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

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

State: OH County: Cuy

Quadrangle: Shaker Heights

Local Place Names: S on Hawthorn Pkwy, W of 271

Landowner: Cle Met

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: 41.38079

Longitude: -81.51543

Coord. Accuracy: ✓ m ☐ ft +- 1.4

GPS File Name: 1219A

Plot size for cover data: 0.1 (hectares)

X-axis Bearing of plot: [300] °

Depth: (1-5): 4

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

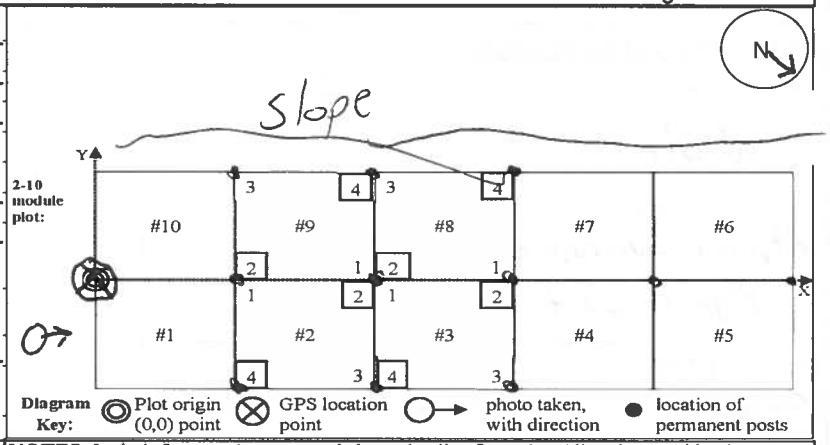
Camera No.: 4

Photo Nos.: CR-0108 SRE 7/27-12

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: Plot runs NE along top of slope. Parked on gravel pulloff near bridle trail on Hawthorn Parkway West of 271.

Rationale: GRTS

Veg. Char. Canopy: Pinus strobus, Sassafrass, Liriodendron, Acer rubrum

Shrub: Acer rubrum, Acer saccharum, Fagus

Herb: very depaup.; Arisaema, Frax seedlings, carex

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 - Background Data Sheet

GENERAL INFORMATION

Project Label: PCAP

Project Name: OIBe2012

Plot Name:

Plot No.: 1219

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

Date (mm/dd/yyyy): 6/20/2012

End date (if > 1 day): / /

Party	Role**
Z. Barton	Plot leader
N. Zimmerman	Bot. Asst.
J. Pettit	Woody/Soil
L. Huffman	Woody/Soil

** 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

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

State: OH County: Cuy

Quadrangle: ~~Northfield~~ Shaker Heights

Local Place Names: South of Hawthorn Pkwy West of I480 Bridge

Landowner: Cleveland Metroparks

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: 41.38079

Longitude: 081,51543

Coord. Accuracy: ✓ m ☐ ft +- 1.4m

GPS File Name: 1219A

Plot size for cover data: 0.1 (hectares)

X-axis Bearing of plot: [303] °

Depth: (1-5): 4

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

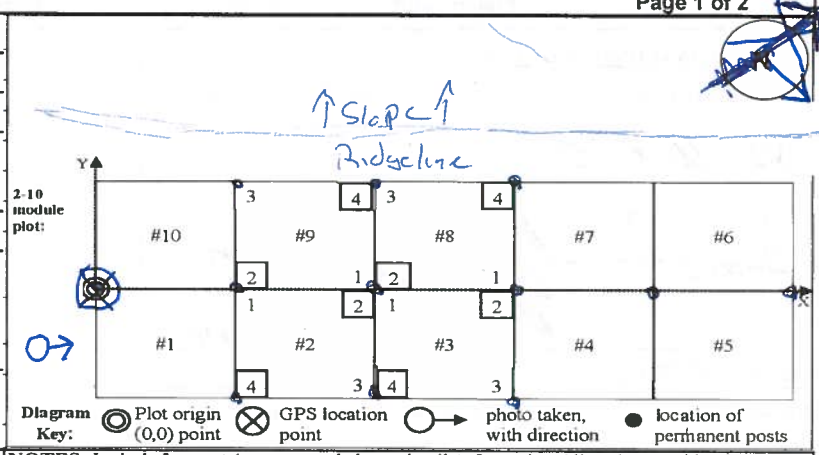
Camera No.: 4

Photo Nos.: 4- 0108

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: Plot runs ~~South~~ North of and parallel to slope. Plot follows top of ridgeline.

Rational: GRTS Point

Veg Char: Canopy dominated by White Pines, Sassafras, Tulip Subcanopy contains small Beech & Sugar maple + Red maple Saplings. Herb layer depauperate.

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 2

Project Label: PCAP Project name: 01Be2012 Plot no.: 1219

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:

	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	0			1	0			1	0			1	1				
%unveg. litter (bare litter)	1	10			1	10			1	10			1	10				

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	depth	cov
7'						Pinus ~~alba~~ strobus			4	6	3		2	7	4		4	7	3		4	5	4					
7'						Acer rubrum			4	4			~~2~~4	7	2		4	4			4	5						
6'	5'					Acer saccharum			3	7			4				2	5	2		2	6	4					
7'		2'			.8	Sasafrass albidum			3	6	4				3	4	4	7	4		4	~~5~~4	2					
7'		2'				Liriodendron tulipifera			2	6	3		4	5			X	X+	4	3	2	6	4					
4'						Ulmus americana			4	7																		
4'	2'	2'				Prunus serotina			3	2	3		3	5	4				2	2	3	2	2					
		2				Alliaria petiolata			3	2	2		2	2	2		2	2	4		2	2	2					
	2'	2'				Crataegus sp.			2	4			2	1														
		2				Arisaema triphyllum			2	2	2		3	2	2		3	2					-2	2				
rounatus		1				~~Ranunculus sp.~~ Geranium 2513 maculatum		24-0109	2	1																		
		2				Acer seedlings			2	2	4		2	2	3		2	2	3				2	2				
		1				Quercus seedlings			2	1			1	1														
		2				Berberis thunbergii			2	2					2	1	1	2+			1	1						
		2				Fraxinus seedlings			2	2	4				2	2												
		2				Circaea lutetiana			1	2+			2	1														
		2				Glyceria striata			1	2+			2	2														
		2				Parthenocissus quinquefolia					+4	2	1	1														
		2				Pinus seedlings			1	1+			3	2	3		2	2			1	1						
		1				Vitis sp. (seedlings)					2	1	2	1			2	1										
alternate arisulate		1			10+	Rosa multiflora			1	1																		
		1				~~Unknown dicot~~ Hackelia virginiana	23B12-A-12	24-0110	1	1							2	1										
		1				Poaceae (no repro)			1	1																		
4		2'				Carya cordiformis							2	1			2	1										
		2				Veronica officinalis							2	2	2													

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

Project Label: PCAP Project name: 01Be2012 Plot no.: 1219

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		
%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 #	mod depth	mod cov	corner depth	corner cov	mod depth	mod cov	corner depth	corner cov	mod depth	mod cov	corner depth	corner cov	mod depth	mod cov	corner depth	corner cov	mod depth	mod cov	corner depth	corner cov	mod depth	corner cov
		1				Ulmus seedling							2	1					+2		1									
seedling		2'				Rubus sp.							2	2	2															
		2				Moss sp.							2	2					2		1						2	2		
		1'				Prunus cerasus							1	1	+		2	1												
	4'	1'				Fagus grandifolia							1	2	+		2	5			4	6	2							
		2				~~Poaceae~~ Danthonia spicata ZSD 9-25-12	X	ZSB053							2	1	4	3												
		1				Rhamnus frangula									2	1														
		2				Vitis riparia							X		2	2														
		2				Panicum boreale ~~longinosum~~ ZSD 9-25-12	X	ZSB054									2	2												
		2				Toxicodendron radicans											2	2												
		2				Carex ~~c~~swanii ZSB 9-25-12	X	ZSB055											2	2										
		1				Prenanthes sp.													2	1										
2'		1				Cornus florida													2	4										
5						Quercus rubra															3	7								
		2				Ligustrum virginica															2	2								
		1				Viola sp.																							R	1
		2				Carya ovata																							R	3
5						Populus ~~deltoides~~ grandidentata																							R	5
		1				Potententilla simplex																							R	2

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: 01Be2012 Plot No.: 1219 Page: 1 of 3

Cleveland Metroparks

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	Sassafrass albidum											•	••	•	•		
1	Acer rubrum									••							
1	Standing dead									•	••	•	•				
1	Acer saccharum								•	•							
1	Cretagus sp.								•								
1	Pinus strobus															•	
2	Ulmus americana																46.6
2	Crataegus sp.								•								
2	Standing dead											•					
2	Berberis thunbergii					••											
2	Acer saccharum										•						
2	Pinus strobus														X		
2	Liriodendron tulipifera																41.4
2	Sassafras albidum													•	•		
2	Pinus strobus										•				••		
3	standing dead										•	•		•			
3	Prunis serotina										•						
3	Acer rubrum										•					•	
3	Pinus strobus																50.8
3	Berberis thunbergii					•											
4	Prunus serotina											•					
4	Pinus strobus																40.8
4	Acer rubrum								•	•	••						
4	Vitis sp. riparia								•								

SRE 8-24-12

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: 01 Be 2012 Plot No.: 1219 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)
4	Standing dead									•	••						
~~4~~	~~Acer rubrum~~								X		X						
4	Populus grandidentata											•		•			
4	Sassafras albidum												•				
5	Pinus strobus												•			••	
5	Liriodendron tulipifera															•	
5	Acer rubrum								•	•		•				•	
5	Standing dead								••		•	•					
5	Sassafras albidum													::			
5	Acer saccharum									••							
5	Vitis sp. riparia									•							
5	Crataegus sp.								•								
6	Acer rubrum												•				
6	Prunus serotina															•	
6	Pinus strobus													•		••	
6	Standing dead													••			
6	Liriodendron tulipifera										•						
~~67~~	Pinus strobus												•	::			44.8, 43.4, 55.9
7	Acer rubrum									••							
7	Acer saccharum								•	•							
7	Standing dead									•							
7	Berberis thunbergii					•											
8	Sassafras albidum			:								•	::	::			42.9
8	Pinus strobus										••			•		••	

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Cleveland Metroparks

Project Label: PCAP Project Name: 01Be2012 Plot No.: 1219 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	Acer saccharum								••	•							
8	Berberis thunbergii					••											
8	Cornus florida								•								
8	Standing dead							•									
8	Fagus grandifolia								•								
9	Fagus grandifolia							•	•								
9	~~Fagus~~ Acer rubrum										•						
9	Acer saccharum								••	•							
9	Liriodendron tulipifera									•							47.1, 40.7
9	Pinus strobus														•		
9	Standing dead								•				•				
9	Sassafras albidum			•													
10	Acer saccharum								••	•							
10	Standing Dead							••		•	•						
10	Sassafras albidum											•			•		
10	Fagus grandifolia									•							
10	Liriodendron tulipifera															•	52.0
10	Carya ovata									•							
10	Acer rubrum										••						
10	Pinus strobus																44.6
10	Berberis thunbergii					•											

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

Project Label: PCAP Project Name: 01 Bet~~1219~~ 2012 Plot No.: 1219

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 slope) 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	~~10~~ 17	~~12~~ 0 1	0	3	0
3	—	0	0	0	27	0	0	2	0
8	—	0	0	1	23	2	0	3	0
9	—	0	0	1	24	2	0	3	0

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	~~7~~	3	6	8
3	7	9	9	9
8	6	4	6	4
9	3	4	2	5

2	5	3	5	9
	9	4	6	6
3	6	9	13	10
	8	10	6	8
8	5	4	6	5
	6	5	5	4
9	4	4	2	5
	2	4	2	6

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

Project label: PCAP Project Name: 01Be2012 Plot No.: 1219

Cleveland Metroparks

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

Soil pit module # 3 (one per entire plot)

6 cm	matrix color	10YR 4/2	
	mottle color	N/A	
	%mottle	0	
	oxid roots	Y	(N)
	texture*	2	
	redox features**	Y	(N)
	hydr. cond.***	I S M	(D)
20 cm	matrix color	10YR 4/2	
	mottle color	N/A	
	%mottle	0	
	oxid roots	Y	(N)
	texture*		
	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

Web Soil Survey Information

Soil Series/Type: Rittman silt loam-RSC

Soil Series Source: Ohio Soil Survey

Landform type: Drainageways, ridges

Depth to rest. Layer: >80 inches

Parent Material: Till

DRAINAGE

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

AY 6-21-2012

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	6.5	5.7	0	>30
3	5.8	5.3	0	730
8	5.5	4.0	0	>30
9	4.3	3.1	0	>30

EARTH SURFACE & GROUND COVER

Underlying Earth Surface* (Sum = 100%)	percent	Ground Cover (Each ≤ 100%)	percent
Histosol	0	Coarse Woody Debris***	15
Mineral Soil	100	Fine Woody Debris****	10
Gravel-Cobble*	0	Litter	96
Boulder**	0	Duff (Ferm.+ Humus)	0
Bedrock	0	Bryophyte- Lichen	1
* Gravel-Cobble = 1/16-10"		Water	0
**Boulder = > 10 in		Bare Soil	1
*** >5 cm in diameter		Road/Trail	0
**** <5 cm in diameter		Other	0

TRAIL INFORMATION:

record type and cover for each

Type	%Cover
□ All Purpose	
□ Bridle	
□ Hiking sanctioned	
□ Bootleg unsanctioned	
□ Gravel	
□ Deer	

COVER BY STRATA %
estimate using midpoints of 5,ex:3, 8, 13

Strata	Height Range (m)	Total Cover (%)
Tree	>5 -	88
Shrub	0.5 - 5	13
Herb	<5 -	3
(Floating)*	-	—
(Aquatic)*	-	—

* 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					
Lythrum salicaria (wetland)	Purple Loosestrife					
Aegopodium podagraria (G-cover)	Bishop's Goutweed					
Celastrus orbiculatus (vine)	Asian Bittersweet					
Torilis sp.	Hedgeparsley					
Conium maculatum	Poison Hemlock					
Rhamnus cathartica	Common Buckthorn (shrub)					
Berberis thunbergii	Japanese Barberry (shrub)	3	1	2	2	
Alnus glutinosa	European Alder					
Dipsacus laciniatus	Cut-leaf Teasel					
Elaeagnus umbellata	Autumn Olive (shrub)					
Lonicera maackii	Amur Honeysuckle (shrub)					
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)					
Viburnum plicatum	Doublefile Viburnum (shrub)					
Tier 4: Widespread and abundant		**Presence**				**comments**
		NE	SE	SW	NW	
Alliaria petiolata	Garlic Mustard	4	1	2	1	
Ligustrum vulgare	Common Privet (shrub)					
L. morrowii, L. tatarica	Bush Honeysuckles (shrub)					
Phalaris arundinacea	Reed Canarygrass					
Phragmites australis (wetland)	Phragmites					
Polygonum cuspidatum	Japanese Knotweed					
Frangula alnus	Glossy Buckthorn (shrub)	1				SRE 10-17-12
Rosa multiflora	Multiflora Rose (shrub)		1		1	
Typha angustifolia, T. x.glauca	Cattails (wetland)				5	
Cirsium arvense	Canada thistle	1	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

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: PLAPBe1219 DATE: 06 / 20 / 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, Leaf Type: ● N, Absent: ○)						Buffer Plot 2 (Canopy Type: ○ D ○ E, Leaf Type: ○ B ○ N, Absent: ○)						Buffer Plot 3 (Canopy Type: ○ D ○ E, Leaf Type: ○ B ○ N, Absent: ○)					
	0	1	2	3	4	Flag	0	1	2	3	4	Flag	0	1	2	3	4	Flag
Big Trees (>0.3m DBH)	○	○	○	●	○	1	○	○	○	○	○		○	○	○	○	○	
Small Trees (<0.3m DBH)	○	○	●	○	○		○	○	○	○	○		○	○	○	○	○	
Woody Shrubs, Saplings (0.5m-5m HIGH)	○	●	○	○	○		○	○	○	○	○		○	○	●	○	○	
Woody Shrubs, Saplings (<0.5m HIGH)	○	●	○	○	○		○	○	○	○	○		○	○	○	○	○	
Herbs, Forbs and Grasses	○	●	○	○	○		○	○	○	○	○		○	○	○	○	○	
Bare ground	○	●	○	○	○		○	○	○	○	○		○	○	○	○	○	
Litter, duff	○	○	○	○	●		○	○	○	○	○		○	○	○	○	○	
Rock	●	○	○	○	○		○	○	○	○	○		○	○	○	○	○	
Water	●	○	○	○	○		○	○	○	○	○		○	○	○	○	○	
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

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

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: _____	○	○	○	

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: PEAPBe1219 DATE: 06 / 20 / 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

	0	1	2	3	4	Flag
Big Trees (>0.3m DBH)	○	○	○	○	●	
Small Trees (<0.3m DBH)	○	○	●	○	○	
Woody Shrubs, Saplings (0.5m-5m HIGH)	●	○	○	○	○	
Woody Shrubs, Saplings (<0.5m HIGH)	○	●	○	○	○	
Herbs, Forbs and Grasses	○	●	○	○	○	
Bare ground	●	○	○	○	○	
Litter, duff	○	○	○	○	●	
Rock	●	○	○	○	○	
Water	●	○	○	○	○	
Submerged Vegetation	●	○	○	○	○	

Buffer Plot 2	Canopy Type: D ● E	Absent: ○	Leaf Type: B ● N	Flag

	0	1	2	3	4	Flag
Big Trees (>0.3m DBH)	○	○	○	●	○	
Small Trees (<0.3m DBH)	○	○	○	●	○	
Woody Shrubs, Saplings (0.5m-5m HIGH)	●	○	○	○	○	
Woody Shrubs, Saplings (<0.5m HIGH)	○	●	○	○	○	
Herbs, Forbs and Grasses	○	●	○	○	○	
Bare ground	○	●	○	○	○	
Litter, duff	○	○	○	○	●	
Rock	●	○	○	○	○	
Water	●	○	○	○	○	
Submerged Vegetation	●	○	○	○	○	

Buffer Plot 3	Canopy Type: D ● E	Absent: ○	Leaf Type: B ● N	Flag

	0	1	2	3	4	Flag
Big Trees (>0.3m DBH)	○	○	●	○	○	
Small Trees (<0.3m DBH)	○	○	○	●	○	
Woody Shrubs, Saplings (0.5m-5m HIGH)	○	●	○	○	○	
Woody Shrubs, Saplings (<0.5m HIGH)	○	●	○	○	○	
Herbs, Forbs and Grasses	○	○	●	○	○	
Bare ground	○	●	○	○	○	
Litter, duff	○	○	○	○	●	
Rock	●	●	○	○	○	
Water	●	○	○	○	○	
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				
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	○	○	○	
Recentl Burned Grassland (BLACKENED)	○	○	○	

Habitat/Vegetation Stressors				
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: _____	○	○	○	

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: PCAPBe1219 DATE: 06 / 20 / 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						Buffer Plot 2	Canopy Type: D ○ E ○ Absent: ○ Leaf Type: B ○ N ○ Flag						Buffer Plot 3	Canopy Type: D ● E ○ Absent: ○ Leaf Type: B ● N ○ Flag					
Big Trees (>0.3m DBH)	0	1	2	3	● 4		Big Trees (>0.3m DBH)	0	1	2	3	● 4		Big Trees (>0.3m DBH)	0	1	2	3	● 4	
Small Trees (<0.3m DBH)	0	1	● 2	3	4		Small 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-5m HIGH)	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		Woody Shrubs, Saplings (<0.5m 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		Herbs, Forbs and Grasses	0	● 1	2	3	4		Herbs, Forbs and Grasses	0	● 1	2	3	4	
Bare ground	● 0	1	2	3	4		Bare ground	● 0	1	2	3	4		Bare ground	● 0	1	2	3	4	
Litter, duff	0	1	2	3	● 4		Litter, duff	0	1	2	3	● 4		Litter, duff	0	1	2	3	● 4	
Rock	0	● 1	2	3	4		Rock	● 0	1	2	3	4		Rock	0	● 1	2	3	4	
Water	● 0	1	2	3	4		Water	● 0	1	2	3	4		Water	● 0	1	2	3	4	
Submerged Vegetation	● 0	1	2	3	4		Submerged Vegetation	● 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	○	○	●	1
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: _____	○	○	○	

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: PCAP BE 1219 DATE: 06/20/2012

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: ○	Flag	Buffer Plot 2	Canopy Type: ● (E)	Absent: ○	Flag	Buffer Plot 3	Canopy Type: ● (E)	Absent: ○	Flag
	Leaf Type: ● (N)				Leaf Type: ● (N)				Leaf Type: ● (N)		
Big Trees (>0.3m DBH)	4			Big Trees (>0.3m DBH)	4			Big Trees (>0.3m DBH)	4		
Small Trees (<0.3m DBH)	4			Small Trees (<0.3m DBH)	4			Small Trees (<0.3m DBH)	3		
Woody Shrubs, Saplings (0.5m-5m HIGH)	3			Woody Shrubs, Saplings (0.5m-5m HIGH)	3			Woody Shrubs, Saplings (0.5m-5m HIGH)	3		
Woody Shrubs, Saplings (<0.5m HIGH)	3			Woody Shrubs, Saplings (<0.5m HIGH)	3			Woody Shrubs, Saplings (<0.5m HIGH)	3		
Herbs, Forbs and Grasses	3			Herbs, Forbs and Grasses	3			Herbs, Forbs and Grasses	3		
Bare ground	0			Bare ground	0			Bare ground	0		
Litter, duff	4			Litter, duff	4			Litter, duff	0		
Rock	0			Rock	0			Rock	0		
Water	0			Water	0			Water	0		
Submerged Vegetation	0			Submerged Vegetation	0			Submerged Vegetation	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					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	●	●	○	1	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: PCAPBe1219 DATE: 06 / 20 / 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)					
Big Trees (>0.3m DBH)	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Small Trees (<0.3m DBH)	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Woody Shrubs, Saplings (0.5m-5m HIGH)	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Herbs, Forbs and Grasses	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Bare ground	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Litter, duff	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Rock	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Water	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4	
Submerged Vegetation	0	1	2	3	4		0	1	2	3	4		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: _____	○	○	○	

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