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

Project Label: PCAP **Plot No:** 1226 **Date Sampled:** 6-28-12 **Lead:** Burton

				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	
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?		6/29/12		Enter date to left ~~HBT~~ JTP
Final data sheets scanned?				Enter date to left
Buffer Widths measured?		(Y)	N	LNH 6-22-12
Web Soil Survey		(Y)	N	NMZ 6/29/12
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:

Bearing [redacted]° Park at North Olmsted Fire Station in visitor spaces. Check in w/ the Fire Station

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

GENERAL INFORMATION

Project Label: PCAP

Project Name: 01BW2012

Plot Name: Party Plot

Plot No.: 1226

☐ Level 4 (no nested corners sampled)

■ Level 5 (nested corners sampled)

Date (mm/dd/yyyy): 6/28/12

End date (if > 1 day): / /

Party	Role**
All PCAP Crew	Plot leader
Present here	

** 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

Correct SRE 8-2-12

State: OH County: Cuy.

Quadrangle: ~~North Olmsted~~ Rocky Lock

Local Place Names: North Olmsted fire station 500m SE of plot

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:	**Coord. Units**
■ Lat/Long ☐ UTM ☐ StatePlane	■ deg ☐ deg min
☐ Other (*specify*)	■ 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: 41.40802

Longitude: -81.95296

Coord. Accuracy: ☐ m ☐ ft 100%+-

GPS File Name: 1226A

Plot size for cover data: 0.1 (hectares)

X-axis Bearing of plot: [60] °

Depth: (1-5): 4

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

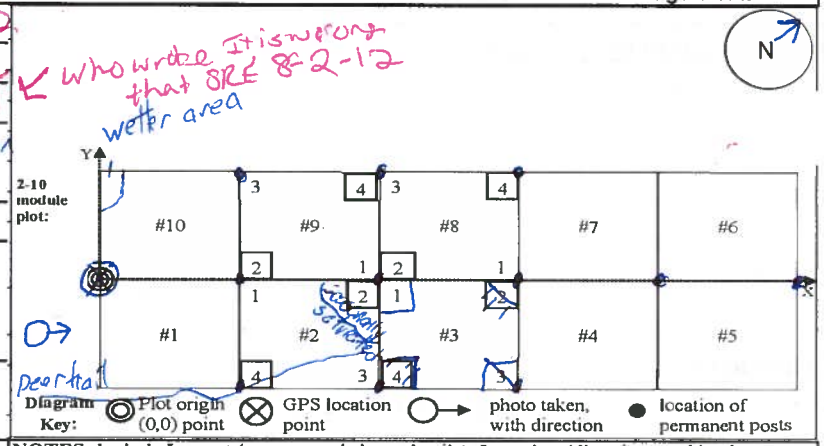
Camera No.: 3

Photo Nos.: 0929

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 Nested corners in mod 3 switched to #1 #2 avoid small light gap in corner 2. Small wetter area in corner 3 of mod 10.

Location: 500m NW of North Olmsted Fire station

Rationale: GRTS

Veg. Char.: Canopy: Fraxinus, Acer rubrum, Acer saccharinum, Ulmus americana, Nyssa sylvatica

Shrub: Nyssa, Lonicera morrowii,

Herb: Carex, Toxicodendron, Parthenocissus,

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: OIBW2012 — Plot no.: 1226

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	1	3	24	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	2			1	2			1	2			1	2				
%unveg. litter (bare litter)	1	7			1	8			1	8			1	6				

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
5						Quercus palustris			4	5													1	6						
6						Fraxinus sp.			4	7	2		2	7	4															
	4	2			3.	Lonicera morrowii			2	6	2				+2	4	2	4					1	2						
		6			8.	Fraxinus seedlings			3	3	4		4	2	4						3	2	4	4	4					
6	3					Ulmus americana			4	4+			4	6							4	5			4	3				
5		2			9.	Vitis aestivalis			4	6					2	4	3	3							3	2				
		2				Prunus serotina			3	2	2		3	2	4						4	2	2	2	3					
	2	2			3.	Cornus racemosa			3	2							2	2					2	2	2					
		2				Viburnum dentatum			3	2	2		2	2			2	2	3				3	2	3					
		2				Acer seedlings			2	2	3		2	2	2						2	2			4	2				
2	2					Crataegus sp.			2	2																				
	2	2			7.	Rubus (pensylvanicus) ZSB 9-25-12	X	ZSB088	2	2			1	3+					+2	3	1	3+								
		2				Mass sp.			2	2	2		2	2	2		4	2	2		2	2	3							
		1				Ulmus seedling			3	2																				
		1				Ligustrum vulgare			2	2																				
	2	3				Toxicodendron radicans			2	3			2	4	2		3	3							4	2				
		2				Circaea lutetiana			2	2	2		1	2									2	2						
		2				Rhamnus frangula			2	1			4	1											2	1				
	1	2			2	Parthenocissus quinquefolia			1	2+					+2	2	4	4					2	2	4					
	2					Glyceria striata ZSB 9-25-12	X	ZSB089	1	2+																				
		1				Viburnum opulus var. opulus			1	1+							1	2+												
		1				Dryopteris carthusiana			1	2+																				
		2			7.	~~Ulmus am~~ Podophyllum peltatum			1	2+																				
		2				Alliaria petiolata					4	2	4	2							4	2			2	2				
6	2	2			9.	Nyssa sylvatica					4	7	3	7	24		4		+4	4	2	2								

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

Project Label: PCAP Project name: 01BW2012 Plot no.: 1226

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:
%open water
%unvegetated open water
%unveg. ground (bare soil)
%unveg. litter (bare litter)

T	S	H	(F)	(A)	Br	Species	c	Voucher #	mod 2 depth	mod 2 cov	corner 4 depth	corner 4 cov	mod 2 depth	mod 2 cov	corner 2 depth	corner 2 cov	mod 3 depth	mod 3 cov	corner 1 depth	corner 1 cov	mod 3 depth	mod 3 cov	corner 4 depth	corner 4 cov	mod 8 depth	mod 8 cov	corner 4 depth	corner 4 cov	mod 8 depth	mod 8 cov	corner 2 depth	corner 2 cov	mod 9 depth	mod 9 cov	corner 4 depth	corner 4 cov	mod 9 depth	mod 9 cov	corner 2 depth	corner 2 cov	mod R depth	mod R cov	corner R depth	corner R cov
7					10	Acer rubrum					4	6	4	7							3	8	4		4	8	4																	
		1				Poaceae sp. ZSB 10-3-12		C3-0930			3	1																																	
		1			+	Quercus seedlings					2	1	1	1							2	1			3	1																				
		1				Taraxacum officinale					2	1																																	
trailing		4				Rubus hispidus ZSB 9-25-12	X	ZSB090	1	2			1	2							4	4	2		3	3	2																				
	3				7	Fraxinus pennsylvanica			1	3								4	3		4	2																								
	1	1				Lindera benzoin							1	1											1	2																				
		2			10	Rosa multiflora							1					4	2		1	2																								
		1				Geum sp. ~~canadense~~		C4-0121					1	1							1	1			1	1																				
5						Acer saccharinum															4	7	2		3	6																				
						Vitis sp. aestivalis															2																										
		2				Veronica officinalis															1	4+																								
		2				Carex swanii ZSB 9-25-12	X	ZSB091													1	2+			1	2																				
		1				Arisaema triphyllum		ZSB092													1	1+																								
		2				Juncus tenuis																			1	1																				
		2				Polygonum virginianum																																					R	2		
		2				Hackelia virginiana																																					R	2		
dirty red base		1				~~Carex swanii ZSB 9-25-12~~	X	ZSB092																																			R	2	Duplicate species 10-10-12	
		1				Liriodendron tulipifera																																			R	1		
5		1			+10	Sassafrass albidum																																			R	5		
		2				Potentilla simplex																																			K	2		
		1				Epilobium coloratum																																			R	1		
		1				Carya cordiformis																																			R	1		
						~~Fraxinus americana~~																																			R	2		
		2				Carex ulpinoidea ZSB 9-25-12	X	ZSB093																																	R	2		

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: 01 BW 2012 Plot No.: 1226 Page: 1 of 4

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	Vitis aestivalis																SRE 4-23-12
~~1~~	~~Vitis sp.~~																
1	Ulmus americana																
~~1~~	~~Ulmus~~																
1	Standing dead																40.3
1	Fraxinus sp.			8													
1	Lonicera morrowii		25B4-25-12														
1	Rhubus ~~sp.~~ pennsylvanica	X	ZSB088														
2	Lonicera morrowii																
2	Vitis ~~sp.~~ aestivalis		SRE 4-3-12														
2	Standing dead																
2	Cornus ~~sp.~~ racemosa		SRE 4-3-12														
2	Fraxinus sp.																46.5
2	Nyssa sylvatica		25B4-25-12														
2	Rubus sp. pennsylvanica	X	ZSB088														
3	Standing dead																
3	Nyssa sylvatica			12													
3	Fraxinus pennsylvanicus																
3	Toxicodendron radicans																
3	Fraxinus sp			8													48.0
3	Vitis ~~sp.~~ aestivalis		SRE-8-3-12														
3	Lonicera morrowii																
3	~~Rhus~~ Rosa multiflora																
3	Ulmus amerkana																

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: 01BW2012 Plot No.: 1226 Page: 2 of 4

Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0.5-1m browsed	% sub or super sample	# shrub clumps	size class (cm) woody stems >1m 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)
✓ 3	RUBUS sp. pennsylvanicus	X	ZSB088	1													
✓ 4	Standing Dead		ZSB-26-12				1	1			1						
✓ 4	Fraxinus pennsylvanica			1						1							
✓ 4	Acer rubrum																54.5
✓ 4	Ulmus americana										1	1					
✓ 4	Lonicera morrowii			1		1											
✓ 4	Fraxinus sp			2													
✓ 4	Rubus sp pennsylvanica	X	ZSB088	2		1											
✓ 4	Lindera benzoin			1		1											

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: 01BW2012 Plot No.: 1226 Page: 3 of 4

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)
✓	6 Standing dead						••	••		••	••						
✓	6 Crataegus sp.										•						
✓	6 Toxicodendron radicans						••										
✓	6 Acer rubrum												•				~~56.5~~ 53.8 * 183 cm from ground
✓	7 Vitus ~~sp~~ aestivalis SEE 8-3-12								•	•							
✓	7 standing dead						••										
✓	7 Rubus ~~sp.~~ pensylvanicus		ZSB088			•											
✓	8 Vitis aestivalis								••								
✓	8 Acer rubrum			•									•				58.4
✓	8 Acer saccharinum												•				
✓	8 Ulmus americana										•						
✓	8 Rubis ~~sp~~ pensylvanicus		ZSB088	3		Li											
✓	8 Prunis serotina			•													
✓	8 Nissa sylvatica			••													
✓	8 Lonicera morowii					8											
✓	8 Rosa multiflora			•													
✓	8 Fraxinus sp.			11													
✓	9 standing dead								•	••							48.2
✓	9 Acer rubrum									•			•				~~42.5~~
✓	9 Rosa multiflora			••		••											
✓	9 ~~Cornus~~ Cornus ~~sp.~~ racemosa SEE 8-3-12			•													
✓	9 Nissa Sylvatica			••													
✓	9 Rubis ~~sp~~ pensylvanicus		ZSB088	••		7											
✓	9 Fraxinus sp.			16													

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: 01 BW 2012 Plot No.: 1226 Page: 4 of 4

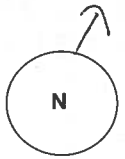
Explain subsample (additional room on back):

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)
✓ 9	Lonicera morrowii					•											
✓ 10	Acer rubrum			•													49.0
✓ 10	Standing dead						••		•	•		X					
✓ 10	Prunus serotina			•			•										
✓ 10	Nyssa sylvatica			••				•				•					
✓ 10	Ulmus americana										•						
✓ 10	Fraxinus sp.			27													45.9
✓ 10	Vitis ~~sp~~ aestivalis	SLE 8-3-12		•					•								
✓ 10	Lonicera morrowii					L											
✓ 10	Rubus ~~sp~~ pensylvanus		ZSB088	••		•											
✓ 10	Cornus racemosa			••													
✓ 5	Acer rubrum															•	
✓ 5	Prunus serotina			••						•							
✓ 5	Sassafras albidum			••									•		•	••	
✓ 5	Lonicera morrowii					••											
✓ 5	Standing dead						•		••	••	•	•					
✓ 5	Nyssa sylvatica									•							
✓ 5	Fraxinus sp			L													
✓ 5	Vitis ~~sp~~ aestivalis	SLE 8-3-12		•													

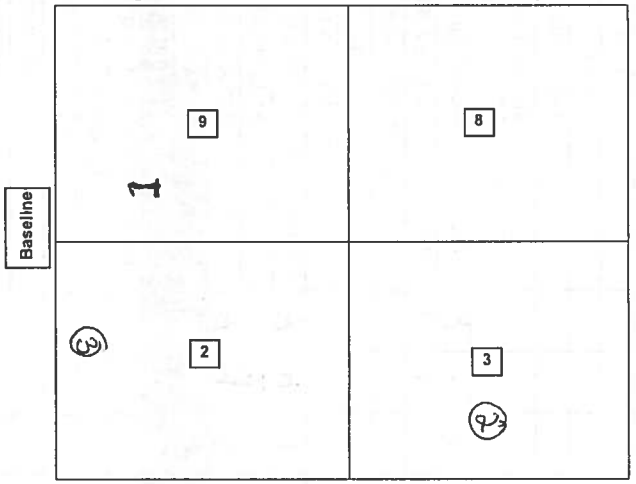
CLEVELAND METROPARKS Emerald Ash Borer - Fraxinus Sheet *INTENSIVE MODULES ONLY* *TREES ≥ 10CM ONLY*

Project Label: PCAP Project Name: 01BW2012 Plot No.: 1226 Date: 28 JUN 2012

Module	Tree ID.	Species	Dead	c	Voucher #	DBH (cm)	Ht @ DBH	ASH Only: Ash condition	*Dead condition	# Exit holes	Epicormic present	Woodpecker holes
9	1	Fraxinus sp.	X	–	–	42.5	–	5	C	0	0	1
3	2	Fraxinus sp.		–	–	49.0	–	2	–	0	1	0
2	3	Fraxinus sp.		–	–	46.5	–	2	–	0	1	0
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
	16											
	17											
	18											
	19											
	20											
	21											
	22											
	23											
	24											
	25											



*** Change intensive module numbers when necessary



Map all ash trees ≥10cm in each module using Tree ID number

*** If Ash Condition scores 5 (dead) provide breakup score (A-E)**
Count EAB exit holes 1.25m≥ x ≥1.5m
Woodpecker and epicormic marked present (1) or absent (0)

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

Project label: PCAP Project Name: OIBW 2012 Plot No.: 1226

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

Soil pit module # 8 (one per entire plot)

5 cm	matrix color	2.5Y 3/2
	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 3/2
	mottle color	n/a
	%mottle	0
	oxid roots	(Y) N
	texture*	2
	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)

Saw 2 worms in soil pit, Saw castings in Mod 2. Saw a worm in the soil corer.

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 (where other)

Soil Series/Type: Mr - Miner silty clay loam

Soil Series Source: Ohio Soil Survey

Landform type: till plains, lake plains

Depth to rest. Layer: >80"

Parent Material: till

DRAINAGE*

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

NMZ 6/29/12

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	2.0	2.0	0	>30
3	4.1	4.1	0	>30
8	3.4	3.4	0	>30
9	2.9	2.9	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	~~98~~	Fine Woody Debris****	3
Gravel-Cobble*	0	Litter	97
Boulder**	2	Duff (Ferm.+ Humus)	0
Bedrock	0	Bryophyte- Lichen	+3
* Gravel-Cobble = 1/16-10"		Water	0
**Boulder = > 10 in		Bare Soil	1
*** >5 cm in diameter		Road/Trail	5
**** <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	5

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

Strata	Height Range (m)	Total Cover (%)
Tree	5<	83
Shrub	0.5 - 5	18
Herb	0 - 0.5	38
(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 - Plant Cover and Earth Surface

Project Label: PCAP Project Name: OIBW2012 Plot No.: 1226

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)
3		0	0	3	29	6	0	3	0
8		0	0	3	19	5	0	3	0
2		0	0	1	15	3	6	3	0
9		0	0	3	23	1	6	3	0

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

19 5 0
21 5 0
3 17 3 0 3 3 0
29 6 0 3
31 6 0 3
28 6 0 3
4

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	7	4	7
3	16	3	4	3
8	3	7	4	1
9	4	5	4	5

2 6 5 4 6
7 7 5 8
4 7 4 7
3 15 2 3 3
16 4 4 3
16 2 5 2
8 2 7 3 1
3 7 5 1
4 5 4 2

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP BW 1226 DATE: 06/28/2012

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

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	●	●	○	12
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: PCAPBW1226 DATE: 06 / 28 / 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
Big Trees (>0.3m DBH)	0	1	2	●	●	
Small Trees (<0.3m DBH)	0	1	2	●	●	
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 / Leaf Type: B ● N / Absent: ○					Flag
Big Trees (>0.3m DBH)	0	1	2	3	●	
Small Trees (<0.3m DBH)	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	●	3	4	
Bare ground	0	●	2	3	4	
Litter, duff	0	1	2	●	4	
Rock	0	1	●	3	4	
Water	●	1	2	3	4	
Submerged Vegetation	●	1	2	3	4	

Buffer Plot 3	Canopy Type: D ● E / Leaf Type: B ● N / Absent: ○					Flag
Big Trees (>0.3m DBH)	0	1	2	●	4	
Small Trees (<0.3m DBH)	0	1	2	3	●	
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	●	2	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	

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	○	○	●	2
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

2428168304

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP BW 1226 **DATE:** 06/28/2012

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

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: PCAPBW1226 DATE: 06 / 28 / 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			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	○	○	○	
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: PCAPBW1226 DATE: 06 / 28 / 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
Big Trees (>0.3m DBH)	0 1 2 ● 4			
Small Trees (<0.3m DBH)	0 1 2 ● 4			
Woody Shrubs, Saplings (0.5m-5m HIGH)	0 ● 2 3 4			
Woody Shrubs, Saplings (<0.5m HIGH)	0 ● 2 3 4			
Herbs, Forbs and Grasses	0 ● 2 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	Leaf Type: B N	Absent: ○	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	Leaf Type: B N	Absent: ○	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: _____	○	○	○	

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

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