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

Project Label: PCAP **Plot No:** 1358 **Date Sampled:** 7/22 **Lead:** J. Miller

			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)	instructed to leave flags per SE
Data sheet QA before leaving site?		(Y) N	
Common equipment returned to tub.		(Y) N	
Data sheets scanned?		9-3-13	Enter date to left CL
Final data sheets scanned?		[illegible]	Enter date to left ~~SL~~
Buffer Widths measured?		(Y) N	BB 6-28-13
Web Soil Survey		(Y) N	RSE 29 Aug 2013
Voucher Location	Refrigerator	(Y) N	
(# vouchers collected) JAM 132	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:

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

GENERAL INFORMATION

Project Label: PCAP

Project Name: ~~1558~~ 01 RR 2013

Plot Name: #1 "Other"

Plot No.: 1358

☐ Level 4 (no nested corners sampled)

■ Level 5 (nested corners sampled)

Date (mm/dd/yyyy): 07/22/2013

End date (if > 1 day): / /

Party	Role**
J. Miller	Plot leader
S. Eysenbach	Bot. Assist
A. Schraufnagel	Woody Tech
C. Lemmo	" "

** 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.	✓			n/a
bryo			✓	✓
lichen				✓

TAXONOMIC STANDARD

Authority: G&C **Pub Date:** 1998

LOCATION

State: OH **County:** Cuyahoga

Quadrangle:

Local Place Names: Morely Ford, Rocky River

Landowner: CMP

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: -1

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

Latitude: N 41.458379

Longitude: W 81.822778

Coord. Accuracy: ☐ m ☐ ft +-

GPS File Name: 1358A

Plot size for cover data: 0.05 (hectares)

X-axis Bearing of plot: [303] °

Depth: (1-5): 4

Intensive modules: 2, 3, ~~8~~, ~~9~~, 4, 5 (EDIT IF MODIFIED)

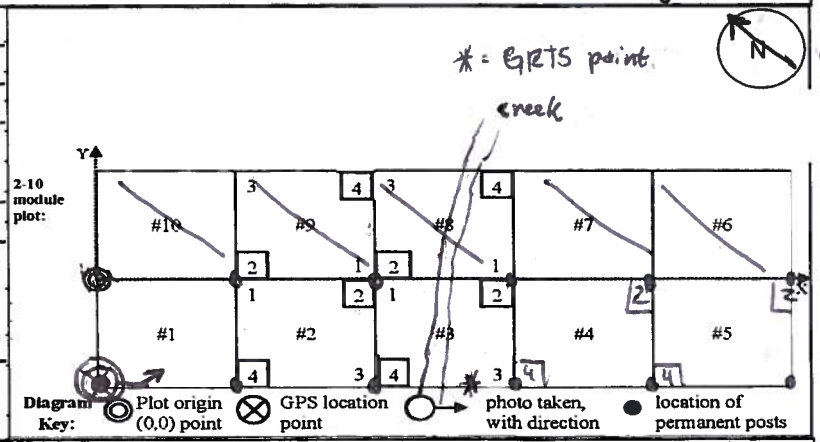
Camera No.: C3

Photo Nos.: C3 1489, 1490

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: 1x5

Location: Park @ Morely Ford, before river. Walk south ~ 80 m through floodplain

Rationale: GRTS point

Veg. characteristics: RR floodplain, partially planted in Norway spruce - also mature Basswood, Cottonwood, tulip, Ash w/ younger maples, Sassafrass, Carya Cordiformis, and some buckeye & boxelder. Spicebush dominant in shrub layer. Very sparse, disturbed (flood) herbaceous layer.

* Ranunculus bubbles observed.

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

Project Label: PCAP Project Name: 01 RR 2013 Plot No.: 1358

MODIFIED NATURESERVE CLASS*

CODE (on separate form): Fit=___ Conf=___

D LOI

COMMUNITY NAME: mesic Floodplain

~~Mixed Forest~~

DISTURBANCES

type*	severity**	yrs ago	% of plot	description
Human	M	0	100%	trash
Natural	H	0	100%	windfall, flooding
Fire				
Cut				
Animal	ML	0	100%	deer browse
Other				

**L=low, ML=med low, M=med, MH=med high, H=high, VH=very high

Current Land Use: CMP

Former Land Use: vnk. (possibly spruce plantation)

HOMOGENEITY

- ☐ Homogeneous
- ☑ Conspicuous inclusions
- ☐ Compositional trend across the plot
- ☐ Irregular/pattern mosaic

HYDROLOGIC REGIME*

- ☐ Upland (seldom flooded)
- ☐ Intermittently/seasonally saturated (seldom flooded)
- ☐ Permanently/Semipermanent. saturated (dry <1/yr, seldom flooded)
- ☐ Occasionally flooded (<1/yr)
- ☑ Temporarily flooded
- ☐ Intermittently flooded
- ☐ Semipermanently flooded
- ☐ Permanently flooded
- ☐ Tidal/Seiche flooded daily
- ☐ Tidal/Seiche flooded monthly
- ☐ Tidal/Seiche flooded irregular (e.g. wind, storms)
- ☐ Unknown

SALINITY*

- ☐ Saltwater
- ☐ Brackish
- ☐ Fresh
- ☑ Upland (n/a)

(by default unless plot is a wetland)

Additional notes & diagrams: (Representativeness of plot to the stand, successional status, maturity, etc.)

- Consp. inclusion: stream/creek through Mod #3.
  - Piles of woody debris from a recent flood event. Some plants still w/ mud on leaves/stems.

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

Project Label: PCAP Project name: 01 RR 2013 Plot no.: 1358

Total modules: 5 Intensive modules: 4 Plot configuration: 1x5 Plot area (ha): 0.08

Cleveland Metroparks

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

Strata - Cov. entire plot

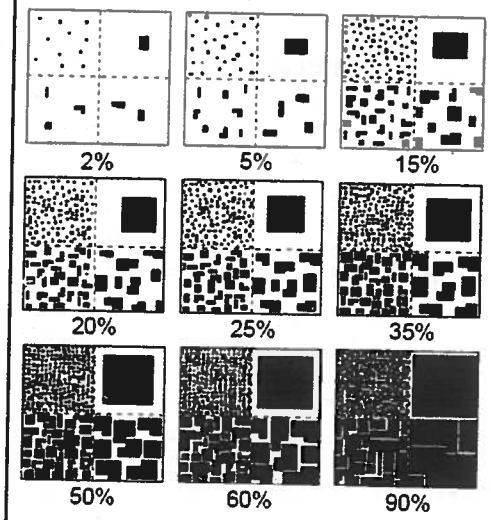
Estimate for each intensive module:
%open water
%unvegetated open water
%unveg. ground (bare soil)
%unveg. litter (bare litter)

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 4 depth	corner 4 cov	mod 3 depth	mod 3 cov	corner 2 depth	corner 2 cov	mod 4 depth	mod 4 cov	corner 4 depth	corner 4 cov	mod 4 depth	mod 4 cov	corner 2 depth	corner 2 cov	mod 5 depth	mod 5 cov	corner 4 depth	corner 4 cov	mod 5 depth	mod 5 cov	corner 2 depth	corner 2 cov	mod R depth	mod R cov	corner R depth	corner R cov
	7	2			4	Lindera benzoin			4	7	4		4	7	2						2	6	4		2	5	4																	
6		2				Liriodendron tulipifera			4	8	4		4	6							1	2			2	2																				
3						Acer ~~saccharinum~~ rubrum			4	5																																				
6						Acer saccharum			2	6																							1	4												
		2				Alliaria petiolata			2	2	3								2	2	2	2	2		2	4	2	3																
		2				Quercus spp. (seedling)			2	1			1	1																			2	2												
		2				Ulmus spp. (seedling)			2	2	2		1	1							2	2											2	2												
		2				Leerzia virginica			2	2	2		4	2							2	2											3	3												
		2				Fraxinus sp. (seedling)			2	2	3		3	2	4						2	2	2										2		2	2										
		2			2	Impatiens capensis			2	2													1	2																						
3	3	2				Prunus serotina			2	1					4	4					x		2	4		9 x2																				
4						Quercus rubra			2	2			4	3																																
8						Picea abies			2	8	4		4	8	4						2	7	2		4	9	4																			
5	3					Aesculus glabra			2	4																																				
		1				Polygonum spp.			2	1																																				
3	3					Ulmus rubra					3	4	1	5							4	3																						
		1				Polygonatum pubescens					3	1																																		
		2				Moss spp.			1	2			4	2	2						2	2											4	2										
		2			7	Bidens spp			1	1			2	1							1	1											2	1										
		2			6	Geum spp.			1	2			2	1							2	2																						
		2				Cirsea lutetiana			1	1			1	1							1	2											2	2										
		2			8	Solidago ~~flexicaulis~~ caesia			1	2											1	1																						
5		2			2	Carya cordiformis			1	1			1	5							4	4	2		2	1																		
		1				Prunella vulgaris			1	2																																		
		1				~~Asteraceae spp~~ Aster latelorius		C3-1491	1	1											1	2																						

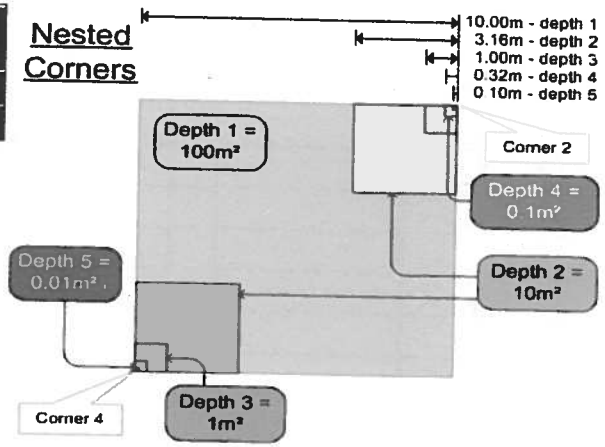
SRE 10-11-13

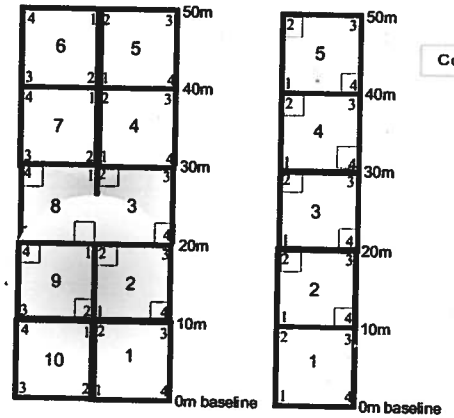
EXAMPLES OF PERCENT OF AREA COVERED

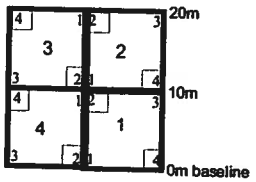
The following graphic can be used for various data elements to convey "Amount" or "Quantity". *NOTE:* Within any given box, each quadrant contains the same total area covered, just different sized objects.



cover class	% cover	midpoint
1	solitary or few	0.0001
2	0-1%	0.005
3	1-2%	0.015
4	2-5%	0.035
5	5-10%	0.075
6	10-25%	0.175
7	25-50%	0.375
8	50-75%	0.625
9	75-95%	0.850
10	95-100%	0.975







BROWSE RATING NARRATIVE DESCRIPTION

LOW OR NONE: there is no measurable browse line AND there are very few or no plants 1-m nested quadrat and intensive module. In general, low values relate to less than 10 percent, by numbers of stems browsed.

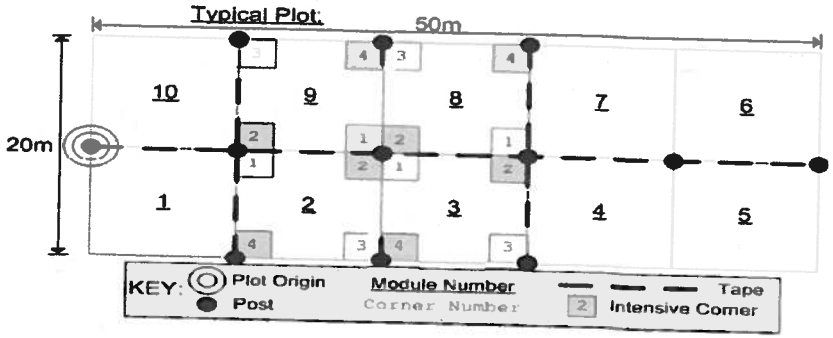
MEDIUM LOW values include evidence of browse at about 10 percent of the stems with no significant impact to plant reproduction evident. In this rating, plants are browsed but preferential species are observed to be reproducing in numbers that appear normal or near-normal in comparison to low browse areas. For example, trilliums may flower and fruit, but jewelweed and arrowwood viburnum exhibit browse.

MEDIUM: browse affects greater than 10 percent and less than 25 percent of stems in the 1 m2 nested quadrat and intensive module. A browse line is usually not evident or obvious for all classes and species of vegetation, but careful examination may show preferential browse and/or browse lines for some species of plants.

MEDIUM HIGH values include evidence of a browse line and 25 percent of stems browsed with very little vegetation regeneration evident. In this rating, for some species of plants, reproduction does not appear to occur or it is very severely limited.

HIGH: greater than 25 percent of the stems of plants in the 1 m2 nested quadrat and intensive module AND a browse line is evident.

VERY HIGH values include extensive browse conditions, where the browse line is very evident AND almost all seedlings and herbs are severely browsed or missing. Browse line may be 5 to 6 feet in height with no or little green growth beneath.



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

Project Label: PCAP — Project name: 01 RR 2013 — Plot no.: 1358

Total modules: ~~10~~ 5 — Intensive modules: 4 — Plot configuration: 1x5 — Plot area (ha): 0.05

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 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 4 depth	corner 4 cov	mod 3 depth	mod 3 cov	corner 2 depth	corner 2 cov	mod 4 depth	mod 4 cov	corner 5 depth	corner 5 cov	mod R depth	corner R cov
%open water	1								1								1					
%unvegetated open water	1								1								1					
%unveg. ground (bare soil)	1								1								1					
%unveg. litter (bare litter)	1								1								1					

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 4 depth	corner 4 cov	mod 3 depth	mod 3 cov	corner 2 depth	corner 2 cov	mod 4 depth	mod 4 cov	corner 5 depth	corner 5 cov	mod R depth	corner R cov
		2				Toxicodendron radicans			1	2					2	2							2	2			2	2		
6						Tilia americana			1	5			4	6							3	6								
		2				Anisaema triphyllum var. triphyllum			1	1					2	1							4	2	3	2	3			
						~~Poaceae spp.~~		~~C3-1492~~	1	1																				
6						Juglans nigra							2	7	2						4	5								
		1				Unk. dicot 1		C3-1493					2	1																
2		2			1	Parthenocissus quinquefolia									4	2					2	2			2	2	2			
4		2			8	Sassafrass albidum									4	5							2	6	3	3				
		1				Viburnum ~~dentatum~~ ~~tentago~~ spp.									2	1														
		2				Polygonum virginianum									2	1			1	2					2	2				
		2				Acer spp (seedling)									2	2			1	2					2	2				
		2				Ligustrum vulgare							1	1					2	2										
3x	x	1				Acer negundo							1	3																
6						Fraxinus pennsylvanica													2	7							2	6		
		2				Oxalis stricta													2	2					3	2				
		1				Poaceae 2		C3-1495											2	1										
5		X				Ulmus americana															4	6	1	4						
5						Populus deltoides															4	4	X		4	5				
						~~Hackelia virginiana~~															2	1								
		1				Rosa multiflora													1	1										
		1				Cinna arundinacea													1	1										
		1			10	Viburnum opulus var. opulus		SPF 14-13											1	1										
		1				Carex ~~spp. 1~~ tribuloides	X	JAM 132											1	1										
		1				Unk dicot 1		C3-1496,7											1	1										
		1				Vitis spp. (seedling)													1	1			4	1						

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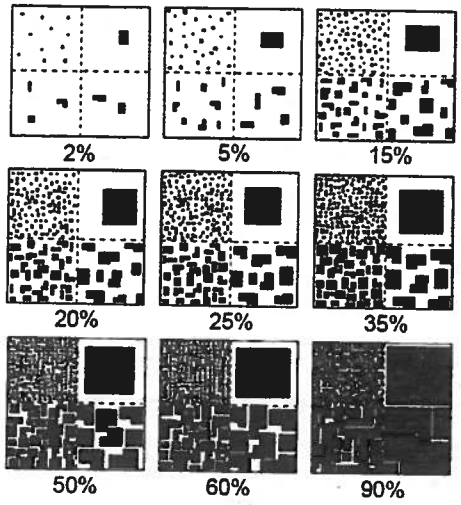

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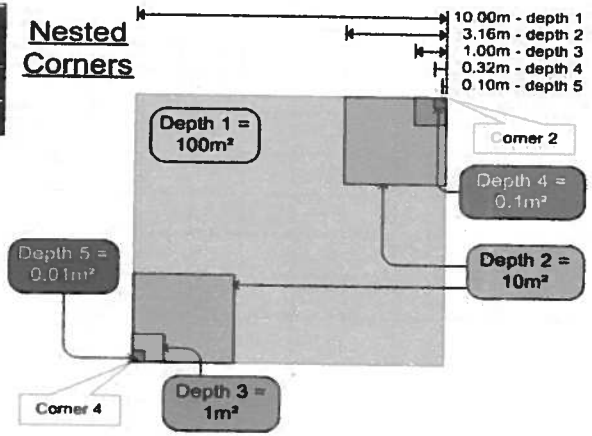
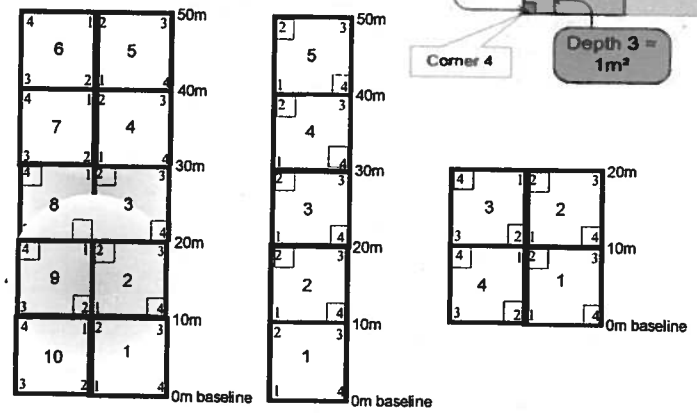
5	5-10%	0.075
6	10-25%	0.175
7	25-50%	0.375
8	50-75%	0.625
9	75-95%	0.850
10	95-100%	0.975

Nested Corners





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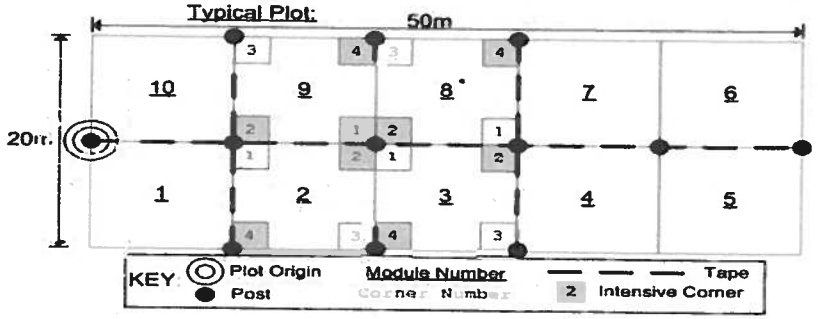

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet Page 3 of 3

Project Label: PCAP Project name: 01 RR 2013 Plot no.: 1358

Total modules: 5 Intensive modules: 4 Plot configuration: 1x5 Plot area (ha): 0.05

Visual est. % open water entire site: ~~Visual est. %unveg.o.w. entire site:~~ ~~Visual est. %invasives entire site:~~

Cleveland Metroparks

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

Strata - Cov. entire plot

	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner
Estimate for each intensive module:	2	4	2	2	3	4	3	2	4	4	4	2	5	4	5	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	depth	cov
			2				Glyceria ~~striata~~ spp		C3-1492	1	1									1	2								
e			1				Juncus tenuis													1	1								
c			1				Taraxacum officinale													1	1			2	1				
			1				Veronica ~~serpyllifolia~~													1	2								
a			1				Viburnum dentatum													1	1								
			1				Arechtites hieracifolia																	3	1				
pile wort			1				Verbesina alternifolia																	2	1				
p			2				Lonicera morrowii																	2	2				
o	5						Vitis aestivalis																			4	5		
n	3						Carpinus caroliniana																			2	3		
			1				Maianthemum racemosa																	1	1				
	x	2	1				Crataegus spp.																	1	2				
k			1				Lobelia inflata																					R	1

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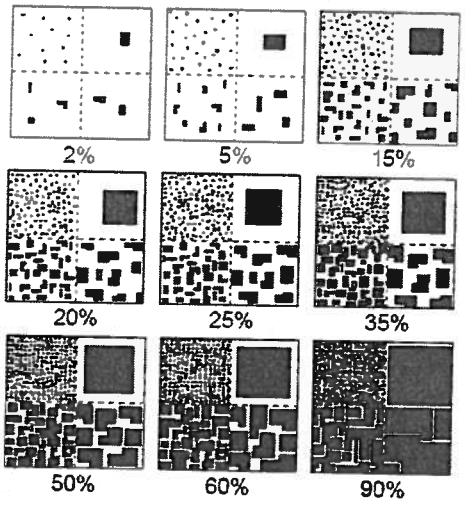

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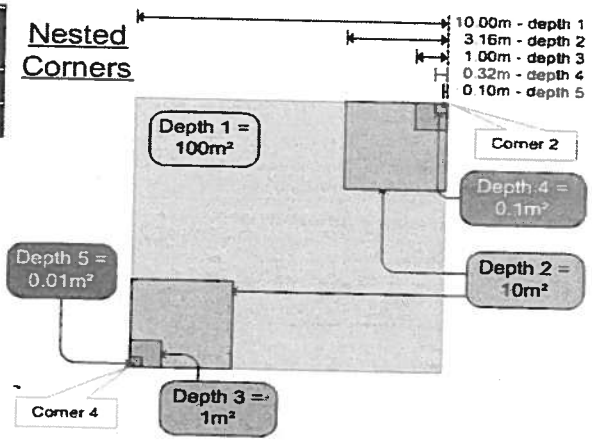
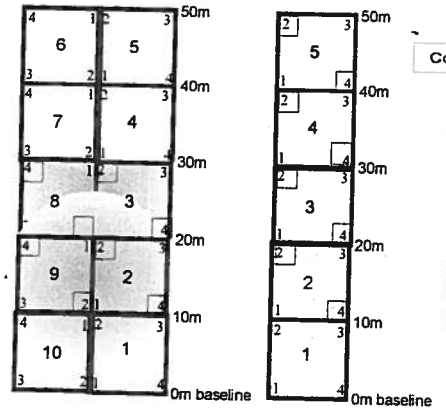
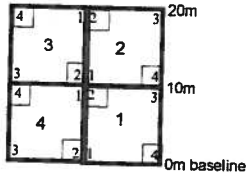
7	25-50%	0.375
8	50-75%	0.625
9	75-95%	0.850
10	95-100%	0.975







BROWSE RATING NARRATIVE DESCRIPTION

LOW OR NONE: there is no measurable browse line AND there are very few or no plants 1-m nested quadrat and intensive module. In general, low values relate to less than 10 percent, by numbers of stems browsed.

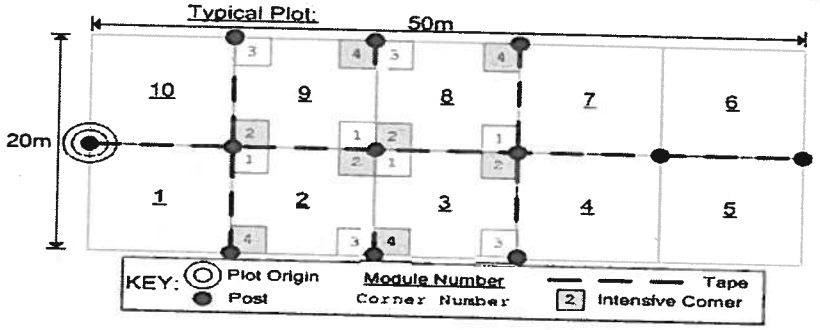
MEDIUM LOW values include evidence of browse at about 10 percent of the stems with no significant impact to plant reproduction evident. In this rating, plants are browsed but preferential species are observed to be reproducing in numbers that appear normal or near-normal in comparison to low browse areas. For example, trilliums may flower and fruit, but jewelweed and arrowwood viburnum exhibit browse.

MEDIUM: browse affects greater than 10 percent and less than 25 percent of stems in the 1 m2 nested quadrat and intensive module. A browse line is usually not evident or obvious for all classes and species of vegetation, but careful examination may show preferential browse and/or browse lines for some species of plants.

MEDIUM HIGH values include evidence of a browse line and 25 percent of stems browsed with very little vegetation regeneration evident. In this rating, for some species of plants, reproduction does not appear to occur or it is very severely limited.

HIGH: greater than 25 percent of the stems of plants in the 1 m2 nested quadrat and intensive module AND a browse line is evident.

VERY HIGH values include extensive browse conditions, where the browse line is very evident AND almost all seedlings and herbs are severely browsed or missing. Browse line may be 5 to 6 feet in height with no or little green growth beneath.



CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

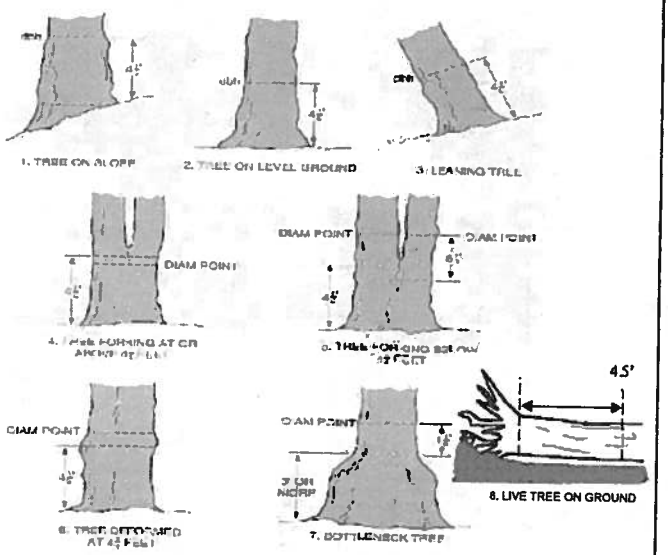
Cleveland Metroparks

Project Label: PCAP Project Name: 01RR2013 Plot No.: 1358 Page: 1 of 2

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	Standing dead								••	•	•						
1	Carya cordiformis									•							
1	Lindera benzoin			•••		•••											
1	Liriodendron tulipifera										•		•				
1	Picea abies												•				
1	Acer rubrum															•	
1	Aesculus glabra										•						
2	Aesculus glabra									•							
2	Standing dead										•						
2	Liriodendron tulipifera																107.7
2	Picea abies											•		••			
2	Lindera benzoin			••		•••											
2	Tilia americana											•					
3	Lindera benzoin			•••		•••											
3	Picea abies													••	•		
3	Prunus serotina								•								
3	Standing dead					•							•	•			
3	Parthenocissus quinquefolia							•									
3	Juglans nigra																51.5
4	Lindera benzoin			•••		••											
4	Standing dead										•				•		
4	LIGUSTRUM VULGARE			•													
4	Ulmus rubra									•							
4	Parthenocissus quinquefolia			••													

DBH Measurement Rules



Woody Stem Deer Browse

Record the number of stems/plants between 0.5-1.0 meters tall that exhibit evidence of this years deer browse.

Record using the tally system from 1 to 10

1 2 3 4 5

ASH CANOPY CONDITION

1. **Healthy, full canopy:** A healthy ash canopy is normally thinner than many other trees such as maple.
2. **Thinning canopy:** There aren't as many leaves as there ought to be, but all top branches exposed to sunlight have leaves.
3. **Dieback:** Canopy is thinning and some top branches exposed to sunlight are dead (have no leaves). Lower branches, not exposed to sunlight, die naturally and are not considered.
4. **>50% Dieback:** The canopy has less than half of the leaves that should be there and/or half of the top branches are dead.
5. **Dead canopy:** No leaves remain in the canopy portion of the tree. It still counts as a 5 even if there are epicormic sprouts below the canopy (lowest branch) on the trunk.

A B C D E

ASH CANOPY BREAKUP CONDITION (for dead trees):
(If an ash receives a score of 5 (dead) under canopy condition it must also receive a breakup condition rank as described below)

A: All main branches contain fine twigs (newly dead).
B: Over 50% of main branches have fine twigs.
C: Less than 50% of main branches have fine twigs.
D: Stem still standing and tertiary main branches present.
E: Central stem still standing.

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Cleveland Metroparks

Project Label: PCAP Project Name: 01RF2013 Plot No.: 1358 Page: 2 of 2

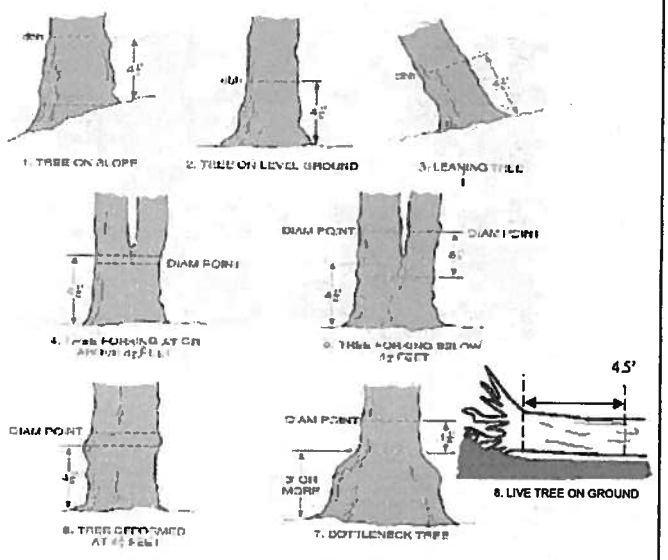
Explain subsample (additional room on back):

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)
a	4 Ulmus americana										•						
b	4 Picea abies												•				
c	4 Fraxinus pennsylvanica														•		
d	4 Tilia americana											•					
e	4 Liriodendron tulipifera			•													
f	5 Fraxinus sp. pennsylvanica SEE 4 FT 13												•				
g	5 Picea abies										•		•	•	•		42.0
h	5 Lindera benzoin			11		••		•									
i	5 Standing dead											•					
j	5 Sassafras albidum			••													
k	3 Carya cordiformis			•													

3aCM PCAP Natural Woody Stem Data Sheet ver 2.0.xls last revised 5/29/2012 jjm

Natural Resources Management FORM NR/2010-03a

DBH Measurement Rules



Woody Stem Deer Browse

Record the number of stems/plants between 0.5-1.0 meters tall that exhibit evidence of this years deer browse.

Record using the tally system from 1 to 10

1 2 3 4 5

ASH CANOPY CONDITION

1. **Healthy, full canopy:** A healthy ash canopy is normally thinner than many other trees such as maple.
2. **Thinning canopy:** There aren't as many leaves as there ought to be, but all top branches exposed to sunlight have leaves.
3. **Dieback:** Canopy is thinning and some top branches exposed to sunlight are dead (have no leaves). Lower branches, not exposed to sunlight, die naturally and are not considered.
4. **>50% Dieback:** The canopy has less than half of the leaves that should be there and/or half of the top branches are dead.
5. **Dead canopy:** No leaves remain in the canopy portion of the tree. It still counts as a 5 even if there are epicormic sprouts below the canopy (lowest branch) on the trunk.

A B C D E

ASH CANOPY BREAKUP CONDITION (for dead trees):
(If an ash receives a score of 5 (dead) under canopy condition it must also receive a breakup condition rank as described below)

A: All main branches contain fine twigs (newly dead).
B: Over 50% of main branches have fine twigs.
C: Less than 50% of main branches have fine twigs.
D: Stem still standing and tertiary main branches present.
E: Central stem still standing.

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

Project Label: PCAP Project Name: 01RR2013 Plot No.: 1358 Date: 07-22-18

Module	Tree ID.	Species	Dead	c	Voucher #	DBH (cm)	Ht @ DBH	ASH Only: Ash condition	*Dead condition	# Exit holes	Epicormic present	Woodpecker holes
4	1	Fraxinus pennsylvanica				30.6	/	1		0	0	0
5	2	Fraxinus pennsylvanica				21.4	/	2		0	0	0
	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
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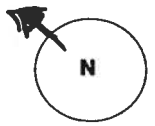
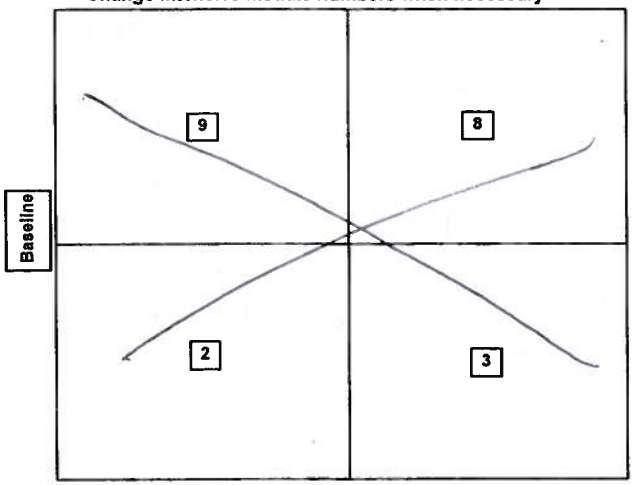
	22											
	23											
	24											
	25											

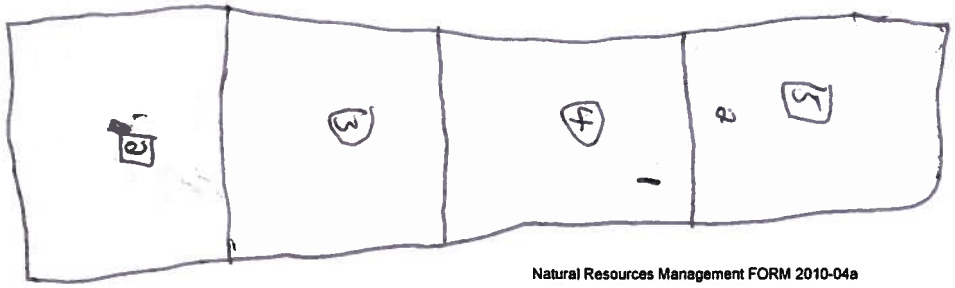


*** Change intensive module numbers when necessary



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: 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	X	X	X	X	
Cynanchum louiseae (vine)	Black Swallow-wort					
Butomus umbellatus (wetland)	Flowering Rush					
Heracleum mantegazzianum	Giant Hogweed					

Presence
X: yes

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)					
Alnus glutinosa	European Alder					
Dipsacus laciniatus	Cut-leaf Teasel					
Elaeagnus umbellata	Autumn Olive (shrub)					
Lonicera maackii	Amur Honeysuckle (shrub)					
Euonymus fortunei	Wintercreeper					

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

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			SRT 12-3-13
Viburnum plicatum	Doublefile Viburnum (shrub)					

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

Tier 4: Widespread and abundant		Presence				comments
		NE	SE	SW	NW	
Alliaria petiolata	Garlic Mustard	X	3	X	X	~~SRT 12-3-13~~
Ligustrum vulgare	Common Privet (shrub)	1		1	1	
L. morrowii, L. tatarica	Bush Honeysuckles (shrub)		1			SRT 12-3-13
Phalaris arundinacea	Reed Canarygrass					
Phragmites australis (wetland)	Phragmites					
Polygonum cuspidatum	Japanese Knotweed					
Frangula alnus	Glossy Buckthorn (shrub)					
Rosa multiflora	Multiflora Rose (shrub)		1	1	3	
Typha angustifolia, T. x.glauca	Cattails (wetland)					
Cirsium arvense	Canada thistle			2		
Dipsacus fullonum	Common Teasel					
Hesperis matronalis	Dame's Rocket					
Vinca minor (G-cover)	Periwinkle					

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

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

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

Project Label: PCAP Project Name: 01 RR 2013 Plot No.: 1358

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	1	38	1	0	2	0
3		0	0	2	22	5	0	3	0
4		0	0	2	25	10	0	5	0
5		0	0	1	36	0	0	2	0

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

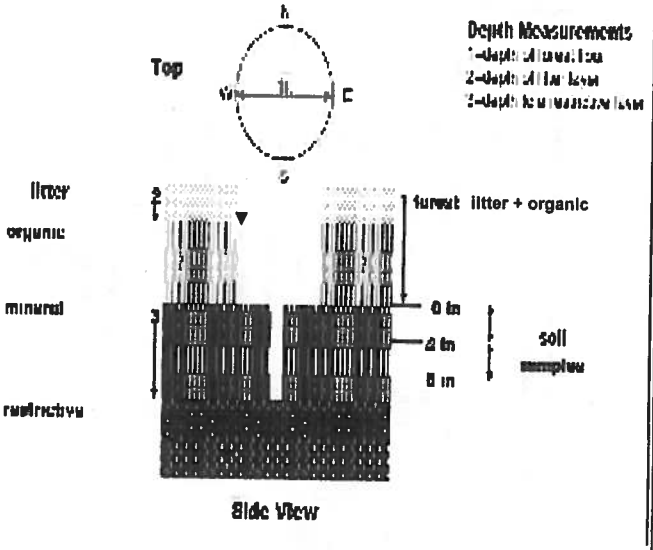
CROWN COVER (DENSIOMETER): Make 4 readings per module facing N, S, E, W. Place dot count in corresponding space. (4 dots per grid square)

Module	N	S	E	W
2	16	9	19	13
3	14	27	19	18
4	46	21	30	19
5	21	17	27	22

COVER BY STRATA

STRATUM	GENERAL FORM
Tree (generally >5 m)	Tree (overstory), very tall shrubs*, liana, epiphyte)
Shrub (generally 0.5 to 5 m)	Tree (sapling), shrub, liana, epiphyte)
Herb (Field)	Herb, dwarf-shrub**, tree (seedling***)
Floating	Floating
Aquatic (submerged)	Submerged

*Very tall shrubs are sometimes included in the tree stratum
**Can also include seedlings of shrubs, i.e. all shrubs <0.5m
***Tree seedlings are often defined as up to 1.4 m height or as <2.5 cm DBH in which case they would span the herb and shrub layers.



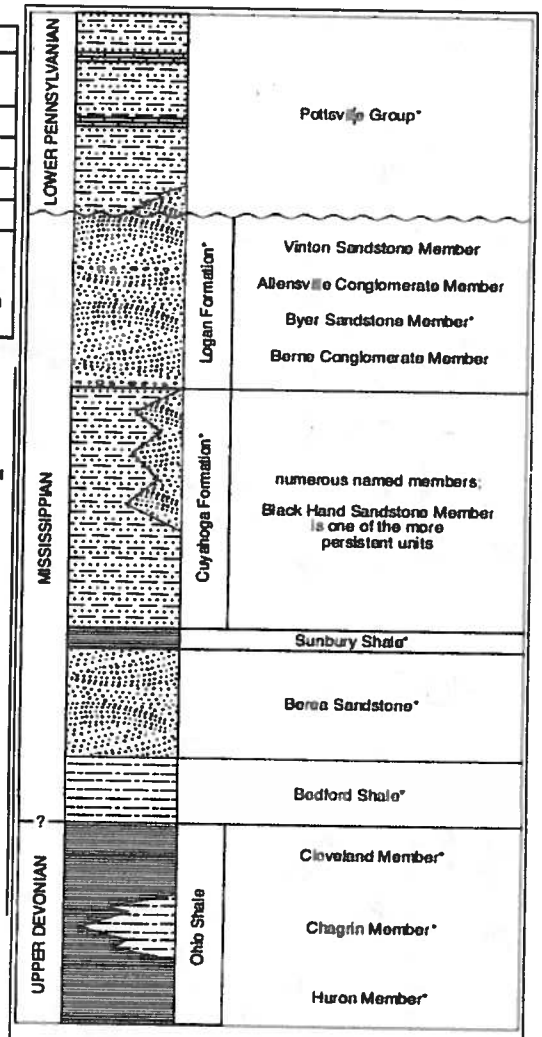


FIGURE 3-20.—Generalized section of Upper Devonian, Mississippian, and Lower Pennsylvanian formations in northeastern Ohio. Asterisks indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the area. The section is not to scale, but the thicknesses indicated are proportional. The term "Waverly" is used in the older literature to refer to Mississippian rocks in Ohio. Some geologists use the European term "Carboniferous," which encompasses the Mississippian and Pennsylvanian Periods of the U.S. Many units have been named within the Cuyahoga Formation, but most units are local and cannot be traced over great distances. The Black Hand Member is a spectacular massive sandstone that is fairly widespread but discontinuous. See Hyde (1953), Hoover (1960), and Collins (1979) for more information on Mississippian rocks in Ohio. See figure 3-18 for explanation of rock types.

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

Project label: PCAP Project Name: 01 BR 2013 Plot No.: 1358

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)

5 cm	matrix color	2.5Y 3/2
	mottle color	none
	%mottle	0
	oxid roots	Y (N)
	texture*	2
	redox features**	Y (N)
	hydr. cond.***	I S (M) D
20 cm	matrix color	2.5Y 4/3
	mottle color	none
	%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)

a few worms present

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: Ch/Chagrin silt loam; occass. rarely flooded

Soil Series Source: Ohio Soil Survey

Landform type: Flood Plains

Depth to rest. Layer: >80" 101cm

Parent Material: Alluvium

DRAINAGE*

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

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	0.4	0.4	0	730.0
3	0.0	0.0	0	730.0
4	1.4	1.4	0	730.0
5	0.1	0.1	6	730.0

EARTH SURFACE & GROUND COVER

Underlying Earth Surface* (Sum = 100%)	percent	Ground Cover (Each ≤ 100%)	percent
Histosol	0	Coarse Woody Debris***	7%
Mineral Soil	100%	Fine Woody Debris****	18%
Gravel-Cobble*	0	Litter	10%
Boulder**	0	Duff (Ferm.+ Humus)	0
Bedrock	0	Bryophyte- Lichen	1%
* Gravel-Cobble = 1/16-10"		Water	0
**Boulder = > 10 in		Bare Soil	50%
*** >5 cm in diameter		Road/Trail	0
**** <5 cm in diameter		Other -	0

TRAIL INFORMATION: None

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	78%
Shrub	0.5 - 5m	43%
Herb	≤ 0.5m	8%
(Floating)*	-	
(Aquatic)*	-	

* rooted and floating or slightly emersed

** submersed, most plant mass below surface

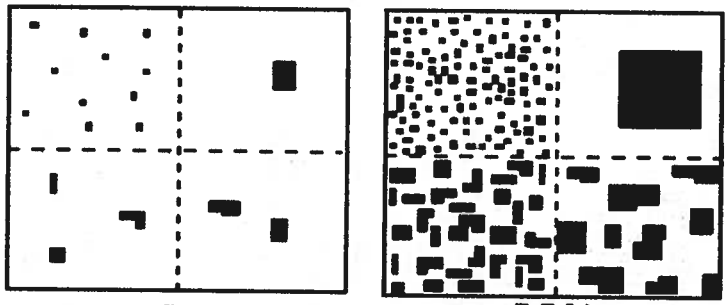
SEE BACK OF PAGE FOR "TYPICAL"STRATA DESCRIPTIONS. STRATA CAN VARY BY COVER TYPE.

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

PERCENT MOTTLES (USE CLASS CODES):

Class	Code		Criteria: % of Surface Area Covered
	Conv.	NASIS	
Few	f	#	< 2
Common	c	#	2 to < 20
Many	m	#	≥ 20

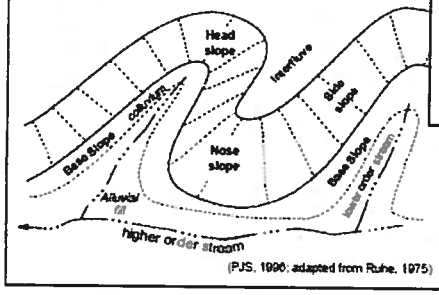


SOIL TEXTURE: Record the code for the soil texture of the 5 cm and 20 cm layers. To estimate texture, collect a soil sample from the appropriate layer and moisten it with water to the consistency of modeling clay/wet newspaper; the sample should be wet enough that all of the particles are saturated but excess water does not freely flow from the sample when squeezed. Attempt to roll the sample into a ball. If the soil will not stay in a ball and has a grainy texture, the texture is either sandy or coarse sandy. If the soil does form a ball, squeeze the sample between your fingers and attempt to form a self-supporting ribbon. Samples which form both a ball and a ribbon should be coded as clayey; samples which form a ball but not a ribbon should be coded as loamy.

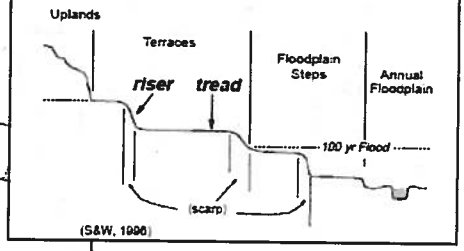
0= Organic
1= Loamy
2= Clayey
3= Sandy
4= Coarse Sand
9= Not measured - make plot note

Geomorphic Component - Three-dimensional descriptors of parts of landforms or microfeatures that are best applied to areas. Unique descriptors are available for Hills, Terraces, Mountains, and Flat Plains: e.g., (for Hills) *nose slope* or *NS*.

Hills	Code	
	PDP	NASIS
interfluve	IF	IF
head slope	HS	HS
nose slope	NS	NS
side slope	SS	SS
base slope	--	BS

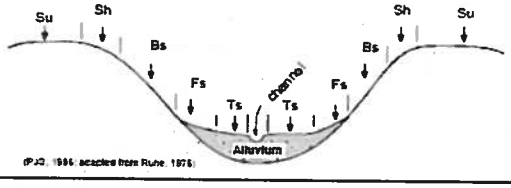


Terraces	Code
riser	RI
tread	TR



Hillslope - Profile Position (Hillslope Position in PDP) - Two-dimensional descriptors of parts of line segments (i.e., slope position) along a transect that runs up and down the slope: e.g., *backslope* or *BS*. This is best applied to transects or points, not areas.

Position	Code
summit	SU
shoulder	SH
backslope	BS
footslope	FS
toeslope	TS



HYDROLOGIC REGIME Modified from Grossman et al 1998. (Frequency and duration of flooding.)

UPLAND: Not a wetland. Very rarely flooded.

INTERMITTENTLY/SEASONALLY SATURATED: Dry at least once per year. Surface water is seldom present, but substrate is saturated to surface for extended periods during the growing season.

PERMANENTLY/SEMIPERMANENTLY SATURATED: Dry less than once per year. Surface water is seldom present, but substrate is saturated to surface for extended periods during the growing season. Equivalent to Cowardin's Saturated modifier.

OCCASIONALLY FLOODED: Surface water can be present for brief periods during growing season, but not in most years. Often characterizes flood-plain upper terraces.

TEMPORARILY FLOODED: Surface water present for brief periods during growing season, but water table usually lies well below soil surface. Often characterizes flood-plain levees and lower terraces. Equivalent to Cowardin's Temporary modifier.

INTERMITTENTLY FLOODED : Substrate is usually exposed, but surface water can be present for variable periods without detectable seasonal periodicity. Inundation is not predictable to a given season and is dependent upon highly localized rain storms. This modifier was developed for use in the arid West for water regimes of Playa lakes, intermittent streams, and dry washes but can be used in other parts of the U.S. where appropriate. This modifier can be applied to both wetland and non-wetland situations. Equivalent to Cowardin's Intermittently Flooded modifier.

SEMIPERMANENTLY FLOODED (exposed <1/year): Surface water persists throughout the growing season in most years. Land surface is normally saturated when water level drops below soil surface. Includes Cowardin's Intermittently Exposed and Semipermanently Flooded modifiers.

PERMANENTLY FLOODED: Water covers the land surface at all times of the year in all years. Equivalent to Cowardin's "permanently flooded".

UNKNOWN: The hydrologic regime cannot be determined from the available information.

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP PR 135B

DATE: 07 / 22 / 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: ● ● Absent: ○ Leaf Type: ● ● 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	●	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	●	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	●	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	●	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	●	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	●		Bare ground	0	1	2	3	4		Bare ground	0	1	2	3	4	
Litter, duff	0	●	2	3	4		Litter, duff	0	1	2	3	4		Litter, duff	0	1	2	3	4	
Rock	●	1	2	3	4		Rock	0	1	2	3	4		Rock	0	1	2	3	4	
Water	●	1	2	3	4		Water	0	1	2	3	4		Water	0	1	2	3	4	
Submerged Vegetation	●	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					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 - TARGETED ALIEN SPECIES (Back)

Reviewed by (initial): _____

Site ID: PCAPRR1358 DATE: 07/22/2013

Confirm a filled data bubble indicates presence and an unfilled bubble indicates absence by filling in this bubble

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
Eurasian Watermilfoil	○	○	○		Purple Loosestrife	○	○	○		Johnson Grass	○	○	○	
Water hyacinth	○	○	○		Knotweed	○	○	○		Kudzu	○	○	○	
Yellow Floating Heart	○	○	○		Japanese Knotweed	○	○	○		Multiflora Rose	○	○	○	
Giant Salvinia	○	○	○		Perennial Pepperweed	○	○	○		Common Buckthorn	○	○	○	
Garlic Mustard	●	○	○		Giant Reed	○	○	○		Himalayan Blackberry	○	○	○	
Poison Hemlock	○	○	○		Cheatgrass	○	○	○		Tamarisk	○	○	○	
Mile-A-Minute Weed	○	○	○		Reed Canary Grass	○	○	○		Other:	○	○	○	
Birdsfoot Trefoil	○	○	○		Common Reed	○	○	○		Other:	○	○	○	
Canada Thistle	○	○	○		Leafy Spurge	○	○	○		Other:	○	○	○	
										Other:	○	○	○	

PLOT COORDINATES

Provide GPS coordinates at the center of the Buffer Plot (#3) at the far end of each Buffer Transect and for the Buffer Plot at the AA CENTER. Indicate the location of the plot coordinates by filling in the appropriate bubble.

If Buffer Plot 3 can not be accessed, take the coordinates at the nearest practicable location ALONG THE TRANSECT. This is important because all Buffer Plots are centered on the Buffer Transects and the coordinates will indicate the location of the transect. Fill in the "nearest practicable location" bubble, fill in the flag box, and describe where the coordinates were taken and why in the comment section below. The coordinates of the nearest practicable location can be either placed as close to the center of Plot 3 as possible or at the center of the last accessible Buffer Plot.

Location of coordinates (choose one): Flag

● AA CENTER ○ N3 ○ S3 ○ E3 ○ W3 ○ Nearest practicable location (flag and comment below)

Latitude North 41.45910 Longitude West 081.82285

Use Decimal Degrees; NAD83

Flag	Comments

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP RR 1358 DATE: 07/22/2013

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

Reviewed by (initial): _____

Site ID: PCAP RR1358 **DATE:** 07/22/2013

Confirm a filled data bubble indicates presence and an unfilled bubble indicates absence by filling in this bubble

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
Eurasian Watermilfoil	O	O	O		Purple Loosestrife	O	O	O		Johnson Grass	O	O	O	
Water hyacinth	O	O	O		Knotweed	O	O	O		Kudzu	O	O	O	
Yellow Floating Heart	O	O	O		Japanese Knotweed	O	O	O		Multiflora Rose	O	O	O	
Giant Salvinia	O	O	O		Perennial Pepperweed	O	O	O		Common Buckthorn	O	O	O	
Garlic Mustard	O	O	O		Giant Reed	O	O	O		Himalayan Blackberry	O	O	O	
Poison Hemlock	O	O	O		Cheatgrass	O	O	O		Tamarisk	O	O	O	
Mile-A-Minute Weed	O	O	O		Reed Canary Grass	O	O	O		Other: _____	O	O	O	
Birdsfoot Trefoil	O	O	O		Common Reed	O	O	O		Other: _____	O	O	O	
Canada Thistle	O	O	O		Leafy Spurge	O	O	O		Other: _____	O	O	O	
										Other: _____	O	O	O	

PLOT COORDINATES

Provide GPS coordinates at the center of the Buffer Plot (#3) at the far end of each Buffer Transect and for the Buffer Plot at the AA CENTER. Indicate the location of the plot coordinates by filling in the appropriate bubble.

If Buffer Plot 3 can not be accessed, take the coordinates at the nearest practicable location ALONG THE TRANSECT. This is important because all Buffer Plots are centered on the Buffer Transects and the coordinates will indicate the location of the transect. Fill in the "nearest practicable location" bubble, fill in the flag box, and describe where the coordinates were taken and why in the comment section below. The coordinates of the nearest practicable location can be either placed as close to the center of Plot 3 as possible or at the center of the last accessible Buffer Plot.

Location of coordinates (choose one):

O AA CENTER ● N3 O S3 O E3 O W3 O Nearest practicable location (flag and comment below)

Flag: ☐

Latitude North 41.45978 Longitude West 081.82297

Use Decimal Degrees; NAD83

Flag	Comments
1	Picnic area

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP RR1358 DATE: 07/22/2013

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

1

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; 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; Leaf Type: B, N; Absent; 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; Leaf Type: B, N; Absent; 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	○	○	○	
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 - TARGETED ALIEN SPECIES (Back)

Reviewed by (initial): _____

Site ID: PCAP RR1358 **DATE:** 07/22/2013

O Confirm a filled data bubble indicates presence and an unfilled bubble indicates absence by filling in this bubble

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
Eurasian Watermilfoil	O	O	O		Purple Loosestrife	O	O	O		Johnson Grass	O	O	O	
Water hyacinth	O	O	O		Knotweed	O	O	O		Kudzu	O	O	O	
Yellow Floating Heart	O	O	O		Japanese Knotweed	O	O	O		Multiflora Rose	O	O	O	
Giant Salvinia	O	O	O		Perennial Pepperweed	O	O	O		Common Buckthorn	O	O	O	
Garlic Mustard	O	O	O		Giant Reed	O	O	O		Himalayan Blackberry	O	O	O	
Poison Hemlock	O	O	O		Cheatgrass	O	O	O		Tamarisk	O	O	O	
Mile-A-Minute Weed	O	O	O		Reed Canary Grass	O	O	O		Other:	O	O	O	
Birdsfoot Trefoil	O	O	O		Common Reed	O	O	O		Other:	O	O	O	
Canada Thistle	O	O	O		Leafy Spurge	O	O	O		Other:	O	O	O	
										Other:	O	O	O	

PLOT COORDINATES

Provide GPS coordinates at the center of the Buffer Plot (#3) at the far end of each Buffer Transect and for the Buffer Plot at the AA CENTER. Indicate the location of the plot coordinates by filling in the appropriate bubble.

If Buffer Plot 3 can not be accessed, take the coordinates at the nearest practicable location ALONG THE TRANSECT. This is important because all Buffer Plots are centered on the Buffer Transects and the coordinates will indicate the location of the transect. Fill in the "nearest practicable location" bubble, fill in the flag box, and describe where the coordinates were taken and why in the comment section below. The coordinates of the nearest practicable location can be either placed as close to the center of Plot 3 as possible or at the center of the last accessible Buffer Plot.

Location of coordinates (choose one):

O AA CENTER O N3 O S3 O E3 O W3 ● Nearest practicable location (flag and comment below)

Flag: 1

Latitude North 41.45868 Longitude West 081.82133

Use Decimal Degrees; NAD83

Flag	Comments
1	unable to reach BP3E because Rocky River flows

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAPRR1358 DATE: 07/22/2013

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; Leaf Type: ● B ○ N; ○ Absent)	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; Leaf Type: ● B ○ N; ○ Absent)	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; Leaf Type: ● B ○ N; ○ Absent)	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	○	○	○	
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 - TARGETED ALIEN SPECIES (Back)

Reviewed by (initial): _____

Site ID: PCAP RR 1358 **DATE:** 07/22/2013

● Confirm a filled data bubble indicates presence and an unfilled bubble indicates absence by filling in this bubble

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
Eurasian Watermilfoil	O	O	O		Purple Loosestrife	O	O	O		Johnson Grass	O	O	O	
Water hyacinth	O	O	O		Knotweed	O	O	O		Kudzu	O	O	O	
Yellow Floating Heart	O	O	O		Japanese Knotweed	O	O	O		Multiflora Rose	O	O	O	
Giant Salvinia	O	O	O		Perennial Pepperweed	O	O	O		Common Buckthorn	O	O	O	
Garlic Mustard	O	O	O		Giant Reed	O	O	O		Himalayan Blackberry	O	O	O	
Poison Hemlock	O	O	O		Cheatgrass	O	O	O		Tamarisk	O	O	O	
Mile-A-Minute Weed	O	O	O		Reed Canary Grass	O	O	O		Other: _____	O	O	O	
Birdsfoot Trefoil	O	O	O		Common Reed	O	O	O		Other: _____	O	O	O	
Canada Thistle	O	O	O		Leafy Spurge	O	O	O		Other: _____	O	O	O	
										Other: _____	O	O	O	

PLOT COORDINATES

Provide GPS coordinates at the center of the Buffer Plot (#3) at the far end of each Buffer Transect and for the Buffer Plot at the AA CENTER. Indicate the location of the plot coordinates by filling in the appropriate bubble.

If Buffer Plot 3 can not be accessed, take the coordinates at the nearest practicable location ALONG THE TRANSECT. This is important because all Buffer Plots are centered on the Buffer Transects and the coordinates will indicate the location of the transect. Fill in the "nearest practicable location" bubble, fill in the flag box, and describe where the coordinates were taken and why in the comment section below. The coordinates of the nearest practicable location can be either placed as close to the center of Plot 3 as possible or at the center of the last accessible Buffer Plot.

Location of coordinates (choose one): Flag

O AA CENTER O N3 ● S3 O E3 O W3 O Nearest practicable location (flag and comment below)

Latitude North 41.45710 Longitude West 081.82182

Use Decimal Degrees; NAD83

Flag	Comments

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (Initial): _____

Site ID: PCAP RR1358 **DATE:** 07/22/2013

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

1

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)	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 ●; Leaf Type: B ●; Absent: ○; 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 ●; Leaf Type: B ●; Absent: ○; Flag 1)	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	●	○	○	2
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 - TARGETED ALIEN SPECIES (Back)

Reviewed by (initial): _____

Site ID: PCAP RR[illegible]1358 **DATE:** 07/22/2013

● Confirm a filled data bubble indicates presence and an unfilled bubble indicates absence by filling in this bubble

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
Eurasian Watermilfoil	O	O	O		Purple Loosestrife	O	O	O		Johnson Grass	O	O	O	
Water hyacinth	O	O	O		Knotweed	O	O	O		Kudzu	O	O	O	
Yellow Floating Heart	O	O	O		Japanese Knotweed	O	O	O		Multiflora Rose	O	O	O	
Giant Salvinia	O	O	O		Perennial Pepperweed	O	O	O		Common Buckthorn	O	O	O	
Garlic Mustard	O	O	O		Giant Reed	O	O	O		Himalayan Blackberry	O	O	O	
Poison Hemlock	O	O	O		Cheatgrass	O	O	O		Tamarisk	O	O	O	
Mile-A-Minute Weed	O	O	O		Reed Canary Grass	O	O	O		Other: _____	O	O	O	
Birdsfoot Trefoil	O	O	O		Common Reed	O	O	O		Other: _____	O	O	O	
Canada Thistle	O	O	O		Leafy Spurge	O	O	O		Other: _____	O	O	O	
										Other: _____	O	O	O	

PLOT COORDINATES

Provide GPS coordinates at the center of the Buffer Plot (#3) at the far end of each Buffer Transect and for the Buffer Plot at the AA CENTER. Indicate the location of the plot coordinates by filling in the appropriate bubble.

If Buffer Plot 3 can not be accessed, take the coordinates at the nearest practicable location ALONG THE TRANSECT. This is important because all Buffer Plots are centered on the Buffer Transects and the coordinates will indicate the location of the transect. Fill in the "nearest practicable location" bubble, fill in the flag box, and describe where the coordinates were taken and why in the comment section below. The coordinates of the nearest practicable location can be either placed as close to the center of Plot 3 as possible or at the center of the last accessible Buffer Plot.

Location of coordinates (choose one):

O AA CENTER O N3 O S3 O E3 O W3 ● Nearest practicable location (flag and comment below)

Flag: 1

Latitude North 41.45848 Longitude West 081.82404

Use Decimal Degrees; NAD83

Flag	Comments
1	very steep slope
2	two lane road close to B1