PCAP PLOT DATA QUALITY CONTROL

Project Label: PCAP **Plot No:** 1117 **Date Sampled:** 6/16/11 **Lead:** DS

Comment required if item answer is NO

Parking/Access outside of Park Boundaries:		Y	N	If yes, write information 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 recored	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	NA
Cover by Strata? (confirm cover type)		Y	N	
Soil samples collected?		Y	N	
Vouchers labeled on datasheet with initials and number		Y	N	
Vouchers labeled on collection bag		Y	N	
Data sheet QA before leaving site?		Y	N	
Data sheets scanned?		06/23/11		Enter date to left
Final data sheets scanned?				Enter date to left
Web Soil survey		Y	N	
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	

Buffer width entered

Was there a wetland at the point?: Y N If NO, go to the next question. If YES, stop

Was there a wetland within 60m of this point? Y N If NO, go to the next section. If YES, stop

Pick one of the next three options below:

- ☐ **The soils ARE NOT hydric and the area at the point is**
- ☐ Developed with buildings, roads, pavement, fill
- ☐ Farmed, turf
- ☐ Other (specify):

- ☐ **The soils ARE hydric and the area at the point is**
- ☐ Developed with buildings, roads, pavement, fill
- ☐ Farmed, turf
- ☐ Other (specify):

- ☐ **No wetland determination can be made (explain below)**

Additional Comments:

* Buffer plots measured and entered - SEM 6/17/11

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

GENERAL INFORMATION

Project Label: PCAP

Project Name: 6/14/2011

Plot Name: "SON OF A BEECH"

Plot No.: 1117

☐ Level 4 (no nested corners sampled)

■ Level 5 (nested corners sampled)

Date (mm/dd/yyyy): 06/16/2011

End date (if > 1 day): / /

Party	Role**
D STOVER	Plot leader, BUFFER
Z BARTON	ASS'T, BUFFER
A MACK	SOILS, STEMS
J MURPHY	"

** Roles: Co-leader, Assn. 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 simpl
vascul.	✓			n/a
bryo			✓	
lichen				✓

TAXONOMIC STANDARD

Authority: G&C Pub Date: 1998

LOCATION

State: OH County: MEDINA

Quadrangle: WEST RICHFIELD

Local Place Names: WHIPP'S LEDGES

Landowner: CLE METROPARKS

X-axis Bearing of plot: [124] °

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

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

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

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

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

Datum: ■ NAD83/WGS84 ☐ NAD27

Latitude: 41.21517

Longitude: 81.70020

Coord. Accuracy: ✓ m ☐ ft +-11

GPS File Name: 1117 A

Plot size for cover data: 0.1 (hectares)

☐ Stems not sampled on this plot ☐ Stems absent

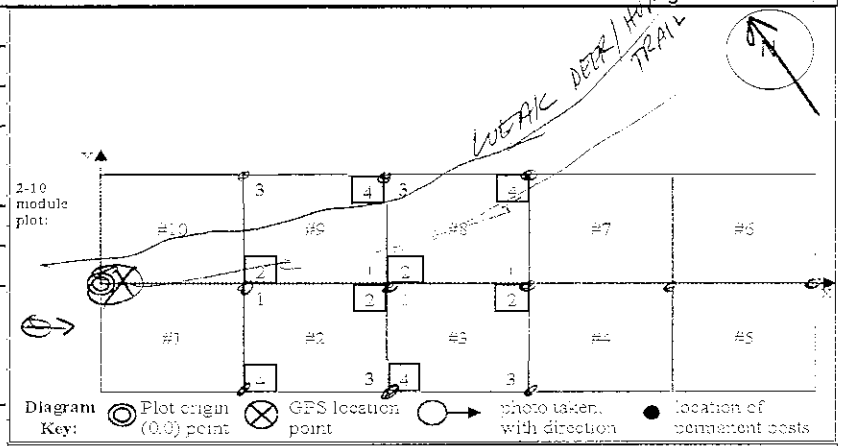
✓ Stems present Plot size stems: 0.1 (ha)

Depth: (1-5): 4

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

Camera No.: 3

Photo Nos.: 459-460



Plot placement: ☐ Representative ✓ GRTS ☐ Random ☐ Stratified Random

☐ Transect component ☐ Systematic (grid) ☐ Capture specific feature ☐ Other

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

LAYOUT - 2x5

LOCATION - ca. 475m SE of Whipp's Ledges parking area in beech-maple woods. Follow trail along ledges and cut into forest from there.

RATIONALE - Agree w/ plot layout

VEG - Beech-maple woods w/ thick sapling understory and ~~medium~~ moderate herb layer (Allium, Geranium, Trillium, Caulophyllum), deer browse evident but low (several trillium observed with fruit)

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: 01/4/2011 Plot No.: 1117

CLASSIFICATION

(FIT = excellent, good, fair, poor; CONF = high, med, low) 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, weakly 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=___

MODIFIED NATURESERVE CLASS*

CODE (on separate form): Fit=E Conf=H

COMMUNITY NAME: C02 BEECH - MAPLE FOREST

STAND SIZE

- ☐ >1,000 x plot size
- ☐ > 100 x plot size
- ☑ 10-100 x plot size
- ☐ 3-10 x plot size
- ☐ 1-3 x plot size
- ☐ < plot size

SALINITY*

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

(by default unless plot is a wetland)

DISTURBANCES

type*	severity**	yrs ago	% of plot	description
Human	L	unk.	50	grape vine cutting in last 4 mos of plot, disused trail thru part of plot.
Natural		>1	DSS &	25-11
Fire				
Cut				
Animal	L	0	100	deer browse
Other				

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

Current Land Use: PARKLAND

Former Land Use: UNKNOWN

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

HOMOGENEITY

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

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

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Project Label: PCAP Project name: 01 Hi 2011 Plot no.: 1117

Total modules: 10 Intensive modules: 4 Plot configuration: 2X5 Plot area (ha): 0.1

Visual est. % open water entire site: 0 Visual est. %unveg.o.w. entire site: 0 Visual est. %invasives entire site: 1%

Cleveland Metroparks

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

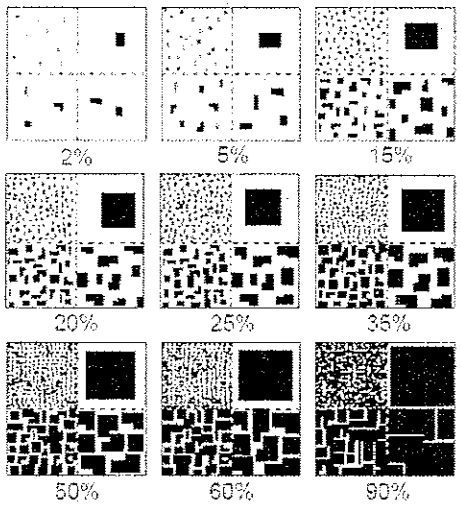
Strata - Cov. entire plot

Estimate for each intensive module:	mod 2 depth	corner 4 cov	mod 2 depth	corner 2 cov	mod 3 depth	corner 4 cov	mod 3 depth	corner 2 cov	mod 8 depth	corner 4 cov	mod 8 depth	corner 2 cov	mod 9 depth	corner 4 cov	mod 9 depth	corner 2 cov	mod R depth	corner R cov
%open water	1	0			1	0			1	0			1	0				
%unvegetated open water	1	0			1	0			1	0			1	0				
%Unveg. ground (bare soil)	1	0			1	0			1	1			1	1				
%unveg. litter (bare litter)	1	9			1	9			1	9			1	9				

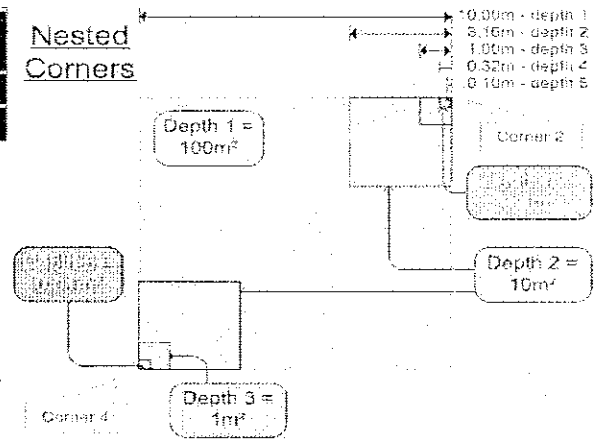
T	S	H	(F)	(A)	Br	Species	c	Voucher #	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
8	9	4			4	Acer saccharum			4	9	34		4	10	4		4	9	4		4	9	4			
8	8	5			5	Fagus grandifolia			4	8	2		4	9	4		4	9	3		3	7	3			
5	1	1				Carya cordiformis					2	7	3	1	2				2	1	2	5	4			
		2				Allium tricoccum			4	2	34		2	1	2		3	2	4		3	2	3			
		2				Trillium grandiflorum			4	2	2		4	2	2		3	2	2		3	2	2			
		1				Podophyllum peltatum			3	1					2	2										
		2			4	Fraxinus seedling			3	2	2		1	1			3	1	3		2	2	2			
		1				Moss sp.			3	1	34		2	1	3		2	1	3				2	1		
		1				Acer seedling			3	1	4		3	1	3		3	1	3		3	1	2			
		1				Ulmus seedling			2	1	2				2	1					4	1				
		2				Polystichum acrostichoides			2	3					2	2	2	2			1	1				
		2				Prenanthes sp.			2	2					3	1										-
		2				Geranium maculatum			2	2			2	2			2	2	2							
		1				Maianthemum racemosum			2	1	2		2	1	2				3	1	1	1				
		2				Arisaema triphyllum			2	3	2		3	2	2		4	2	3				4	2		
		1				Ribes cynosbati			2	1																
		1				Geum canadense			2	1																
		1				Sanguinaria canadensis			2	1	2		3	1							1	1				
		2				Polygonum virginianum			2	1							2	2	2				3	1		
		2			4	Parthenocissus quinquefolia			2	1									2	1			2	2		
		1			6	Aster 1 (long leaf)			1	1	-												2	1		
3	2					Ostrya virginiana			1	5	-												2	4		
		1				Carex communis (communis)	X	DS027			3	1									1	1				
		3				Caulophyllum thalictroides					3	3	1	3					2	3	1	4				
	3					Tilia americana			1	1	-										1	4				

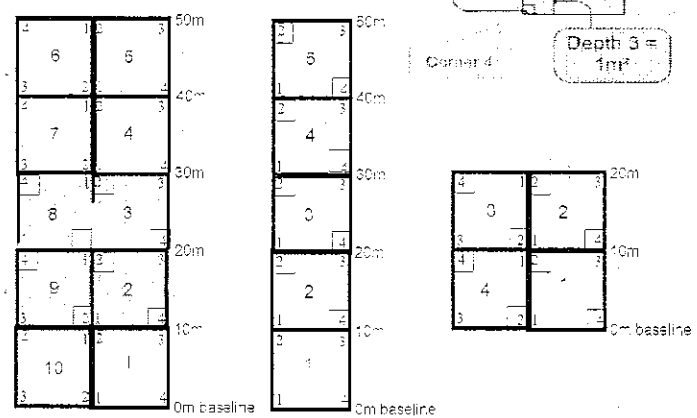
EXAMPLES OF PERCENT OF AREA COVERED

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.

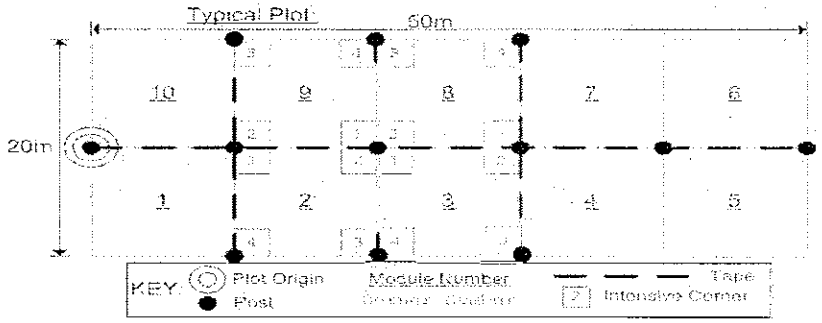
MEDIUM LOW values include evidence of browse at about 10 percent of the stems with no significant impact to plant reproduction evident. In this rating, plants are browsed but preferential species are observed to be reproducing in numbers that appear normal or near-normal in comparison to low browse areas.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

Project Label: PCAP Project name: 01 Hi 2011 Plot no.: 1117

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

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

Estimate for each intensive module:	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner
	2	4	2	2	3	4	3	2	8	4	8	2	9	4	9	2	R	R
	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
%open water	1				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
		1				Prunus serotina					2	1	1	1			1	1			4	1						
		2				Dryopteris carthusiana			1	1			1	1			1	1										
		2				Carex albursina (lax)		DS028	1	2					2	1												
		1				Smilax hispidus			1	1																		
		1				Carex digitalis (digi)	X	DS029	1	1																		
		2			8	Rosa multiflora			1	1					2	2												
		1				Leersia virginica			1	1							2	1					4	1				
	2	1				Lindera benzoin			1	2			2	3	2								2	2				
		1				Impatiens sp.				*																	R	1
		2			7	Euonymus alatus			1	1			1	1+			1	1			1	1						
		2				Viola pubescens			1	1			1	1+			1	1										
		1			8	Solidago caesia			1	1																		
		1				Liriodendron tulipifera							1	1							4	1+						
		1				Rubus allegheniensis							1	1														
5						Quercus rubra											4	8	2		4	7						
4						Ulmus rubra																					R	5
		2				Circaea lutetiana											3	1					2	1				
	1					Fraxinus americana																					R	1
		1				Hackelia virginiana											3	1										
		1				Solidago flexicaulis											1	2										
		1				Vitis seedling											1	1			2	1	2					
		1				Conopholis americana											1	1			1	1						
3						Acer rubrum															1	5						
		1				Unknown graminoid																					R	1
		1				Polygonatum pubescens																					R	1

10, 7

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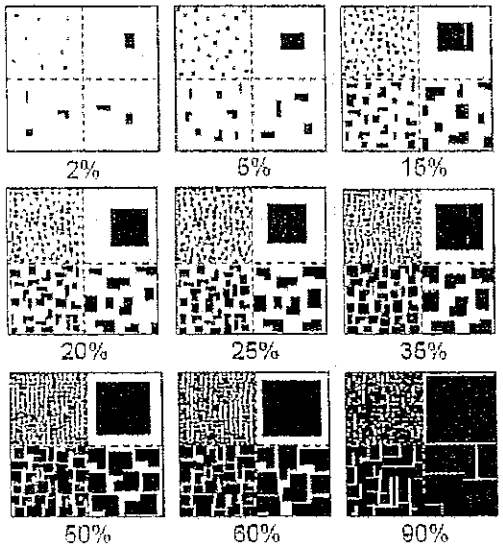
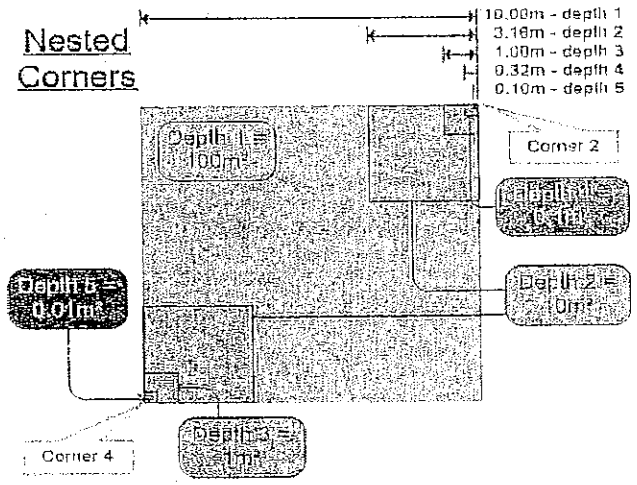
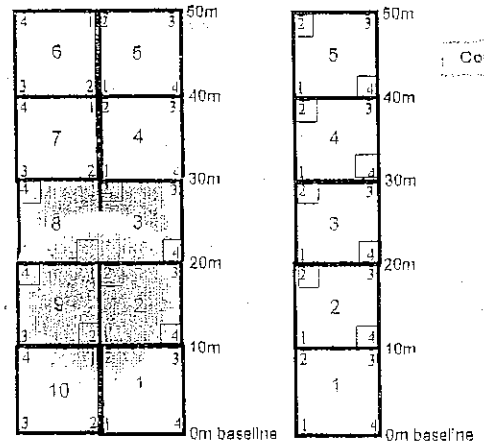
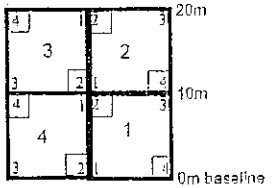


cover class	% cover	midpoint
1	solitary or few	0.0001
2	0-1%	0.005
3	1-2%	0.015
4	2-5%	0.035
5	5-10%	0.075
6	10-25%	0.175
7	25-50%	0.375
8	50-75%	0.625
9	75-95%	0.850
10	95-100%	0.975

Nested Corners







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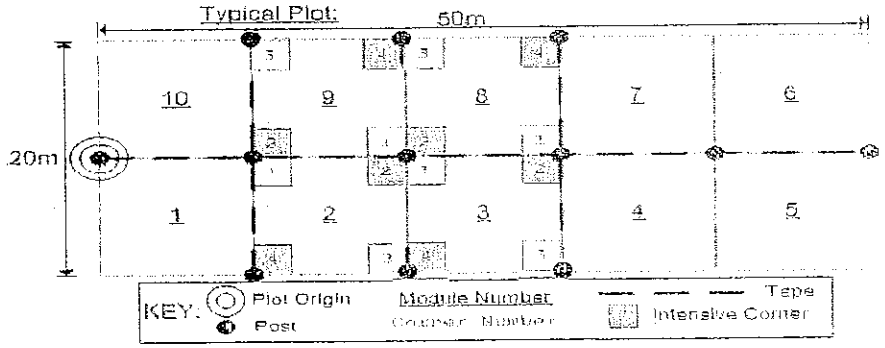

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Project Label: PCAP Project name: 01 Hi 2011 Plot no.: 1117

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

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

Estimate for each intensive module:

	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner
																	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	o	Voucher #	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov
		1				Vitis aestivalis																					R	1
		2				Brachyelytrum erectum																					R	2
		1				Sambucus pubens																					R	1

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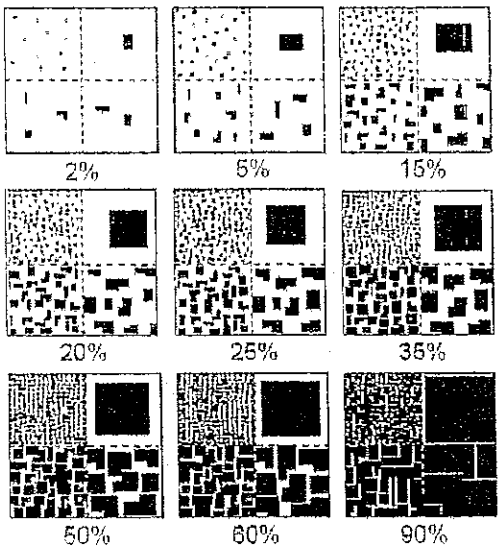

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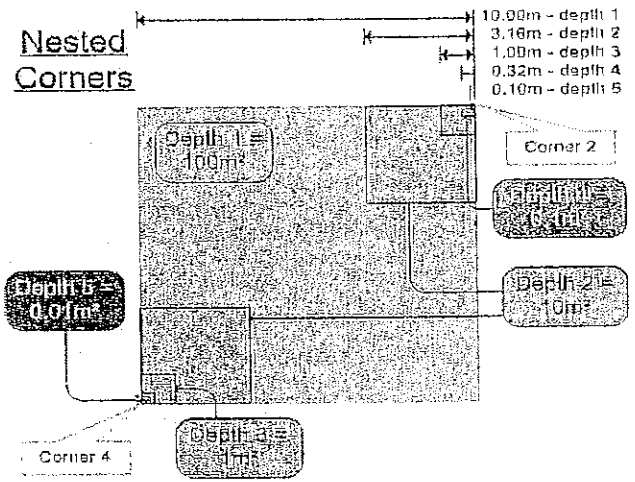
5	5-10%	0.075
6	10-25%	0.175
7	25-50%	0.375
8	50-75%	0.625
9	75-95%	0.850
10	95-100%	0.975

Nested Corners



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.

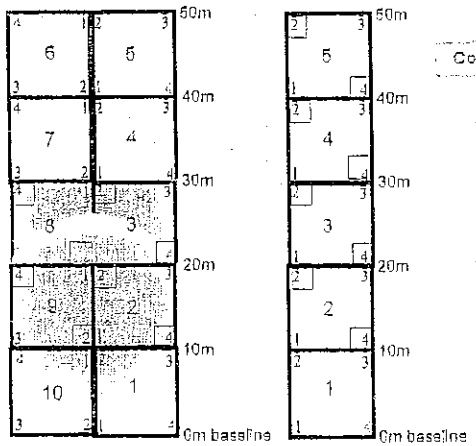
MEDIUM LOW values include evidence of browse at about 10 percent of the stems with no significant impact to plant reproduction evident. In this rating, plants are browsed but preferential species are observed to be reproducing in numbers that appear normal or near-normal in comparison to low browse areas.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

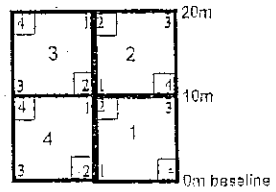
MEDIUM: browse affects greater than 10 percent and less than 25 percent of stems in the 1 m2 nested quadrat and intensive module. A browse line is usually not evident or obvious for all classes and species of vegetation, but careful examination may show preferential browse and/or browse lines for some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

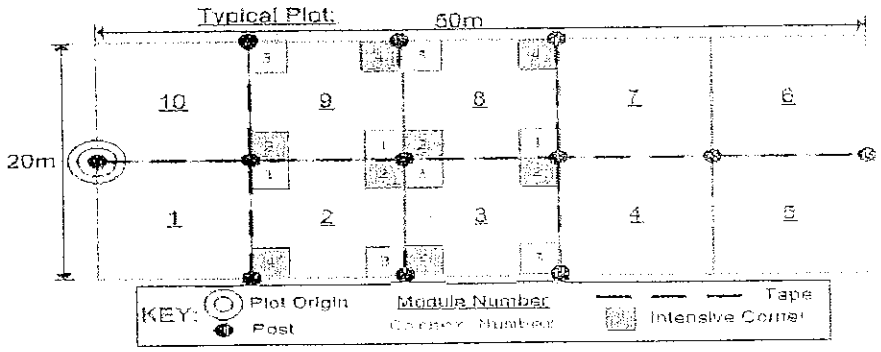
MEDIUM HIGH values include evidence of a browse line and 25 percent of stems browsed with very little vegetation regeneration evident. In this rating, for some species of plants, reproduction does not appear to occur or it is very severely limited.

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.







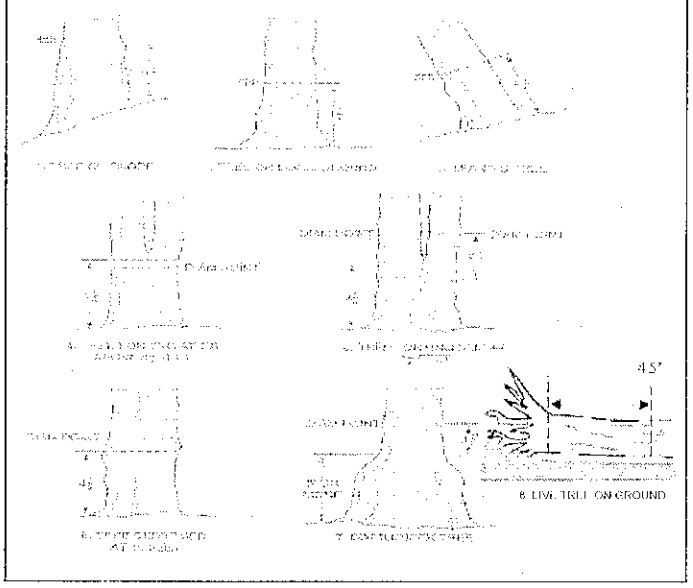
CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: OLHI 2011 Plot No.: 1117 Page: 1 of 3

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)
1	Acer saccharum			X													
1	Standing dead																45.9
1	Fagus grandifolia			4													
1	Lindera benzoin					3											
1	Carya cordiformis																54.1
1	Fraxinus americana			2													
2	Acer saccharum																
2	Fagus grandifolia			4													
2	Carya cordiformis																42.6
2	Fraxinus americana			4													
2	Ostrya virginiana			X													
2	Lindera benzoin					2											
2	Standing dead						1										
3	Fagus grandifolia			4													
3	Acer saccharum			1													
3	Standing dead																46.6
3	Lindera benzoin			X	1												
4	Acer saccharum			3X													
4	Carya cordiformis																
4	Fagus grandifolia			1													
4	Lindera benzoin			X		1											
4	Standing dead																
4	Multiflora rose			4													
4	Fraxinus americana			1													

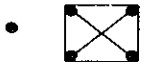
DBH Measurement Rules

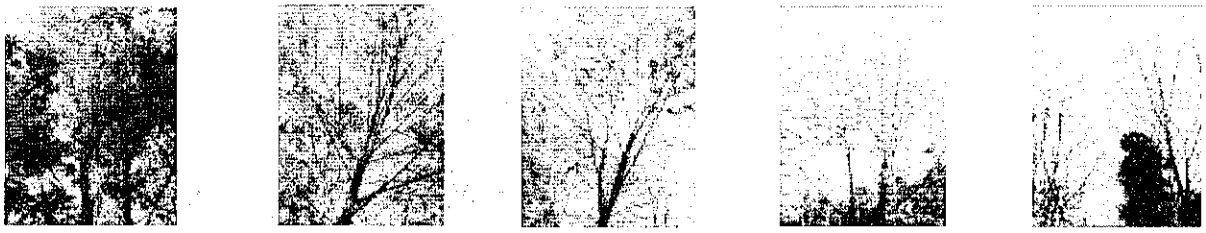


Woody Stem Deer Browse

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

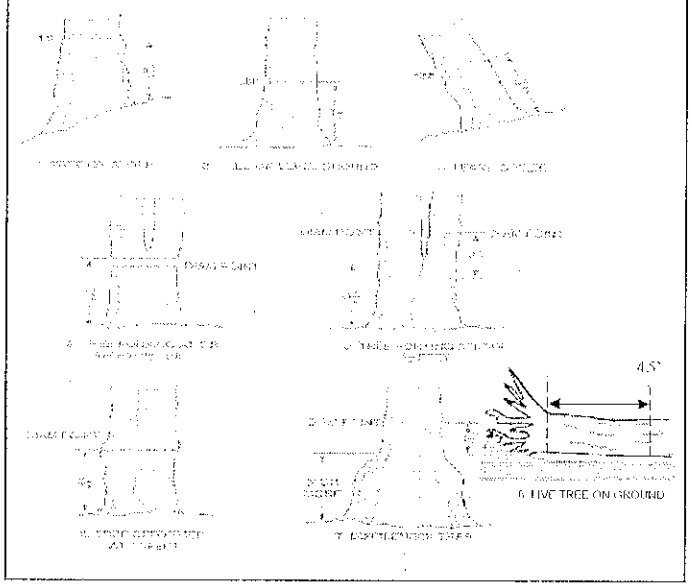
Project Label: PCAP Project Name: ~~PCAP~~ 01 H2 2011 Plot No.: 1117 Page: 2 of 3

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 0-<1	2 1-<2.5	3 2.5-<5	4 5-<10	5 10 - <15	6 15 - <20	7 20 - <25	8 25 - <30	9 30 - <35	10 35 - <40	11 >40 (record each tree)
5	Acer saccharum			3													
5	Fagus grandifolia			7													48.2, 46.9
5	~~Vitis (Dead)~~																
5	Standing dead																
5	Lindera benzoin					1											
5	Fraxinus americana			1		*											
6	Fagus grandifolia																
6	Standing dead																
6	Acer saccharum																
6	~~Vitis sp. (dead)~~																
6	Lindera benzoin					1											
6	Rosa multiflora																
7	Fagus grandifolia																49.6, 43.0
7	~~Vitis sp. (dead~~																
7	Acer saccharum																
7	Ulmus rubra ~~Ulmus~~ ~~americana~~																
8	Acer saccharum																
8	Fagus grandifolia																
8	Standing dead																
9	Acer saccharum																
9	Fagus grandifolia																
9	Acer rubrum																
9	Standing dead																
9	Fraxinus americana																

See photo P461

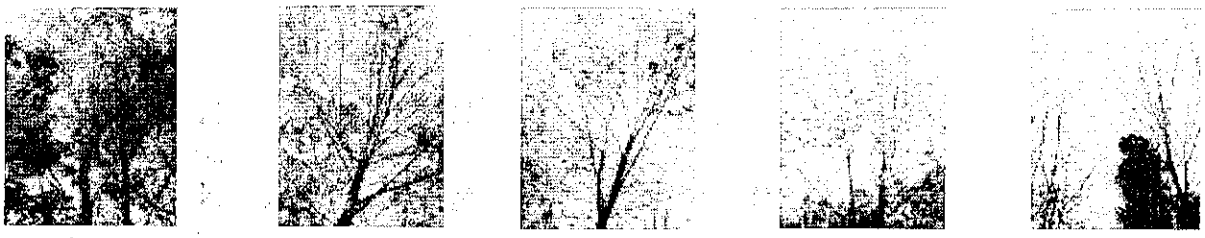
DBH Measurement Rules



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

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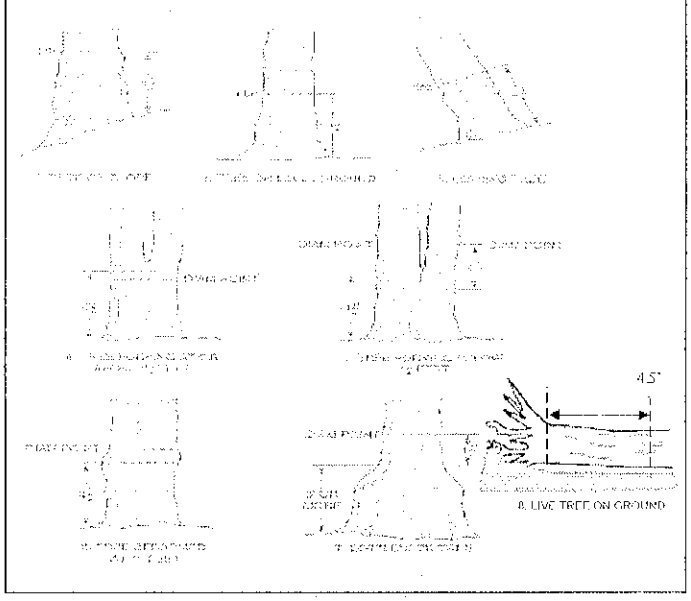
CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP Project Name: OHI 2011 Plot No.: 1117 Page: 3 of 3

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 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	Tilia americana								•								
9	Ostrya virginiana								•								
10	Lindera benzoin					1											
10	Acer saccharum			••			⊠ ••	⊠ ⊡		°	•	••				•	45.4
10	Fagus grandifolia			••			••	••	•								
10	standing dead						⊠										
10	~~Acer rubrum~~ Ulmus rubra															•	
10	Fraxinus americana			••													

DBH Measurement Rules



Woody Stem Deer Browse

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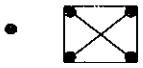
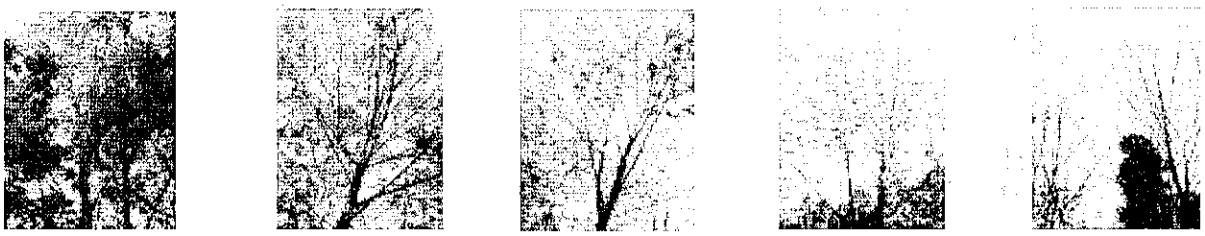
Record using the tally system from 1 to 10





1 2 3 4 5

ASH CANOPY CONDITION

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E: Central stem still standing

CLEVELAND METROPARKS Plant Community Assessment Program: Invasive Species Survey

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

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 (wetland)	Poison Hemlock					
Rhamnus cathartica	Common Buckthorn (shrub)					
Berberis thunbergii	Japanese Barberry (shrub)	1	2			
Alnus glutinosa	European Alder					
Dipsacus laciniatus	Cut-leaf Teasel					
Elaeagnus umbellata	Autumn Olive (shrub)					
Lonicera maackii	Amur Honeysuckle (shrub)	1	1			
Euonymus fortunei	Wintercreeper					

# of Plants
4: 50-100
5: 100-1,000
6: >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)					
Viburnum plicatum	Doublefile Viburnum (shrub)					

# of Plants
1: 1-10
2: 11-50.
3: >50

Tier 4: Widespread and abundant		Presence				comments
		NE	SE	SW	NW	
Alliaria petiolata	Garlic Mustard	X	X		X	
Ligustrum vulgare	Common Privet (shrub)					
L. morrowii, L. tatarica	Bush Honeysuckles (shrub)	X	X			
Phalaris arundinacea	Reed Canarygrass					
Phragmites australis (wetland)	Phragmites					
Polygonum cuspidatum	Japanese Knotweed					
Frangula alnus	Glossy Buckthorn (shrub)					
Rosa multiflora	Multiflora Rose (shrub)	X	X	X	X	
Typha angustifolia, T. x.glauca	Cattails (wetland) NO					
Cirsium arvense	Canada thistle					
Dipsacus fullonum	Common Teasel					
Hesperis matronalis	Dame's Rocket					
Vinca minor (G-cover)	Periwinkle					

Presence
X: yes

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

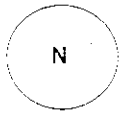
CLEVELAND METROPARKS Emerald Ash Borer - Fraxinus Sheet

INTENSIVE MODULES ONLY *TREES ≥ 10CM ONLY*

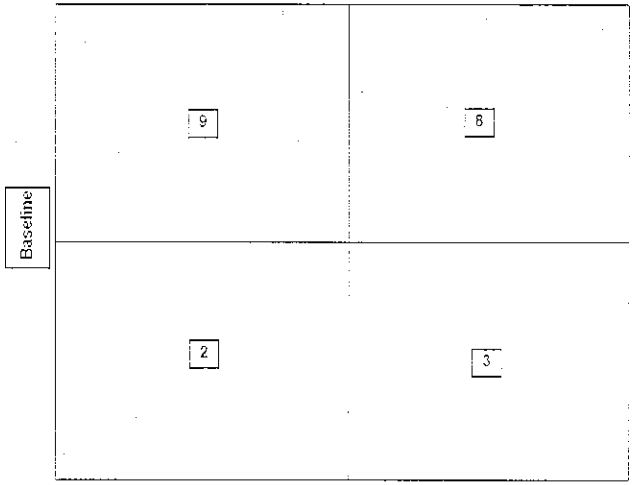
Project Label: PCAP Project Name: 01H2011 Plot No.: 1117 Date: 6/16/11

Module	Tree ID.	Species	Dead	c	Voucher #	DBH (cm)	~1.3 @ DBH	ASH Only: Ash condition	*Dead condition	# Exit holes	Epicormic present	Woodpecker holes
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
	16											
	17											
	18											
	19											
	20											
	21											
	22											
	23											
	24											
	25											

NO ASH



*** 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 - Plant Cover and Earth Surface

Project Label: PCAP Project Name: OHi 2011 Plot No.: 1117

COVER BY STRATA (Est. estimate using midpoints, of 5 ex: 3, 8, 13, 18%)		
Strata	Height Range (m)	Total Cover (%)
Tree	5 - x	98
Scrub	0.5 - 5	83
Herb	x - 0.5	23
(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.

EARTH SURFACE & GROUND COVER			
Underlying Earth Surface*		Ground Cover	
(Sum = 100%)	percent	(Each ≤ 100%)	percent
Histosol	0	Coarse Woody Debris***	8
Mineral Soil	98	Fine Woody Debris****	8
Gravel-Cobble*	2	Litter	98
Boulder**	0	Duff (Fern. + Humus)	0
Bedrock	0	Bryophyte-Lichen	3
		Water	0
		Bare Soil	3
		Road/Trail	8
		Other	0

* Gravel-Cobble = 1/16 to 10 in

**Boulder = > 10 in

*** >5 cm in diameter

**** <5 cm in diameter

Deer →

TRAIL INFORMATION: If trail falls in plot record type and cover for each	
Type	%Cover
☐ All Purpose	
☐ Bridle	
☐ Hiking unpaved	
☐ Bicycle unpaved	
☐ Gravel	
X Deer	8

Remember: in a standard 2x5 plot each module = 10% cover

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	3	1	2	2
6	1	0	1	1
8	1	2	1	0
9	1	2	1	0

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)

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

0 feature is absent or functionally absent (Golf Course Flat)

3 feature is present in very small amounts or 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 length

mod#	corner	no. of tussocks depth 3 1x1m (count)	no. of hummocks 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	2,4	0	0	2	13	0	0	3	1
3	2,4	0	0	2	6	1	0	3	1
8	2,4	0	0	2	10	1	1	3	1
9	2,4	0	0	2	17	0	0	3	1

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

macro depressions = macrotopographic depressions with module. These may extend into other modules and be counted again

c.w.d. = coarse woody debris

microhab. interspers. = overall ranking of plot microtopographic interspersion complexity using scale below

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 both 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)

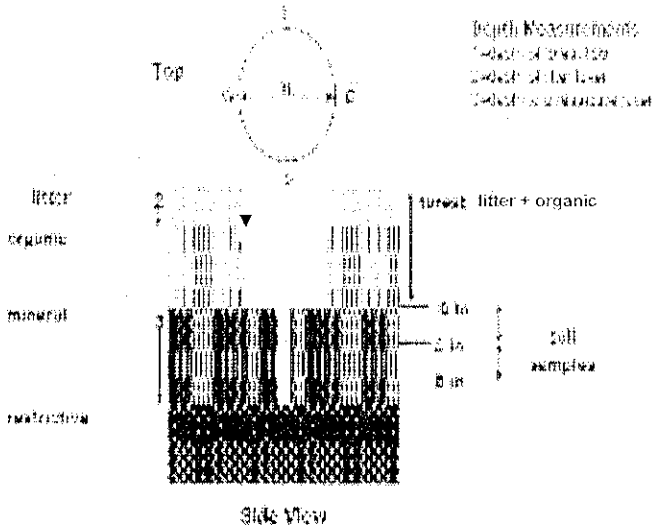
COVER BY STRATA

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.



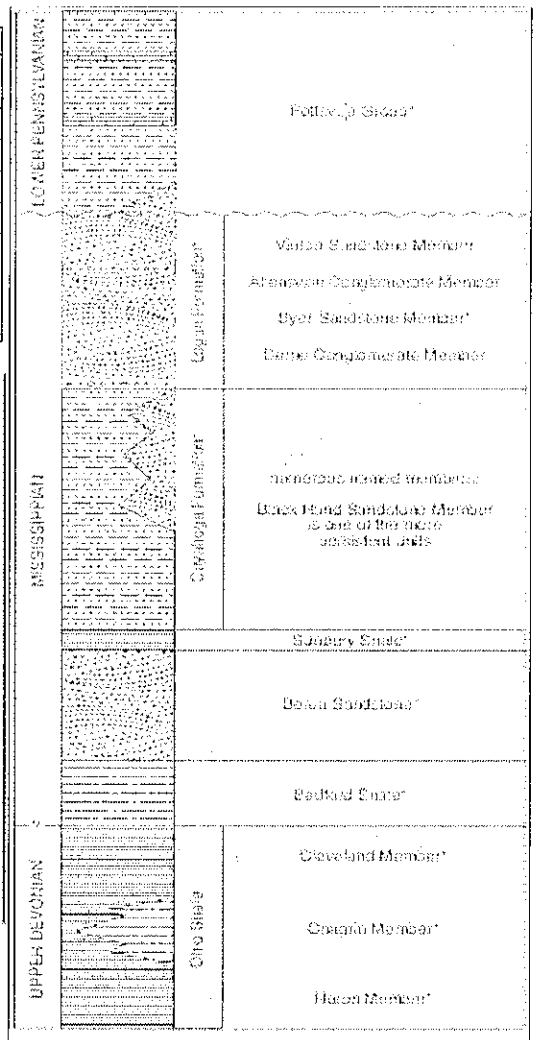


FIGURE 3-20.—Generalized section of Upper Devonian, Mississippian, and Lower Pennsylvanian formations in northeastern Ohio. Arrows indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the state. The section is not to scale, but the thicknesses indicated are proportional. The term "Waverly" is used in the older literature to refer to Mississippian rocks in Ohio. Some geologists use the Europe-derived "Carboniferous" to encompass 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), Pepper (1966), and Collins (1979) for more information on Mississippian rocks in Ohio. See figure 3-22 for explanation of rock types.

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

Project label: PCAP Project Name: Ohio 2011 Plot No.: 1117

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

Soil pit module # 8 (one per entire plot)

5 cm	matrix color	10YR 2/2
	mottle color	—
	%mottle	—
	oxid roots	Y (N)
	texture*	1
	redox features**	Y (N)
	hydr. cond.***	I S (M) D
20 cm	matrix color	10YR 3/3
	mottle color	—
	%mottle	—
	oxid roots	Y (N)
	texture*	1
	redox features**	Y (N)
	hydro. cond.***	I S (M) D

* refer to texture classes on reverse side

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

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

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

- Earthworms present in soil pit
- castings layer small but observed throughout plot
- middens not observed

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

Soil Description/notes:

Web Soil Survey Information:

Soil Series/Type: Mahoning silt loam

Soil Series Source: Ohio Soil Survey

Landform type: Plain

Parent Material: Till

DRAINAGE*

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

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

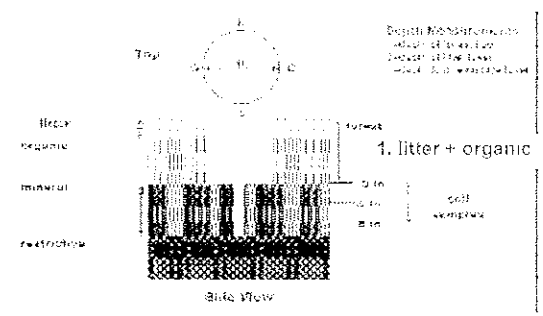
SOIL DEPTH MEASUREMENT INSTRUCTIONS: Measure to the nearest 0.1 cm in center of intensive modules. If >30.5 cm, record as >30

mod#	1 litter + organic depth (cm)	2 litter depth (cm)	3 restrict. depth(cm) *[WSS]	water depth (cm)	depth sat soil (cm)
2	2.5	2.5	63	0	>30
3	3.0	3.0	48	0	>30
8	3.75	3.75	65	0	>30
9	3.5	3.5	40	0	>30

Length of soil probe = 125 cm

* Use Web Soil Survey for #3 Restrictive layer dept.

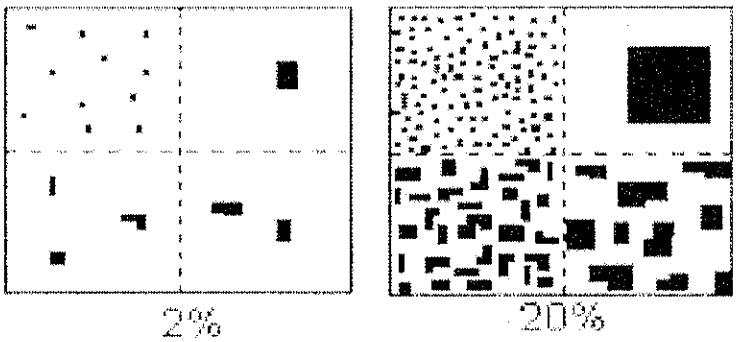
WSS - Depth to restr. feat. = more than 80 inches



WSS - JEM 6/17/11

PERCENT MOTTLES (USE CLASS CODES):

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

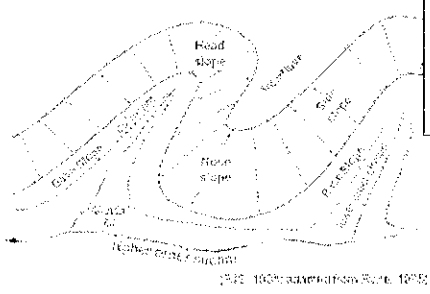


SOIL TEXTURE: Record the code for the soil texture of the 5 cm and 20 cm layers. To estimate texture, collect a soil sample from the appropriate layer and moisten it with water to the consistency of modeling clay/wet newspaper; the sample should be wet enough that all of the particles are saturated but 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.

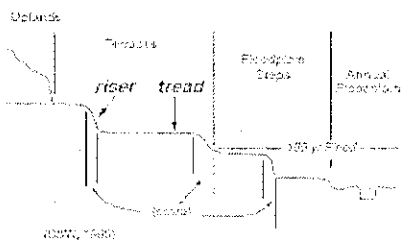
- **0**= Organic
- **1**= Loamy
- **2**= Clayey
- **3**= Sandy
- **4**= Coarse Sand
- **9**= Not measured - make plot note

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 FDP	Code NASIS
interfluve	IF	IF
head slope	HS	HS
nose slope	NS	NS
side slope	SS	SS
base slope	—	BS

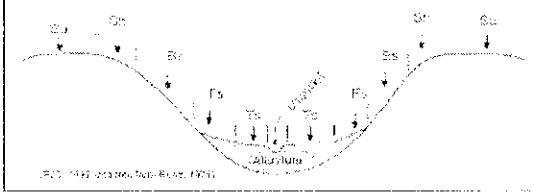


Terraces	Code
riser	RI
tread	TR



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 1117 Hi

DATE: 06 / 16 / 2011

Location:

● AA Center ○ N ○ S ○ E ○ W

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

Buffer Natural Cover Strata

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

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

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

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

Residential and Urban Stressors

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

Hydrology Stressors

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

Agricultural & Rural Stressors

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

Industrial Development Stressors

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

Habitat/Vegetation Stressors

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

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

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: _____ **DATE:** ____/____/_____

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

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

Latitude North 41.21518 Longitude West 81.70012

Use Decimal Degrees; NAD83

Flag	Comments

7966623548

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: Pcal Hi 1117 **DATE:** 06 / 16 / 2011

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	●	3	4	
Woody Shrubs, Saplings (<0.5m HIGH)	0	●	2	3	4	
Herbs, Forbs and Grasses	0	●	2	3	4	
Bare ground	●	1	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	3	●	
Woody Shrubs, Saplings (0.5m-5m HIGH)	0	1	2	3	●	
Woody Shrubs, Saplings (<0.5m HIGH)	0	●	2	3	4	
Herbs, Forbs and Grasses	0	●	2	3	4	
Bare ground	●	1	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	3	●	
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	●	2	3	4	
Herbs, Forbs and Grasses	0	●	2	3	4	
Bare ground	0	●	2	3	4	
Litter, duff	0	1	2	3	●	
Rock	0	●	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	○	○	○	
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: Grape vine cutting	●	○	○	
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: _____ **DATE:** ___ / ___ / _____

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 ● W3 O Nearest practicable location (flag and comment below)

Flag ☐

Latitude North 41.21505 Longitude West 81.~~41070~~ 70178

Use Decimal Degrees; NAD83

Flag	Comments

7966623548

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP Hi 1117 **DATE:** 06 / 16 / 2011

Location: ○ AA Center ○ N ● S ○ E ○ W

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

Buffer Natural Cover Strata

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

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

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

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

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):

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

Flag ☐

Latitude North 41.21408 Longitude West 81.69971

Use Decimal Degrees; NAD83

Flag	Comments

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP H1 X 1117

DATE: 06/16/2011

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

Buffer Plot 2	Canopy Type: ● D E	Leaf Type: ● D B	Absent: ○			Flag
Big Trees (>0.3m DBH)	0	1	2	3	●	
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	●	1	2	3	4	
Litter, duff	0	1	2	3	●	
Rock	0	1	2	●	4	
Water	●	1	2	3	4	
Submerged Vegetation	●	1	2	3	4	

Buffer Plot 3	Canopy Type: D E	Leaf Type: D B	Absent: ●			Flag
Big Trees (>0.3m DBH)	●	1	2	3	4	
Small Trees (<0.3m DBH)	●	1	2	3	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	1	●	3	4	
Bare ground	●	1	2	3	4	
Litter, duff	0	1	2	●	4	
Rock	0	●	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	○	○	○	
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: Grape vine cutting	●	○	○	
Other: Grape tangle	○	○	●	F1

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: _____ **DATE:** ___/___/_____

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):

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

Flag ☐

Latitude North 41.21548 Longitude West 81.69859

Use Decimal Degrees; NAD83

Flag	Comments
F1	Grape tangle light gap, possible canopy collapse

7966623548

FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (initial): _____

Site ID: PCAP Hi 1117 **DATE:** 06/16/2011

Location: ○ AA Center ● N ○ S ○ E ○ W

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

Buffer Natural Cover Strata

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

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

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

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

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

Residential and Urban Stressors

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

Hydrology Stressors

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

Agricultural & Rural Stressors

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

Industrial Development Stressors

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

Habitat/Vegetation Stressors

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

Fill bubble if present - Plot	1	2	3	Flag
Herbicide Use	○	○	○	
Mowing/Shrub Cutting	○	○	○	
Trails	○	○	○	
Soil Compaction (ANIMAL OR HUMAN)	○	○	○	
Offroad vehicle damage	○	○	○	
Soil erosion (FROM WIND, WATER OR OVERUSE)	○	○	○	
Other: Grape vine cutting	●	○	○	
Other: Light gap	○	○	●	F1

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: _____ **DATE:** ___ / ___ / _____

● **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 41.21637 Longitude West 81.70016

Use Decimal Degrees; NAD83

Flag	Comments
F1	Grape vine tangle - possible canopy collapse

7966623548

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

GENERAL INFORMATION

Project Label: PCAP

Project Name:

Plot Name:

Plot No.: 1117

☐ Level 4 (no nested corners sampled)

■ Level 5 (nested corners sampled)

Date (mm/dd/yyyy): / /

End date (if > 1 day): / /

Party	Role**
	Plot leader

** 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:

Quadrangle:

Local Place Names:

Landowner:

X-axis Bearing of plot: 124 °

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

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

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

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

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

Datum: ■ NAD83/WGS84 ☐ NAD27

Latitude: 41.21527

Longitude: 81.70073

Coord. Accuracy: 7 m ☐ ft -3

GPS File Name: 1117A

Plot size for cover data: 0.1 (hectares)

☐ Stems not sampled on this plot ☐ Stems absent

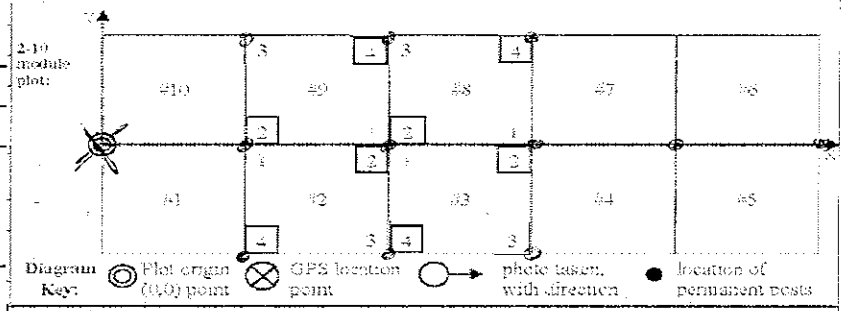
☐ Stems present **Plot size stems:** 0.1 (ha)

Depth: (1-5):

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

Camera No.:_____

Photo Nos.:



Plot placement: ☐ Representative ☐ GRTS ☐ 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

Rationale - Point lands in Homogenous Beech Maple Forest Community type is the same in all directions. Randomly chose direction of plot using "spin the bottle" technique

Plot setup fall 2010

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

Cleveland Metroparks

Project Label: PCAP Project Name: _____ Plot No.: _____

CLASSIFICATION

(FIT = excellent, good, fair, poor; CONF = high, med, low) 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=___

MODIFIED NATURESERVE CLASS*

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

COMMUNITY NAME:

LANDFORM TYPE*:

STAND SIZE

- ☐ >1,000 x plot size
- ☐ > 100 x plot size
- ☐ 10-100 x plot size
- ☐ 3-10 x plot size
- ☐ 1-3 x plot size
- ☐ < plot size

DRAINAGE*

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

SALINITY*

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

DISTURBANCES

type*	severity**	yrs ago	% of plot	description
Human				
Natural				
Fire				
Cut				
Animal				
Other				

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

Current Land Use:

Former Land Use:

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

HOMOGENEITY

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

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

Park at bottom of ledges off state Rd.