

## CLEVELAND METROPARKS Plant Community Assessment Program: Quality Control Form



Project Label:

PCAP

Plot No: 1319

Date Sampled: 6/28/13

Lead: Tom Gacerda

Comment required if item answer is NO

Parking/Access outside of Park Boundaries:		Y <input checked="" type="radio"/> N <input type="radio"/>	If yes, write details in Comments section below
Field journals completed		Y <input checked="" type="radio"/> N <input type="radio"/>	not done before leaving plot, thunderstorm
Site sketch made on 1:3000 map?		Y <input checked="" type="radio"/> N <input type="radio"/>	
Check cover page	X-axis Bearing of plot recorded	Y <input checked="" type="radio"/> N <input type="radio"/>	
	GPS coords Recorded	Y <input checked="" type="radio"/> N <input type="radio"/>	
	North direction recorded	Y <input checked="" type="radio"/> N <input type="radio"/>	
	Photographs taken?	Y <input checked="" type="radio"/> N <input type="radio"/>	
Plot No., Date agreement on all pages?		Y <input checked="" type="radio"/> N <input type="radio"/>	
Header data completed all pages?		Y <input checked="" type="radio"/> N <input type="radio"/>	
Cover classes recorded in all Intensive modules		Y <input checked="" type="radio"/> N <input type="radio"/>	
Browse Level By Species		Y <input checked="" type="radio"/> N <input type="radio"/>	
Woody stem quality control check		Y <input checked="" type="radio"/> N <input type="radio"/>	
Invasive plant quality control check		Y <input checked="" type="radio"/> N <input type="radio"/>	
Ash trees mapped		Y <input checked="" type="radio"/> N <input type="radio"/>	
Cover by Strata? (confirm cover type)		Y <input checked="" type="radio"/> N <input type="radio"/>	
Soil samples collected with matching plot #.		Y <input checked="" type="radio"/> N <input type="radio"/>	
Vouchers labeled on datasheet with initials and number		Y <input checked="" type="radio"/> N <input type="radio"/>	
Vouchers labeled on collection bag		Y <input checked="" type="radio"/> N <input type="radio"/>	
Pink flags removed		Y <input checked="" type="radio"/> N <input type="radio"/>	
Data sheet QA before leaving site?		Y <input checked="" type="radio"/> N <input type="radio"/>	
Common equipment returned to tub		Y <input checked="" type="radio"/> N <input type="radio"/>	
Data sheets scanned?		6/28/13	Enter date to left AB
Final data sheets scanned?			Enter date to left
Buffer Widths measured?		Y <input checked="" type="radio"/> N <input type="radio"/>	AL 6-20-13
Web Soil Survey		Y <input checked="" type="radio"/> N <input type="radio"/>	AB 6/28/13
Voucher Location	Refrigerator <input checked="" type="checkbox"/>	Y <input type="radio"/> N <input type="radio"/>	
(# vouchers collected)	Press (#)		Enter number to left
TAL 29-12	Drier	Y <input type="radio"/> N <input type="radio"/>	
	Identified	Y <input type="radio"/> N <input type="radio"/>	
	Mounted	Y <input type="radio"/> N <input type="radio"/>	
	Thrown away	Y <input type="radio"/> N <input type="radio"/>	

## GRTS point verification: Is plot sampleable?

<input checked="" type="checkbox"/> Yes	Original GRTS point is sampleable
<input type="checkbox"/> No	Original GRTS point lands in a non-sampleable area (fill in category below)
<input type="checkbox"/> Point falls in a water (i.e. river, lake)	
<input type="checkbox"/> Managed mowed area (i.e. golf course, picnic area, right-of-way)	
<input type="checkbox"/> Paved area (i.e. parkinglot, road)	
<input type="checkbox"/> Unsafe to sample (i.e. steep slope)	
<input type="checkbox"/> Other	

## Additional Comments:





# CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

Project Label: PCAP

Project Name: 01180013

Plot No.: 1319

Page 2 of 2

<b>MODIFIED NATURESERVE CLASS*</b> CODE (on separate form): <b>A02 C8-2</b>		<b>DISTURBANCES</b> <table border="1"> <thead> <tr> <th>type*</th> <th>severity**</th> <th>yrs ago</th> <th>% of plot</th> <th>description</th> </tr> </thead> <tbody> <tr> <td>Human</td> <td>Int.</td> <td>0</td> <td>5</td> <td>Windfall, top cut up in plot</td> </tr> <tr> <td>Natural</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fire</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cut</td> <td>Int.</td> <td>0</td> <td>5</td> <td>500 sq ft</td> </tr> <tr> <td>Animal</td> <td>VH</td> <td>0</td> <td>100</td> <td>Browsing</td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				type*	severity**	yrs ago	% of plot	description	Human	Int.	0	5	Windfall, top cut up in plot	Natural					Fire					Cut	Int.	0	5	500 sq ft	Animal	VH	0	100	Browsing	Other				
type*	severity**	yrs ago	% of plot	description																																				
Human	Int.	0	5	Windfall, top cut up in plot																																				
Natural																																								
Fire																																								
Cut	Int.	0	5	500 sq ft																																				
Animal	VH	0	100	Browsing																																				
Other																																								
<b>COMMUNITY NAME:</b> <b>Oak-Muske</b>																																								
<b>HOMOGENEITY</b>		<input checked="" type="checkbox"/> Homogeneous <input type="checkbox"/> Compositional trend across the plot <input type="checkbox"/> Conspicuous inclusions <input type="checkbox"/> Irregular/pattern mosaic																																						
<b>HYDROLOGIC REGIME*</b>		<input checked="" type="checkbox"/> Upland (seldom flooded) <input type="checkbox"/> Intermittently flooded <input type="checkbox"/> Semipermanently flooded <input type="checkbox"/> Intermittently/seasonally saturated (seldom flooded) <input type="checkbox"/> Permanently flooded <input type="checkbox"/> Brackish <input checked="" type="checkbox"/> Fresh (C 8-2) <input type="checkbox"/> Tidal/Seiche flooded daily (dry <1/yr, seldom flooded) <input type="checkbox"/> Tidal/Seiche flooded monthly (Occasionally flooded (<1/yr)) <input type="checkbox"/> Tidal/Seiche flooded irregular (e.g. wind, storms) <input type="checkbox"/> Temporarily flooded <input type="checkbox"/> Unknown																																						
(by default unless plot is a wetland)		Additional notes & diagrams: (Representativeness of plot to the stand, successional status, maturity, etc.) age stand. Stand is small and age and density drop off North and South. Ash stand borders plot to East and Hemlocks + Ravine borders plot to West. brush in somewhat present, many plants in understory browsed.																																						
<b>Current Land Use:</b> Cliff <b>Former Land Use:</b> Unknown																																								

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

Project Label:

PCAF

Project name: 01 Bp 203

Plot no.: 3/9

Total modules:

1

Intensive modules: Plot configuration. 2x3

Plot area (ha): 0.1

Cleveland  
Metroparks

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

1

卷之三

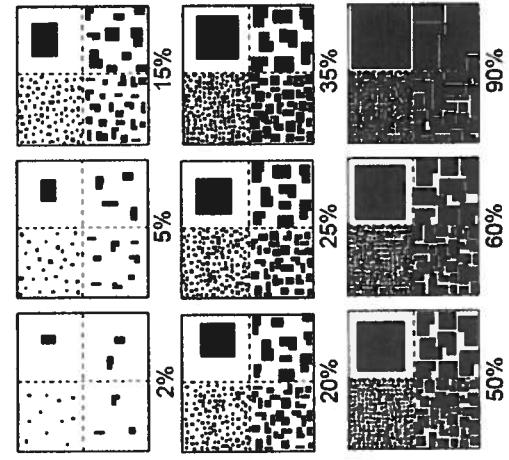
51/11

卷之三

Unknown Cork sp 3 (V shaped leaf)

#### 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.



#### 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 m<sup>2</sup> 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.

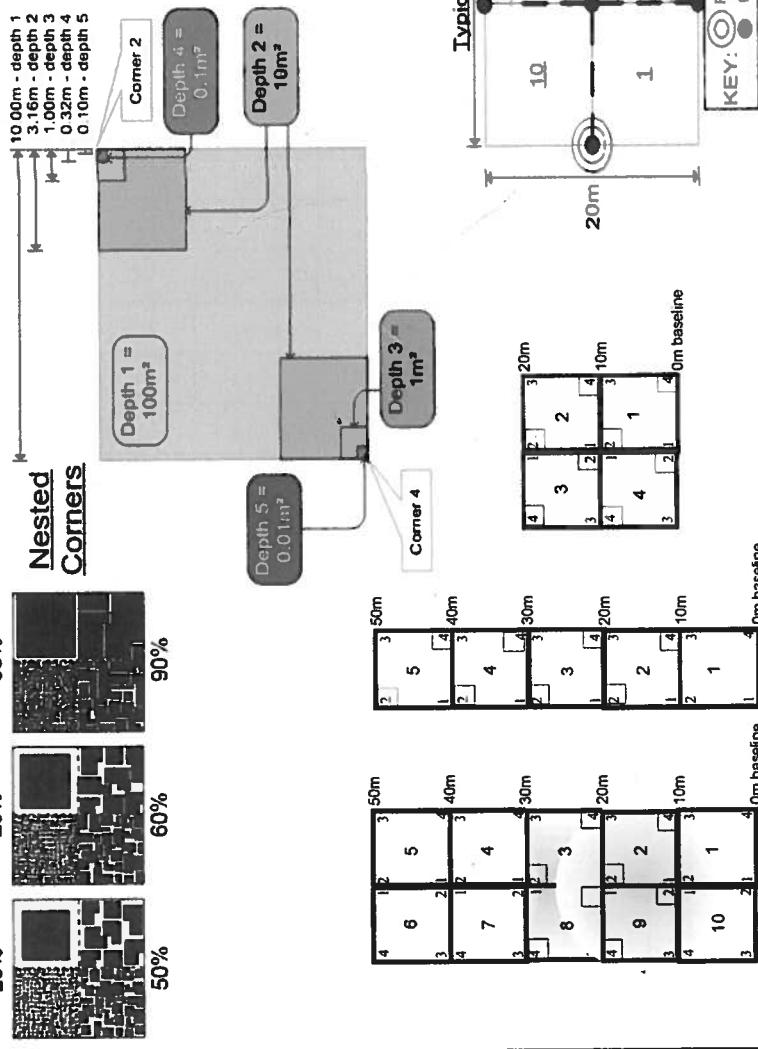
**MEDIUM HIGH** values include evidence of a browse line and 25 percent of stems browsed with very little vegetation regeneration evident. In this rating, for some species of plants, reproduction does not appear to occur or it is very severely limited.

**HIGH:** greater than 25 percent of the stems of plants in the 1 m<sup>2</sup> 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.

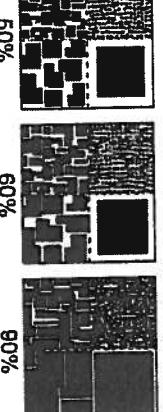
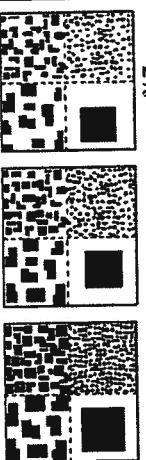
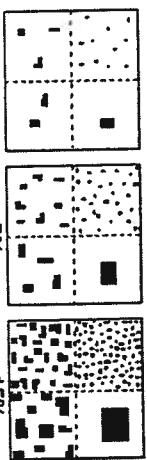
cover class	% cover	midpoint
1	solitary or few	0.0001
2	0-1%	0.005
3	1-2%	0.015
4	2-5%	0.035
5	5-10%	0.075
6	10-25%	0.175
7	25-50%	0.375
8	50-75%	0.625
9	75-95%	0.850
10	95-100%	0.975





#### EXAMPLES OF PERCENT OF AREA COVERED

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



#### Nested Corners

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.

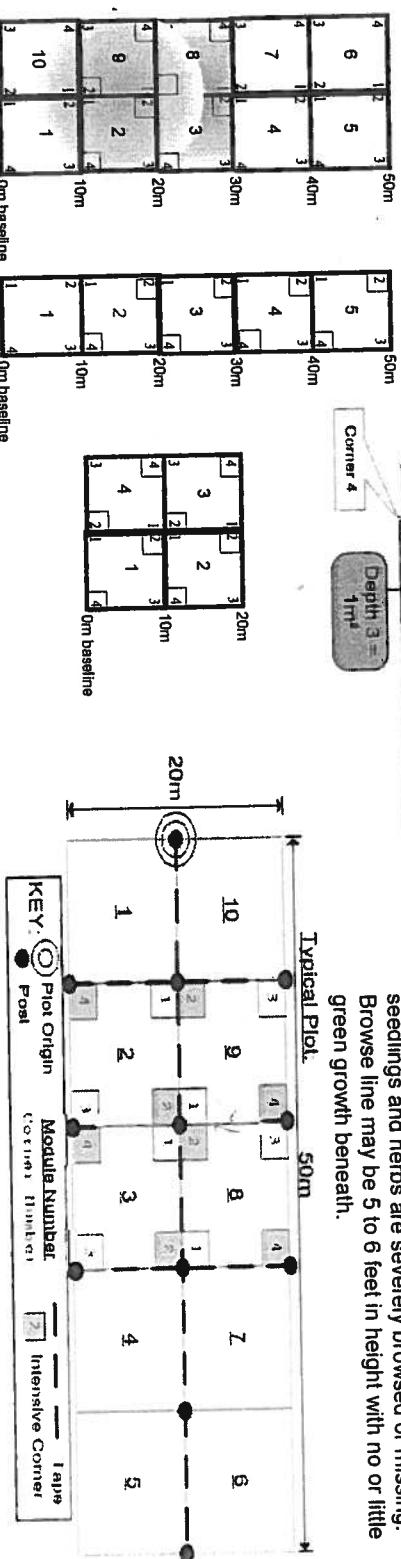
**MEDIUM:** browse affects greater than 10 percent and less than 25 percent of stems in the 1 m<sup>2</sup> nested quadrat and intensive module. A browse line is usually not evident or obvious for all classes and species of vegetation, but careful examination may show preferential browse and/or browse 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 m<sup>2</sup> 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.

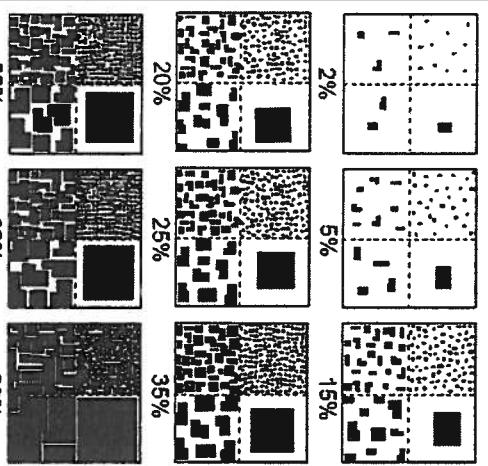
#### Typical Plot



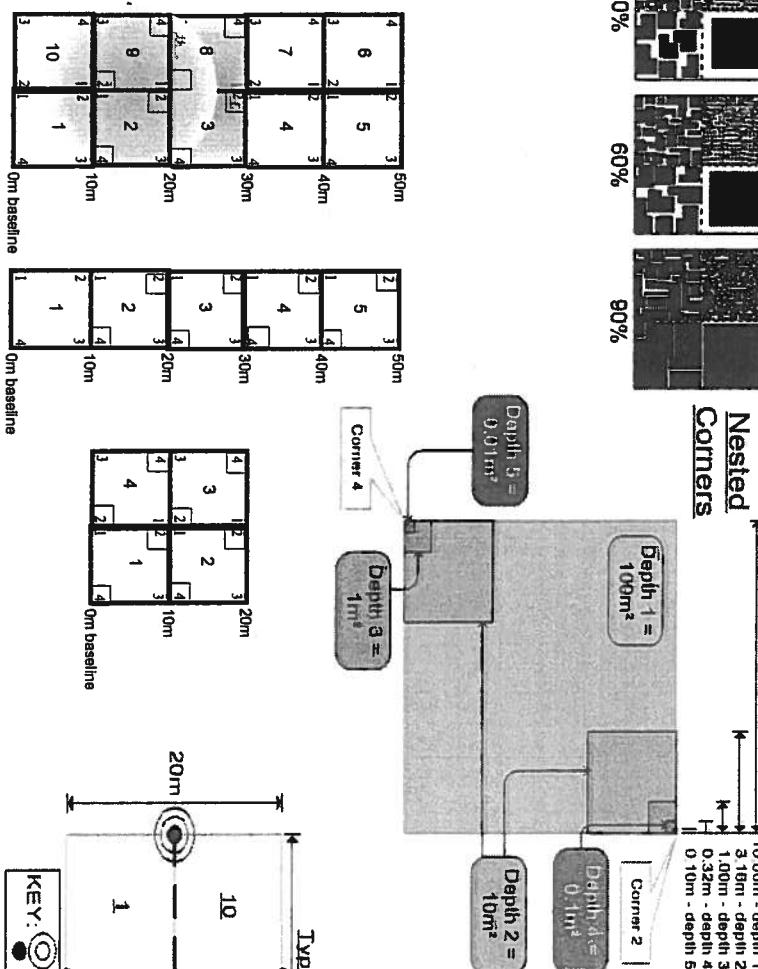


#### EXAMPLES OF PERCENT OF AREA COVERED

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.



#### Nested Corners



cover class	% cover	midpoint
1	solitary or few	0.001
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.

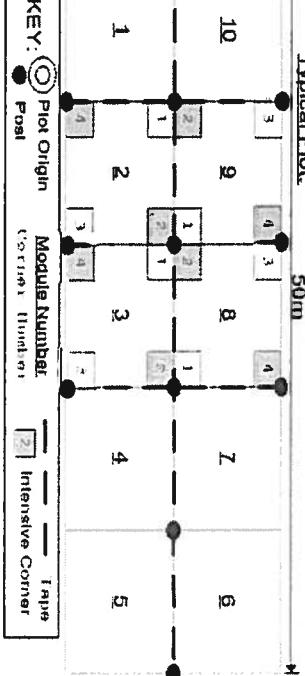
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**CLEVELAND METROPARKS** Plant Community Assessment Program Species Cover Data Sheet 2a

Project Label:

PCAP

111

104

01

Intensive modules: 4 Plot configuration: 2x5

Plot area (ha): 0.1

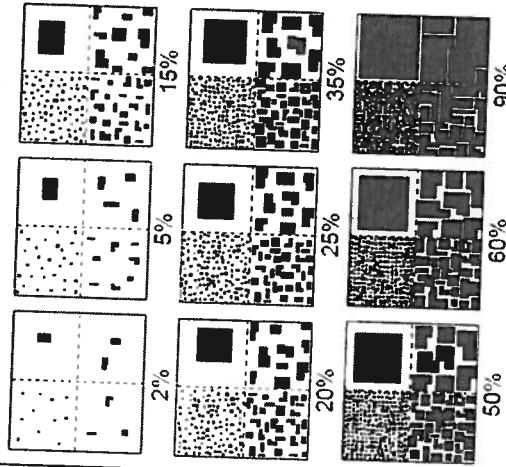
Cleveland  
Metroparks

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

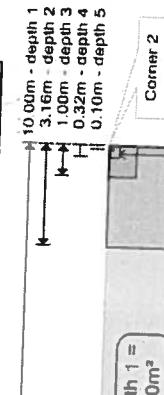
T	S	H	(F)	(A)	Br.	Species	C	Voucher #	Date
1'						<i>Hackelia virginiana</i>	1	1	
1'						<i>Davurus koreta</i>	1	1	
1'						<i>Rubus occidentalis</i>	1	1	
1'						<i>Urtica canescens</i> sp. 2	<del>1</del>	<del>1</del>	
1'						<i>Carex vulpinoidea</i> L.	<del>1</del>	<del>1</del>	
1'						<i>Poa</i> sp. 2	<del>1</del>	<del>1</del>	
1'						<i>Pratensis</i>	<del>1</del>	<del>1</del>	
1'						<i>Barberis thunbergii</i> BERGTE	<del>1</del>	<del>1</del>	
1'						<i>Smilax hispida</i>	<del>1</del>	<del>1</del>	
1'						<i>Sambucus sp.</i>	<del>1</del>	<del>1</del>	
1'						<i>Fragaria ananassa</i>	<del>1</del>	<del>1</del>	
1'						<i>Lindernia benzoin</i>	<del>1</del>	<del>1</del>	
1'						<i>Tilia americana</i>	<del>1</del>	<del>1</del>	
1'						<i>Urtica canescens</i> sp. 3	<del>1</del>	<del>1</del>	
1'						<i>Viola sp.</i>	<del>1</del>	<del>1</del>	
1'						<i>Smilax rotundifolia</i>	<del>1</del>	<del>1</del>	
1'						<i>Crum sp.</i>	<del>1</del>	<del>1</del>	
1'						<i>Brunia sp. 1</i> BOSCHEN	<del>1</del>	<del>1</del>	
1'						<i>Polygonum virginianum</i>	<del>1</del>	<del>1</del>	
1'						<i>Cirsium heterophyllum</i>	<del>1</del>	<del>1</del>	
1'						<i>Erypterum rugosum</i>	<del>1</del>	<del>1</del>	
1'						<i>Drimus Virginiana</i>	<del>1</del>	<del>1</del>	

#### EXAMPLES OF PERCENT OF AREA COVERED

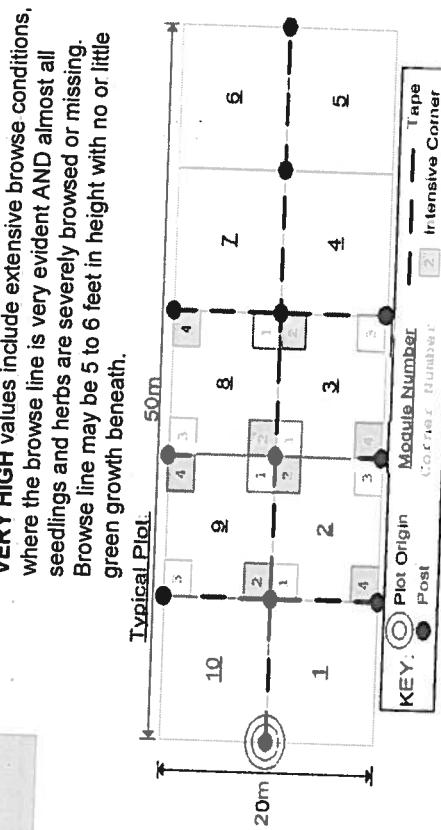
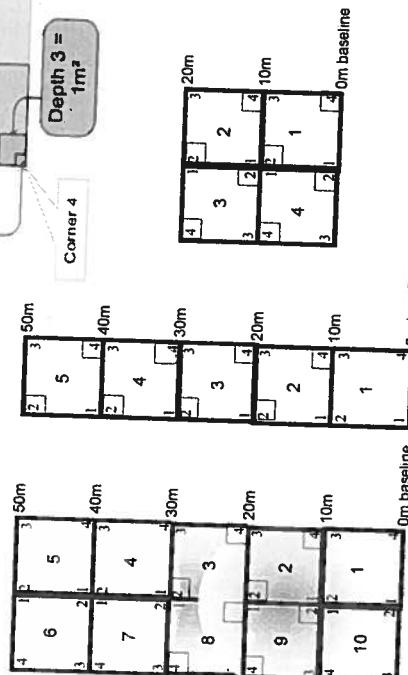
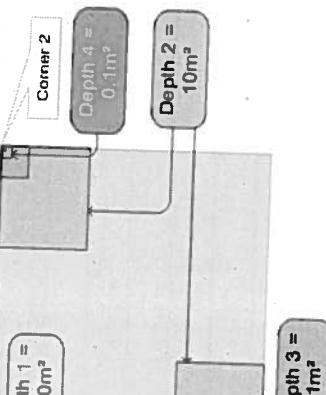
The following graphic can be used for various data statements to convey "Amount of Occupancy". **NOTE:** Within any given box, each quadrant contains the same total area covered, just different sized objects.



cover class	% cover	midpoint
1	solidary 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



## CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCA

Project Name: 0132134

Plot No.: 1319

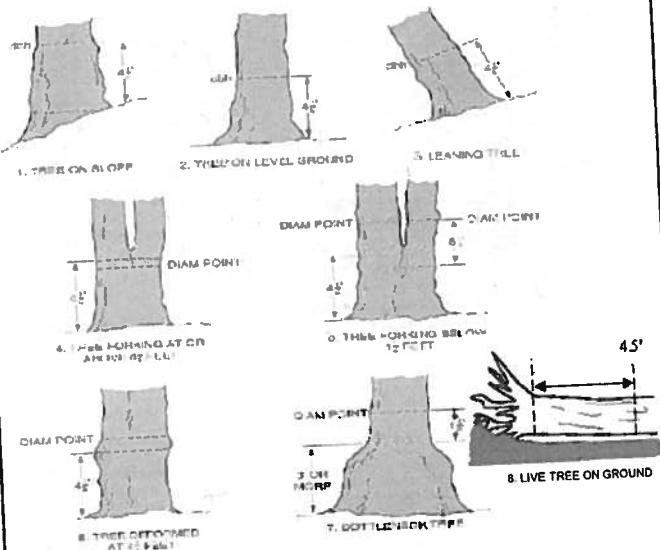
Page: 1 of 2

© Cleveland Metroparks

Explain subsample (additional room on back).

mod #	species	c	voucher#	# stems 0-1.4m browsed	% sub or super sample	# shrub clumps	# stems (cm) woody stems >1.4m										11 >40 (record each tree)
							1	2	3	4	5	6	7	8	9	10	
1	<i>Fraxinus sp.</i>			••													56.3
1	<i>Styrax</i> dec																
1	<i>Acer saccharum</i>																
1	<i>Fagus grandifolia</i>			•													
1	<i>Rhus virginiana</i>			•													
2	<i>Quercus ilicis</i>																
2	<i>Acer saccharum</i>																
2	<i>Fraxinus sp.</i>																
3	<i>Acer saccharum</i>																
2	<i>Euonymus sp.</i>			•													56.2
2	<i>Fagus grandifolia</i>			•													
3	<i>Acer saccharum</i>																
3	<i>Fagus grandifolia</i>			•													
3	<i>Fraxinus sp.</i>			•													
3	<i>Rosa multiflora</i>			•													
3	<i>Ulmus sp.</i>			•													
4	<i>Ulmus americana</i>			•													
4	<i>Acer saccharum</i>																
4	<i>Tilia americana</i>																
4	<i>Fraxinus sp.</i>																
4	<i>Rosa multiflora</i>			•													
5	<i>Acer saccharum</i>																
5	<i>Fraxinus sp.</i>			•													
5	<i>Euonymus sp. obovatus</i>			•													

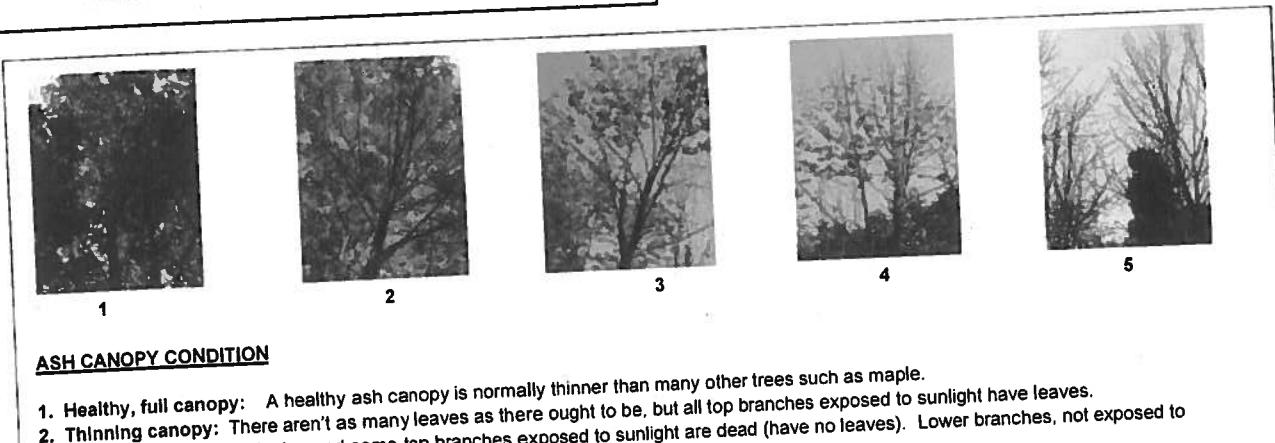
### DBH Measurement Rules



### Woody Stem Deer Browse

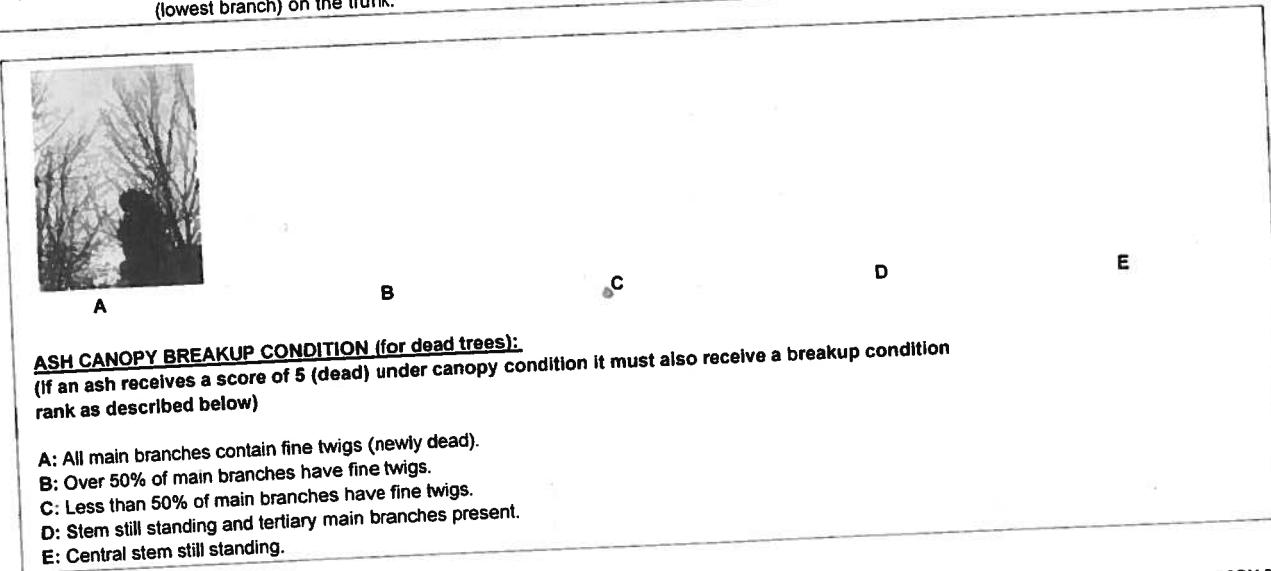
Record the number of stems/plants between 0.5-1.0 meters tall that exhibit evidence of this year's deer browse.

Record using the tally system from 1 to 10



### 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.



### 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: 01/Be 13/1

Plot No.: 1304

Page: 2 of 3

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Explain subsample (additional room on back):

mod #	species	c	voucher#	browsed	sample	# shrub clumps	# size class (cm) woody stems >1.4m	# stems 0-1.4m or super										
								1	2	3	4	5	6	7	8	9	10	11
6	Lindera benzoin			o														
5	Rubus sp. <i>glaberrimus</i>			o														
6	Acer saccharum			o														
6	Quercus spp.																	
6	Fraxinus sp.			oo														
7	Prunus spp.			o														
7	Acer saccharum			oo														
7	Tsuga canadensis																	
7	Quercus spp.																	
7	Smilax spp.			o														
7	Fraxinus sp.			o														
8	Acer saccharum																	
8	Quercus rubra																	
8	Fraxinus sp.			o														
8	Fagus grandifolia			oo														
8	Fraxinus pennsylvanica sp. <i>subsp. nigra</i>			oo														
9	Acer saccharum																	
9	Liquidambar styraciflua																	
9	Fraxinus sp.			oo														
9	Prunus spp.			o														
10	Standing dead																	
10	Acer saccharum																	
10	Prunus thunbergii			oo														
10	Fraxinus sp.			oo														

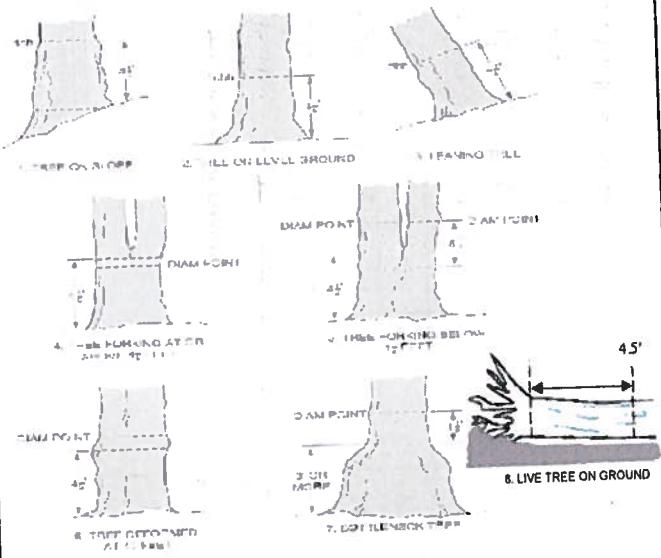
42.8  
C8:

46.0

45.9, 43.7

65.3

#### 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 year's 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: D13e Plot No.: 9

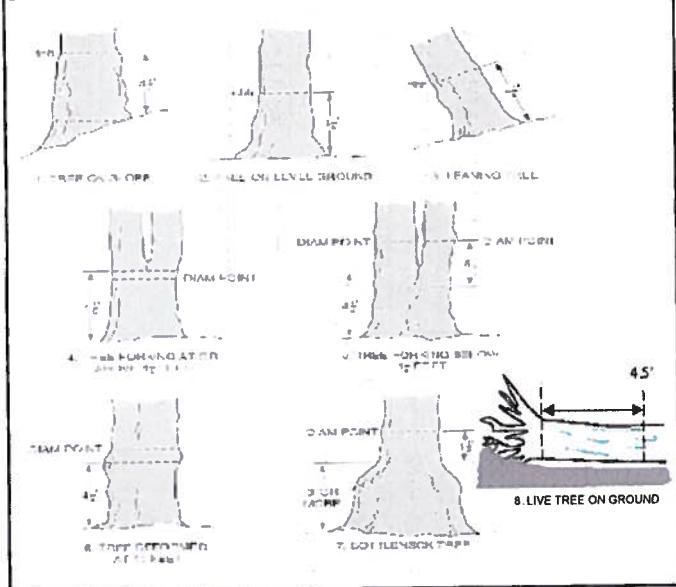
卷之二

Gmelin Metropolis

**Explain subsample (additional room on back):**

111

### 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

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(If an ash receives a score of 5 (dead) under canopy condition it must also receive a breakup condition rank as described below)

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- Over 50% of main branches have fine twigs.
- Less than 50% of main branches have fine twigs.
- Stem still standing and tertiary main branches present.
- Central stem still standing.

CLEVELAND METROPARKS Emerald Ash Borer - *Fraxinus* Sheet

Project Label: PCAP

Project Name: 6/26/34

INTENSIVE MODULES ONLY      TREES  $\geq 10\text{cm}$  ONLY

Plot No.: 1319      Date: 6/25/13

Page: 1 of 2

Module ID.      Tree Species      Dead c      Voucher #

(cm)

DBH

Ht @

Ash condition

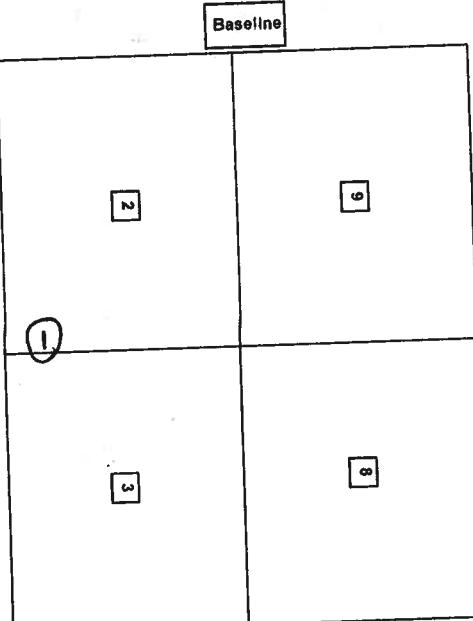
"Dead condition

# Exit holes

Epicormic present

Woodpecker holes

Module ID.	Tree Species	Dead c	Voucher #	DBH (cm)	Ht @ DBH	Ash condition	"Dead condition	# Exit holes	Epicormic present	Woodpecker holes
2	Fraxinus sp.	1	42.8			1	1	0	0	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										

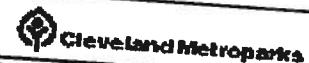


\*\*\* Change intensive module numbers when necessary

Map all ash trees  $\geq 10\text{cm}$  in each module using Tree ID number

- \* If Ash Condition scores 5 (dead) provide breakup score (A-E)
- Count EAB exit holes  $1.25\text{mm} \times 21.5\text{mm}$
- Woodpecker and epicormic marked present (1) or absent (0)

CLEVELAND METROPARKS Plant Community Assessment Program: Invasive Species Survey



Presence  
X: yes

Tier 1: Early detection/ Rapid response		Presence				GPS
		NE	SE	SW	NW	
<i>Microstegium vimineum</i>						
<i>Ranunculus ficaria</i>						
<i>Cynanchum louiseae</i>	(vine)					
<i>Butomus umbellatus</i>	(wetland)					
<i>Heracleum mantegazzianum</i>						
Tier 2: Assess as Needed		# of Plants				comments
		NE	SE	SW	NW	
<i>Acer platanoides</i>						
<i>Ailanthus altissima</i>						
<i>Lonicera japonica</i>	(vine)					
<i>Lythrum salicaria</i>	(wetland)					
<i>Aegopodium podagraria</i>	(G-cover)					
<i>Celastrus orbiculatus</i>	(vine)					
<i>Torilis sp.</i>						
<i>Conium maculatum</i>						
<i>Rhamnus cathartica</i>						
<i>Berberis thunbergii</i>						
<i>Alnus glutinosa</i>						
<i>Dipsacus laciniatus</i>						
<i>Elaeagnus umbellata</i>						
<i>Lonicera maackii</i>						
<i>Euonymus fortunei</i>						
Tier 3: Presence is of Interest		# of Plants				comments
		NE	SE	SW	NW	
<i>Convallaria majalis</i>	(G-cover)					
<i>Coronilla varia</i>	(G-cover)					
<i>Eleutherococcus pentaphylloides</i>						
<i>Pachysandra terminalis</i>	(G-cover)					
<i>Philadelphus coronarius</i>						
<i>Pulmonaria officinalis</i>	(G-cover)					
<i>Rubus phoenicolasius</i>						
<i>Iris pseudacorus</i>	(wetland)					
<i>Ornithogalum umbellatum</i>						
<i>Viburnum opulus</i> var. <i>opulus</i>						
<i>Viburnum plicatum</i>						
Tier 4: Widespread and abundant		Presence				comments
		NE	SE	SW	NW	
<i>Alliaria petiolata</i>						
<i>Ligustrum vulgare</i>						
<i>L. morrowii</i> , <i>L. tatarica</i>						
<i>Phalaris arundinacea</i>						
<i>Phragmites australis</i>	(wetland)					
<i>Polygonum cuspidatum</i>						
<i>Frangula alnus</i>						
<i>Rosa multiflora</i>						
<i>Typha angustifolia</i> , <i>T. x. glauca</i>						
<i>Cirsium arvense</i>						
<i>Dipsacus fullonum</i>						
<i>Hesperis matronalis</i>						
<i>Vinca minor</i>	(G-cover)					

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

4bCM PCAP Invasive species datasheet.xls last revised 6/11/2012 ceh

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

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

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

**SOIL PIT DESCRIPTION:** Excavate 20 cm

plug with shovel. Describe using Munsell chart, visual exam, texture, and odor.

**SOIL PIT MODULE #** 5 (one per entire plot)

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

<b>Soil pH module #</b> 5 (one per entire plot)	
<b>5 cm</b>	
matrix color	10Y5/2/1
moisture color	none
% smotitic	0
oxid/reduc	Y (N)
texture*	1
redox features**	Y (N)
hydr. cond.***	1 S (M) D
<b>20 cm</b>	
matrix color	10Y5/2/1
moisture color	none
% smotitic	0
oxid/reduc	Y (N)
texture*	1
redox features**	Y (N)
hydr. cond.***	1 S (M) D

**Soil Collection Module** **Horizon (A, B, C)**

2,3,8,9 composted	A
-------------------	---

**Web Soil Survey Information:**

Soil Series/Type	LoB-Lodi-Middleville Silt loam
Soil Series/Source	Ohio Soil Survey
Landform type	Ridges
Depth to rest. Layer	20 to 40 in. to lithic bedrock
Parent Material	Residuum weathered from sandstone
DRAINAGE*	anhydritic
Excessively dr.	<input type="checkbox"/> Somewhat excessively <input checked="" type="checkbox"/> Well drained <input type="checkbox"/> Moderately well dr. <input type="checkbox"/> Somewhat poorly dr. <input type="checkbox"/> Very poorly dr. <input type="checkbox"/> Impermeable surface
* Gravel/Cobble	= 1/16-10"
Bedrock	0.00%
Boulders	> 10 in
Bare Soil	0%
Bryophyte-Lichen	0%
Water	0%
Gravel	0%
Deer	0%

**EARTH SURFACE & GROUND COVER**

<b>Underlying Earth Surface*</b>	<b>Ground Cover</b>
( $\Delta$ um = 100%)	Percent ( $\Delta$ um $\leq$ 100%)
Histosol	0.50%
Mineral Soil	99.50%
Gravel-Cobble*	5.00%
Boulders**	1.00%
Bedrock	0.00%
* Gravel-Cobble	= 1/16-10"
** > 5 cm in diameter	Boulder = > 10 in
Other	0%

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

<b>Strata</b>	<b>Height Range (m)</b>	<b>Total Cover (%)</b>
Treec	> 5m	88%
Shrub	0.5 - 5m	8%
Herb	> - 0.5	0%
(Floating)*	-	0%
(Aquatic)*	-	0%

**NOTES**

**A8** 6/28/13

\* refer to texture classes on reverse side

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

\*\*\* Circle one

1=undrained S=saturated M=moist D=dry

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

mod#	1 litter organic depth (cm)	2 litter depth (cm)	water depth (cm)	depth sat soil (cm)
2	4.0	4.0	0	>30cm
3	4.5	4.5	0	>30cm
4	3.0	3.0	0	>30cm
5	3.5	3.5	0	>30cm

found 3 worms  
 - also 1 glass! Watch  
 out when digging in future

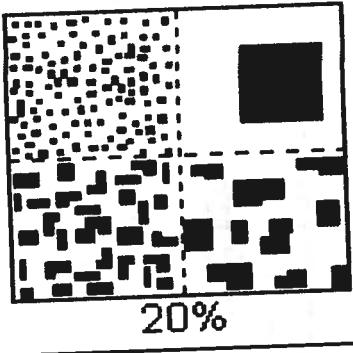
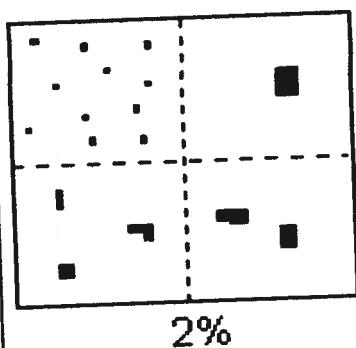
SEE BACK OF PAGE FOR "TYPICAL" STRATA  
 DESCRIPTIONS. STRATA CAN VARY BY COVER TYPE.

\* We tried over 10 different spots on the intensive and in the intensives, all of them we hit rock or only sun deeper or less, were only able to get a soil pit in this residue

6ACM PCAP Soils\_Crown Cover\_Landform\_ Standing Biomass\_Data Sheet\_ver 3.0d last revised 6/4/2012 eah

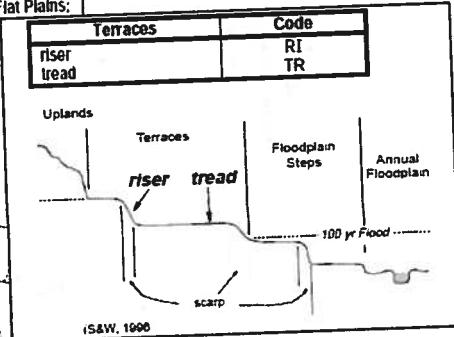
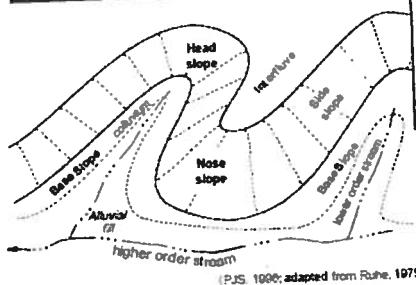
**PERCENT MOTTLES (USE CLASS CODES):**

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



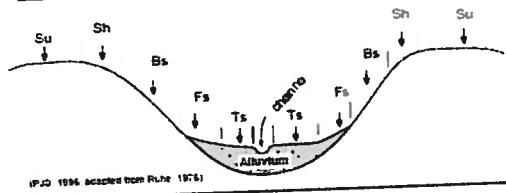
**Geomorphic Component** - Three-dimensional descriptors of parts of landforms or microfeatures that are best applied to areas. Unique descriptors are available for Hills, Terraces, Mountains, and Flat Plains; e.g., (for Hills) nose slope or NS.

Hills	Code	Code	Code
	POP	NASIS	
Interfluve	IF	IF	
head slope	HS	HS	
nose slope	NS	NS	
side slope	SS	SS	
base slope	--	BS	



**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/SEMPERMANENTLY 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.

**SEMPERMANENTLY 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.



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.

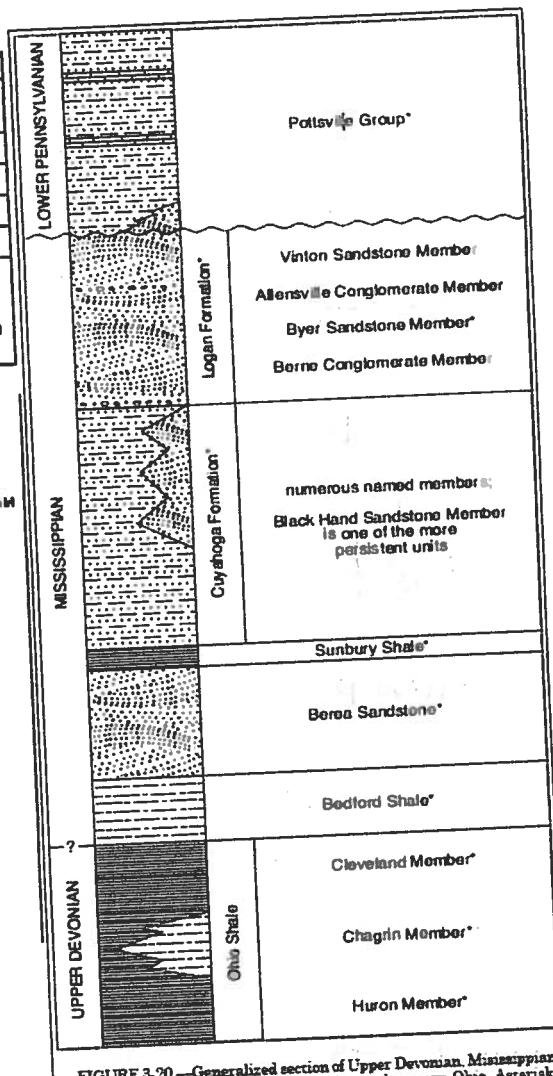
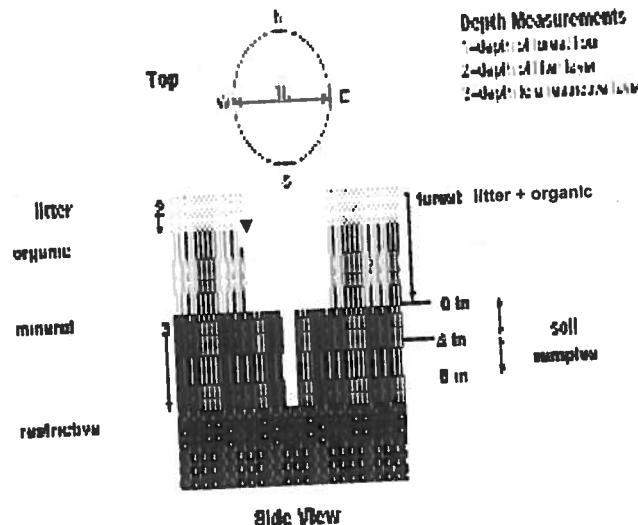


FIGURE 3-20.—Generalized section of Upper Devonian, Mississippian, and Lower Pennsylvanian formations in northeastern Ohio. Asterisks indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the area. The section is not to scale, but the thicknesses 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 3-16 for explanation of rock types.

**FORM B-1: BUFFER SAMPLE PLOTS (Front)**

Reviewed by (initial): \_\_\_\_\_

Site ID: PCAPBe1319

DATE: 06/25/2013

**Location:**

AA Center ON OS OE OW

**Fill in bubble(s) if plot(s) could not be sampled and flag →**

Plot 1     Plot 2     Plot 3

### **Buffer Natural Cover Strata**

**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 presence.

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 = Dense (40-70%); 4 = Very Dense (70-100%)

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

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

### **Industrial Development Stressors**

### Habitat/Vegetation Stressors

Native 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Forest Clear Cut	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Herbicide Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Gas Wells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Forest Selective Cut	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Mowing/Shrub Cutting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mine (surface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Tree Plantation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Trails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mine (underground)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Tree Canopy Herbivory (INSECT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Soil Compaction (ANIMAL OR HUMAN)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Military	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Shrub Layer Browsed (WILD OR DOMESTIC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Offroad vehicle damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Highly Grazed Grasses (OVERALL <3" HIGH)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Soil erosion (FROM WIND, WATER, OR OVERUSE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Recently Burned Forest Canopy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Recently Burned Grassland (BLACKENED)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

Buffer Sample Plots 05/27/2011

2428168304

FORM B-1: BUFFER SAMPLE PLOTS - TARGETED ALIEN SPECIES (Back)

Reviewed by (Initial): \_\_\_\_\_

Site ID: PCAL 8e 1314

DATE: 06/25/2015

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

## 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):**

Nearest practicable location (flag and comment below)

Latitude North 41.37935      Longitude West 081.55244

Use Decimal Degrees: NAD83

Buffer Sample Points - Targeted Alien Species 05/27/2011

7966623548

## FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (Initial): \_\_\_\_\_

Site ID: DCA PBe 1319

DATE: 06/25/2013

Location:

○ AA Center

● N

OS

OE OW

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(&lt;10%); 2=Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (&gt;75%)

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

## Hydrology Stressors

## Agricultural &amp; 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/Spoll 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

Buffer Sample Plots 05/27/2011

**FORM B-1: BUFFER SAMPLE PLOTS - TARGETED ALIEN SPECIES (Back)**

Reviewed by (Initials): \_\_\_\_\_

Site ID: PCAPBe1319

DATE: 06/25/2013

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

## **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 41.37947 Longitude West 081.55253

---

**Use Decimal Degrees: NAD83**

7966623548

## FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (Initial): \_\_\_\_\_

Site ID: PCAPB1319

DATE: 06/25/2013

Location:

O AA Center O N O S O E O W

Fill in bubble(s) if plot(s) could not be sampled and flag →

O Plot 1 O Plot 2 O 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(&lt;10%); 2 = Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (&gt;75%)

Buffer Plot 1	Canopy Type: D E		Absent: 0	Buffer Plot 2	Canopy Type: D E		Absent: 0	Buffer Plot 3	Canopy Type: D E		Absent: 0
	Leaf Type: B N	Flag			Leaf Type: B N	Flag			Leaf Type: B N	Flag	
Big Trees (>0.3m DBH)	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Small Trees (<0.3m DBH)	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Woody Shrubs, Saplings (0.5m-5m HIGH)	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Woody Shrubs, Saplings (<0.5m HIGH)	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Herbs, Forbs and Grasses	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Bare ground	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Litter, duff	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Rock	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Water	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	0 1 2 3 4
Submerged Vegetation	0 1 2 3 4		0	0 1 2 3 4		0	0	0 1 2 3 4		0	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	0 0 0				Ditches, Channelization	0 0 0				Pasture/Hay	0 0 0				
Road - two lane	0 0 0				Dike/Dam/Road/RR Bed (IMPEDE FLOW)	0 0 0				Range	0 0 0				
Road - four lane	0 0 0				Water Level Control Structure	0 0 0				Row Crops	0 0 0				
Parking Lot/Pavement	0 0 0				Excavation, Dredging	0 0 0				Fallow Field (RECENT-RESTING ROW CROP FIELD)	0 0 0				
Golf Course	0 0 0				Fill/Spoil Banks	0 0 0				Fallow Field (OLD - GRASS, SHRUBS, TREES)	0 0 0				
Lawn/Park	0 0 0				Freshly Deposited Sediment (UNVEGETATED)	0 0 0				Nursery	0 0 0				
Suburban Residential	0 0 0				Soil Loss/Root Exposure	0 0 0				Dairy	0 0 0				
Urban/Multifamily	0 0 0				Wall/Riprap	0 0 0				Orchard	0 0 0				
Landfill	0 0 0				Inlets, Outlets	0 0 0				Confined Animal Feeding	0 0 0				
Dumping	0 0 0				Point Source/Pipe (EFFLUENT OR STORMWATER)	0 0 0				Rural Residential	0 0 0				
Trash	0 0 0				Impervious surface input (SHEETFLOW)	0 0 0				Gravel Pit	0 0 0				
Other: _____	0 0 0				Other: _____	0 0 0				Irrigation	0 0 0				
Other: _____	0 0 0				Other: _____	0 0 0				Other: _____	0 0 0				

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	0 0 0				Forest Clear Cut	0 0 0				Herbicide Use	0 0 0				
Gas Wells	0 0 0				Forest Selective Cut	0 0 0				Mowing/Shrub Cutting	0 0 0				
Mine (surface)	0 0 0				Tree Plantation	0 0 0				Trails	0 0 0			2	
Mine (underground)	0 0 0				Tree Canopy Herbivory (INSECT)	0 0 0				Soil Compaction (ANIMAL OR HUMAN)	0 0 0			2	
Military	0 0 0				Shrub Layer Browsed (WILD OR DOMESTIC)	0 0 0				Offroad vehicle damage	0 0 0				
Other: _____	0 0 0				Highly Grazed Grasses (OVERALL <3" HIGH)	0 0 0				Soil erosion (FROM WIND, WATER, OR OVERUSE)	0 0 0			1	
Other: _____	0 0 0				Recently Burned Forest Canopy	0 0 0				Other: _____	0 0 0				
Other: _____	0 0 0				Recently Burned Grassland (BLACKENED)	0 0 0				Other: _____	0 0 0				

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 (initials): \_\_\_\_\_

Site ID: PCAPBe 1314

DATE: 06/25/2013

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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Purple Loosestrife	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Johnson Grass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Water hyacinth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Knotweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Kudzu	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Yellow Floating Heart	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Japanese Knotweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Multiflora Rose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Giant Salvinia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Perennial Pepperweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Common Buckthorn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Garlic Mustard	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		Giant Reed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Himalayan Blackberry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Poison Hemlock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Cheatgrass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Tamarisk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Mile-A-Minute Weed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Reed Canary Grass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Birdsfoot Trefoil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Common Reed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Canada Thistle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Leafy Spurge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
										Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

## 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 41.37944

Longitude West 081.55109

### Use Decimal Degrees; NAD83

Flag	Comments
1	part of buffer plot 1 = dried small stream or runoff
2	dirt trail - marked both boxes for same feature

# FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (Initial): \_\_\_\_\_

Site ID: PCAPB1319

DATE: 06/25/2013

Location:

AA Center  N  S  O E  O 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: <input checked="" type="radio"/> <input type="radio"/> D		Absent: <input type="radio"/>	Buffer Plot 2	Canopy Type: <input checked="" type="radio"/> <input type="radio"/> E		Absent: <input type="radio"/>	Buffer Plot 3	Canopy Type: <input checked="" type="radio"/> <input type="radio"/> D		Absent: <input type="radio"/>				
	Leaf Type: <input checked="" type="radio"/> <input type="radio"/> B	Leaf Type: <input type="radio"/> <input checked="" type="radio"/> N			Leaf Type: <input checked="" type="radio"/> <input type="radio"/> B	Leaf Type: <input type="radio"/> <input checked="" type="radio"/> N			Leaf Type: <input checked="" type="radio"/> <input type="radio"/> B	Leaf Type: <input type="radio"/> <input checked="" type="radio"/> N					
Big Trees (>0.3m DBH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input checked="" type="radio"/>	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/>	Big Trees (>0.3m DBH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>
Small Trees (<0.3m DBH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input checked="" type="radio"/>	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/>	Small Trees (<0.3m DBH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>
Woody Shrubs, Saplings (0.5m-5m HIGH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/>	<input type="radio"/>	Woody Shrubs, Saplings (0.5m-5m HIGH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>
Woody Shrubs, Saplings (<0.5m HIGH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/>	<input type="radio"/>	Woody Shrubs, Saplings (<0.5m HIGH)	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>
Herbs, Forbs and Grasses	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Herbs, Forbs and Grasses	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>	<input type="radio"/>
Bare ground	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bare ground	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>
Litter, duff	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Litter, duff	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>	<input type="radio"/>
Rock	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Rock	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>
Water	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Water	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>
Submerged Vegetation	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Submerged Vegetation	<input checked="" type="radio"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>	<input type="radio"/> 4	<input type="radio"/>

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

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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Forest Clear Cut	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Herbicide Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Gas Wells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Forest Selective Cut	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Mowing/Shrub Cutting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Mine (surface)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Tree Plantation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Mine (underground)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Tree Canopy Herbivory (INSECT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Soil Compaction (ANIMAL OR HUMAN)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Military	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Shrub Layer Browsed (WILD OR DOMESTIC)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Offroad vehicle damage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Highly Grazed Grasses (OVERALL <3" HIGH)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Soil erosion (FROM WIND, WATER, OR OVERUSE)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Recently Burned Forest Canopy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Recently Burned Grassland (BLACKENED)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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 (initials): \_\_\_\_\_

Site ID: PCAPBe 319

DATE: 06/25/2013

• 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Purple Loosestrife	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Johnson Grass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Water hyacinth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Knotweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Kudzu	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Yellow Floating Heart	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Japanese Knotweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Multiflora Rose	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
Giant Salvinia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Perennial Pepperweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Common Buckthorn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Garlic Mustard	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		Giant Reed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Himalayan Blackberry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Poison Hemlock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Cheatgrass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Tamarisk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Mile-A-Minute Weed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Reed Canary Grass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Birdsfoot Trefoil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Common Reed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Canada Thistle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Leafy Spurge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
										Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

## **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 41.37813

Longitude West 0.81.55.23.4

Use Decimal Degrees: NAD83

## FORM B-1: BUFFER SAMPLE PLOTS (Front)

Reviewed by (Initial): \_\_\_\_\_

Site ID: PCAPBc139

DATE: 06/25/2013

Location:

O AA Center O N O S O E O W

Fill in bubble(s) if plot(s) could not be sampled and flag →

O Plot 1 O Plot 2 O 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(&lt;10%); 2=Moderate(10-40%); 3 = Heavy (40-75%); 4 = Very Heavy (&gt;75%)

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

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

Residential and Urban Stressors				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	0	0	0		Ditches, Channelization	0	0	0		Pasture/Hay	0	0	0		
Road - two lane	0	0	0		Dike/Dam/Road/RR Bed (IMPEDE FLOW)	0	0	0		Range	0	0	0		
Road - four lane	0	0	0		Water Level Control Structure	0	0	0		Row Crops	0	0	0		
Parking Lot/Pavement	0	0	0		Excavation, Dredging	0	0	0		Fallow Field (RECENT-RESTING ROW CROP FIELD)	0	0	0		
Golf Course	0	0	0		Fill/Spoil Banks	0	0	0		Fallow Field (OLD - GRASS, SHRUBS, TREES)	0	0	0		
Lawn/Park	0	0	0		Freshly Deposited Sediment (UNVEGETATED)	0	0	0		Nursery	0	0	0		
Suburban Residential	0	0	0		Soil Loss/Root Exposure	0	0	0	1	Dairy	0	0	0		
Urban/Multifamily	0	0	0		Wall/Riprap	0	0	0		Orchard	0	0	0		
Landfill	0	0	0		Inlets, Outlets	0	0	0		Confined Animal Feeding	0	0	0		
Dumping	0	0	0		Point Source/Pipe (EFFLUENT OR STORMWATER)	0	0	0		Rural Residential	0	0	0		
Trash	0	0	0		Impervious surface input (SHEETFLOW)	0	0	0		Gravel Pit	0	0	0		
Other: <u>Fence</u>	0	0	0	1	Other: _____	0	0	0		Irrigation	0	0	0		
Other: _____	0	0	0		Other: _____	0	0	0		Other: _____	0	0	0		

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	0	0	0		Forest Clear Cut	0	0	0		Herbicide Use	0	0	0		
Gas Wells	0	0	0		Forest Selective Cut	0	0	0		Mowing/Shrub Cutting	0	0	0		
Mine (surface)	0	0	0		Tree Plantation	0	0	0		Trails	0	0	0		
Mine (underground)	0	0	0		Tree Canopy Herbivory (INSECT)	0	0	0		Soil Compaction (ANIMAL OR HUMAN)	0	0	0		
Military	0	0	0		Shrub Layer Browsed (WILD OR DOMESTIC)	0	0	0		Offroad vehicle damage	0	0	0		
Other: _____	0	0	0		Highly Grazed Grasses (OVERALL <3" HIGH)	0	0	0		Soil erosion (FROM WIND, WATER, OR OVERUSE)	0	0	0	1	
Other: _____	0	0	0		Recently Burned Forest Canopy	0	0	0		Other: _____	0	0	0		
Other: _____	0	0	0		Recently Burned Grassland (BLACKENED)	0	0	0		Other: _____	0	0	0		

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: ~~PCAPBe~~ 1215 319

DATE: 06/25/2013

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

FIII 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Purple Loosestrife	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Johnson Grass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Water hyacinth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Knotweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Kudzu	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Yellow Floating Heart	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Japanese Knotweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Multiflora Rose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Giant Salvinia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Perennial Pepperweed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Common Buckthorn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Garlic Mustard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Giant Reed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Himalayan Blackberry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Poison Hemlock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Cheatgrass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Tamarisk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Mile-A-Minute Weed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Reed Canary Grass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Birdsfoot Trefoil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Common Reed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Canada Thistle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Leafy Spurge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
										Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

## 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)

Flap

Latitude North 41°37'9.17"

Longitude West 081.55322

### Use Decimal Degrees; NAD83

7966623548