

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



Project Label: \_\_\_\_\_

PCAP

Plot No: 1090Date Sampled: 8/18/15Lead: CKM

Comment required if item answer is NO

Parking/Access outside of Park Boundaries:	Y	<input checked="" type="radio"/> N	If yes, write details in Comments section below
Field journals completed	<input checked="" type="radio"/> Y	N	
Site sketch made on 1:3000 map?	<input checked="" type="radio"/> Y	N	
Check cover page	<input checked="" type="radio"/> Y	N	
X-axis Bearing of plot recorded	<input checked="" type="radio"/> Y	N	
GPS coords. Recorded	<input checked="" type="radio"/> Y	N	
North direction recorded	<input checked="" type="radio"/> Y	N	
Photographs taken?	<input checked="" type="radio"/> Y	N	
Relocated Pins Mapped	<input checked="" type="radio"/> Y	N	
Plot No., Date agreement on all pages?	<input checked="" type="radio"/> Y	N	
Header data completed all pages?	<input checked="" type="radio"/> Y	N	
Cover classes recorded in all Intensive modules	<input checked="" type="radio"/> Y	N	
Browse Level By Species	<input checked="" type="radio"/> Y	N	
Woody stem quality control check	<input checked="" type="radio"/> Y	N	Check every line and cross check with the Tree Cover Sheet
Invasive plant quality control check	Y	N	N/A
Ash trees mapped	<input checked="" type="radio"/> Y	N	
Completed Forest Pest/Pathogen Datasheet	<input checked="" type="radio"/> Y	N	
Cover by Strata? (confirm cover type)	<input checked="" type="radio"/> Y	N	
Soil samples collected with matching plot #.	<input checked="" type="radio"/> Y	N	
Cross check 2010 information	<input checked="" type="radio"/> Y	N	Highlight any changes from 2010 information
Vouchers labeled on datasheet with initials and number	<input checked="" type="radio"/> Y	N	
Vouchers labeled on collection bag	<input checked="" type="radio"/> Y	N	
Pink flags removed	<input checked="" type="radio"/> Y	N	
Data sheet QA before leaving site?	<input checked="" type="radio"/> Y	N	
Common equipment returned to tub.	Y	N	
Data sheets scanned?			Enter date to left
Final data sheets scanned?			Enter date to left
Buffer Widths measured?	Y	N	
Web Soil Survey	Y	N	
Voucher Location	Refrigerator	Y	N
(# vouchers collected)	Press (#)		Enter number to left
CKM389- 394	Drier	Y	N
	Identified	Y	N
	Mounted	Y	N
	Thrown away	Y	N

## GRTS point verification: Is plot sampleable?

<input 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:

Found all pins



# CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

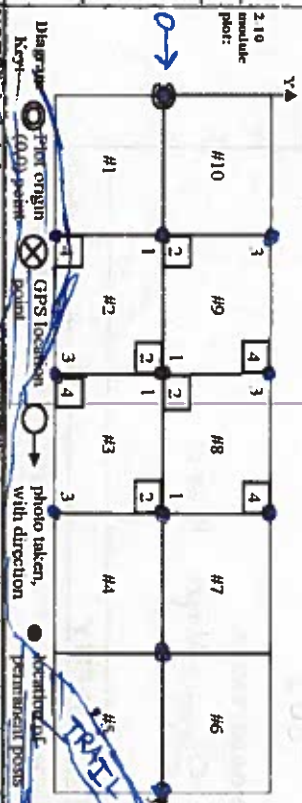
GENERAL INFORMATION			
Project Label:	PCAP		
Project Name:	02RR2015		
Pilot Name:	High times at the gas line		
Pilot No.:	1090		
<input type="checkbox"/> Level 4 (no nested corners sampled) <input checked="" type="checkbox"/> Level 5 (nested corners sampled)			
Date (mm/dd/yyyy):	8/19/2015		
End date (if > 1 day):	/ /		
Party:	C. Minney Pilot leader M. Gettys Bot. Asst. D. Sweet Woody Tech T. Cochran Woody Tech		
Role**			
* Roles: Co-leader, Asst. Guide, Owner, Taxonomist, etc.			
PLOT NOT SAMPLED:	<input type="checkbox"/> Other <input type="checkbox"/> Perm. water <input type="checkbox"/> Paved <input type="checkbox"/> Slope <input type="checkbox"/> Safety		
SAMPLING QUALITY*			
Effort Level:	subjective evaluation of how much effort put into sampling. Hurried plots may still provide good data		
<input checked="" type="checkbox"/> Very thorough <input type="checkbox"/> Accurate <input type="checkbox"/> Hurried			
TAXONOMIC ACCURACY			
	high	moder.	low
vascul.	X		n/a
br/o		X	
lichen			X
TAXONOMIC STANDARD			
Authority:	G&C	Pub Date:	1998

LOCATION	
State:	OH County: Cuyahoga
Quadrangle:	North Olmsted
Local Place Names:	Frostville Museum and Lewis road
Landowner:	CMP
Data Confidentiality:	
Check one:	<input checked="" type="checkbox"/> Public data <input type="checkbox"/> Private Data <input type="checkbox"/> Fuzz 100m <input type="checkbox"/> Fuzz 250m <input type="checkbox"/> Fuzz 500m
Reason:	
If data not public why?	
Source of coordinates:	<input type="checkbox"/> MAP <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Coord. Units
Coordinate system:	<input type="checkbox"/> Lat/Long <input type="checkbox"/> UTM <input type="checkbox"/> StatePlane <input type="checkbox"/> Other (specify)
Datum:	<input checked="" type="checkbox"/> NAD83/WGS84 <input type="checkbox"/> NAD27
GPS location in plot (x=0 to 5, y=-1.0, +1):	
x = 0 y = 0 (base of plot x=0, y=0)	
Latitude:	41.90411
Longitude:	81.89098
Coord. Accuracy:	<input checked="" type="checkbox"/> m <input type="checkbox"/> ft <input type="checkbox"/> +/- 3
GPS File Name:	1090A
Plot size for cover data:	-1 (hectares)
X-axis Bearing of plot:	95
Depth: (1-5):	4
Intensive modules: 2, 3, 8, 9	REPT IF MODIFIED
Camera No.:	4
Photo Nos.:	4852
Plot placement:	<input checked="" type="checkbox"/> XRTS <input type="checkbox"/> Representative <input type="checkbox"/> Random <input type="checkbox"/> Stratified Random <input type="checkbox"/> Transect component <input type="checkbox"/> Systematic (grid) <input type="checkbox"/> Capture specific feature <input type="checkbox"/> Other

\*Definitions and values in CMI PCAP FORM v. 1.0 and CVS Field Guide



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: Park on gravel pull off north east side of bridge on Lewis Rd. Walk ~ 300m of road along Rocky River SE along trail. There is a bench in Mod 1 along trail which is a good marker. The plot is right beside the trail.  
 Origin is near a lot of Paw Paw  
 Rationale: GRTS  
 Veg Characterization: The canopy is dominated by Sugar Maple with a few others. The shrub layer is dominated by sugar maple.  
 Paw. The herb layer is dominated by Fraxinus seedling and various shrubs.

OVER



## CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

Plot No.: 1090

Project Name: 02 RR 2015

Project Label: PCAP

MODIFIED NATURESERVE CLASS*		Fit= ___ Conf= ___	
CODE (on separate form):			
203			
COMMUNITY NAME:			
Sugar Maple Forest			
HOMOGENEITY			
<input type="checkbox"/> Homogeneous <input checked="" type="checkbox"/> Compositional trend across the plot <input type="checkbox"/> Irregular/pattern mosaic			

DISTURBANCES				
type*	severity**	yrs ago	% of plot	description
Human	M	0	10	Trail, foot traffic
Natural	M	0	10	EAB
Fire				
Cut				
Animal	M	0	100	Deer browse
Other				

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

Current Land Use: <u>CMP</u>
Former Land Use:

HYDROLOGIC REGIME *	
<input type="checkbox"/> Upland (seldom flooded)	<input type="checkbox"/> Intermittently flooded
<input type="checkbox"/> Intermittently/seasonally saturated (seldom flooded)	<input type="checkbox"/> Semipermanently flooded
<input type="checkbox"/> Permanently/Semipermanent saturated (dry <1/yr, seldom flooded)	<input type="checkbox"/> Permanently flooded
<input type="checkbox"/> Occasionally flooded (<1/yr)	<input type="checkbox"/> Tidal/Seiche flooded daily
<input checked="" type="checkbox"/> Temporarily flooded	<input type="checkbox"/> Tidal/Seiche flooded monthly
	<input type="checkbox"/> Tidal/Seiche flooded irregular (e.g. wind, storms)
	<input type="checkbox"/> Unknown

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

The stand is somewhat un-evenaged. The plot is obviously within a flood plain. I kept it a Sugar Maple Community because of the dominance of that species from canopy to shrub layer, though some Sycamore and Paw-Paw are intermixed. The soil was also mostly clay with less sand than a typical floodplain I'm used to. Significant *Privet* encroachment on left side of plot. The *Rhamnus* within plot are very small (seedlings mostly). Plot did not smell of gas but did smell fishy.

Not 100% sure if trail to come in was official or bootleg.

# CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Project Label: PCAP  
Total modules: 10

Project name: 02RR2015  
Intensive modules: 4  
Plot configuration: 2x5

Plot no.: 1090  
Plot area (ha): .1



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

# Cleveland Metroparks

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

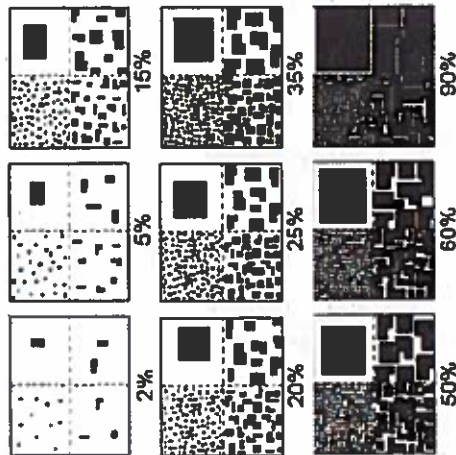
Strata - Cov. entire plot

S H (F) (A) Br	Species	C	Voucher #	Estimate for each intensive module:	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod
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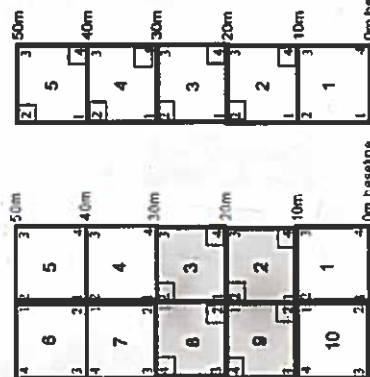
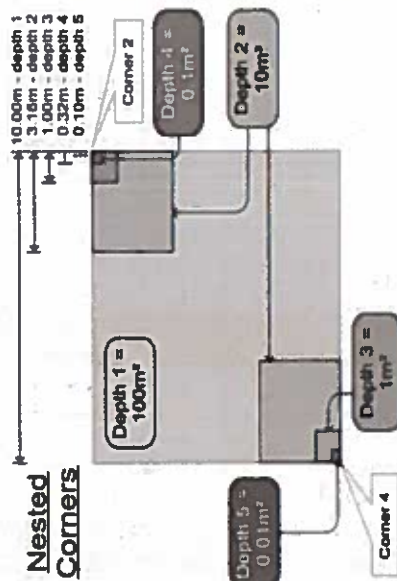


# EXAMPLES OF PERCENT OF AREA COVERED

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.

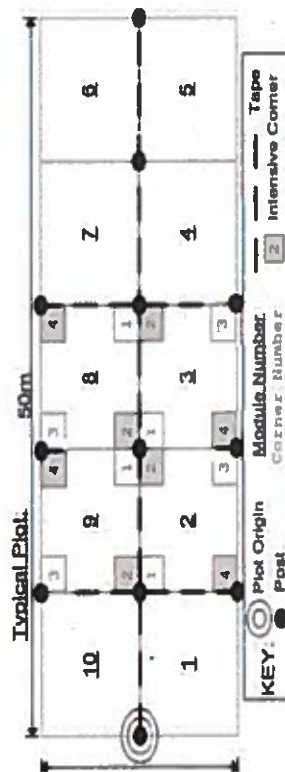
**MEDIUM LOW** values include evidence of browse at about 10 percent of the stems with no significant impact to plant reproduction evident. In this rating, plants are browsed but preferential species are observed to be reproducing in numbers that appear normal or near-normal in comparison to low browse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

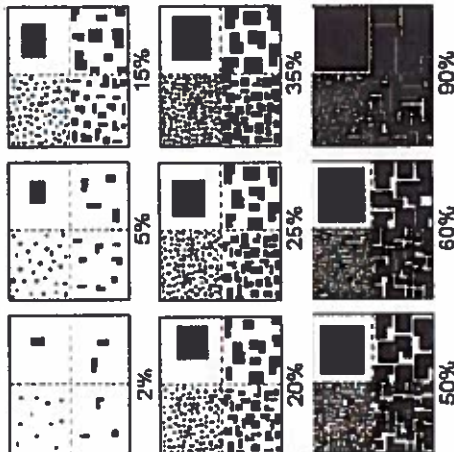






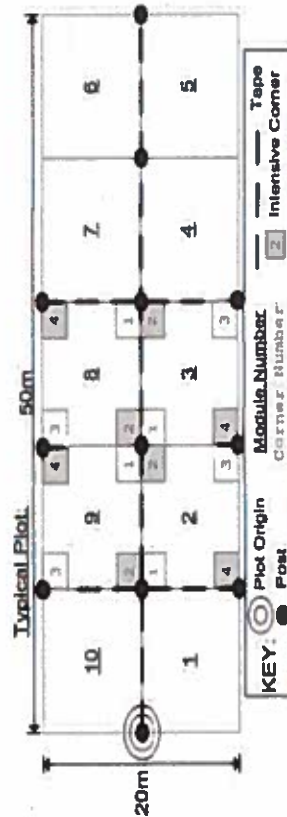
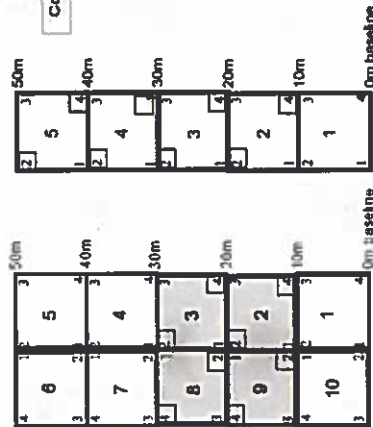
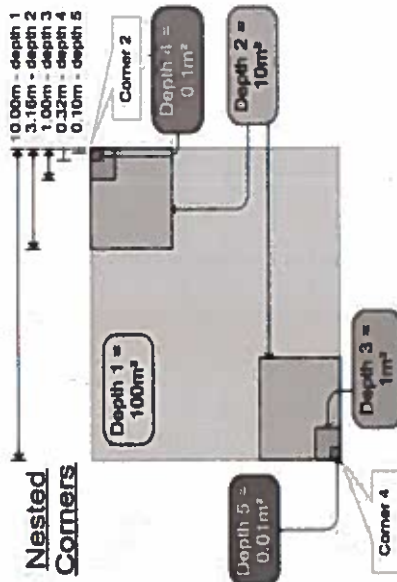
# EXAMPLES OF PERCENT OF AREA COVERED

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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



KEY: Plot Origin Post Intensive Corner

## 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.

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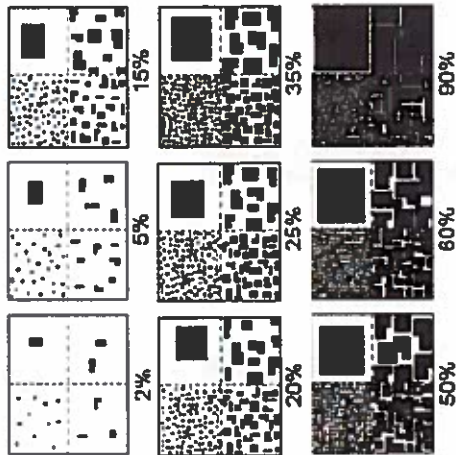
**VERY HIGH** values include extensive browse conditions, where the browse line is very evident AND almost all seedlings and herbs are severely browsed or missing. Browse line may be 5 to 6 feet in height with no or little green growth beneath.





# EXAMPLES OF PERCENT OF AREA COVERED

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# BROWSE RATING NARRATIVE DESCRIPTION

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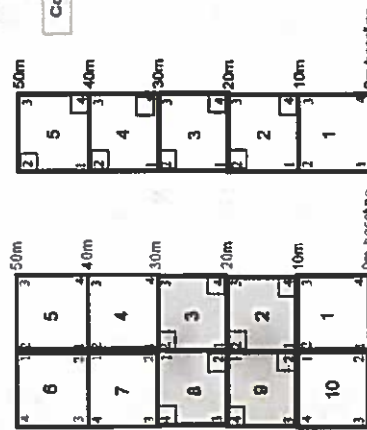
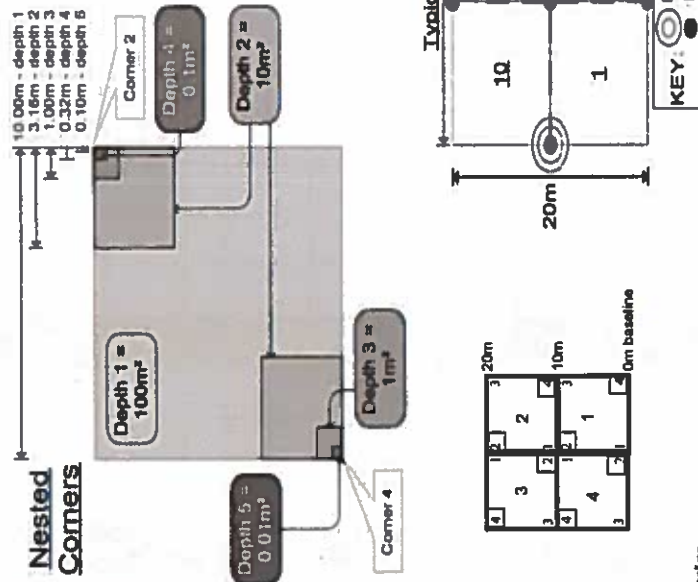
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## Page of 1

**Natural Resource Management FORM NR2010-02a**



Page      of     

Plot no.:

[illegible]

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

Project Label: PCAP

Project Name: 02RR2015

Plot No.: 1090

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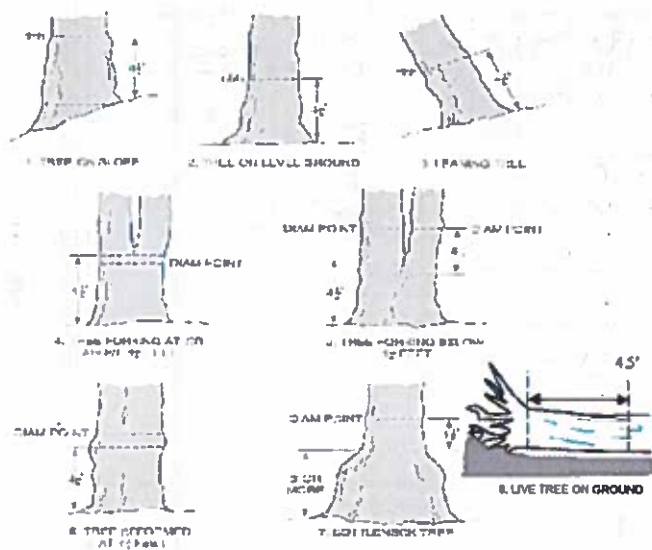
Explain subsample (additional room on back):

Very low fruit  
not at DBH

mod #	species	c	voucher#	# stems 0-1.4m browsed	% sub or super sample	# shrub clumps	size class (cm)	1	2	3	4	5	6	7	8	9	10	11
1	Asimina triloba						BT											
1	Acer Saccharum																	
1	Standing dead																	
1	Rosa Multiflora																	
2	Asimina triloba																	
2	Acer Saccharum																	
2	Standing dead																	
2	Fraxinus pensylvanica																	
2	BERBERIS THUNBERGII																	
2	Fraxinus Sp.																	
2	Eurogymnos alatus																	
3	Acer Saccharum																	
3	BERBERIS THUNBERGII																	
3	Betula alleghaniensis																	
3	Platanus occidentalis																	
3	Rosa Multiflora																	
3	Eurogymnos alatus																	
3	Acer rubrum																	
4	Acer Saccharum																	
4	Platanus occidentalis																	
4	Eurogymnos alatus																	
5	Platanus occidentalis																	
5	Acer Saccharum																	
5	Standing Dead																	

MS-ID's  
as A.Sac.  
2015

### 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

- Healthy, full canopy:** A healthy ash canopy is normally thinner than many other trees such as maple.
- Thinning canopy:** There aren't as many leaves as there ought to be, but all top branches exposed to sunlight have leaves.
- 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.
- >50% Dieback:** The canopy has less than half of the leaves that should be there and/or half of the top branches are dead.
- 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)

- All main branches contain fine twigs (newly dead).
- 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 Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP

Project Name: 02RR2015

Plot No.: 1090

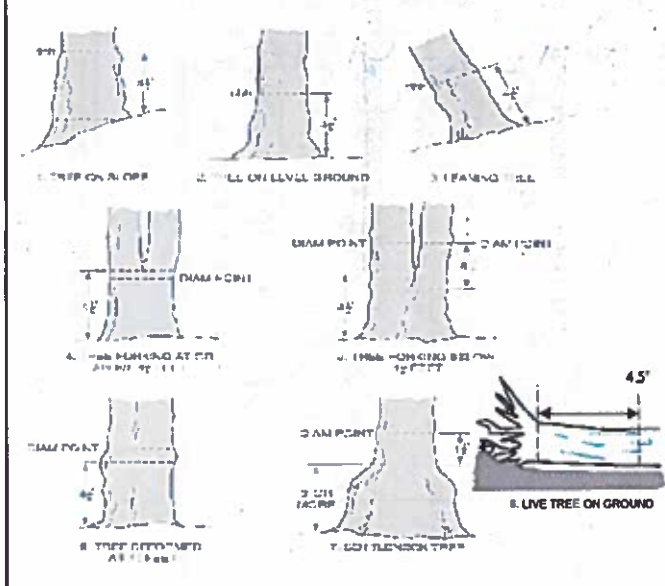
Page: 2 of 3



Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0-1.4m browed	% sub or super sample	# shrub clumps	size class (cm) woody stems >1.4m												
							1 0-1	2 1-2.5	3 2.5-5	4 5-10	5 10-15	6 15-20	7 20-25	8 25-30	9 30-35	10 35-40	11 >40 (record each tree)		
5	Prunus Serotina																		
5	LIGUSTRUM VIGARE																		51.2
5	EUDONYMUS ALTIUS																		
6	<del>Fraxinus alata</del> ROBINIA PSEUDACACIA																		
6	Prunus Serotina																		
6	Acer Saccharum																		
6	Acer SP. (Seedling)																		
6	Eucalyptus alatus																		
7	Prunus Serotina																		
7	Acer Saccharum																		
7	<del>Fraxinus alata</del> ROBINIA PSEUDACACIA																		
7	Standing dead																		
7	LIGUSTRUM VIGARE																		
7	<del>Fraxinus alata</del> SP. acutifolia CRN																		
7	Fraxinus SP.																		
7	EUDONYMUS ALTIUS																		
7	ROSA MULTIFLORA																		
8	Platanus occidentalis																		71.4
8	Ulmus americana																		
8	Acer Saccharum																		
8	Prunus Serotina																		42.0
8	Liriodendron tulipifera																		
8	ROBINIA PSEUDACACIA																		
8	LIGUSTRUM VIGARE																		

### 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.

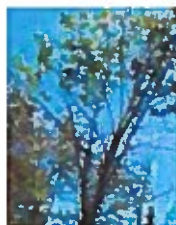
Record using the tally system from 1 to 10



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: 02R2015

Plot No.: 1090

Page: 3

of

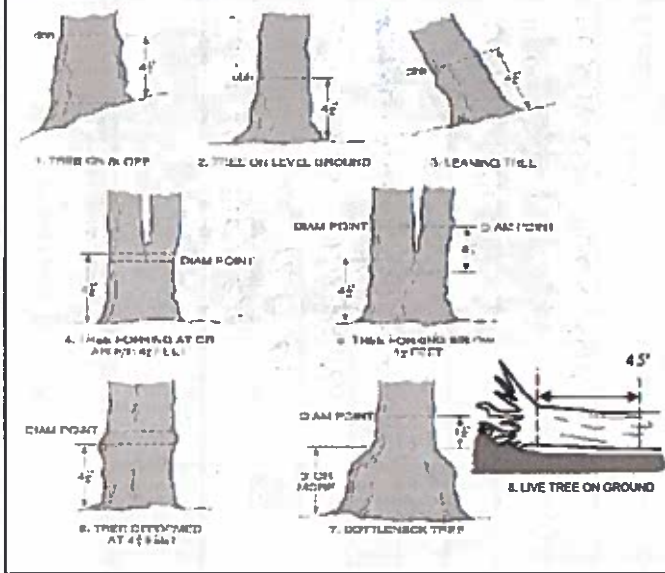


Explain subsample (additional room on back):

mod #	species	C	voucher#	# stems 0-1.4m browsed	% sub or super sample	# shrub clumps	size class (cm) woody stems >1.4m												
							1	2	3	4	5	6	7	8	9	10	11		
							0-1	1-2.5	2.5-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	>40 (record each tree)		
8	ROSA MULTIFLORA			..															
8	EUONYMUS ALATUS			..															
8	BERBERIS THUNBERGII			..															
8	<del>RUBUS PENNSYLVANICUS</del>			..															
8	FRAXINUS PENNSYLVANICA			..															
9	ULMUS AMERICANA																		
9	ACER SACHARINUM																		
9	BERBERIS THUNBERGII			..															
9	PRUNUS SEROTINA			..															40.4
9	LIGUSTRUM VULGARE			..															
9	ASIMINA TRILOBA			..															
9	ROSA MULTIFLORA			..															
9	FRAXINUS PENNSYLVANICA			..															
9	RUBUS PENNSYLVANICUS			..															
9	EUONYMUS ALATUS			..															
10	ASIMINA TRILOBA			..															
10	LIGUSTRUM VULGARE			..															
10	Standing dead			..															
10	ROBIDIA PSEUDACACIA			..															
10	Prunus Serotina			..															
10	BERBERIS THUNBERGII			..															
10	Acer Saccharum			..															
10	Fraxinus pennsylvanica			..															
10	ROSA MULTIFLORA			..															



### 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



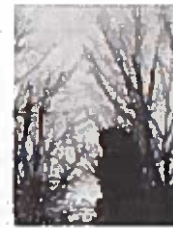
2



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.

Project Label: PCAP

Project Name: 02RR2015

Plot No.: 1092

Date: 8/18

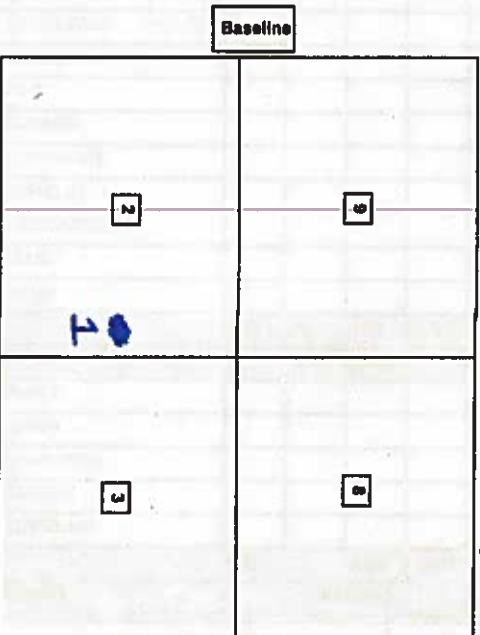
Ash Only

Tree ID.	Species	Tree ID	DBH (cm)	HT @ DBH	Ash condition	Dead condition	# EAB holes	Epicormic present	Woodpecker holes
1	<i>Fraxinus pennsylvanica</i>		60.8		5	C	7	01	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									

\* If Ash Condition scores 5 (dead) provide breakup score (A-E)  
Count EAB exit holes 1.25m<sup>2</sup> x 21.5m  
Woodpecker and epicormic marked present (1) or absent (0)



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



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

Presence  
X: yes

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

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

Tier 1: Early detection/ Rapid response		Presence				GPS	
		NE	SE	SW	NW		
Microstegium vimineum	Japanese stillgrass						
Ranunculus ficaria	Lesser Celandine						
Cynanchum louseae	Black Swallow-wort						
Butomus umbellatus	(wetland) Flowering Rush						
Hieracium mantegazzianum	Giant Hogweed						
Tier 2: Assess as Needed		# of Plants				comments	
		NE	SE	SW	NW		
Acer platanoides	Norway Maple						
Allanthus altissima	Tree of Heaven						
Lonicera japonica	(vine) Japanese Honeysuckle						
Lycium salicaria	(wetland) Purple Loosestrife						
Aegopodium podagraria	(G-cover) Bishop's Goutweed						
Celastrus orbiculatus	(vine) Asian Bittersweet						
Torilis sp.	Hedgeparsley						
Conium maculatum	Poison Hemlock						
Rhamnus cathartica	Common Buckthorn						
Berberis thunbergii	Japanese Barberry						
Alnus glutinosa	European Alder						
Dipsacus laciniatus	Cut-leaf Teasel						
Elaeagnus umbellata	Autumn Olive						
Lonicera maackii	Amur Honeysuckle						
Eunymus fortunei	Wintercreeper						
Tier 3: Presence is of Interest		# of Plants				comments	
		NE	SE	SW	NW		
Conwallaria majalis	(G-cover) Lily of the Valley						
Coronilla varia	(G-cover) Crown Vetch						
Eleutherococcus pentaphyllus	Five-leaf Aralia						
Pachysandra terminalis	(G-cover) Japanese Pachysandra						
Philadelphus coronarius	Mock Orange						
Pulmonaria officinalis	(G-cover) Lungwort						
Rubus phoenicolasius	Wineberry						
Iris pseudacorus	(wetland) Yellow Flag Iris						
Ornithogalum umbellatum	Star of Bethlehem						
Viburnum opulus var. opulus	European Craberry						
Viburnum plicatum	Doublefile Viburnum						
Tier 4: Widespread and abundant		Presence				comments	
		NE	SE	SW	NW		
Alliaria petiolata	Garlic Mustard						
Ligustrum vulgare	Common Privet						
L. morrowii, L. tatarica	Bush Honeysuckles						
Phalaris arundinacea	Reed Canarygrass						
Phragmites australis	(wetland) Phragmites						
Polygonum cuspidatum	Japanese Knotweed						
Frangula alnus	Glossy Buckthorn						
Rosa multiflora	(shrub) Multiflora Rose						
Typha angustifolia, T. x. glauca	Cattails (wetland)						
Cirsium arvense	Canada thistle						
Dipsacus fullonum	Common Teasel						
Hesperis matronalis	Dame's Rocket						
Vinca minor	(G-cover) Periwinkle						



# CLEVELAND METROPARKS Plant Community Assessment Program Forest Pest and Pathogens Data Sheet



Project Label: \_\_\_\_\_ PCAP \_\_\_\_\_

Project Name: 02PR2015

Plot No.: 109a

Page: 1 of 1

mod #	species	voucher#	# 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	<u>None present</u>													
2														
3														
4														
5														
6														
7														
8														
9														
10														

\* IF EVIDENCE OF PEST OR PATHOGEN RECORD TOTAL SPECIES POPULATION IN THE PLOT EVEN THE NOT INFECTED

Strata	# of stem infected	Severity (H,M, or L)
Tree (size class 3 or above)		
Shrub (size class 2 or below including shrub clumps)		

\* Write None Present if no evidence:

NONE

Beech (Fungus)

None present Asian Longhorned Beetle

Hemlock (HWA)

Other Pest or Pathogen

Walnut (Thousand Canker)

Severity

High = more than 50% of leaf/needle cover exhibiting symptoms

Medium = Less than 50% of leaf/needle cover exhibiting symptoms

Low = Only a few leaves or branches are exhibiting symptoms



STANDING BIOMASS (required for emergent wetlands) collected in 0.1m dip plots (2x3.12 cm) from corners 1 and 3 in each intensive module. Required for VIBI-E score calculation. C7=check when collected

Module #	C7	Corner	Corner

### CLASSIFICATION

(FT = excellent, F = Fair and Confidence)

#### Hydroscaphic class (WETLANDS ONLY)

<input type="checkbox"/> DEPRESSION	Fit =	Conf =
<input type="checkbox"/> IMPONDMENT <input type="checkbox"/> Beaver <input type="checkbox"/> Human	Fit =	Conf =
<input type="checkbox"/> RIVERINE <input type="checkbox"/> Headwater <input type="checkbox"/> Mainstem <input type="checkbox"/> Channel	Fit =	Conf =
<input type="checkbox"/> SLOPE (ground water hydrology or on a physical slope)	Fit =	Conf =
<input type="checkbox"/> FLOODING <input type="checkbox"/> Reservoir <input type="checkbox"/> Natural Lake	Fit =	Conf =
<input type="checkbox"/> COASTAL (specify subclass)	Fit =	Conf =
<input type="checkbox"/> BCG (strongly, moderately, weakly anthropogenic)	Fit =	Conf =

#### Other EPA VIBI Plant Community Class (WETLANDS ONLY)

<input type="checkbox"/> FOREST <input type="checkbox"/> Swamp forest <input type="checkbox"/> bog forest <input type="checkbox"/> forest seep	Fit =	Conf =
<input type="checkbox"/> EMERGENT <input type="checkbox"/> marsh <input type="checkbox"/> wet meadow <input type="checkbox"/> open bog	Fit =	Conf =
<input type="checkbox"/> SHRUB <input type="checkbox"/> shrub swamp <input type="checkbox"/> tall sh. bog <input type="checkbox"/> tall sh. fen	Fit =	Conf =

### MICROTOPOGRAPHIC FEATURE COUNTS - Intensive modules only

Plots for microhabitat features. Select one or select two and average the score. NOTE: If mud falls on a slope automatically gets ranked based on steepness (1-3) to begin - any features present Slope 1 = slight elevational grade across module (ft) Slope 2 = falls on slope -20° Slope 3 = maximum steepness that can be safely sampled -45°

- 0 Feature is absent or functionally absent from the wetland
- 3 Feature is present in the wetland in very small amounts or if more common, of low quality
- 7 Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
- 10 Feature is present in moderate or greater amounts and of highest quality

C.W.D. - Count for pieces with minimum 1m length

module	corner	no. of		no. macro. depressions	c.w.d (2-12 cm)		c.w.d (13-10cm)		c.w.d >40 cm	microhab. interspers.	microhab. SLOPE 10x10m
		tussocks	hummocks (Ttp-1/ps)		depth 1 10x10m	depth 1 10x10m	depth 1 10x10m	depth 1 10x10m			
2		0	0	0	8	1	0	1			
3		0	0	0	11	0	0	1			
8		0	0	0	15	1	0	1			
9		0	0	0	17	0	0	1			

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

### McHAB INDICES (degrees) + for up - for down

FILLED OUT USING GIS PROGRAM - DO NOT FILL OUT IN FIELD

At aspect	N	SE	TSI**
+45 degrees	NE		
+90 degrees	E		
+135 degrees	SE		
+180 degrees	S		
+225 degrees	SW		
+270 degrees	W		
+315 degrees	NW		

LSI is angle of plot to the horizon. TSI is angle formed by local slopes. For TSI measure angle from recorder eye to eye of person standing ~10 m away.

\* Landform Index (position within landscape)  
 \*\* Terrain Shape Index (slope microtopographic shape)

CROWN COVER (DENSIOMETER) Male + 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
1	1	6	2	0
2	0	2	1	0
3	2	3	3	4
4	1	4	1	2



# 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.

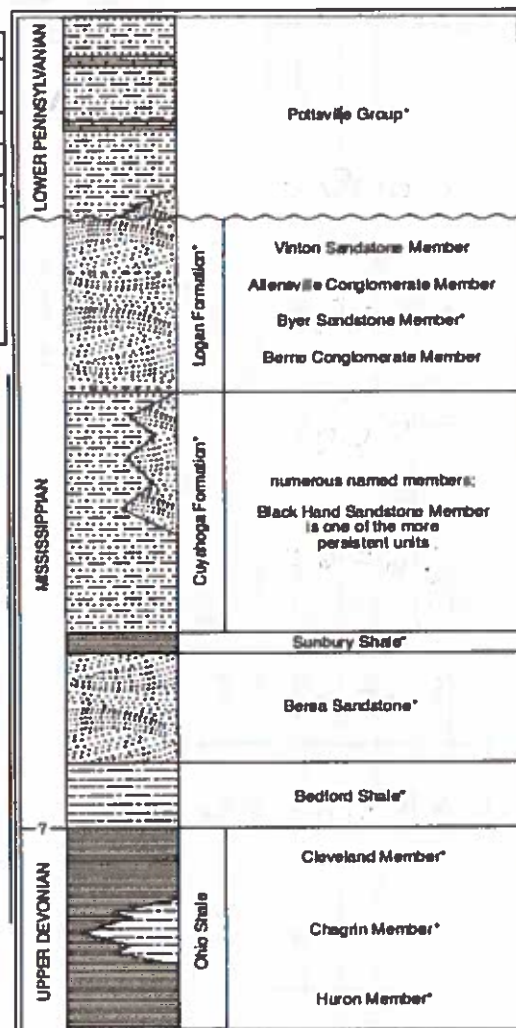
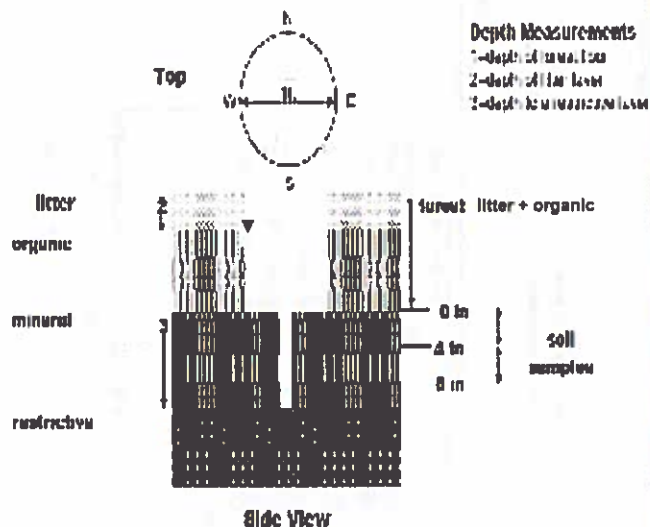


FIGURE 3-20.—Generalized section of Upper Devonian, Mississippian, and Lower Pennsylvanian formations in northeastern Ohio. Asterisks indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the area. The section is not to scale, but the thicknesses 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 Hyle (1953), Hoover (1960), and Collins (1979) for more information on Mississippian rocks in Ohio. See figure 3-18 for explanation of rock types.

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

**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 pit module # \_\_\_\_\_ (one per entire plot)

5 cm	matrix color
	moist color
	%mottle
	oxid roots Y N
	texture*
	redox features** Y N
	hyd. cond.*** I S M D
20 cm	matrix color
	moist color
	%mottle
	oxid roots Y N
	texture*
	redox features** Y N
	hyd. cond.*** I S M D

\* refer to lecture classes on reverse side

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

\*\*\* Circle one:

I=indicated S=saturated M=moist D=dry

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

Soil Collection Module (Harrison (A, B, C))	A
2,3,8,9 campified	
Wd Soil Survey later radius	
Soil Series/Type:	
Soil Series Source: Ohio Soil Survey	
Landform type:	
Depth to root layer:	
Parent Material:	
Drainage:	
c Excessively dr.	c Somewhat excessively
c Well drained	c Moderately well dr.
c Somewhat poorly dr.	c Very poorly dr.
c Impermeable surface	

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

1 liter+ organic depth (cm)	2 liter depth (cm)	water depth (cm)	depth set soil (cm)
2	3.2	0	0
3	2.1	0	0
8	1.8	0	0
9	2.0	0	0

**EARTH SURFACE & GROUND COVER**

Underlying Earth Surface*	Ground Cover	percent
Run / 100%	percent	percent
Histocel	Each S 100%	8
Mineral Soil	Coarse Woody Debris***	3
Gravel-Cobble*	Fine Woody Debris****	71
Boulder**	Litter	0
Bedrock	Duff (Ferm + Humus)	1
	Bryophyte Lichen	0
	Water	1
* Gravel-Cobble = 1/16-10"	Bare Soil	4
** Boulder = > 10 in		
*** > 5 cm in diameter	Rock/Trunk	0
**** < 5 cm in diameter	Other	

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

Strata	Height Range (m)	Total Cover (%)
Tree	5-7	88
Shrub	0-5.5	28
Herb	0-0.5	33
(Floating)*		
(Aquatic)*		

\* rooted and floating or slightly immersed  
\*\* submersed, most plant mass below surface  
SEE BACK OF PAGE FOR TYPICAL STRATA DESCRIPTIONS. STRATA CAN VARY BY COVER TYPE.

**TOTAL INFORMATION:**

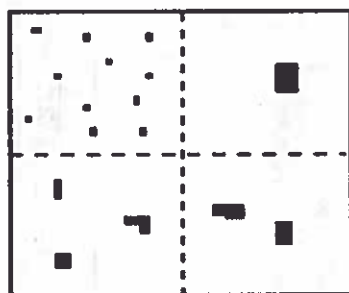
record type and cover for each	%Cover
Type	
c All Purpose	
c Bridle	
c Riding sanctioned	3
c Riding unsanctioned	1
c Gravel	
c Deer	

**STAND SIZE**

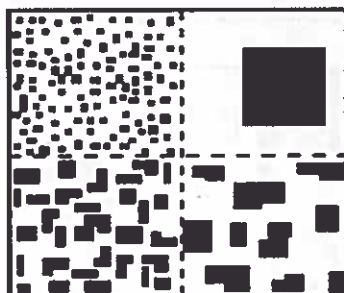
- ☐ >600 x plot size
- ☐ > 100 x plot size
- ☒ 10-100 x plot size
- ☐ 3-10 x plot size
- ☐ 1-3 x plot size
- ☐ < plot size

# PERCENT MOTTLES (USE CLASS CODES):

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



2%



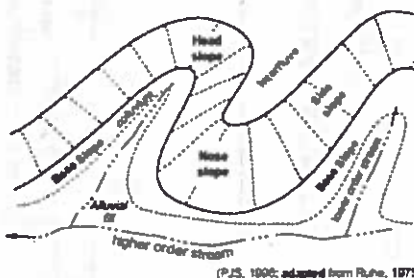
20%

**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

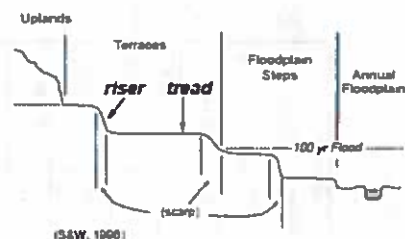
**Geomorphic Component** - Three-dimensional descriptors of parts of landforms or microfeatures that are best applied to areas. Unique descriptors are available for Hills, Terraces, Mountains, and Flat Plains; e.g., (for Hills) nose slope or NS.

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



(P.J.S. 1906; adapted from Ruhe, 1975)

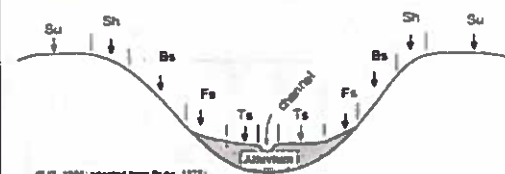
Terraces	Code
riser	RI
tread	TR



(S&W, 1906)

**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



(P.J.S. 1906; adapted from Ruhe, 1975)

## **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/SEMI-PERMANENTLY 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.

**SEMI-PERMANENTLY 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.