

All Set up on 8-19-15

CLEVELAND METROPARKS Plant Community Assessment Program: Quality Control Form



Project Label:

PCAP

Plot No:

3368

Date Sampled:

8/20/15

Lead:

CKM

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 type="radio"/> N <input checked="" type="radio"/>	
Site sketch made on 1:3000 map?	Y <input type="radio"/> N <input checked="" type="radio"/>	
Check cover page	X-axis Bearing of plot recorded	Y <input type="radio"/> N <input checked="" type="radio"/>
	GPS coords. Recorded	Y <input type="radio"/> N <input checked="" type="radio"/>
	North direction recorded	Y <input type="radio"/> N <input checked="" type="radio"/>
	Photographs taken?	Y <input type="radio"/> N <input checked="" type="radio"/>
	Relocated Pins Mapped	Y <input type="radio"/> N <input checked="" type="radio"/>
Plot No., Date agreement on all pages?	Y <input type="radio"/> N <input checked="" type="radio"/>	
Header data completed all pages?	Y <input type="radio"/> N <input checked="" type="radio"/>	
Cover classes recorded in all Intensive modules	Y <input type="radio"/> N <input checked="" type="radio"/>	
Browse Level By Species	Y <input type="radio"/> N <input checked="" type="radio"/>	
Woody stem quality control check	Y <input type="radio"/> N <input checked="" type="radio"/>	Check every line and cross check with the Tree Cover Sheet
Invasive plant quality control check	Y <input type="radio"/> N <input checked="" type="radio"/>	NA
Ash trees mapped	Y <input type="radio"/> N <input checked="" type="radio"/>	
Completed Forest Pest/Pathogen Datasheet	Y <input type="radio"/> N <input checked="" type="radio"/>	
Cover by Strata? (confirm cover type)	Y <input type="radio"/> N <input checked="" type="radio"/>	
Soil samples collected with matching plot #.	Y <input type="radio"/> N <input checked="" type="radio"/>	NA
Cross check 2010 information	Y <input type="radio"/> N <input checked="" type="radio"/>	Highlight any changes from 2010 information
Vouchers labeled on datasheet with initials and number	Y <input type="radio"/> N <input checked="" type="radio"/>	
Vouchers labeled on collection bag	Y <input type="radio"/> N <input checked="" type="radio"/>	
Pink flags removed	Y <input type="radio"/> N <input checked="" type="radio"/>	
Data sheet QA before leaving site?	Y <input type="radio"/> N <input checked="" type="radio"/>	
Common equipment returned to tub.	Y <input type="radio"/> N <input checked="" type="radio"/>	
Data sheets scanned?		Enter date to left
Final data sheets scanned?		Enter date to left
Buffer Widths measured?	Y <input type="radio"/> N <input checked="" type="radio"/>	
Web Soil Survey	Y <input type="radio"/> N <input checked="" type="radio"/>	
Voucher Location	Refrigerator	Y <input type="radio"/> N <input checked="" type="radio"/>
(# vouchers collected)	Press (#)	Enter number to left
CKM 414-417	Drier	Y <input type="radio"/> N <input checked="" type="radio"/>
	Identified	Y <input type="radio"/> N <input checked="" type="radio"/>
	Mounted	Y <input type="radio"/> N <input checked="" type="radio"/>
	Thrown away	Y <input type="radio"/> N <input checked="" type="radio"/>

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:

All pins found

D

D

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

GENERAL INFORMATION

Project Label: PCAP

Project Name: OZBE2015

Pilot Name: It's only
Wednesday plot

Pilot No.: 3396

☐ Level 4 (no nested corners sampled)

☒ Level 5 (nested corners sampled)

Date (mm/dd/yyyy): 8/20/2015

End date (if > 1 day): / /

Party

Role**

C. Minney

Pilot leader

D. Sweet

Bot. Asst.

T. Cochran

Woody Tech

M. Gutzky

Woody Tech

** Roles: Co-leader, Asst. Guide, Observer, Taxonomic, etc.

PLOT NOT SAMPLED:

☐ Other

☐ Perm. water ☐ Paved ☐ Slope ☐ Safety

SAMPLING QUALITY*

Effort Level:

subjective evaluation of
how much effort put into
sampling. Hurried plots
may still provide good
data

☒ Very thorough

☐ Accurate

☐ Hurried

TAXONOMIC ACCURACY

☐ high ☐ modera. ☐ low ☐ not simpl

☒ vascu. ☐ bryo ☐ lichen

☐ n/a

☒ TAXONOMIC STANDARD

Authority: G&C Pub Date: 1998

Minimum required fields in Bold and Underlined

LOCATION

State: OH

County: Cuyahoga

Quadrangle: Northfield

Local Place Names: Overlook lane

Landowner: CMP

Data Confidentiality:

Check one: ☒ Public data ☐ Private Data

☐ Fuzz 100m ☐ Fuzz 250m ☐ Fuzz 500m

Reason:

If data not public why?

Source of coordinates: ☐ MAP ☒ GPS

Coordinate system:

Coord. Units

☒ Lat/Long ☐ UTM ☐ StatePlane

☐ deg ☐ deg min

☐ Other (specify)

☐ m ☐ ft

Datum: ☒ NAD83/WGS84 ☐ NAD27

GPS location in plot x=0 to 5, y=-1.0, +1.0:

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

Latitude: 41.37279

Longitude: 81.56610

Coord. Accuracy: ☒ m ☐ ft

+/- 3

GPS File Name: 3396

Plot size for cover data: .1

(hectares)

X-axis Bearing of plot:

[100]°

Depth: (1-5): 4

Intensive modules: 2, 3, 8, 9

(EDIT IF MODIFIED)

Camera No.: 4

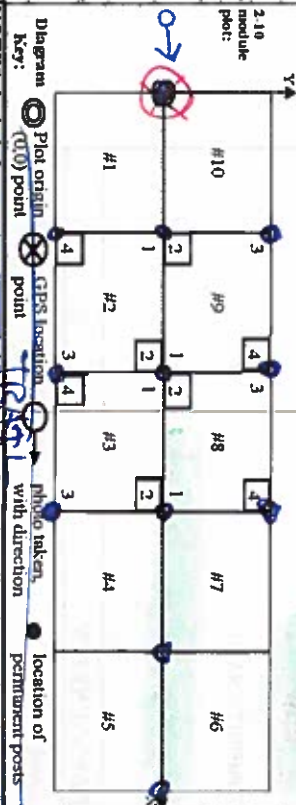
Photo Nos.: C4881

Pilot placement: ☒ GRTS ☐ Representative

☐ Random ☐ Stratified Random ☐ Transect component

☐ Systematic (grid) ☐ Capture specific feature ☐ Other

* Definitions and values in CM PCAP FOM 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 All pins found

Location: Park at parking area on Overlook lane. Plot is with 10m of parking area. Origin is on downslope side.

Rationale: GRTS

Veg Characterization: The canopy is dominated by Sugar and Red Maple with Tulip. The herb layer is dominated by Sugar Maple and Spicebush. The herb layer is sparse but dominated by Virginia Creeper.

OVER

CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

Project Label: PCAP

Project Name: 02BE2015

Plot No.: 3396

Cleveland Metropolitan

Page 2 of 2

MODIFIED NATURE RESERVE CLASS*

CODE (on separate form):

02

COMMUNITY NAME:

Beech-Maple Forest

Fit= Conf=

HOMOGENEITY

☒ Homogeneous
 ☐ Compositional trend across the plot

☐ Conspicuous inclusions
 ☐ Irregular/pattern mosaic

HYDROLOGIC REGIME*

☒ Upland (seldom flooded)
 ☐ Intermittently/seasonally saturated (seldom flooded)
 ☐ Permanently/Semipermanent, saturated (dry <1/yr, seldom flooded)
 ☐ Occasionally flooded (<1/yr)
 ☐ Temporarily flooded

☐ Intermittently flooded
 ☐ Semipermanently flooded
 ☐ Permanently flooded
 ☐ Tidal/Seiche flooded daily
 ☐ Tidal/Seiche flooded monthly
 ☐ Tidal/Seiche flooded irregular (e.g. wind, storms)
 ☐ Unknown

SALINITY*

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

(by default unless plot is a wetland)

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

The stand is un-even-aged ~~and~~ and mature. The large tulips in the plot are stressed perhaps by the weevil? The plot is and has been heavily browsed. Mostly rich woods species with Beech drops and Trillium just below the plot. The bootleg trail noted previously was not found.

DISTURBANCES

type*	severity**	yrs ago	% of plot	description
Human				
Natural	M	0	25	Tulip affliction (Weevil?)
Fire				
Cut				
Animal	H	0	100	Deer browse
Other				

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

Current Land Use: CMP

Former Land Use:

1bCM PCAP Background Data Sheet Page 2_ver 2.xls last revised 5/29/2012 cel

Natural Resources Management FORM NR/2010-01b

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Page 1 of 3

Project Label: PCAP
Total modules: 10

Project name: 02BE2015
Intensive modules: 4
Plot configuration: 2x5

Plot no.: 3396
Plot area (ha): .1



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

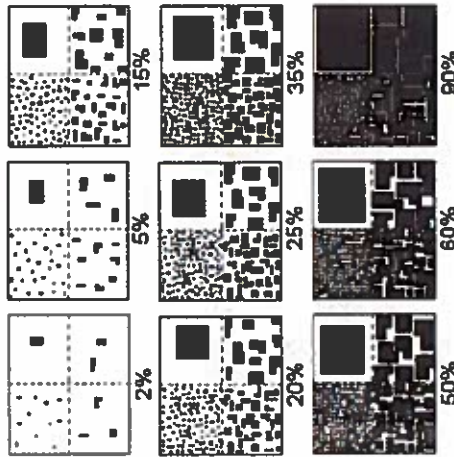
Strata - Cov. entire plot

S	H	(F)	(A)	Br	Species	C	Voucher #	Estimate for each intensive module:				%open water				%unveg. ground (bare soil)				%unveg. litter (bare litter)			
								mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner
2	5				Parthenocissus quinquefolia			2	4	2	2	1	0	0	0	1	0	0	0	1	0	0	0
2	2				Fraxinus sp. (seedling)			3	2	2	2	3	2	2	2	4	2	2	2	4	2	2	2
2	2				7. Circaea lutetiana			3	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2
2	2				6. Ilex sp. (seedling)			3	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2
2	2				Acer sp. (seedling)			3	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2
2	2				5. Geum sp.			3	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2
2	2				Rosa alba			3	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2
2	2				Geum canadense			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Allium tricoccum			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				6. Carex cordiformis			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Carex 1 sp.			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				LONICERA MORROWII			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Vitis sp.			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Polygonum virginianum			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Ceranium maculatum			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				ALTAIRA PETIOLATA			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Carex 2 blanda			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Actaea alba			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Lindera benzoin			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				6. Fraxinus pennsylvanica			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Moss sp.			3	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2
2	2				Polygonatum pubescens			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Toxicodendron radicans			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				BERBERIS THUNBERGII			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2				Arisaema triphyllum var. triphyllum			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

SRE combined 2-23-16

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.

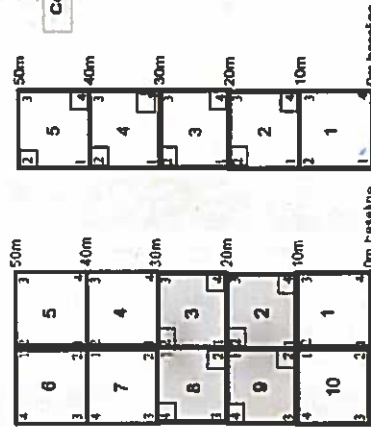
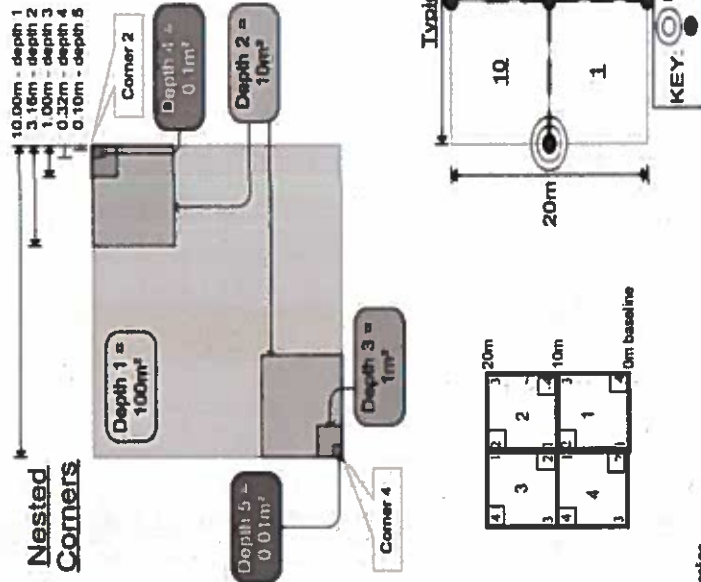
MEDIUM LOW values include evidence of browse at about 10 percent of the stems with no significant impact to plant reproduction evident. In this rating, plants are browsed but preferential species are observed to be reproducing in numbers that appear normal or near-normal in comparison to low browse areas. 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 m2 nested quadrat and intensive module. A browse line is usually not evident or obvious for all classes and species of vegetation, but careful examination may show preferential browse and/or browse lines for some species of plants.

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

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

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



CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Page 2 of 3

Project Label: PCAP
Total modules: 10

Project name: 02BE2015
Intensive modules: 4
Plot configuration: 2x5

Plot no.: 3396
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

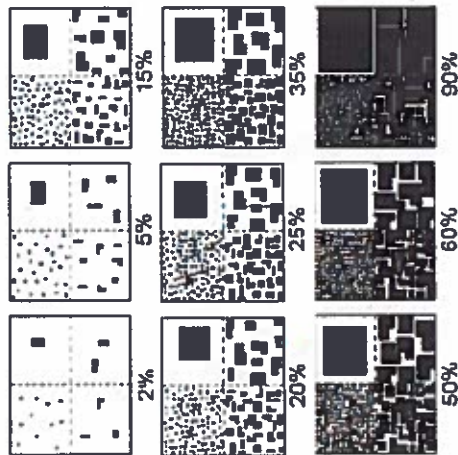
Strata - Cov. entire plot

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

Combined
SRE 2-23-16

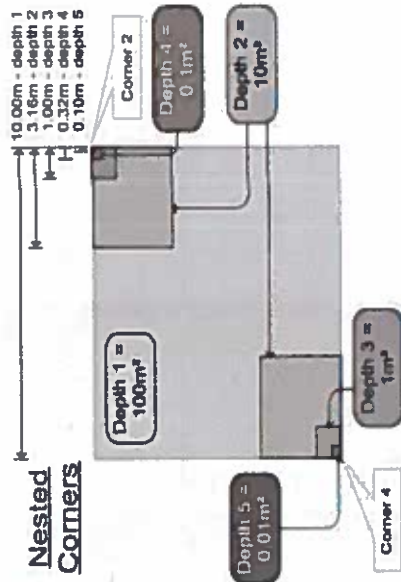
EXAMPLES OF PERCENT OF AREA COVERED

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cover class	% cover	midpoint
1	solitary or low	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



BROWSE RATING NARRATIVE DESCRIPTION

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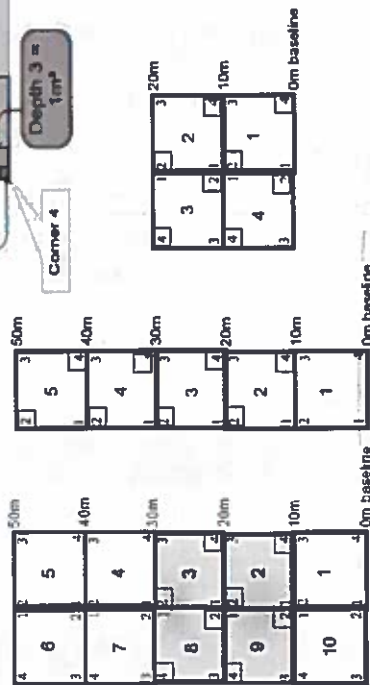
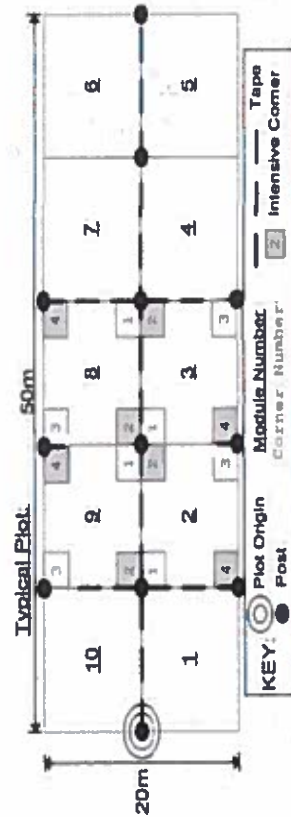
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Page 3 of 3

Plot area (ha):



Estimate for each intensive module:

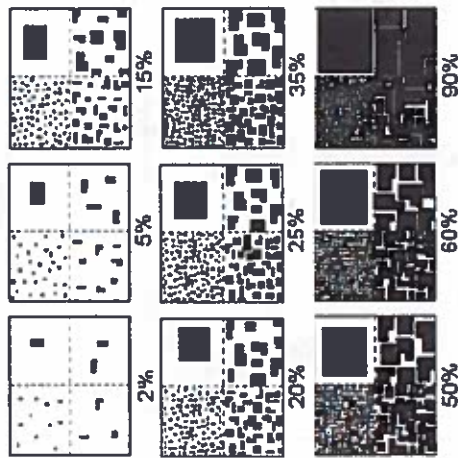
- %open water
- %unvegetated open water
- %unveg. ground (bare silt)
- %unveg. filter (bare silt)

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

Natural Resource Management FORM NR/2010-02a

EXAMPLES OF PERCENT OF AREA COVERED

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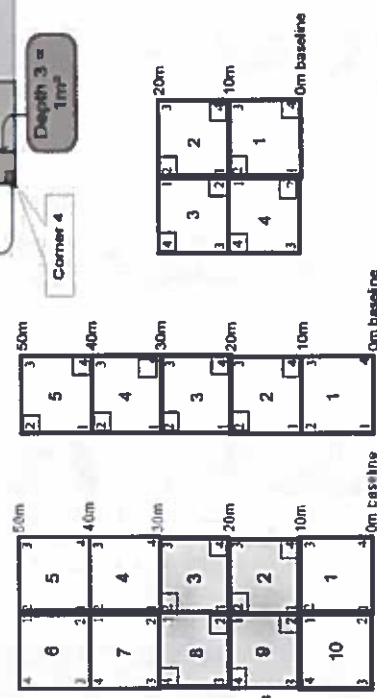
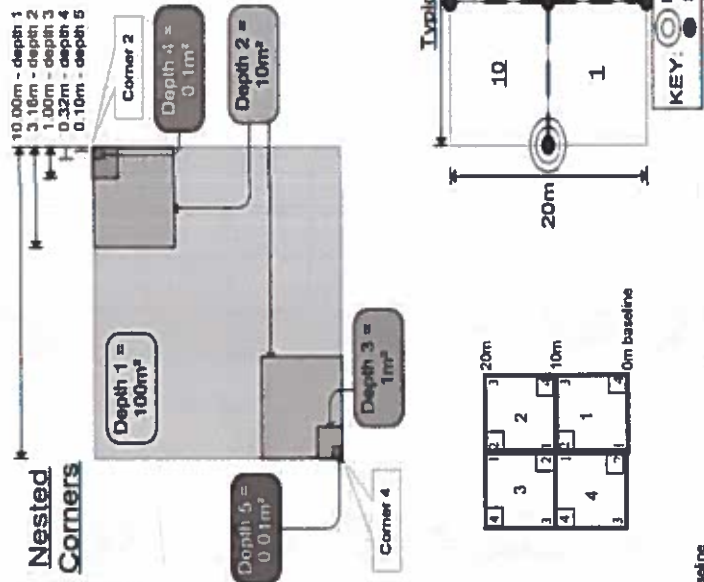
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Page 1 of 1

shading
net 100%
on T-B

Page of Page of

PCAP

Project name:

Plot no.: _____

[illegible]

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP

Project Name: DBS2015

Plot No: 3916

Page: 1 of 4



Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0-1.4m or super sample	% sub sample	# shrub dumps	size class (cm) woody stems > 1.4m	1	2	3	4	5	6	7	8	9	10	11
1	Fagus grandifolia																	
1	Acer rubrum																	
1	Acer saccharum																	
1	Liriodendron tulipifera																	
1	ROSA MULTIFLORA																	
1	Ribes cynosbati																	
1	Parthenocissus quinquefolia																	
1	Carpinus caroliniana																	
1	Euonymus alatus																	
2	Lindera benzoin																	
2	Acer saccharum																	
2	Liriodendron tulipifera																	
2	Standing Dead																	
2	ROSA MULTIFLORA																	
2	Ribes cynosbati																	
2	BEARBERRY THUNBERGII																	
2	Vitis sp.																	
3	Acer rubrum																	
3	Acer saccharum																	
3	Fraxinus sp.																	
3	Carpinus caroliniana																	
3	Fraxinus pennsylvanica																	
3	BEARBERRY THUNBERGII																	
3	Carya cordiformis																	

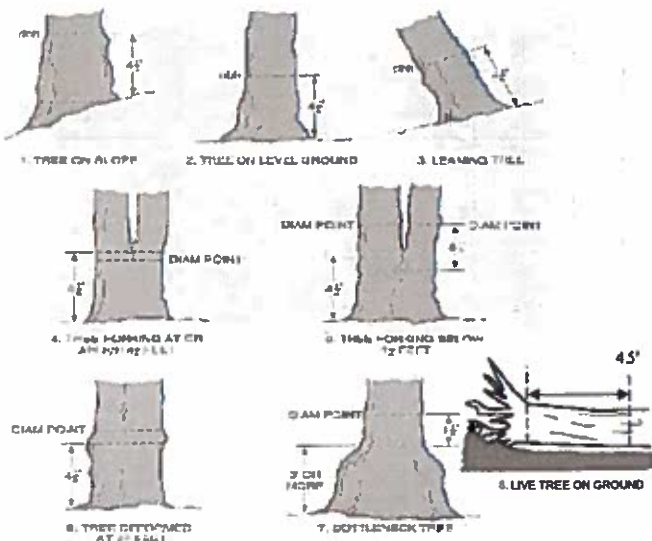
87.0

80.9

134.2

43.4

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



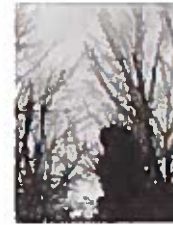
2



3



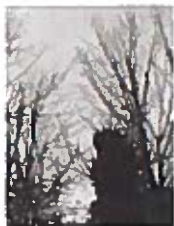
4



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: CARBS 2015

Plot No.: 396

Page: 2 of 4

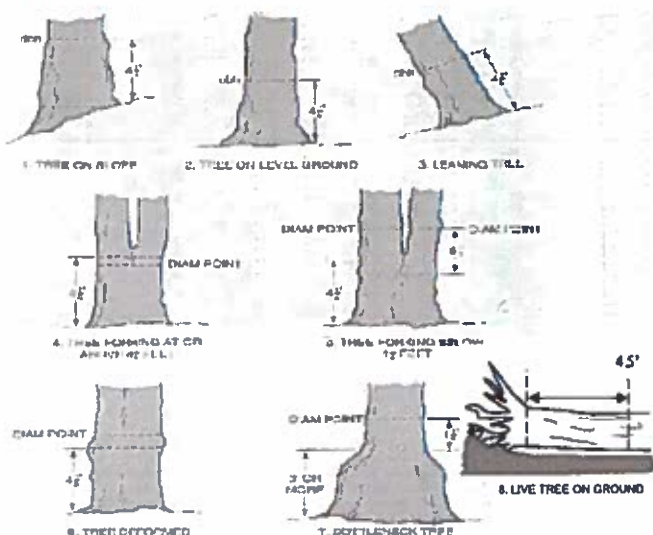


Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0-1.4m browed	% sub or super sample	# shrub clumps	size class (cm)	1 0-1	2 1-2.5	3 2.5-5	4 5-10	5 10-15	6 15-20	7 20-25	8 25-30	9 30-35	10 35-40	11 >40 (record each tree)
3	<i>Ostrya virginiana</i>			11														
3	<i>ROSA MULTIFLORA</i>																	
4	<i>Acer saccharum</i>																	
4	<i>Ostrya virginiana</i>																	
4	<i>Acer rubrum</i>																	42.6
4	Standing Dead																	
4	<i>Ulmus americana</i>																	
4	<i>Prunus serotina</i>																	61.9
4	<i>BETULA THUNBERGII</i>																	
4	<i>ROSA MULTIFLORA</i>																	
5	<i>Prunus serotina</i>																	
5	<i>Acer saccharum</i>																	
5	<i>Toxicodendron radicans</i>																	
5	<i>Fraxinus quinquifida</i>																	
5	Standing Dead																	
5	<i>Acer rubrum</i>																	
5	<i>Ostrya virginiana</i>																	
5	<i>Zunyas obscurus</i>																	
6	<i>Acer saccharum</i>																	
6	Standing Dead																	
6	<i>Acer rubrum</i>																	
6	<i>Lindula benzoin</i>																	
6	<i>Fraxinus quinquifida</i>																	
6	<i>LIGUSTRUM VULGARIS</i>																	

100% in 2010

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.
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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

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CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet

Project Label: PCAP

Project Name: 02B22015

Plot No.: 3396

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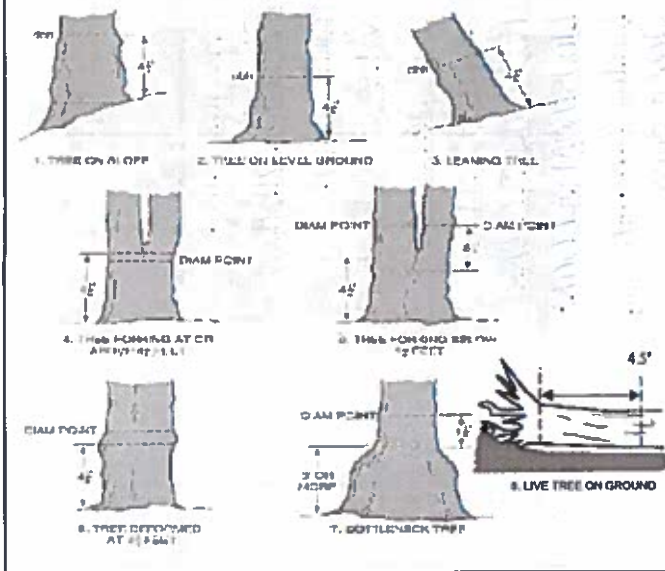
Explain subsample (additional room on back):

mod #	species	c	voucher#	# stems 0-1.4m browsed	% sub or super sample	# shrub clumps	size class (cm) woody stems > 1.4m										
							1 0-1	2 1-2.5	3 2.5-5	4 5-10	5 10-15	6 15-20	7 20-25	8 25-30	9 30-35	10 35-40	11 >40 (record each tree)
6	Sassafras albidum			1													
7	Sassafras albidum																
7	Acer rubrum																
7	Vitis aestivalis			1													
7	Acer saccharum																
7	Standing Dead																
7	ROSA MULTIFLORA			1													
7	LIBOSTRUM VULGARIS			1													
8	Lindera benzoin			1													
8	Acer rubrum																
8	Acer saccharum																
8	Standing Dead																
8	BRSBRIS-THUNBERGII			1													
8	Viburnum acerifolium			1													
8	ROSA MULTIFLORA			1													
8	Rachnocissus quinquefolia			1													
8	Euonymus alatus			1													
9	Acer saccharum																
9	Carya cordiformis			1													
9	Standing Dead																
9	Acer rubrum			1													
9	Magnolia acuminata																
9	Lindera benzoin			1													
9	Rachnocissus quinquefolia			1													

Wid *
as quiba
ad 10

732

DBH Measurement Rules



Woody Stem Deer Browse

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

Record using the tally system from 1 to 10



1



2



3



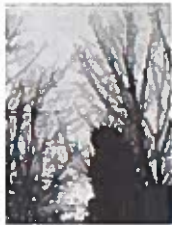
4



5

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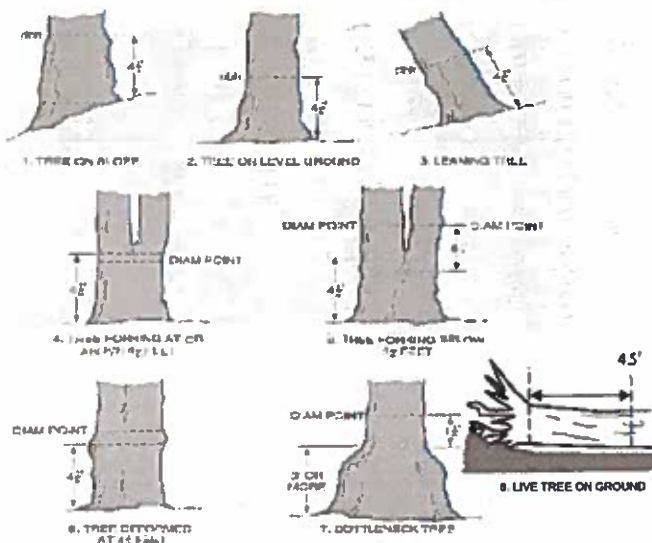
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Check and Inform

Page: 4 of 4

[illegible]

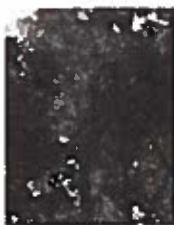
DBH Measurement Rules



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Record using the tally system from 1 to 10



1



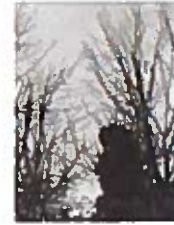
2



3



4



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Tree ID	Species	DBH (cm)	HT (m)	Ash condition	Dead condition	# EAB holes	Epicormic present	Woodpecker holes
1	<i>None ≥ 10cm</i>							
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 1.25m² x ≥1.5m
Woodpecker and epicormic marked present (1) or absent (0)



*** Change Intensive module numbers when necessary

Baseline	9	8
2	3	

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

CLEVELAND METROPARKS Plant Community Assessment Program: Invasive Species Survey



Tier 1: Early detection/ Rapid response		Presence				GPS	Presence X: yes
		NE	SE	SW	NW		
Microstegium vimineum	Japanese stiltgrass						
Ranunculus ficaria	Lesser Celandine						
Cynanchum louiseae (vine)	Black Swallow-wort						
Butomus umbellatus (wetland)	Flowering Rush						
Heracleum mantegazzianum	Giant Hogweed						
Tier 2: Assess as Needed		# of Plants				comments	# of Plants 1: 1-10 2: 11-50. 3: 51-100 4: 101-1,000 5: >1,000
		NE	SE	SW	NW		
Acer platanoides	Norway Maple						
Ailanthus altissima	Tree of Heaven						
Lonicera japonica (vine)	Japanese Honeysuckle						
Lythrum salicaria (wetland)	Purple Loosestrife						
Aegopodium podagraria (G-cover)	Bishop's Goutweed						
Celastrus orbiculatus (vine)	Asian Bittersweet						
Torilis sp.	Hedgeparsley						
Conium maculatum	Poison Hemlock						
Rhamnus cathartica	Common Buckthorn (shrub)						
Berberis thunbergii	Japanese Barberry (shrub)						
Alnus glutinosa	European Alder						
Dipsacus laciniatus	Cut-leaf Teasel						
Elaeagnus umbellata	Autumn Olive (shrub)						
Lonicera maackii	Amur Honeysuckle (shrub)						
Euonymus fortunei	Wintercreeper						
Tier 3: Presence is of Interest		# of Plants				comments	# of Plants 1: 1-10 2: 11-50. 3: 51-100 4: 101-1,000 5: >1,000
		NE	SE	SW	NW		
Convallaria majalis (G-cover)	Lily of the Valley						
Coronilla varia (G-cover)	Crown Vetch						
Eleutherococcus pentaphyllus	Five-leaf Aralia (shrub)						
Pachysandra terminalis (G-cover)	Japanese Pachysandra						
Philadelphus coronarius	Mock Orange (shrub)						
Pulmonaria officinalis (G-cover)	Lungwort						
Rubus phoenicolasius	Wineberry						
Iris pseudacorus (wetland)	Yellow Flag Iris						
Ornithogalum umbellatum	Star of Bethlehem						
Viburnum opulus var. opulus	European Cranberry (shrub)						
Viburnum plicatum	Doublefile Viburnum (shrub)						
Tier 4: Widespread and abundant		Presence				comments	# of Plants 1: 1-10 2: 11-50. 3: 51-100 4: 101-1,000 5: >1,000
		NE	SE	SW	NW		
Alliaria petiolata	Garlic Mustard						
Ligustrum vulgare	Common Privet (shrub)						
L. morrowii, L. tatarica	Bush Honeysuckles (shrub)						
Phalaris arundinacea	Reed Canarygrass						
Phragmites australis (wetland)	Phragmites						
Polygonum cuspidatum	Japanese Knotweed						
Frangula alnus	Glossy Buckthorn (shrub)						
Rosa multiflora	Multiflora Rose (shrub)						
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						

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

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



Project Label: _____

PCAP _____

Project Name: 02B52015

Pilot No: 3896

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 stems 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:

<u>None</u> Beech (Fungus)	<u>None</u> Asian Longhorned Beetle
<u>None</u> Hemlock (HWA)	<u>None</u> Other Pest or Pathogen
<u>None</u> 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 wetland) collected in 0.1m clip plots (32x12 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

BT = excellent, E Fit and Confidence

Hydrogeomorphic 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"/> BOC (strongly, moderately, weakly ombrotrophic)	Fit =	Conf =

Ohio 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 deep	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

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

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

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

mod#	corner	no. of tussocks		no. of hummocks		no. macro. depressions		c.w.d (2-12 cm)		c.w.d (12-10cm)		c.w.d >40 cm		microhab. interspers.		microhab. SLOPE	
		depth 3 1x1m	(count)	depth 2 3.16x3.16m	(count)	depth 1 10x10m	(count)	depth 1 10x10m	(count)	depth 1 10x10m	(count)	depth 1 10x10m	(count)	depth 1 10x10m	(rank)	depth 1 10x10m	(rank)
2		0		0		0		15		0		0		2		1	
3		0		0		0		7		0		0		2		1	
8		0		0		0		12		2		0		2		1	
9		0		0		0		11		3		0		2.3		1	

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

McNAB INDICES (degrees) + for up - for down

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

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

L71 is angle of plot to the horizon. TSI is angles formed by local slopes. For TSI measure angle from recorder's eye to c.e. of person standing ~10 m away

*Landscape Index (position within landscape)
 **Terrain Shape Index (like microtopographic shape)

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

Module	N	S	E	W
2	0	0	1	0
3	0	0	0	0
8	0	0	0	0
9	0	0	1	0

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.

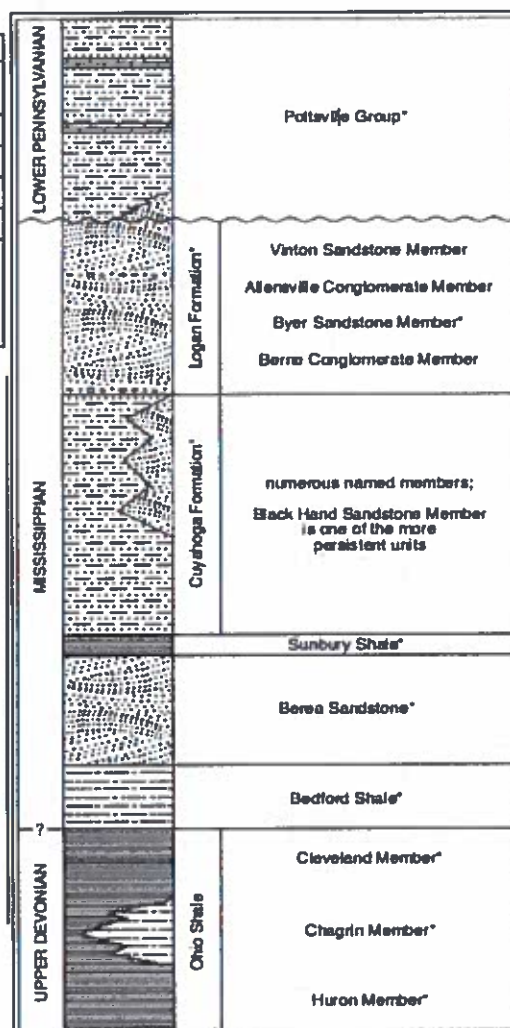
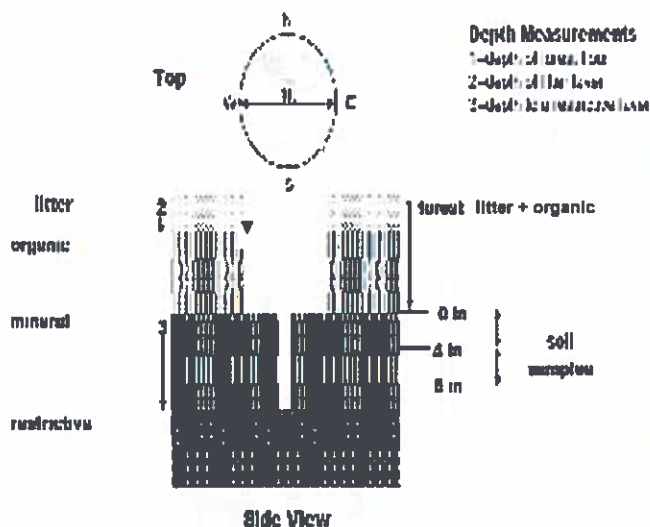


FIGURE 3-20.—Generalized section of Upper Devonian, Mississippian, and Lower Pennsylvanian formations in northeastern Ohio. Asterisks indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the area. The section is not to scale, but the thicknesses indicated are proportional. The term "wavy" 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 (1978) 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
	mottle color
	%mottle
	oxid roots
	texture*
	redox features**
	hydr. cond.***
20 cm	matrix color
	mottle color
	%mottle
	oxid roots
	texture*
	redox features**
	hydr. cond.***

* refer to texture classes on reverse side
 ** e.g. hydrogen sulfide odor, gleying, etc.
 *** Circle one:
 In-saturated S-saturated M-moist D-dry
 Notes: include evidence of earthworms (worms, castings, middens)
 MOD 2: Worms, castings and middens present
 MOD 3: Worms, castings and middens present
 MOD 8: Worms, castings and middens present
 MOD 9: Worms, castings and middens present

Soil Collection Module	Horizon (A, B, C)
2.3.9.2 compacted	A
Hydr. Soil Survey, Exposed	
Soil Series/Type:	
Soil Series Source:	Ohio Soil Survey
Landform type:	
Depth to rest. Layer:	
Parent Material:	
DRAINAGE*	
<input type="checkbox"/> Excessively dr.	<input type="checkbox"/> Somewhat excessively
<input 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	

SOIL DEPTH MEASUREMENT: Measure to the nearest 0.1 cm in center of intensive modules. If >30.5 cm, record as >30			
mod#	1 liter+ organic depth (cm)	2 liter depth (cm)	water depth soil (cm)
2	2.1	2.1	—
3	1.5	1.5	—
8	2.1	2.1	—
9	1.8	1.8	—

EARTH SURFACE & GROUND COVER		
Underlying Earth Surface*	Ground Cover	
Run = 100%	percent	percent
Historic	Coarse Woody Debris***	5
Mineral Soil	Fine Woody Debris****	41
Gravel-Cobble*	Litter	82
Boulder**	Duff (Ferm + Humus)	0
Bedrock	Bryophyte-Lichen	1
Gravel-Cobble = 1/16-10"	Water	0
Boulder = > 10 in	Bare Soil	1
*** > 5 cm in diameter	Dead/Trail	1
**** < 5 cm in diameter	Other	1

COVER BY STRATA		
estimate using midpoints of 5, ex: 3, 8, 13		
Strata	Height Range (m)	Total Cover (%)
Tree	5 - 1	93
Shrub	0.5 - 5	33
Herb	0 - 0.5	18
(Floating)*	—	—
(Aquatic)*	—	—

* rooted and floating or slightly emerged
 ** submerged, most plant mass below surface

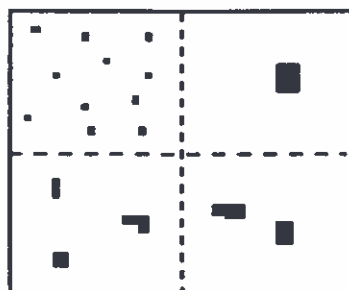
SEE BACK OF PAGE FOR TYPICAL STRATA DESCRIPTIONS. STRATA CAN VARY BY COVER TYPE

D N01/E	
TRAIL INFORMATION:	
record type and cover for each	
Type	% Cover
<input type="checkbox"/> All Purpose	
<input type="checkbox"/> Bridle	
<input type="checkbox"/> Hiking sanctioned	
<input type="checkbox"/> Bicycling unsanctioned	
<input type="checkbox"/> Gravel	
<input type="checkbox"/> Deer	

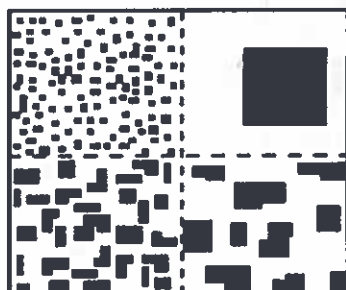
STAND SIZE	
<input type="checkbox"/> > 600 x plot size	
<input type="checkbox"/> > 100 x plot size	
<input checked="" type="checkbox"/> 10-100 x plot size	
<input type="checkbox"/> 3-10 x plot size	
<input type="checkbox"/> 1-3 x plot size	
<input type="checkbox"/> < plot size	

PERCENT MOTTLES (USE CLASS CODES):

Class	Conv.	Code NASIS	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.

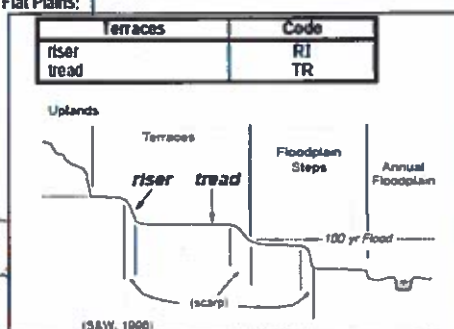
- 0= Organic
- 1= Loamy
- 2= Clayey
- 3= Sandy
- 4= Coarse Sand
- 9= Not measured - make plot note

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



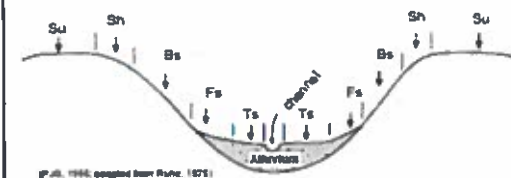
(P.J.S. 1990; adapted from Rube, 1975)



(S&W, 1966)

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. 1990; adapted from Rube, 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.