

CLEVELAND METROPARKS Plant Community Assessment Program: Quality Control Form



Project Label:

PCAP

Plot No. 1071

Date Sampled: 8-12-15

Lead: Eysenbach

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	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		Y	N	N/A
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		Y	N	N/A
Vouchers labeled on collection bag		Y	N	N/A
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
	Drier	Y	N	
	Identified	Y	N	
	Mounted	Y	N	
	Thrown away	Y	N	

GRTS point verification: Is plot sampleable?

<input checked="" type="radio"/> Yes	Original GRTS point is sampleable
<input type="radio"/> 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. parking lot, road)
	<input type="checkbox"/> Unsafe to sample (i.e. steep slope)
	<input type="checkbox"/> Other

Additional Comments:

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CLEVELAND METROPARKS Plant Community Assessment Program - Background Data Sheet

GENERAL INFORMATION	
Project Label: PCAP	
Project Name: 02M52015	
Plot Name: Sticky pants	
Plot No.: 1071	
<input type="checkbox"/> Level 4 (no nested corners sampled)	
<input checked="" type="checkbox"/> Level 5 (nested corners sampled)	
Date (mm/dd/yyyy): 8/12/2015	
End date (if > 1 day): / /	
Party: S. Fytenbeeth	Role: Plot leader
I. Edrhan	Est. Asst
D. Sweet	Notes
E. Knuss	Woods
** Roles: Co-leader, Asst. Guide, Observer, 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: <input checked="" type="checkbox"/> Very thorough	subjective evaluation of how much effort put into sampling. Hunted plots may still provide good data
<input type="checkbox"/> Accurate	
<input type="checkbox"/> Hunted	
TAXONOMIC ACCURACY	
<input checked="" type="checkbox"/> high	moderate
<input type="checkbox"/> low	not simpl
vaseul.	n/a
bryo	<input checked="" type="checkbox"/>
lichen	<input checked="" type="checkbox"/>
TAXONOMIC STANDARD	
Authority: G&C	Pub Date: 1998

Minimum required fields in Bold and Underlined

LOCATION	
State: OH	County: Cuy
Quadrangle:	
Local Place Names: Royalview entrance	
Landowner: CM	
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	
Coordinate system: <input type="checkbox"/> Coord. Units	
<input checked="" type="checkbox"/> Lat/Long <input type="checkbox"/> UTM <input type="checkbox"/> StatePlane <input type="checkbox"/> deg <input type="checkbox"/> deg min	
<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 = 5 y = 0 (base of plot x=0, y=0)	
Latitude: 41.31746	
Longitude: 81.79400	
Coord. Accuracy: <input checked="" type="checkbox"/> m <input type="checkbox"/> ft	
GPS File Name: 1071A	
Plot size for cover data: 0.1 (hectares)	
X-axis Bearing of plot: 162°	
Depth: (1-5): 4	
Intensive modules: 2, 3, 8, 9	(EDIT IF MODIFIED)
Camera No.: C2	
Photo Nos.: C2-4598-99	
Plot placement: <input checked="" type="checkbox"/> ARTS <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 CM PCAP FOM v. 1.0 and CVS Field Guide

Chuck Thomas
a plot

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 others found
Location: Park at the entrance to Royalview picnic area. Walk ~200m across Valley Pkwy, west on the RPT past the Oxbow. Cut north after the oxbow. Plot is located between the oxbow & the st slope

Rationale: BRTS pt
veg char
canopy: Black Maple w/ Box Elder
Red Elm, Cottonwood and
Sycamore shade in

OVER

Plot No.: 1041

Project Name: 07 MSZOLS

Project Label: PCAP

MODIFIED NATURE RESERVE CLASS*

CODE (on separate form):

Fit= Conf=

201

COMMUNITY NAME:

MUSIC Floodplain

HOMOGENEITY

- Homogeneous
- Compositional trend across the plot

☐ Compositional trend across the plot

☐ Conspicuous inclusions ☐ Irregular/pattern mosaic

- o Irregular/pattern mosaic

HYDROLOGIC REGIME*

SALINITY*

□ Saltwater

Brackish

□ Fresh

Upland (n/a)

☐ 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

(by default unless plot is a wetland)

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

Cont'd: Wing stem, White Snake root, Ginger with barlic Mustard, Darnes Root and Multi flora rose.

- Lots of downed woody debris

- Browse is very high w/ majority of plants browsed

-Spice bush looks like the healthiest I have seen this year

- Very large Sycamores just outside plot up slope

- Please be aware when setting up for the C. Thomas deep plot that is pinned

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Page 1 of 2

Project Label: PCAP
Total modules: 10

Project name: 02ms2015 Plot no.: 1071
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

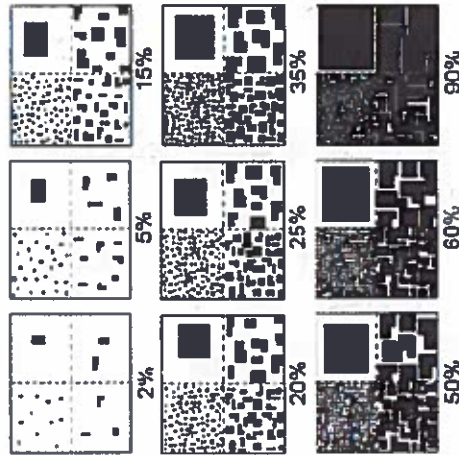
Strata - Cov. entire plot

S	H	(F)	(A)	Br	Species	C	Voucher #	Estimate for each intensive module:				Estimate for each intensive module:				Estimate for each intensive module:				Estimate for each intensive module:				mod	R
								%open water	%unvegetated open water	%unveg. ground (bare soil)	%unveg. litter (bare litter)	%open water	%unvegetated open water	%unveg. ground (bare soil)	%unveg. litter (bare litter)	%open water	%unvegetated open water	%unveg. ground (bare soil)	%unveg. litter (bare litter)	%open water	%unvegetated open water	%unveg. ground (bare soil)	%unveg. litter (bare litter)		
2	3			5	<i>Parthenocissus quinquefolia</i>																				
4				8	<i>Fragaria virginiana</i>																				
2					<i>Toxicaria</i> sp. (seedlings)																				
2					<i>Alliaria petiolata</i>																				
2				7	<i>Circaea lutetiana</i>																				
5				10	<i>Rosa multiflora</i>																				
3	2				<i>Prunus serotina</i>																				
6				7	<i>Eupatorium rugosum</i>																				
3	3			6	<i>Toxicaria pensylvanica</i>																				
5	2			6	<i>Acer negundo</i>																				
1					<i>Rhus sp.</i>																				
1					<i>Ranunculus recurvatus</i>																				
3					<i>Moss sp.</i>																				
3					<i>Asarum canadense</i>																				
2					<i>Cryptantha cruciata</i>																				
2					<i>Toxicodendron radicans</i>																				
2				6	<i>Leum canadense</i>																				
2					<i>Hackelia virginiana</i>																				
2					<i>Ulmus sp. (seedlings)</i>																				
5					<i>Veronica alternifolia</i>																				
2					<i>Acer sp. (seedlings)</i>																				
2					<i>Hesperis matronalis</i>																				
2					<i>Viola sp.</i>																				
2				10	<i>Empetrum capense</i>																				
1					<i>Thalictrum dasycarpum</i>																				

Ligustrum vulgare

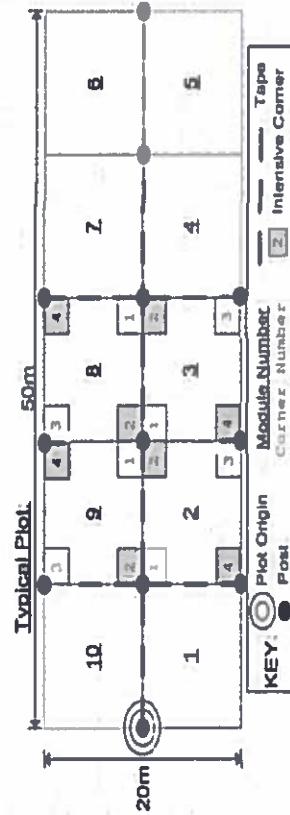
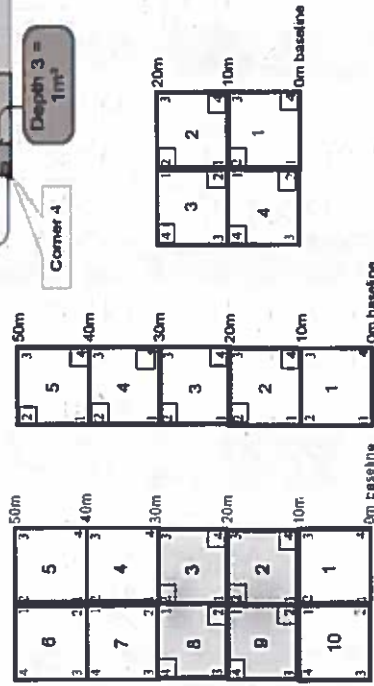
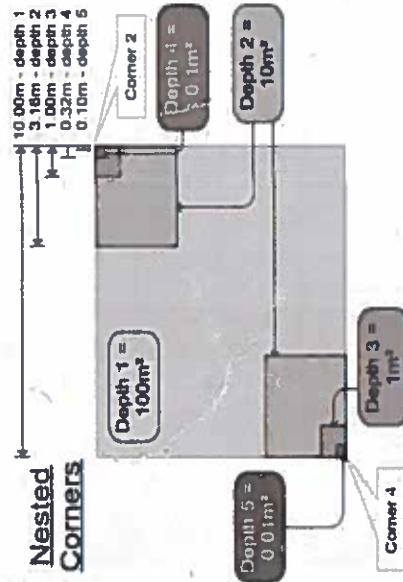
EXAMPLES OF PERCENT OF AREA COVERED

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, but 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

Nested Corners



BROWSE RATING NARRATIVE DESCRIPTION

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

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

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

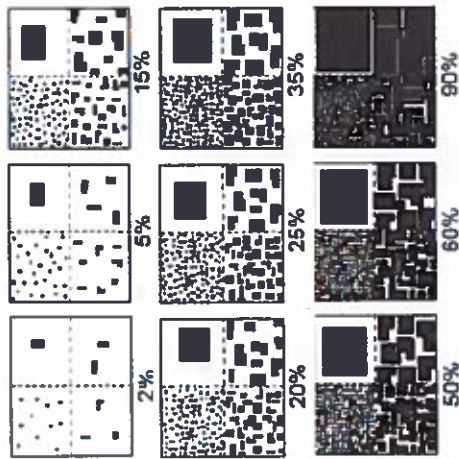
MEDIUM HIGH values include evidence of a browse line and 25 percent of stems browsed with very little vegetation regeneration evident. In this rating, for some species of plants, reproduction does not appear to occur or it is very severely limited.

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

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

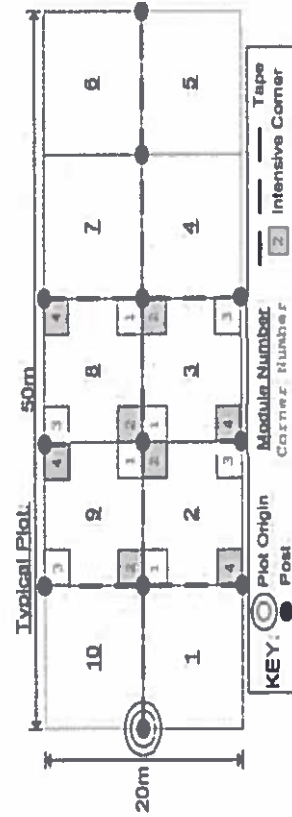
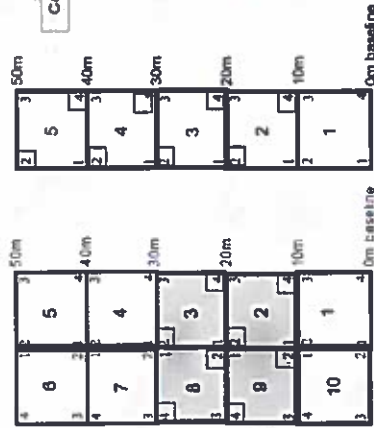
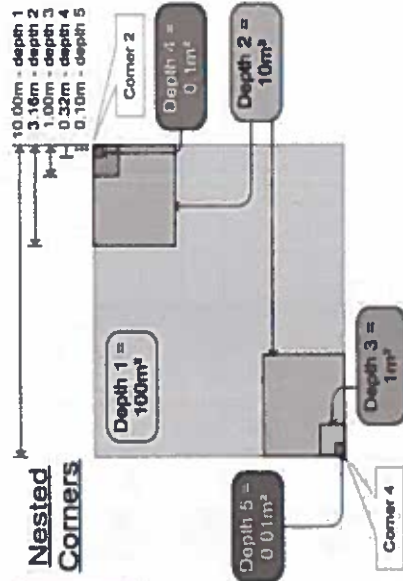
EXAMPLES OF PERCENT OF AREA COVERED

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

Nested Corners



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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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.

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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.

CLEVELAND METROPARKS Plant Community Assessment Program Tree Cover Data Sheet

Project Label: _____

PCAP

Project name: _____

02ms2015

Plot no.: _____

1071

Page _____

of _____

% COVER		Species	c	Presence of tree species (X)		mod	mod	mod	mod	R
Strata - Cov. entire plot	Br			Voucher #	mod					
3		Parthenocissus quinquefolia			X					
8		Acer nigrum			X	X	X	X	X	X
4		Carya cordifolia			X	X	X	X	X	X
5		Ulmus americana			X	X	X	X	X	X
4		Acer negundo			X	X	X	X	X	X
4		Fraxinus americana			X	X	X	X	X	X
7		Platanus occidentalis			X	X	X	X	X	X
8		Populus deltoides			X	X	X	X	X	X
6		Ulmus rubra			X	X	X	X	X	X
4		Pinus strobus			X	X	X	X	X	X
6		Liriodendron tulipifera			X	X	X	X	X	X
2		Acer saccharum			X	X	X	X	X	X

506
10-21-15

Page of

PCAP

Project name:

Plot no.:

[illegible]

CLEVELAND METROPARKS Plant Community Assessment Program Natural Woody Stem Data Sheet



Project Label: PCAP

Project Name: 02MS2015

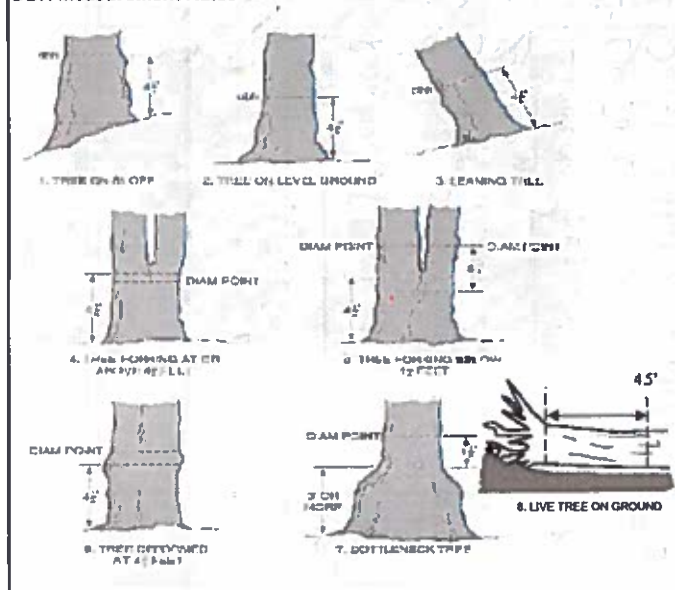
Plot No.: 1071

Page: 1 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	2	3	4	5	6	7	8	9	10	11
1	<i>Parthenocissus quinquefolia</i>						1												106.7
1	<i>Populus deltoides</i>																		
1	<i>Praxinus pennsylvanica</i>																		
1	<i>Rosa multiflora</i>			17															
1	<i>Acer negundo</i>																		
1	Standing dead																		
1	<i>Lindera benzoin</i>			1															
2	<i>Corya cordifolia</i>																		
2	<i>Parthenocissus quinquefolia</i>			2															
2	Standing dead																		
2	<i>Acer negundo</i>																		
2	<i>Rosa multiflora</i>			16															
2	<i>Ulmus americana</i>																		
2	<i>Fraxinus pennsylvanica</i>			7															
3	<i>Fraxinus americana</i>																		
3	<i>Acer negundo</i>																		
3	<i>Acer negundo</i>			2															
3	<i>Parthenocissus quinquefolia</i>																		
3	<i>Rosa multiflora</i>			8															
3	<i>Lindera benzoin</i>			10															
3	<i>Fraxinus pennsylvanica</i>			5															
4	<i>Acer negundo</i>			1															
4	Standing dead																		

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.

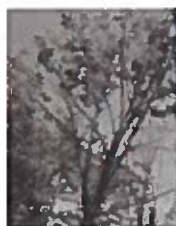
Record using the tally system from 1 to 10



1



2



3



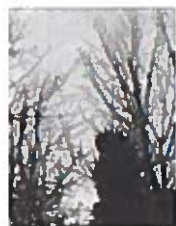
4



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: 02 HAS 2015

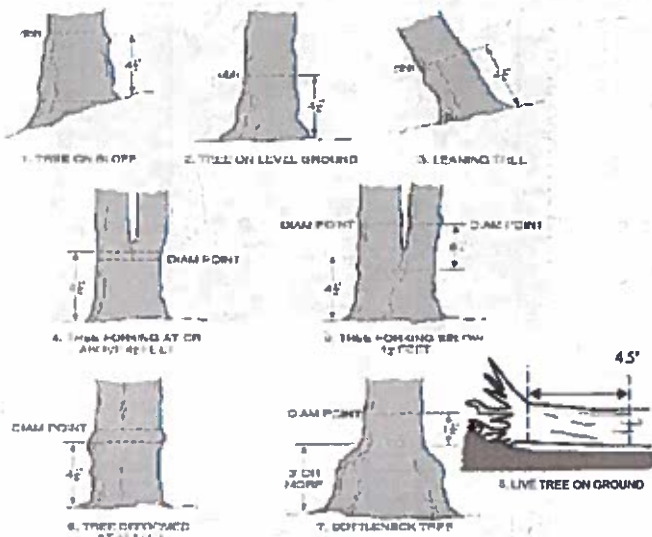
Plot No.: 1071

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	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)		
4	Fraxinus pennsylvanica			3															
4	Crataegus sp.																		
4	Rosa multiflora			1:5															
5	Asimina triloba																		
5	Acer negundo																		
5	Standing dead																		
5	Lindera benzoin			2															
5	Rosa multiflora			1:5															
5	Parthenocissus vitacea			1															
6	Acer negundo																		
6	Standing dead																		
6	Fraxinus pennsylvanica			1															
6	Lindera benzoin			1															
6	Rosa multiflora			2															
7	Acer negundo																		
7	Lindera benzoin																		
7	Rosa multiflora			2															75.9
7	Lindera benzoin			1															
7	Fraxinus pennsylvanica			1															
8	Lilium																		
8	Acer negundo																		
8	Lindera benzoin			4															
8	Standing dead																		
8	Fraxinus pennsylvanica			3															53.1

DBH Measurement Rules



Woody Stem Deer Browse

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

Record using the tally system from 1 to 10



1



2



3



4



5

ASH CANOPY CONDITION

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



A

B

C

D

E

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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)

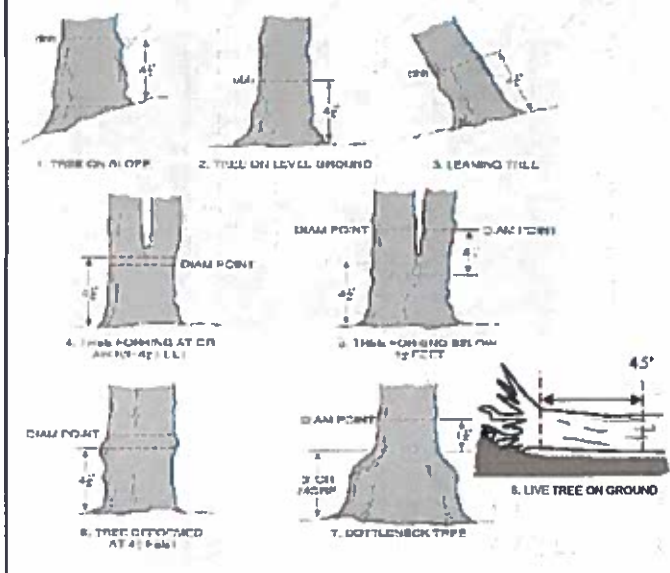
- A:** All main branches contain fine twigs (newly dead).
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- D:** Stem still standing and tertiary main branches present.
- E:** Central stem still standing.

 Cleveland Metroparks

Page: 3 of 4

[illegible]

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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A

B

C

D

E

ASH CANOPY BREAKUP CONDITION (for dead trees):

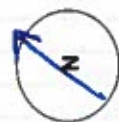
(If an ash receives a score of 5 (dead) under canopy condition it must also receive a breakup condition rank as described below)

- 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.

ASH ONLY

Tree ID	Species	DBH (cm)	HT @ DBH	Ash condition	Dead condition	# Exit holes	Epicormic present	Woodpecker holes
1	None present							
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 21.5m
Woodpecker and epicormic marked present (1) or absent (0)



*** Change intensive module numbers when necessary

Baseline	
1	3
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: DLWC2015

Plot No.: 1071

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	<i>None present</i>													
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:

<i>None present</i>	Beech (Fungus)	<i>None present</i>	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 wetland) collected in 0.1m dip pole (32x32 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)

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

Ohio EPA VIBI-E Plant Community Class (WETLANDS ONLY)

<input type="checkbox"/> FOREST <input type="checkbox"/> standing 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

Rank for microhabitat features. Select one or select two and average the score. NOTE: If mod falls on a slope automatically gets ranked based on steepness (1-3) to begin + very features present
 Slope 1 = slight elevated grade across module (M)
 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									
no. of tussocks	no. of hummocks	no. macro. depressions	C.W.D. (2-12 cm)	C.W.D. (12-40 cm)	C.W.D. >40 cm	microhab. invertebr.	microhab. SLOPE		
depth 3 1x1m	depth 2 3 16x3 16m	depth 1 10x10m	depth 1 10x10m	depth 1 10x10m	depth 1 10x10m	depth 1 10x10m	depth 1 10x10m		
mod#	corner	(count)	(count)	(count)	(count)	(rank)	(rank)		
2		0	1	10	1	0	3	1	
3		0	1	17	7	0	4	1	
8		0	1	7	5	1	3	1	
9		0	0	14	3	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

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

Landform Index (position within landscape)

Terrain Shape Index (like microtopographic shape)

CROWN COVER (DIMENSIONLESS). 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	2	4	2	2
3	2	6	12	0
8	0	0	0	0
9	2	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.

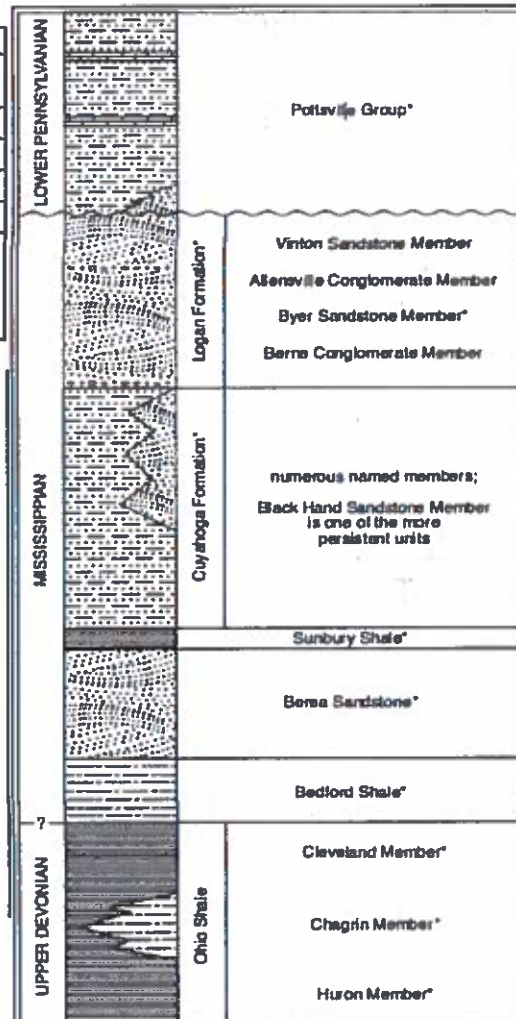
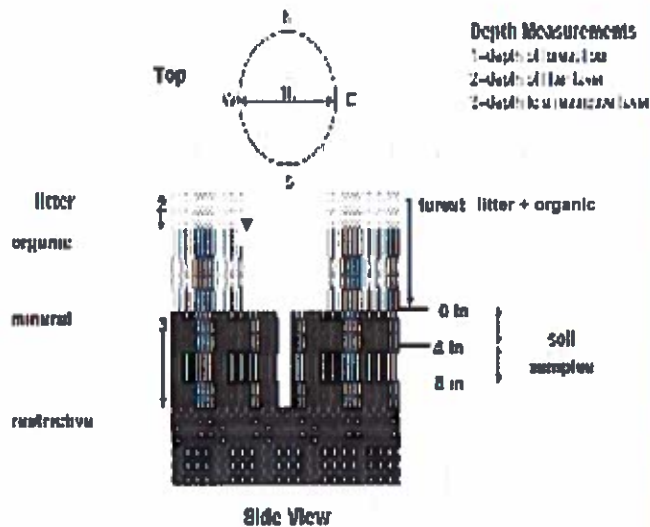


FIGURE 3-20.—Generalized section of Upper Devonian, Mississippian, and Lower Pennsylvanian formations in northeastern Ohio. Asterisks indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the area. The section is not to scale, but the thicknesses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

Soil Collection Module	Horizon (A, B, C)
2,3,8,9 compacted	A
Wild Soil Survey Information:	
Soil Series/Type:	
Soil Series Source:	Ohio Soil Survey
Landform type:	
Depth to root 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

module	1 liter+ organic depth (cm)	2 liter depth (cm)	water depth (cm)	depth sat soil (cm)
2	2.1	2.1	0	0
3	1.5	1.5	0	0
8	0.8	0.8	0	0
9	1.8	1.8	0	0

Mod 2 - lots of worms
 Mod 3 - worms present
 Mod 8 - worms present
 Mod 9 - worms present

EARTH SURFACE & GROUND COVER

Underlying Earth Surface*	Ground Cover	percent
Adam - 100%	percent	
Histisol	Coarse Woody Debris***	14
Mineral Soil	Fine Woody Debris****	5
Gravel-Cobble*	Litter	88
Boulder**	Duff (fern - humus)	0
Bedrock	Bryophyte-Lichen	4
Gravel-Cobble - 1/16-10"	Water	0
**Boulder > 10 in	Bare Soil	2
*** > 5 cm in diameter	Read/Trail	0
**** < 5 cm in diameter	Other	

TRAIL INFORMATION:

record type and cover for each

Type	%Cover
All Purpose	
Bridle	
Hiking sanctioned	
Bloodleg unsanctioned	
Gravel	
Deer	

COVER BY STRATA
 estimate using midpoints of 5, 8, 13

Strata	Height Range (m)	Total Cover (%)
Tree	25	88
Shrub	2-5	28
Herb	5-12	53
(floating)*	-	
(Aquatic)*	-	

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

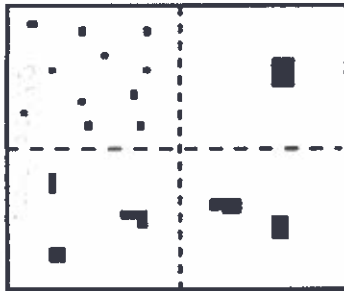
SEE BACK OF PAGE FOR TYPICAL STRATA DESCRIPTIONS. STRATA CAN VARY BY COVER TYPE.

STAND SIZE

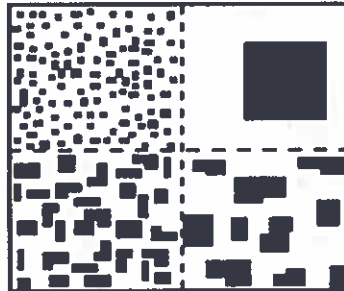
- ☐ >600 x plot size
- ☐ > 100 x plot size
- ☐ 10-100 x plot size
- ☒ 5-10 x plot size
- ☐ 1-3 x plot size
- ☐ < plot size

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%

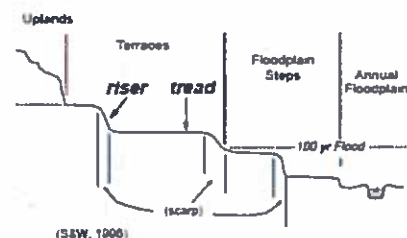
SOIL TEXTURE: Record the code for the soil texture of the 5 cm and 20 cm layers. To estimate texture, collect a soil sample from the appropriate layer and moisten it with water to the consistency of modeling clay/wet newspaper; the sample should be wet enough that all of the particles are saturated but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

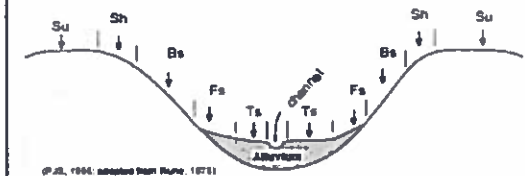
Hills	Code PDP	Code NASIS
interfluvial	IF	IF
head slope	HS	HS
nose slope	NS	NS
side slope	SS	SS
base slope	—	BS

Terraces	Code
riser	RI
tread	TR



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

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



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

UPLAND: Not a wetland. Very rarely flooded.

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

PERMANENTLY/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.