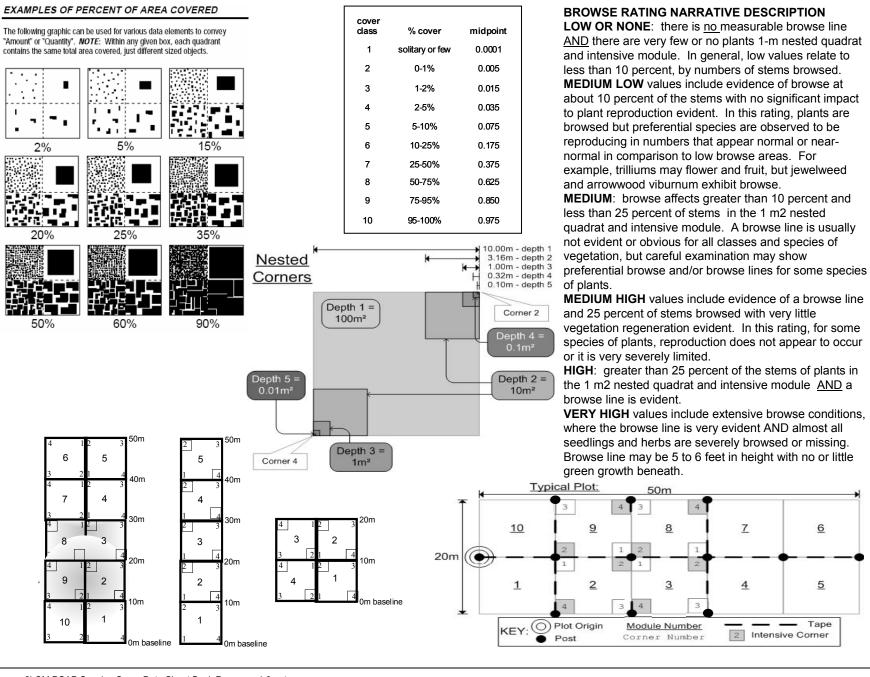
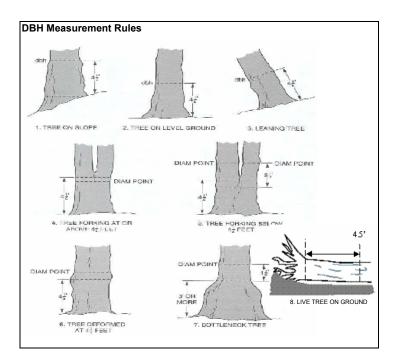
CLEVELAND I	METRO	PARKS	Plant Co	mmunity Assessment Program - Background	d Data S	Sheet								(PClerelandMet	rup <del>arl</del> u
CENEDALIN	IEODM	LATION	т	LOCATION	T									Page 1 of 2	$\overline{}$
GENERAL IN Project Label:	PCAP	IATION	N .	LOCATION State: OH County:										( N	ı )
Project Name:	ICAI														<b>/</b> Ι
Plot Name:				Quadrangle:  Local Place Names:		4									
2 200 2 (1111110)				Local Flace Names.	2-10 Y	Y.		3		4 3					
Plot No.:				Landowner:	module plot:	#	£10		#9		#8		#7	#6	
□ Level 4 (n	o nested o	corners sar	mpled)	Data Confidentiality:		_		2		1 2	]	1			
■ Level 5 (n				Check one: □ Public data □ Private Data		9		1		2 1		2			X
Date (mm/dd/yyy	y): /	/		□ Fuzz 100m □ Fuzz 250m □ Fuzz 500m		7	#1		#2		#3		#4	#5	
End date (if > 1 da		/		Reason:	ъ.			4	anc !	3 4		3	. 1		
Party		Role**		If data not public why?		<b>n O</b> Plo					$\bigcirc$		irection	<ul> <li>location of permanent po</li> </ul>	
		Plot lead	er	Source of coordinates □ MAP ■ GPS										ons and landscap of community,	e
				Coordinate system: Coord. Units	dominant									i or community,	
				■ Lat/Long □ UTM □ StatePlane ■ deg □ deg min											
				□ Other ( <i>specify</i> ) ■ m □ ft □											
				<b>Datum</b> : ■ NAD83/WGS84 □ NAD27											
** Roles: Co-leader, Asst.,	Guide, Owne	r, Taxonomist,	etc.	GPS location in plot $x=0$ to 5, $y=-1,0,+1$ ):											
PLOT NOT SAM	IPLED:		□ Other	x = y =  (base of plot $x=0$ , $y=0$ )											
□ Perm. water	□ Paved	□ Slope	□ Safety	<u>Latitude</u> :											
SAMPLING (	QUALI'	ГҮ*		Longitude:											
Effort Level:	subject	ive evalua	tion of	Coord. Accuracy:											
□ Very thorough		uch effort ng. Hurrie		GPS File Name:											
□ Accurate		ll provide		Plot size for cover data: (hectares)											
□ Hurried	data			X-axis Bearing of plot:											
TAXONOMIC	C ACCI	URACY	-	<b>Depth:</b> (1-5):											
high	modera.	low	not smpl	Intensive modules: 2, 3, 8, 9 (EDIT IF MODIFIED)											
vascul.			n/a	Camera No.:											
bryo				Photo Nos.:											
lichen				Plot placement: GRTS Representative											
TAXONOMIO	CSTAN	DARD		□ Random □ Stratified Random □ Transect component											
	G&C	Pub Date		□ Systematic (grid) □ Capture specific feature □ Other	<u></u>										
Minimum required	l fields in	Bold and	Underlined	*Definitions and values in CM PCAP FOM v. 1.0 and	CVS Fiel	ld Guide								OVER	

MODIFIED NATURESERVE CLASS*  CODE (on separate form): Fit=C  COMMUNITY NAME:  HOMOGENEITY  □ Homogeneous □ Compositional trend across □ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO □ Upland	onf=		type* Human Natural Fire Cut Animal Other **L=low,	RBANCES severity**	yrs ago	% of plot	description
CODE (on separate form):  Fit=C  COMMUNITY NAME:  HOMOGENEITY  Homogeneous Compositional trend across Irregular/pattern mosaic  HYDRO Upland			type* Human Natural Fire Cut Animal Other **L=low,	severity**		% of plot	description
COMMUNITY NAME:  HOMOGENEITY  Homogeneous Compositional trend across Irregular/pattern mosaic  HYDRO			Human Natural Fire Cut Animal Other **L=low,		yrs ago	% of plot	description
HOMOGENEITY  □ Homogeneous □ Compositional trend across □ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO □ Upland	the plot		Natural Fire Cut Animal Other **L=low,	MI =med low			
HOMOGENEITY  □ Homogeneous □ Compositional trend across □ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO □ Upland	the plot		Fire Cut Animal Other **L=low,	MI =med low			
HOMOGENEITY  □ Homogeneous □ Compositional trend across □ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO □ Upland	the plot		Cut Animal Other **L=low,	MI =med low			
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□ Homogeneous □ Compositional trend across □ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO □ Upland	the plot	[	Other **L=low,	MI =med lov			
□ Homogeneous □ Compositional trend across □ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO □ Upland	the plot		**L=low,	MI =med low			
□ Homogeneous □ Compositional trend across □ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO □ Upland	the plot	ſ		MI =med lov			
□ Conspicuous inclusions □ Irregular/pattern mosaic  HYDRO  □ Upland	the plot			, IVIL IIICU IOV	, M=med	, MH=med l	nigh, H=high, VH=very high
HYDRO			Current 1	Land Use:			
□ Upland			Former I	Land Use:			
	DLOGIC REGIME*						
CALINITY*	(seldom flooded)	□ Interm	ittently flo	ooded			
SALINI I	tently/seasonally saturated	□ Semipe	ermanently	y flooded			
□ Saltwater (seldom	flooded)	□ Permai	nently floo	oded			
□ Brackish □ Perman	ently/Semipermanent. saturated	□ Tidal/S	Seiche floo	oded daily			
□ Fresh (dry <1)	yr, seldom flooded)	□ Tidal/S	Seiche floo	oded monthly			
□ Upland (n/a) □ Occasio	nally flooded (<1/yr)	□ Tidal/S	Seiche floo	oded irregular			
□ Tempor	arily flooded	(e.g. v	vind, storr	ms)			
(by default unless plot is a wetland)		□ Unkno	wn				

CI	_E\	/EL	ANI	D M	ETF	ROPARKS Plant Community Assessi	men	ıt Program Speci	es C	over	Data	She	et 2a	а							F	'age		of		
P	roj	ect	Lab	el:		PCAP	•	Project name:				-		Plot	no.:			-								
T	ota	l mo	dul	es:			lr	ntensive modules:			Plot	conf	igura	ition:					_	Plot :	area	(ha):				
		^							mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corner	mod	corn
	1	O	•				E	Estimate for each			İ				İ				i i						R	
	1	Y				<b>Br</b> = Browse Level. Use cover classes to	iı	ntensive module:	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov	depth	cov		cov	depth	cov	depth	COV
.5	Нe	vel	ary	d		describe amount of browse per species over		%open water			<u> </u>		1		<u> </u>		1		<u> </u>	<u> </u>	1		-			
ניח	81	rop	an	1.5		entire plot		6unvegetated open water			<u>;</u>		1		<u> </u>		1		<u>;                                    </u>	Ь—	1	<u> </u>				
2tr	ata	- Co	, an	tira r	alot			unveg. ground (bare soil) %unveg. litter (bare litter)			<u> </u>		1		-		1		<del>!</del> '		1					
T	S	<u>- Со</u>	/. en	(A)	Br	Species	С	Voucher #	depth	COV	depth	cov	depth	COV	depth	cov	depth	COV	depth	cov	depth	COV	depth	cov	depth	COV
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CLE	Project Label:	n c	Community	ASSESSI		ygraiii i 	vaturar i	Woody 3	otem Da	la Silee			_			Octevel	and Metroparks
				-	Projec	t Name:				Plot No.:			Page:		of		
	Explain subsample (additional room of	n ba									1						
				# stems	% sub or super			( <b>cm</b> ) wood			5		7				
mod #	species	С	voucher#	0-1.4m browsed								6 15 - <20		8 25 - <30	9 30 - <35	10 35 - <40	11 >40 (record each tree)



### **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















## **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.



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# 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.

CLEV	ELAN	ID METROPARKS Emerald Ash Bo	orer - F	Fraxinus Shee	et					INTENSIV	E MODULES	ONLY	TREES ≥ 10CM ONLY	Фолитонического
		Project Label:	PCAP	Proje	ct Name:			_		Plot No.:		Date:		Page: 1 of 2
									ASH	Only				
Module	Tree ID.	Species	Dead o	Voucher #	DBH (cm)	Ht @ DBH	Ash condition	*Dead condition	# Exit holes	Epicormic present	Woodpecker holes			
	1													
	2													
	3												( N	
	4													
	5													
	6													
	7											*	** Change intensive module num	bers when necessary
	8													
	9													
	10												9	8
	11													
	12											•		
	13											Baseline		
	14											Ba		
	15													
	16													
	17												2	3
	18													
	19											L		
	20													
	21											V	Map all ash trees ≥10cm in each mo	dule using Tree ID number
	22													
	23													
	24													
	25													

<sup>\*</sup> If Ash Condition scores 5 (dead) provide breakup score (A-E) Count EAB exit holes 1.25m≥ x ≥1.5m Woodpecker and epicormic marked present (1) or absent (0)

# CLEVELAND METROPARKS Plant Community Assessment Program: Invasive Species Survey



Tier 1: Early detectio	n/ Ranid response		Dro	sence		GPS	1
Tiel 1. Early detection	iii napiu response	NE	SE	SW	NW	urs	Presence
Microstogium viminoum	Jananoso stiltarass	INE	)E	344	INVV		
Microstegium vimineum Ranunculus ficaria	Japanese stiltgrass Lesser Celandine			+	+ +		X: yes
	e) Black Swallow-wort	+	+	+	+		1
,		-	+	+	+ +		-
	d) Flowering Rush				+ +		
Heracleum mantegazzianum	Giant Hogweed		ш - Е	Diamete			1
Tier 2: Assess	as Needed	NIE		Plants		comments	# of Diomete
A con plata paid a	Namueu Marala	NE	SE	SW	NW		# of Plants
Acer platanoides	Norway Maple				1		1: 1-10
Ailanthus altissima	Tree of Heaven				1		2: 11-50.
Lonicera japonica (vine	, , ,	-	+	+	+ +		3: 51-100
Lythrum salicaria (wetland	,	-	-	+	+ +		4: 101-1,000
Aegopodium podagraria (G-cove			-	-	+		5: >1,000
Celastrus orbiculatus (vine	<i>'</i>	-	+	+	+ +		_
Torilis sp.	Hedgeparsley	+	-	+	+		4
Conium maculatum	Poison Hemlock		-	+	+		-
Rhamnus cathartica	Common Buckthorn (shrub	-		+	$\vdash$		4
Berberis thunbergii	Japanese Barberry (shrub	)		+	+		4
Alnus glutinosa	European Alder		-	1			4
Dipsacus laciniatus	Cut-leaf Teasel		_				_
Elaeagnus umbellata	Autumn Olive (shrub		_				_
Lonicera maackii	Amur Honeysuckle (shrub	)	-		1		_
Euonymus fortunei	Wintercreeper				-		1
Tier 3: Presence	is of Interest			Plants	T	comments	
	. l	NE	SE	SW	NW		# of Plants
Convallaria majalis (G-cove	<u> </u>				+		1: 1-10
Coronilla varia (G-cove					+		2: 11-50.
Eleutherococcus pentaphyllus	Five-leaf Aralia (shrub	)			1		3: 51-100
	r) Japanese Pachysandra				1		4: 101-1,000
Philadelphus coronarius	Mock Orange (shrub	)	_				5: >1,000
Pulmonaria officinalis (G-cove	<u> </u>				1		_
Rubus phoenicolasius	Wineberry						4
	l) Yellow Flag Iris		_				_
Ornithogalum umbellatum	Star of Bethlehem				+		
Viburnum opulus var. opulus	European Cranberry (shrub)		-		1		_
Viburnum plicatum	Doublefile Viburnum (shrub)				$\perp$		1
Tier 4: Widesprea	d and abundant		_	sence		comments	
	T	NE	SE	SW	NW		# of Plants
Alliaria petiolata	Garlic Mustard	-	-	1	+		1: 1-10
Ligustrum vulgare	Common Privet (shrub)	-	-	1	$\vdash$		2: 11-50.
L. morrowii, L. tatarica	Bush Honeysuckles (shrub)			1			3: 51-100
Phalaris arundinacea	Reed Canarygrass			1	$\vdash$		4: 101-1,000
Phragmites australis (wetland					$\sqcup$		5: >1,000
Polygonum cuspidatum	Japanese Knotweed			1	$\sqcup$		_
Frangula alnus	Glossy Buckthorn (shrub)	1			$\sqcup$		1
Rosa multiflora	Multiflora Rose (shrub)			1			1
Typha angustifolia, T. x.glauca	Cattails (wetland)			1			1
Cirsium arvense	Canada thistle			1			1
Dipsacus fullonum	Common Teasel						1
Hesperis matronalis	Dame's Rocket						_
Vinca minor (G-cover)	Periwinkle		1				

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

			='					Plot No.:	
n 0.1m clip j nodule. Req	plots (32x32 cm)	uired for emergen from corners 1 and score calculation. O							
ollected		i	· · ·	ļ	CLASSIFICATION	Ī			
Module #		C?	Corner Corner		(FIT = excellent, g Fit and C	Confidence			
					Hydrogeomorphic class	(WETLANDS	ONLY):		
					□ DEPRESSION			Fit= Conf	
			<del>                                     </del>	-	□ IMPOUNDMENT □ B	eaver   Human		Fit= Conf	`=
					□ RIVERINE □ Headwa	er   Mainstem	□ Channel	Fit= Conf	`=
					□ SLOPE (ground water hy	drology or on a ph	ysical slop)e	Fit= Conf	`=
					□ FRINGING □ Reservo	ir □ Natural Lak	re	Fit= Conf	`=
					□ COASTAL (specify sul				`=
					□ BOG (strongly, modera			Fit=Conf	`= <u> </u>
					Ohio EPA VIBI Plant C				_
					□ FOREST □ swamp fore □ EMERGENT □ marsh			Fit= Conf	= =
					□ SHRUB □ shrub swamj	□ tall sh. bog	□ tall sh. fen	Fit= Conf	<u>=</u>
ICROTO	POGRAPHIC	FEATURE COU	NTS - Intensive m	iodules only					
ilope 1 = slig	tht elevational graduates	de across module (h	ill)	Slope 2 = falls on	d falls on a slope automatid		based on steepness (* num steepness that ca		
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the and in very small an te amounts, but not	wetland	Slope 2 = falls on on, of low quality small amounts of hi	slope ~20 ° ghest quality	Slope 3 = maxin	num steepness that ca	n be safely sample	
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amour	wetland nounts or if more commo of highest quality, or in s tts and of highest quality	Slope 2 = falls on on, of low quality small amounts of hi	slope ~20 ° ghest quality c.w.d count	Slope 3 = maxin	num steepness that ca	n be safely sample	d ~45°
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the and in very small an te amounts, but not	wetland nounts or if more commo of highest quality, or in s ts and of highest quality  no. of	Slope 2 = falls on on, of low quality small amounts of hi	slope ~20 ° ghest quality c.w.d count c.w.d	Slope 3 = maxing for pieces with c.w.d	minimum 1m length	n be safely sample	
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amour	wetland nounts or if more commo of highest quality, or in s its and of highest quality  no. of hummocks	Slope 2 = falls on on, of low quality small amounts of hi	slope ~20 ° ghest quality c.w.d count	Slope 3 = maxin	num steepness that ca	n be safely sample	d ~45°
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amoun no. of tussocks	wetland nounts or if more commo of highest quality, or in s tts and of highest quality  no. of hummocks uplands (Tip-Ups)	on, of low quality small amounts of hi no. macro. depressions	slope ~20 °  ghest quality  c.w.d count  c.w.d  (2-12 cm)	Slope 3 = maxing for pieces with c.w.d (12-40cm)	minimum 1m length c.w.d >40 cm	microhab.	d ~45° microhab.
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the and in very small an te amounts, but not ate or greater amoun  no. of tussocks  depth 3	wetland nounts or if more commo of highest quality, or in s its and of highest quality  no. of hummocks uplands (Tip-Ups)  depth 2	slope 2 = falls on on, of low quality small amounts of hi  no. macro. depressions  depth 1	ghest quality  c.w.d count  c.w.d  (2-12 cm)  depth 1	for pieces with  c.w.d  (12-40cm)	minimum 1m length c.w.d >40 cm	microhab. interspers.  depth 1	d ~45° microhab. SLOPE
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amoun no. of tussocks	wetland nounts or if more commo of highest quality, or in s tts and of highest quality  no. of hummocks uplands (Tip-Ups)	on, of low quality small amounts of hi no. macro. depressions	slope ~20 °  ghest quality  c.w.d count  c.w.d  (2-12 cm)	Slope 3 = maxing for pieces with c.w.d (12-40cm)	minimum 1m length c.w.d >40 cm	microhab.	d ~45° microhab.
feature is a feature is p	absent or functional graders or seent in the wetle oresent in modera	de across module (h ally absent from the and in very small an te amounts, but not ate or greater amoun  no. of tussocks  depth 3	wetland nounts or if more commo of highest quality, or in s its and of highest quality  no. of hummocks uplands (Tip-Ups)  depth 2	slope 2 = falls on on, of low quality small amounts of hi  no. macro. depressions  depth 1	ghest quality  c.w.d count  c.w.d  (2-12 cm)  depth 1	for pieces with  c.w.d  (12-40cm)	minimum 1m length c.w.d >40 cm	microhab. interspers.  depth 1	d ~45° microhab. SLOPE
feature is a feature is p feature is p feature is p 0 feature is	th elevational gradules absent or functions or sesent in the wetter or sesent in moderations and the sesent in moderations are sesent in moderations.	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amoun no. of tussocks depth 3 1x1m	wetland nounts or if more commo of highest quality, or in s tts and of highest quality  no. of hummocks uplands (Tip-Ups)  depth 2  3.16x3.16m	on, of low quality small amounts of hi  no. macro. depressions  depth 1  10x10m	slope ~20 °  ghest quality  c.w.d count  c.w.d  (2-12 cm)  depth 1  10x10m	for pieces with c.w.d (12-40cm) depth 1 10x10m	minimum 1m length c.w.d >40 cm  depth 1 10x10m	microhab. interspers.  depth 1 10x10m	microhab.  SLOPE  10x10m
feature is a feature is a feature is p feature is p 0 feature is	th elevational gradules absent or functions or sesent in the wetter or sesent in moderations and the sesent in moderations are sesent in moderations.	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amoun no. of tussocks depth 3 1x1m	wetland nounts or if more commo of highest quality, or in s tts and of highest quality  no. of hummocks uplands (Tip-Ups)  depth 2  3.16x3.16m	on, of low quality small amounts of hi  no. macro. depressions  depth 1  10x10m	slope ~20 °  ghest quality  c.w.d count  c.w.d  (2-12 cm)  depth 1  10x10m	for pieces with c.w.d (12-40cm) depth 1 10x10m	minimum 1m length c.w.d >40 cm  depth 1 10x10m	microhab. interspers.  depth 1 10x10m	microhab.  SLOPE  10x10m
feature is a feature is a feature is p feature is p 0 feature is	th elevational gradules absent or functions or sesent in the wetter or sesent in moderations and the sesent in moderations are sesent in moderations.	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amoun no. of tussocks depth 3 1x1m	wetland nounts or if more commo of highest quality, or in s tts and of highest quality  no. of hummocks uplands (Tip-Ups)  depth 2  3.16x3.16m	on, of low quality small amounts of hi  no. macro. depressions  depth 1  10x10m	slope ~20 °  ghest quality  c.w.d count  c.w.d  (2-12 cm)  depth 1  10x10m	for pieces with c.w.d (12-40cm) depth 1 10x10m	minimum 1m length c.w.d >40 cm  depth 1 10x10m	microhab. interspers.  depth 1 10x10m	microhab.  SLOPE  10x10m
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feature is a feature is a feature is p feature is p 0 feature is	th elevational gradules absent or functions or sesent in the wetter or sesent in moderations and the sesent in moderations are sesent in moderations.	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amoun no. of tussocks depth 3 1x1m	wetland nounts or if more commo of highest quality, or in s tts and of highest quality  no. of hummocks uplands (Tip-Ups)  depth 2  3.16x3.16m	on, of low quality small amounts of hi  no. macro. depressions  depth 1  10x10m	slope ~20 °  ghest quality  c.w.d count  c.w.d  (2-12 cm)  depth 1  10x10m	for pieces with c.w.d (12-40cm) depth 1 10x10m	minimum 1m length c.w.d >40 cm  depth 1 10x10m	microhab. interspers.  depth 1 10x10m	microhab.  SLOPE  10x10m
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feature is a feature is a feature is p feature is p 0 feature is	th elevational gradules absent or functions or sesent in the wetter or sesent in moderations and the sesent in moderations are sesent in moderations.	de across module (h ally absent from the land in very small an te amounts, but not ate or greater amoun no. of tussocks depth 3 1x1m	wetland nounts or if more commo of highest quality, or in s tts and of highest quality  no. of hummocks uplands (Tip-Ups)  depth 2  3.16x3.16m	on, of low quality small amounts of hi  no. macro. depressions  depth 1  10x10m	slope ~20 °  ghest quality  c.w.d count  c.w.d  (2-12 cm)  depth 1  10x10m	for pieces with c.w.d (12-40cm) depth 1 10x10m	minimum 1m length c.w.d >40 cm  depth 1 10x10m	microhab. interspers.  depth 1 10x10m	microhab.  SLOPE  10x10m

CLEVELAND METROPARKS Plant Community Assessment Program - Plant Cover and Earth Surface

Oleveland Metropart	
Page: 1 of 1	

McNAB INDICES (degrees) + for up - for down
---

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

		LFI*	TSI**	
At aspect	N			LFI is a
+45 degrees	NE			plot to t horizon
+90 degrees	E			angles f
+135 degrees	SE			TSI mea
+180 degrees	S			recorde
+225 degrees	SW			eye of p
+270 degrees	W			away.
+315 degrees	NW			

angle of the n. TSI is formed by lopes. For easure ers eye to person ng ~10 m

\* Landform Index (position within landscape)

\*\* Terrain Shape Index (site microtopographic shape)

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

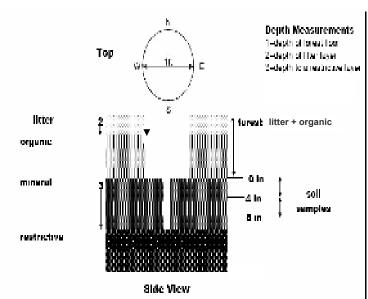
Module	N	s	E	w
2				
3				
8				
Q				

### **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

<sup>\*\*\*</sup>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.



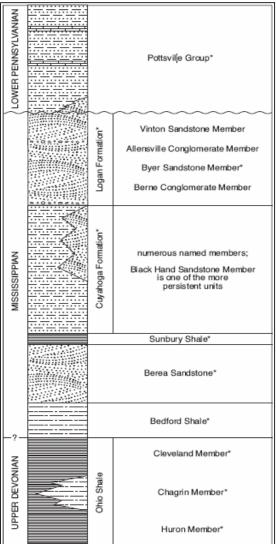


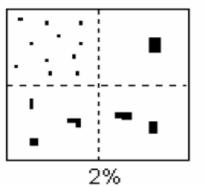
FIGURE 3-20.—Generalized section of Upper Devonian, Misissippian, and Lower Pennsylvanian formations in northeastern Ohio. Asterisks indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the area. The section is not to scale, but the thicknesses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

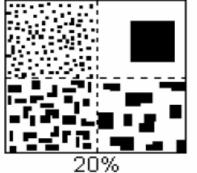
<sup>\*\*</sup>Can also include seedlings of shrubs, i.e. all shrubs <0.5m

	VELAND METROPARKS Plant Community Assessment Program - Soils, Crown Cover, Standing Biomass Data Sheet 6a ect label: <u>PCAP</u> Project Name: Plot No.:									(Cicretand Metroparks				
												Page: 1 of 1	ı	
NI DI DECODINI	N. F 20													
DIL PIT DESCRIPTION  19 wih shovel. Describe							-							
sual exam, texture, and			SAMPLES Stan											
			e module and co			CII	EARTH SURFA	CE & GROU	ND COVER			TRAIL INFOR		
l pit module # (or	ne per entire plot)			1		_	Underlying Earth	h Surface*	Ground Cover			record type and	cover for ea	ach
cm matrix color		Soil Coll	lection Module	Horizon (A,	B, C)	_	(Sum = 100%)	percent	(Each ≤ 100%)	perce	nt	Туре		%Cover
mottle color		2,3,8,9 c	2,3,8,9 composited A			Histosol		Coarse Woody Debris***			□ All Purpose			
%mottle		Web Soil Survey Information:				Mineral Soil		Fine Woody Debris****			□ Bridle			
oxid roots Y N		Soil Seri	Soil Series/Type:				Gravel-Cobble*		Litter			☐ Hiking sancti		
texture*		Soil Seri	ies Source: Ohi	o Soil Surve	y		Boulder**		Duff (Ferm.+ Humus)			□ Bootleg unsar	nctioned	
redox features**	Y N	Landforr	Landform type:		Bedrock		Bryophyte- Lichen			□ Gravel				
hydr. cond.***	I S M D	Depth to rest. Layer:			* Gravel-Cobble =	= 1/16-10"	Water			□ Deer				
cm matrix color		Parent M	faterial:				**Boulder = > 10	in	Bare Soil					
mottle color		DRAIN	AGE*				*** >5 cm in dian	neter	Road/Trail					
%mottle		□ Excess	□ Excessively dr. □ Somewhat excessively			**** <5 cm in dia	meter	Other						
oxid roots	Y N	□ Well d		☐ Moderately										
texture*		□ Somewhat poorly dr. □ Very poorly dr.							<del></del>					
redox features**	Y N	□ Imperr	meable surface					COVER BY	Y STRATA ing midpoints of 5,e	% x:3 8 13				
hydro. cond.***	I S M D							commute de	mg mapomic or e,e	, x.o, o, 10	STANI	D SIZE		
SOIL DEPTH MEASUREMENT: Measure to the nearest 0.1 cm in center of intensive modules. If >30.5 cm,				<u>Strata</u>	Height Range (m)	Total Cover (%)	□ >600	x plot size						
.g. hydrogen sulfide odor, Circle one:	gleying, etc.	record a	is >30 T	I	ı			Tree	-		□ > 100	x plot size		
dundated S=saturated N	,		1 litter+					Shrub	-		□ 10-10	00 x plot size		
tes: include evidence of stings, middens)	f earthworms (worms,	mod#	organic depth (cm)	2 litter depth (cm)	water depth (cm)	depth sat soil (cm)		Herb	-		□ 3-10:	x plot size		
								(Floating)*	-		□ 1-3 x	plot size		
								(Aquatic)*	-		□ < plot	t size		
								* rooted and fl	loating or slightly emerse	ed				
								** submersed	, most plant mass below	surface				
		<del></del>							F PAGE FOR "TYPICAL					
								DESCRIPTIO	NS. STRATA CAN VAR	RY BY COVER TYPE.				

### PERCENT MOTTLES (USE CLASS CODES):

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





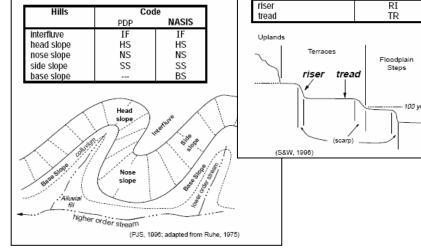
Terraces

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= Clavev
- 3= Sandy
- 4= Coarse Sand
- 9= Not measured make plot note

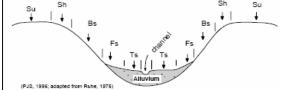
Geomorphic Component - Three-dimensional descriptors of parts of landforms or microfeatures that are best applied to areas. Unique descriptors are available for Hills, Terraces, Mountains, and Flat Plains;

e.g., (for Hills) nose slope or NS.



**Hillslope - Profile Position** (Hillslope Position in PDP) - Twodimensional 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
C.	



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.

Code

**PERMANENTLY/SEMIPERMANENTLY SATURATED**: Dry less than once per year. Surface water is seldom present, but substrate is saturated to surface for extended periods during the growing season. Equivalent to Cowardin's Saturated modifier.

**OCCASIONALLY FLOODED:** Surface water can be present for brief periods during growing season, but not in most years. Often characterizes flood-plain upper terraces.

**TEMPORARILY FLOODED:** Surface water present for brief periods during growing season, but water table usually lies well below soil surface. Often characterizes flood-plain levees and lower terraces. Equivalent to Cowardin's Temporary modifier.

**INTERMITTENTLY FLOODED:** Substrate is usually exposed, but surface water can be present for variable periods without detectable seasonal periodicity. Inundation is not predictable to a given season and is dependent upon highly localized rain storms. This modifier was developed for use in the arid West for water regimes of Playa lakes, intermittent streams, and dry washes but can be used in other parts of the U.S. where appropriate. This modifier can be applied to both wetland and non-wetland situations. Equivalent to Cowardin's Intermittently Flooded modifier.

**SEMIPERMANENTLY FLOODED** (exposed <1/year): Surface water persists throughout the growing season in most years. Land surface is normally saturated when water level drops below soil surface. Includes Cowardin's Intermittently Exposed and Semipermanently Flooded modifiers.

**PERMANENTLY FLOODED**: Water covers the land surface at all times of the year in all years. Equivalent to Cowardin's "permanently flooded"

**UNKNOWN:** The hydrologic regime cannot be determined from the available information .