

CLEVELAND METROPARKS Plant Community Assessment Program: Quality Control Form



Project Label:

PCAP

Plot No:

1055

Date Sampled:

07/15/15

Lead:

LANDE

Comment required if item answer is NO

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

GRTS point verification: Is plot sampleable?

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

Additional Comments:

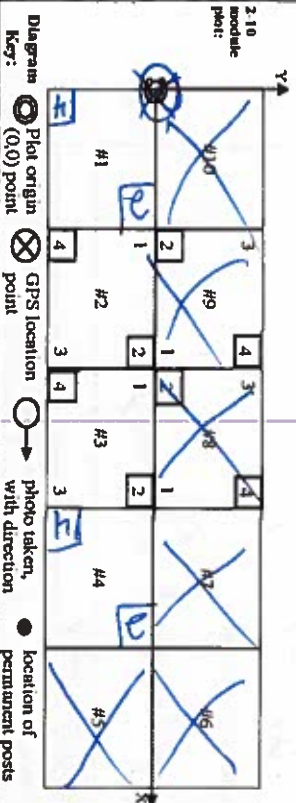
| |
|--|
| |
|--|

| | |
|--|--|
| GENERAL INFORMATION | |
| Project Label: | PCAP |
| Project Name: | 025C2015 |
| Pilot Name: | Watch where you step |
| Pilot No.: | 1055 |
| <input type="checkbox"/> Level 4 (no nested corners sampled) | |
| <input checked="" type="checkbox"/> Level 5 (nested corners sampled) | |
| Date (mm/dd/yyyy): | 07/15/2015 |
| End date (if > 1 day): | 1 |
| Party | Role** |
| A. Lance | Pilot leader |
| D. Sweet | Bt. Asst. |
| R. Eagle | Crew |
| E. Krauss | Crew |
| ** 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: | subjective evaluation of how much effort put into sampling. Hurried plots may still provide good data. |
| <input checked="" type="checkbox"/> Very thorough | |
| <input type="checkbox"/> Accurate | |
| <input type="checkbox"/> Hurried | |
| TAXONOMIC ACCURACY | |
| high | moderate |
| low | not sampled |
| vascular | n/a |
| bryo | |
| lichen | |
| TAXONOMIC STANDARD | |
| Authority: | G&C Pub Date: 1998 |

Minimum required fields in Bold and Underlined

| | |
|---|--|
| LOCATION | |
| State: | OH |
| County: | Cuyahoga |
| Quadrangle: | Chagrin Falls |
| Local Place Names: | Hawthorn Pkwy. |
| Landowner: | CMR |
| 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: | Coord. Units |
| <input checked="" type="checkbox"/> Lat/Long <input type="checkbox"/> UTM <input type="checkbox"/> StatePlane | deg <input type="checkbox"/> deg min |
| <input type="checkbox"/> Other (specify) | m <input type="checkbox"/> ft |
| Datum: | <input checked="" type="checkbox"/> NAD83/WGS84 <input type="checkbox"/> NAD27 |
| GPS location in plot x=0 to 5, y=1,0,+1): | |
| x = 0 y = 0 (base of plot x=0, y=0) | |
| Latitude: | 41.41079 |
| Longitude: | 81.4738 |
| Coord. Accuracy: | m <input type="checkbox"/> ft |
| GPS File Name: | 1055 |
| Plot size for cover data: | 204 (hectares) |
| X-axis Bearing of plot: | [19]° |
| Depth: (1-5): | 4 |
| Intensive modules: | 2,3,4 (EXT IF MODIFIED) |
| Camera No.: | Rebecca Phone |
| Photo Nos.: | |
| Plot placement: | <input checked="" type="checkbox"/> GRTS <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



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 → 1x4

Location → Approx. 25 m west of Hawthorn Pkwy; just past the 422 overpass.

Rationale → GRTS, PCAP re-sample Veg. Characteristics → Extremely disturbed edge with a tremendous amount of buckthorn and poison ivy! Dead pine in the canopy with some red maple and black cherry.

OVER

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Page 1 of 2

Project Label: _____

PCAP

Project name: 08SC2015

Plot no.: 1055

Total modules: 4

Intensive modules: 4

Plot configuration: 5 1x4

Plot area (ha): 0.04



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

Strata - Cov. entire plot

Cleveland
Metroparks

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

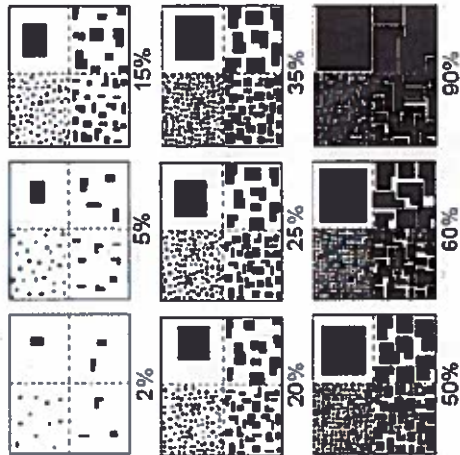
Strata - Cov entire plot

| S | H | (F)(A) | Br | Species | C | Voucher # | Estimate for each intensive module: | R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--------|----|---------|---|-----------|--|--------------------------|-------------------------------|---------------------------------|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|--|-----|--|--|--------|--|
| | | | | | | | % open water | % unvegetated open water | % unveget. ground (bare soil) | % unveget. filter (bare filter) | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | | | mod | | | corner | |

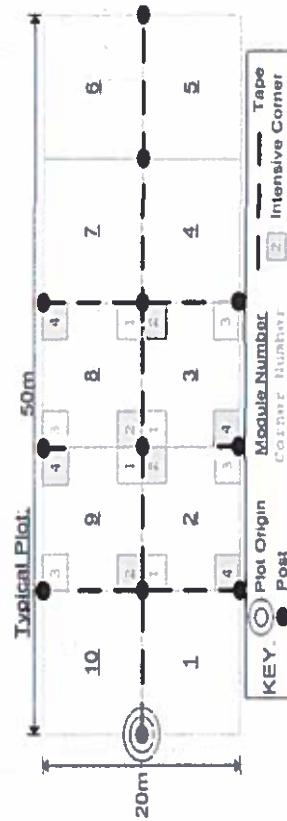
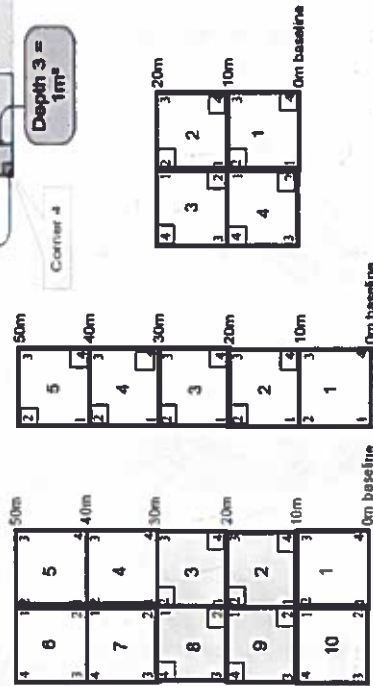
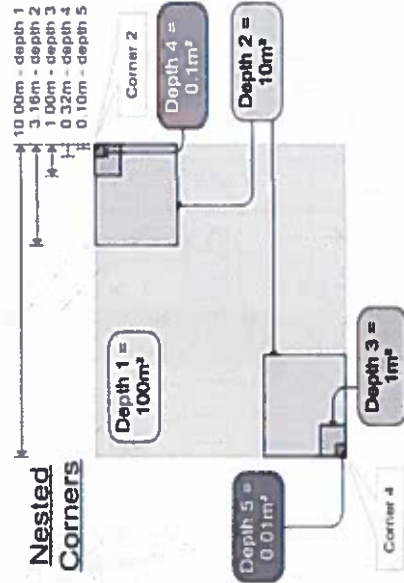
3
strabus
ulmum amer.
Frax.
Pinus nigra
Aster rubrum
Rhamnus

EXAMPLES OF PERCENT OF AREA COVERED

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



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.

CLEVELAND METROPARKS Plant Community Assessment Program Species Cover Data Sheet

Page 2 of 2

Project Label: PCAP

Project name: 05C205

Plot no.: 1055

Total modules: 4

Intensive modules: 4

Plot configuration: 1x4

Plot area (ha): .04



Cleveland Metroparks

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

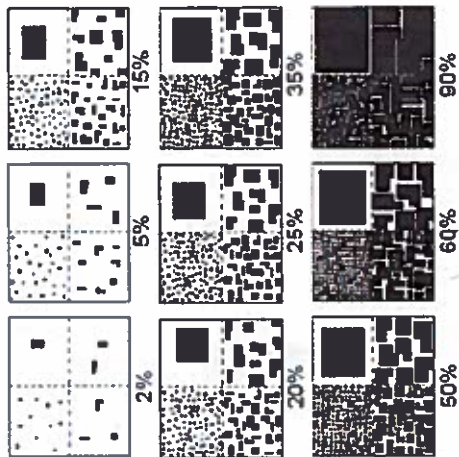
Strata - Cov. entire plot

| 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: | | | | R |
|---|---|-----|-----|----|---|---|-----------|-------------------------------------|-------|-------|-------|-------------------------------------|-------|-------|-------|-------------------------------------|-------|-------|-------|-------------------------------------|-------|-------|-------|---|
| | | | | | | | | %open water | depth | cover | depth | %unvegetated open water | depth | cover | depth | %unveg. ground (bare soil) | depth | cover | depth | %unveg. filter (bare filter) | depth | cover | depth | |
| 2 | | | | | Prunus cerasus | | | | 1 | 4 | 1 | | | | | | | | | | | | | |
| 4 | 2 | | | | Prunus serotina | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | Rubus pensylvanicus | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | Potentilla sp. ^{Quinquefolia} ^{spicata} | | ACL375 | | | | | | | | | | | | | | | | | |
| | | | | | Unknown tree of | | | | | | | | | | | | | | | | | | | |
| | | | | | Unknown tree of | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | Erigeron acerifolia | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | Cornus sp. | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | Bartheneusis quinquefolia | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | Lonicera maackii | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | Rubus occidentalis | | | | | | | | | | | | | | | | | | | |

S&T
9-30-15

EXAMPLES OF PERCENT OF AREA COVERED

The following graphics can be used for visual data elements to convey "Amount" or "Quality". NOTE: Within any given box, each quadrat 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.

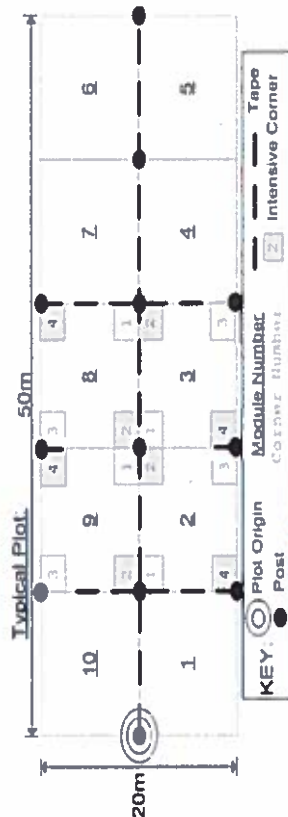
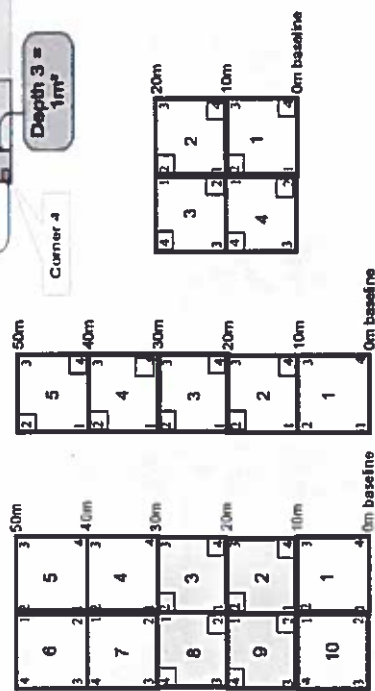
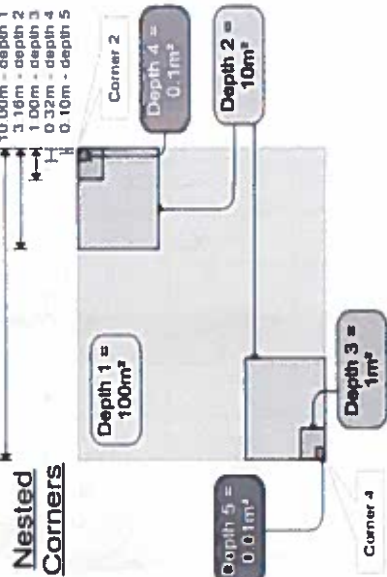
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MEDIUM: browse affects greater than 10 percent and less than 25 percent of stems in the 1 m2 nested quadrat and intensive module. A browse line is usually not evident or obvious for all classes and species of vegetation, but careful examination may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

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Page 7 of 7

Plot no.: 1055

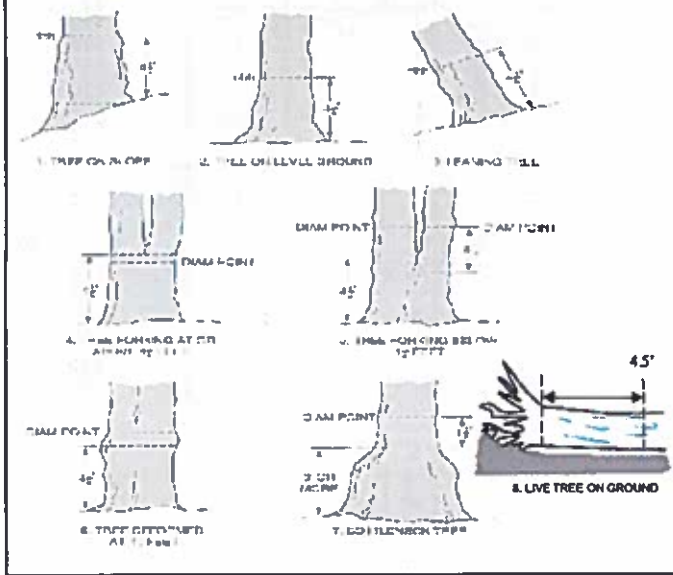
Crime and Homicide

2013

Степанов Н.С.

Combine
- they
separate
due
to sig
Simple

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: 12562015

Plot No.: 1155

Page: 2

of

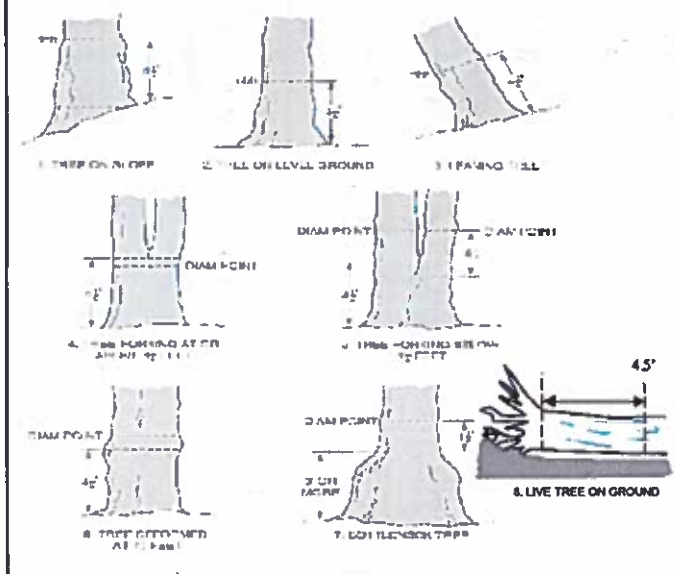


Explain subsample (additional room on back):

| mod # | species | C | voucher# | # stems 0-1.4m browsed | % sub or super sample | # shrub clumps | size class (cm) woody stems >1.4m | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-------|--------------------------|---|----------|------------------------------|-----------------------------|----------------------|-----------------------------------|---|---|---|---|---|---|---|---|---|----|------|
| 3 | Pinus strobus | | | | 25% | | 15 | | | | | | | | | | | |
| 3 | Pinus pennsylvanica | | | 25% | | 21 | | | | | | | | | | | | |
| 3 | Toxicodendron radicans | | | | | 41 → 25% | | | | | | | | | | | | |
| 3 | Rosa multiflora | | | | | | | | | | | | | | | | | |
| 3 | Lonicera maackii | | | | | | | | | | | | | | | | | |
| 3 | Lonicera morrowii | | | | | | | | | | | | | | | | | |
| 3 | Pinus nigra | | | | | | | | | | | | | | | | | 49.5 |
| 3 | Pinus strobus | | | | | | | | | | | | | | | | | |
| 3 | Staphylea trifolia | | | | | | | | | | | | | | | | | |
| 3 | Acer rubrum | | | | | | | | | | | | | | | | | |
| 3 | Carya cordiformis | | | | | | | | | | | | | | | | | |
| 3 | Pinus cerasus | | | | | | | | | | | | | | | | | |
| 3 | Viburnum opulus | | | | | | | | | | | | | | | | | |
| 4 | Fraxinus pennsylvanica | | | 25% | 25% | 9 | | | | | | | | | | | | |
| 4 | Phragmites australis | | | | | 5 | | | | | | | | | | | | |
| 4 | Lonicera maackii | | | | | | | | | | | | | | | | | |
| 4 | Toxicodendron radicans | | | | | 130 | | | | | | | | | | | | |
| 4 | Pinus nigra | | | | | | | | | | | | | | | | | 42.3 |
| 4 | Fraxinus pennsylvanica | | | | | | | | | | | | | | | | | |
| 4 | Sparganium angustifolium | | | | | | | | | | | | | | | | | |
| 4 | Pinus strobus | | | | | | | | | | | | | | | | | |
| 4 | Pinus strobus | | | | | | | | | | | | | | | | | 42.3 |

-Pinus strobus
measure 8
above DBH

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

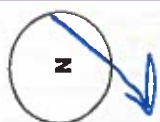
ASH CANOPY BREAKUP CONDITION (for dead trees):

(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.

| Tree ID | Species | DBH (cm) | Ht (m) | Ash condition | Dead condition | # Exit holes | Epacemic present | Woodpecker holes |
|---------|-------------------------------|----------|--------|---------------|----------------|--------------|------------------|------------------|
| 1 | <i>Fraxinus pennsylvanica</i> | 11.0 | 4 | | | 0 | 0 | 0 |
| 2 | <i>Fraxinus pennsylvanica</i> | 12.3 | 2 | | | 0 | 0 | 0 |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |

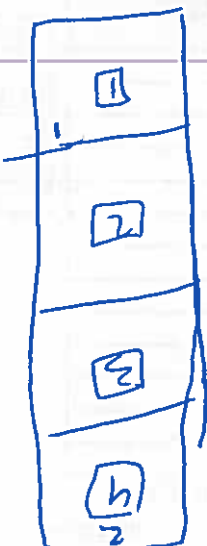
* If Ash Condition scores 5 (dead) provide breakup score (A-E)
Count EAB exit holes 1.25m2 x 21.5m
Woodpecker and epicormic marked present (1) or absent (0)



*** Change intensive module numbers when necessary

| | |
|----------|---|
| Baseline | |
| 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: 025005

Plot No.: 1055

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

* Write None Present if no evidence:

| | |
|--------------------------|-------------------------|
| Beech (Fungus) | 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

PCAP

Summary

ent Program - Plant Cove
A7517015

12

STANDING BIOMASS (required for emergent wetlands) collected in 0.1-m clip plots (32x32 cm) from corners 1 and 3 in each intensive module. Required for VIBI-E score calculation. C7=check when collected

[illegible]

CLASSIFICATION

1111 - **excellent** Fill and Confidence

WETLANDS ONLY

- | | | |
|---|------|-------|
| □ DEPRESSION | Fit= | Conf= |
| □ IMPOUNDMENT □ Beaver □ Human | Fit= | Conf= |
| □ RIVERINE □ Headwater □ Midstream □ Channel | Fit= | Conf= |
| □ SLOPE (ground water hydrology or on a physical map) | Fit= | Conf= |
| □ FRINGING □ Reservoir □ Natural Lake | Fit= | Conf= |
| □ COASTAL (specify subdelta) | Fit= | Conf= |
| □ BOD (strongly, moderately, weakly anthropogenic) | Fit= | Conf= |

Only EPA VI B Plant Community Class WETLANDS ONLY

- | | | | | | |
|----------|--------------|--------------|--------------|------|-------|
| FOREST | swamp forest | bog forest | forest seep | Fit= | Conf= |
| EMERGENT | marsh | wet meadow | open bog | Fit= | Conf= |
| SHRUB | shrub swamp | tall sh. bog | tall sh. fen | Fit= | Conf= |

MICROTOPOGRAPHIC FEATURE COUNTS - Intensive modules only

Stages 1 = eight elevational grids across modules (N1)
Stages 2 = falls on slope -20°
Stages 3 = maximum steepness that can be safely sampled -45°

Slope 2 = beta on slope -20°

Slope 3 = maximum steepness that can be safely sampled -45°

- 9 Feature is absent or functionally absent from the wetland
- 3 Feature is present in the wetland in very small amounts or it 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

[illegible]

NOTE: **binrock** and **ballmrock** are counted in BOTH nested circular centers but counts are acknowledged

MCNAB INDICES (degrees) + for up - for down

FILLED OUT USING GAS PROGRAM - DO NOT FILL OUT IN FIELD!

| | LFT | TSI |
|--------------|-----|-----|
| Alt aspect | N | |
| +45 degrees | NE | |
| +0n degrees | E | |
| +135 degrees | SE | |
| +180 degrees | S | |
| +225 degrees | SW | |
| +270 degrees | W | |
| +315 degrees | NW | |

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

L.F.I is angle of plot to the horizon. T.S.I is angles formed by local slopes. For T.S.I measure angle from recorder eye to eye of person standing ~10 m away

Landform index (position within landscape)

¹²² Terrain Shape Index (the microtopographic shape)

CROWN COVER (DENSIMETER). Male 4

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

| Medals | N | S | E | W |
|--------|---|---|---|---|
| 1 | 7 | 1 | 0 | 2 |
| 2 | 3 | 2 | 0 | 0 |
| 3 | 0 | 0 | 1 | 0 |
| 4 | 2 | 0 | 2 | 1 |

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.

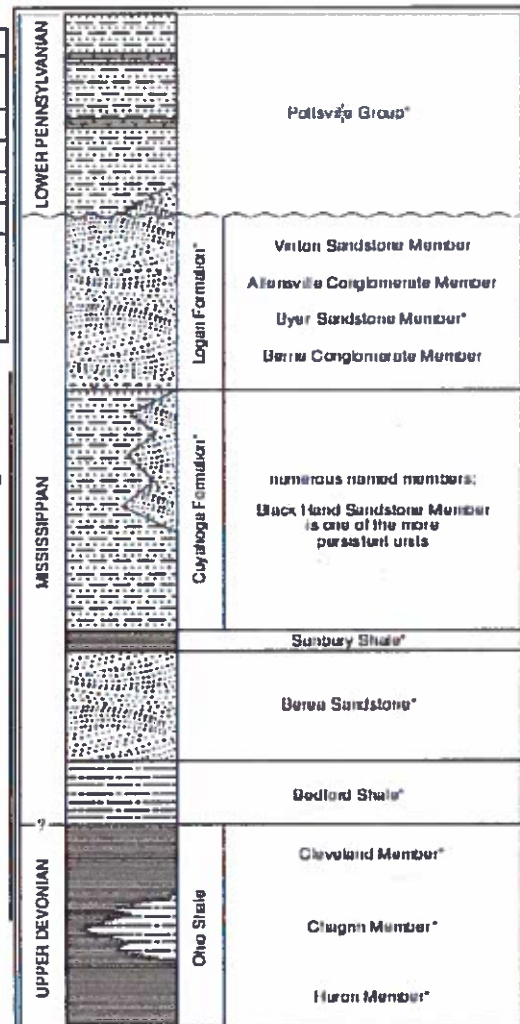
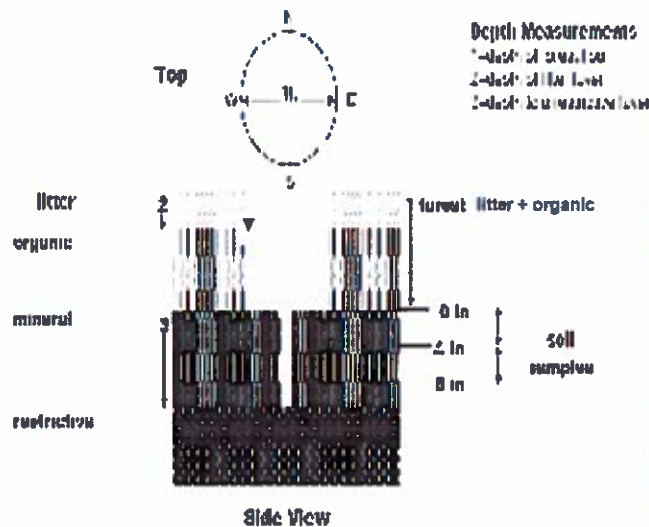


FIGURE 3-23.—Generalized section of Upper Devonian, Mississippian, and Lower Pennsylvanian formations in northeastern Ohio. Asterisks indicate units that are fossiliferous. This composite section represents about 400 meters of rock exposed across the area. The section is not to scale, but the thicknesses indicated are proportional. The term "Waverly" is used in the older literature to refer to Mississippian rocks in Ohio. Some geologists use the European term "Carboniferous," which encompasses the Mississippian and Pennsylvanian Periods of the U.S. Many units have been named within the Cuyahoga Formation, but most units are local and cannot be traced over great distances. The Black Hand Member is a spectacular massive sandstone that is fairly widespread but discontinuous. See Hyde (1953), Hoover (1960), and Collins (1979) for more information on Mississippian rocks in Ohio. See Figure 3-16 for explanation of rock types.

Project label: PCAP

Project Name: 02562615

Plot No.: 1055

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

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

Soil pit module # _____ (one per entire plot)

| | | |
|-------|------------------|---------|
| 5 cm | matrix color | |
| | moist color | |
| | %amorph | |
| | oxid roots | Y N |
| | texture* | |
| | redox features** | Y N |
| | hyd/air cond.*** | I S M D |
| 20 cm | matrix color | |
| | moist color | |
| | %amorph | |
| | oxid roots | Y N |
| | texture* | |
| | redox features** | Y N |
| | hyd/air cond.*** | I S M D |

| |
|---|
| Soil Collection Method: <u>Munsell (A, B, C)</u> |
| 2,3,4,9 completed <u>A</u> |
| Web Soil Survey Information: |
| Soil Series Type: |
| Soil Series Source: <u>Ohio Soil Survey</u> |
| 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 set soil (cm) |
|--------|-----------------------------|--------------------|------------------|---------------------|
| 1 | 1.0 | 1.0 | 0 | 0 |
| 2 | 1.4 | 1.4 | 0 | 0 |
| 3 | 6.3 | 6.3 | 0 | 0 |
| 4 | 6.4 | 6.4 | 0 | 0 |

EARTH SURFACE & GROUND COVER

| Underlying Earth Surface* | Ground Cover | percent |
|---------------------------|------------------------|---------------|
| Open - 100% | percent | (each < 100%) |
| Historic | Coarse Woody Debris*** | 12% |
| Mineral Soil | Fine Woody Debris*** | 8% |
| Gravel/Cobble* | Litter | 90% |
| Boulder** | Duff (Ferm. + Humus) | - |
| Bedrock | Bryophyte/ Lichen | 1% |
| Gravel/Cobble - 1/16-10" | Water | - |
| Boulder = > 10 in | Bare Soil | 1% |
| > 5 cm in diameter | Road/Trail | - |
| < 5 cm in diameter | Other | - |

COVER BY STRATA

estimate using midpoints of 5, ex: 3, 6, 13

| Strata | Height Range (m) | Total Cover (%) |
|-------------|------------------|-----------------|
| Tree | 5 | 83% |
| Shrub | 0.5-5 | 83% |
| Herb | 0-0.5 | 78% |
| (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.

None
Tree Information:

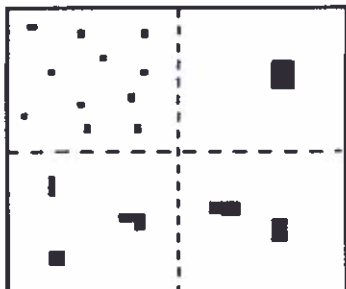
| Type | %Cover |
|----------------------|--------|
| All Purpose | |
| Birdie | |
| Hitting sanctioned | |
| Boo/leg unsanctioned | |
| Gravel | |
| Deer | |

STAND SIZE

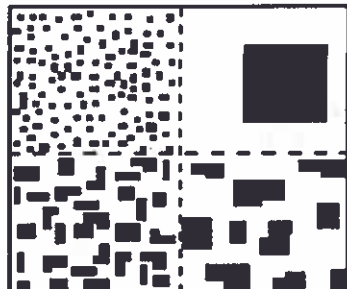
- > 500 x plot size
- > 100 x plot size
- 10-100 x plot size
- 3-10 x plot size
- 1-3 x plot size
- < plot size

PERCENT MOTTLES (USE CLASS CODES):

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



2%



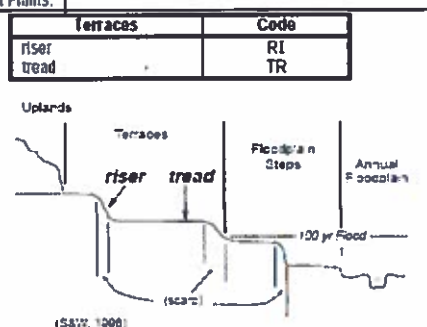
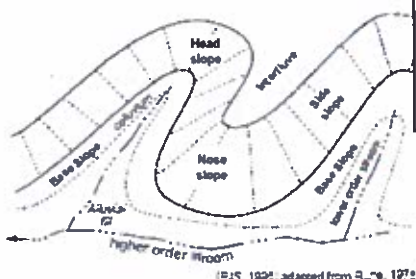
20%

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

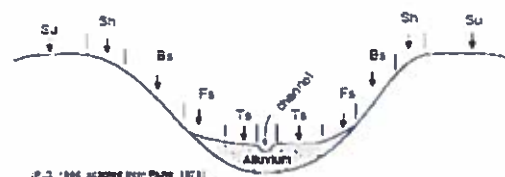
Geomorphic Component - Three-dimensional descriptors of parts of landforms or microfeatures that are best applied to areas. Unique descriptors are available for Hills, Terraces, Mountains, and Flat Plains; e.g., (for Hills) *nose slope* or *NS*.

| Hills | PDP | Code NASIS |
|--------------|-----|------------|
| interfluvium | IF | IF |
| head slope | HS | HS |
| nose slope | NS | NS |
| side slope | SS | SS |
| base slope | BS | BS |



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

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



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

UPLAND: Not a wetland. Very rarely flooded.

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

PERMANENTLY/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.