

APPENDIX C
WETLAND DETERMINATION DATA
FORMS

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-A

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>				
X	<i>Impatiens capensis</i>	Touch-Me-Not, Spotted	5	FACW
X	<i>Agrimonia parviflora</i>	Groovebur, Small-Flower	5	FAC
X	<i>Cinna arundinacea</i>	Wood-Reedgrass, Stout	5	FACW+
X	<i>Toxicodendron radicans</i>	Ivy, Poison	35	FAC
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	10	FACW
<u>Tree</u>				
X	<i>Ulmus rubra</i>	Elm, Slippery	15	FAC
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	15	FACW
X	<i>Acer saccharinum</i>	Maple, Silver	20	FACW
X	<i>Ulmus americana</i>	Elm, American	25	FACW-

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-8	A	10YR 3/1				Silty Clay Loam
8-18	B	10YR 4/1	10YR 5/8	few	faint	Loam

Hydric Soils Indicators

Histosol
 Histic Epipedon
 Sulfidic Odor
 Probable Aquatic Moist Regime
 Reducing Conditions
 Gleyed or Low-Chroma Colors

Concretions
 High Organic % in Surface Layer
 Organic Streaking
 Listed on Local Hydric Soils List
 Listed on National Hydric Soils List
 Other (explain in remarks)

Unit Name: Lobdell silt loam (Lb)
 Drainage Class:

Taxonomy: Fluvaquentic Eutrochrepts
 Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present

This Data Point is a Wetland

Remarks

All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-A

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: Floodplain
 Station ID:
 Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
X	<i>Cimicifuga racemosa</i>	black cohosh	35	UPL
	<i>Verbesina alternifolia</i>	Wingstem	35	FAC
Shrub				
	<i>Ligustrum vulgare</i>	Privet, European	10	FACU
	<i>Rosa multiflora</i>	Rose, Multiflora	15	FACU
	<i>Lonicera tatarica</i>	Honeysuckle, Tartarian	5	FACU*
Tree				
	<i>Juglans nigra</i>	Walnut, Black	25	FACU
	<i>Aesculus glabra</i>	Buckeye, Ohio	25	FACU+

% Species that are OBL, FACW, or FAC (except FAC-): 0

Cowardin Classification:

Remarks

No hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	A	10YR 3/2				Clay Loam
8-18	B	10YR 3/3				Clay Loam

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Lobdell silt loam (Lb)
 Drainage Class: Somewhat Poorly Drained

Taxonomy: Fluvaquentic Eutrochrepts
 Field Observations match map

Remarks

Indicators of hydric soils were not present.

Wetland Determination

- | | |
|---|---|
| <input type="checkbox"/> Hydrophytic Vegetation Present | <input type="checkbox"/> This Data Point is a Wetland |
| <input type="checkbox"/> Hydric Soils Present | |
| <input type="checkbox"/> Wetland Hydrology Present | |

Remarks

This data point lacked all three wetland criteria.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-B

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
X	<i>Viola pallens</i>	Violet,Northern White	10	OBL
X	<i>Polygonum hydropiper</i>	Smartweed,Marshpepper	5	OBL
X	<i>Sambucus canadensis</i>	Elder,American	5	FACW-
X	<i>Onoclea sensibilis</i>	Fern,Sensitive	50	FACW
Tree				
X	<i>Acer rubrum</i>	Maple,Red	15	FAC
X	<i>Acer saccharinum</i>	Maple,Silver	85	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input checked="" type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input checked="" type="checkbox"/> Saturated in upper 12 inches	<input checked="" type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input checked="" type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): surf		

Remarks

Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	10YR 4/1	10YR 4/2	common	faint	Silty Clay Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg)

Taxonomy: Dystric Fluventic Eutrochrepts

Drainage Class:

Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present

This Data Point is a Wetland

Remarks

All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-B

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
- Have vegetation, soils, or hydrology been disturbed?
- Is the area a potential problem area?

Community ID: Upland Forest
 Station ID:
 Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
<i>Herbaceous</i>				
X	<i>Polygonum virginianum</i>	Knotweed, Virginia	25	FAC
X	<i>Onoclea sensibilis</i>	Fern, Sensitive	25	FACW
X	<i>Geum canadense</i>	Avens, White	15	FACU
X	<i>Lysimachia nummularia</i>	Jennie, Creeping	15	OBL

% Species that are OBL, FACW, or FAC (except FAC-): 75 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Recorded Data (describe in remarks) <ul style="list-style-type: none"> <input type="checkbox"/> Stream, Lake, or Tide Gage <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Other (describe in remarks) Field Observations: <ul style="list-style-type: none"> Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >24 Depth to Saturated Soils(in.): >24 | <p><i>Primary Wetland Hydrology Indicators</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in upper 12 inches <input type="checkbox"/> Water marks <input type="checkbox"/> Drift lines <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Drainage patterns in wetlands | <p><i>Secondary Hydrology Indicators</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Oxidized root channels <input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Local soil survey data <input type="checkbox"/> FAC-Neutral test <input type="checkbox"/> Other (explain in remarks) |
|--|--|--|

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	10YR 3/4				Silt Loam
0-0						

- | | |
|---|--|
| <p><i>Hydric Soils Indicators</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Probable Aquatic Moist Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors | <ul style="list-style-type: none"> <input type="checkbox"/> Concretions <input type="checkbox"/> High Organic % in Surface Layer <input type="checkbox"/> Organic Streaking <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (explain in remarks) |
|---|--|

Unit Name: Tioga loam (Tg) Taxonomy: Dystric Fluventic Eutrochrepts
 Drainage Class: [X] Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present
- Hydric Soils Present
- Wetland Hydrology Present
- This Data Point is a Wetland

Remarks
 This data point lacked hydric soils and wetland hydrology and therefore can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-C

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID:

Vegetation

Dominant Species	Common Name	% Cover	Indicator
<i>Herbaceous</i>			
X <i>Osmunda cinnamomea</i>	Fern, Cinnamon	10	FACW
X <i>Leersia oryzoides</i>	Cutgrass, Rice	5	OBL
X <i>Polygonum hydropiper</i>	Smartweed, Marshpepper	5	OBL
X <i>Carex intumescens</i>	Sedge, Bladder	5	FACW+
X <i>Carex stricta</i>	Sedge, Upright	25	OBL
X <i>Viola pallens</i>	Violet, Northern White	5	OBL
X <i>Onoclea sensibilis</i>	Fern, Sensitive	15	FACW
X <i>Glyceria striata</i>	Grass, Fowl Manna	10	OBL

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-3	A	10YR 3/1	5YR 4/6	common	distinct	Silt Loam
3-18	B	10YR 4/1	5YR 4/6	common	distinct	Silt Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present

This Data Point is a Wetland

Remarks

All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-C

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA
 Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Date: October 19, 2004
 County: Lake
 State: Ohio
 Community ID: Floodplain
 Station ID:
 Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>				
X	<i>Geum canadense</i>	Avens,White	20	FACU
<u>Shrub</u>				
X	<i>Rosa multiflora</i>	Rose,Multiflora	55	FACU
X	<i>Rubus allegheniensis</i>	Blackberry,Allegheny	45	FACU-
<u>Tree</u>				
X	<i>Carya laciniosa</i>	Hickory,Big Shellbark	20	FAC
<u>Vine</u>				
X	<i>Vitis aestivalis</i>	Grape,Summer	20	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 20 Cowardin Classification:

Remarks
 Less than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor. Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	10YR 3/3			Silt Loam

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

- | | |
|---|---|
| <input type="checkbox"/> Hydrophytic Vegetation Present | <input type="checkbox"/> This Data Point is a Wetland |
| <input type="checkbox"/> Hydric Soils Present | |
| <input type="checkbox"/> Wetland Hydrology Present | |

Remarks
 This data point lacked all three wetland criteria.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-D

Project/Site: Vrooman Road Date: October 19, 2004
 Applicant/Owner: ODOT County: Lake
 Investigator: BMF/JRA State: Ohio
 Do normal circumstances exist on the site? Community ID: PFO
 Have vegetation, soils, or hydrology been disturbed? Station ID:
 Is the area a potential problem area? Plot ID:

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Viola pallens</i>	Violet, Northern White	10	OBL
X <i>Rhamnus frangula</i>	Buckthorn, Glossy	5	FAC
X <i>Cinna arundinacea</i>	Wood-Reedgrass, Stout	5	FACW+
X <i>Carex stricta</i>	Sedge, Uptight	15	OBL
X <i>Leersia oryzoides</i>	Cutgrass, Rice	10	OBL
X <i>Onoclea sensibilis</i>	Fern, Sensitive	10	FACW
Tree			
X <i>Acer rubrum</i>	Maple, Red	10	FAC
X <i>Ulmus americana</i>	Elm, American	15	FACW-
X <i>Acer saccharinum</i>	Maple, Silver	75	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 100 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input checked="" type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input checked="" type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

Remarks
 Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-3	A	10YR 3/2				Clay Loam
3-18	B	10YR 5/1	10YR 5/8	common	distinct	Clay Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg) Taxonomy: Dystric Fluventic Eutrochrepts
 Drainage Class: Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-D

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio
 Community ID: Upland Forest
 Station ID:
 Plot ID:

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>				
X	<i>Verbesina alternifolia</i>	Wingstem	5	FAC
X	<i>Toxicodendron radicans</i>	Ivy,Poison	15	FAC
X	<i>Geum canadense</i>	Avens,White	15	FACU
<u>Shrub</u>				
X	<i>Ulmus americana</i>	Elm,American	15	FACW-
X	<i>Lindera benzoin</i>	Spicebush,Northern	10	FACW-
X	<i>Rosa multiflora</i>	Rose,Multiflora	65	FACU
<u>Tree</u>				
X	<i>Acer rubrum</i>	Maple,Red	15	FAC
X	<i>Robinia pseudoacacia</i>	Locust,Black	35	FACU-

% Species that are OBL, FACW, or FAC (except FAC-): 62 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor. Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	10YR 3/4			Silt Loam

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg) Taxonomy: Dystric Fluventic Eutrochrepts
 Drainage Class: [X] Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 This data point lacked hydric soils and wetland hydrology and therefore can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-E

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>				
X	<i>Toxicodendron radicans</i>	Ivy,Poison	5	FAC
X	<i>Impatiens capensis</i>	Touch-Me-Not,Spotted	10	FACW
<u>Tree</u>				
X	<i>Acer saccharinum</i>	Maple,Silver	10	FACW
X	<i>Acer rubrum</i>	Maple,Red	10	FAC

% Species that are OBL, FACW, or FAC (except FAC-): 100 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

- | | Primary Wetland Hydrology Indicators | Secondary Hydrology Indicators |
|--|--|--|
| <input type="checkbox"/> Recorded Data (describe in remarks) | <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized root channels |
| <input type="checkbox"/> Stream, Lake, or Tide Gage | <input checked="" type="checkbox"/> Saturated in upper 12 inches | <input checked="" type="checkbox"/> Water-stained leaves |
| <input type="checkbox"/> Aerial Photograph | <input type="checkbox"/> Water marks | <input type="checkbox"/> Local soil survey data |
| <input type="checkbox"/> Other (describe in remarks) | <input type="checkbox"/> Drift lines | <input checked="" type="checkbox"/> FAC-Neutral test |
| Field Observations: | <input type="checkbox"/> Sediment deposits | <input type="checkbox"/> Other (explain in remarks) |
| Depth of Surface Water(in.): 0 | <input type="checkbox"/> Drainage patterns in wetlands | |
| Depth to Free Water in Pit(in.): 3 | | |
| Depth to Saturated Soils(in.): surf | | |

Remarks
 Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-10	A	10YR 5/1	10YR 4/6	few	distinct	Silty Clay Loam
10-18	B	10YR 5/1	7.5YR 4/6	common	distinct	Silty Clay Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks
 All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-E

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio
 Community ID: Upland Forest
 Station ID:
 Plot ID:

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Shrub			
<i>Rosa multiflora</i>	Rose, Multiflora	10	FACU
Tree			
<i>Juglans nigra</i>	Walnut, Black	10	FACU
<i>Acer saccharum</i>	Maple, Sugar	90	FACU-

% Species that are OBL, FACW, or FAC (except FAC-): 0

Cowardin Classification:

Remarks

No hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-5	A	10YR 3/2				Clay Loam
5-12	B	10YR 4/3				Clay Loam

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks

Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks

This data point lacked all three wetland criteria.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-F

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PEM
 Station ID:
 Plot ID:

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Lysimachia nummularia</i>	Jennie, Creeping	5	OBL
X <i>Toxicodendron radicans</i>	Ivy, Poison	5	FAC
X <i>Solidago</i>	goldenrod sp.	25	NI
X <i>Juncus effusus</i>	Rush, Soft	3	FACW+
X <i>Onoclea sensibilis</i>	Fern, Sensitive	5	FACW
X <i>Glyceria striata</i>	Grass, Fowl Manna	60	OBL
Shrub			
X <i>Rhamnus frangula</i>	Buckthorn, Glossy	10	FAC
X <i>Viburnum recognitum</i>	Arrow-Wood, Northern	5	FACW-

% Species that are OBL, FACW, or FAC (except FAC-): 87 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:
 Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): 1
 Depth to Saturated Soils(in.): surf

Remarks
 Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-8	A	10YR 3/1	7.5YR 3/4	few	distinct	Clay Loam
8-18	B	10YR 5/1	10YR 6/8 2.5Y 3/6	common	distinct	Clay

Hydric Soils Indicators

- Histosol
 Histic Epipedon
 Sulfidic Odor
 Probable Aquatic Moist Regime
 Reducing Conditions
 Gleyed or Low-Chroma Colors
 Concretions
 High Organic % in Surface Layer
 Organic Streaking
 Listed on Local Hydric Soils List
 Listed on National Hydric Soils List
 Other (explain in remarks)

Unit Name: Gosport silty clay loam
 Drainage Class:

Taxonomy: Typic Dystrochrepts
 Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
 This Data Point is a Wetland

Remarks
 All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-F

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio
 Community ID: Upland Forest
 Station ID:
 Plot ID:

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Toxicodendron radicans</i>	Ivy,Poison	75	FAC
Shrub			
X <i>Rhamnus frangula</i>	Buckthorn,Glossy	45	FAC
X <i>Rosa multiflora</i>	Rose,Multiflora	10	FACU
Tree			
X <i>Ulmus americana</i>	Elm,American	20	FACW-
X <i>Acer rubrum</i>	Maple,Red	10	FAC
X <i>Quercus rubra</i>	Oak,Northern Red	40	FACU-
X <i>Carya ovata</i>	Hickory,Shag-Bark	15	FACU-

% Species that are OBL, FACW, or FAC(except FAC-): 57 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

- | | | |
|--|--|--|
| <input type="checkbox"/> Recorded Data (describe in remarks) | Primary Wetland Hydrology Indicators | Secondary Hydrology Indicators |
| <input type="checkbox"/> Stream, Lake, or Tide Gage | <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized root channels |
| <input type="checkbox"/> Aerial Photograph | <input type="checkbox"/> Saturated in upper 12 inches | <input type="checkbox"/> Water-stained leaves |
| <input type="checkbox"/> Other (describe in remarks) | <input type="checkbox"/> Water marks | <input type="checkbox"/> Local soil survey data |
| Field Observations: | <input type="checkbox"/> Drift lines | <input checked="" type="checkbox"/> FAC-Neutral test |
| Depth of Surface Water(in.): 0 | <input type="checkbox"/> Sediment deposits | <input type="checkbox"/> Other (explain in remarks) |
| Depth to Free Water in Pit(in.): >24 | <input type="checkbox"/> Drainage patterns in wetlands | |
| Depth to Saturated Soils(in.): >24 | | |

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-6	A	10YR 3/2				Clay Loam
6-18	B	10YR 4/2				Clay Loam

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Gosport silty clay loam
 Drainage Class:

Taxonomy: Typic Dystrochrepts
 Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 This data point lacked wetland hydrology and hydric soils, it therefore can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-G

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PEM
 Station ID:
 Plot ID:

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Toxicodendron radicans</i>	Ivy,Poison	5	FAC
X <i>Onoclea sensibilis</i>	Fern,Sensitive	20	FACW
X <i>Juncus effusus</i>	Rush,Soft	5	FACW+
X <i>Phragmites australis</i>	Reed,Common	70	FACW
Tree			
X <i>Quercus palustris</i>	Oak,Pin	10	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 2
 Depth to Free Water in Pit(in.): surf
 Depth to Saturated Soils(in.): surf

Remarks

Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-8	A	10YR 2/1				Silt Loam
8-18	B	10YR 6/1	10YR 5/8	common	distinct	Silty Clay Loam

Hydric Soils Indicators

- Histosol
 Histic Epipedon
 Sulfidic Odor
 Probable Aquatic Moist Regime
 Reducing Conditions
 Gleyed or Low-Chroma Colors
 Concretions
 High Organic % in Surface Layer
 Organic Streaking
 Listed on Local Hydric Soils List
 Listed on National Hydric Soils List
 Other (explain in remarks)

Unit Name: Gosport silty clay loam
 Drainage Class:

Taxonomy: Typic Dystrochrepts
 Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
 This Data Point is a Wetland

Remarks

All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-G

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio
 Community ID: Upland Forest
 Station ID:
 Plot ID:

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Shrub				
X	<i>Ligustrum vulgare</i>	Privet, European	55	FACU
X	<i>Rhamnus frangula</i>	Buckthorn, Glossy	45	FAC
Tree				
X	<i>Ulmus americana</i>	Elm, American	10	FACW-
X	<i>Carya ovata</i>	Hickory, Shag-Bark	25	FACU-
X	<i>Quercus rubra</i>	Oak, Northern Red	15	FACU-

% Species that are OBL, FACW, or FAC (except FAC-): 40 Cowardin Classification:

Remarks
 Less than 50% hydrophytic vegetation present.

Hydrology

- | | Primary Wetland Hydrology Indicators | Secondary Hydrology Indicators |
|--|--|---|
| <input type="checkbox"/> Recorded Data (describe in remarks) | <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized root channels |
| <input type="checkbox"/> Stream, Lake, or Tide Gage | <input type="checkbox"/> Saturated in upper 12 inches | <input type="checkbox"/> Water-stained leaves |
| <input type="checkbox"/> Aerial Photograph | <input type="checkbox"/> Water marks | <input type="checkbox"/> Local soil survey data |
| <input type="checkbox"/> Other (describe in remarks) | <input type="checkbox"/> Drift lines | <input type="checkbox"/> FAC-Neutral test |
| Field Observations: | <input type="checkbox"/> Sediment deposits | <input type="checkbox"/> Other (explain in remarks) |
| Depth of Surface Water(in.): 0 | <input type="checkbox"/> Drainage patterns in wetlands | |
| Depth to Free Water in Pit(in.): >24 | | |
| Depth to Saturated Soils(in.): >24 | | |

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-4	A	10YR 3/2				Clay Loam
4-18	B	10YR 5/6				Clay Loam

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Gosport silty clay loam
 Drainage Class:

Taxonomy: Typic Dystrochrepts
 Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

- | | |
|---|---|
| <input type="checkbox"/> Hydrophytic Vegetation Present | <input type="checkbox"/> This Data Point is a Wetland |
| <input type="checkbox"/> Hydric Soils Present | |
| <input type="checkbox"/> Wetland Hydrology Present | |

Remarks
 This data point lacked all three wetland criteria.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-H

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID:

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Viola pallens</i>	Violet,Northern White	10	OBL
X <i>Carex stricta</i>	Sedge,Uptight	20	OBL
X <i>Toxicodendron radicans</i>	Ivy,Poison	15	FAC
X <i>Onoclea sensibilis</i>	Fern,Sensitive	25	FACW
X <i>Leersia oryzoides</i>	Cutgrass,Rice	15	OBL
Shrub			
X <i>Carpinus caroliniana</i>	Hornbeam,American	25	FAC
Tree			
X <i>Acer saccharinum</i>	Maple,Silver	10	FACW
X <i>Fraxinus pennsylvanica</i>	Ash,Green	15	FACW

% Species that are OBL, FACW, or FAC(except FAC-): 100

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): surf
 Depth to Saturated Soils(in.): surf

Remarks

Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-6	A	10YR 3/2				Silt Loam
6-18	B	10YR 3/1	10YR 4/6	few	faint	Silty Clay Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks

All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-H

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: October 19, 2004
 County: Lake
 State: Ohio
 Community ID: Upland Forest
 Station ID:
 Plot ID:

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
X	<i>Toxicodendron radicans</i>	Ivy,Poison	25	FAC
X	<i>Geum canadense</i>	Avens,White	20	FACU
Shrub				
X	<i>Crataegus mollis</i>	Hawthorn,Downy	10	FACU
X	<i>Ligustrum vulgare</i>	Privet,European	15	FACU
X	<i>Rosa multiflora</i>	Rose,Multiflora	55	FACU
Tree				
X	<i>Juglans nigra</i>	Walnut,Black	15	FACU
X	<i>Carya laciniosa</i>	Hickory,Big Shellbark	15	FAC
X	<i>Acer saccharum</i>	Maple,Sugar	25	FACU-
X	<i>Carya ovata</i>	Hickory,Shag-Bark	25	FACU-

% Species that are OBL, FACW, or FAC (except FAC-): 22 Cowardin Classification:

Remarks
 Less than 50% hydrophytic vegetation present.

Hydrology

- | | Primary Wetland Hydrology Indicators | Secondary Hydrology Indicators |
|--|--|---|
| <input type="checkbox"/> Recorded Data (describe in remarks) | <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized root channels |
| <input type="checkbox"/> Stream, Lake, or Tide Gage | <input type="checkbox"/> Saturated in upper 12 inches | <input type="checkbox"/> Water-stained leaves |
| <input type="checkbox"/> Aerial Photograph | <input type="checkbox"/> Water marks | <input type="checkbox"/> Local soil survey data |
| <input type="checkbox"/> Other (describe in remarks) | <input type="checkbox"/> Drift lines | <input type="checkbox"/> FAC-Neutral test |
| Field Observations: | <input type="checkbox"/> Sediment deposits | <input type="checkbox"/> Other (explain in remarks) |
| Depth of Surface Water(in.): 0 | <input type="checkbox"/> Drainage patterns in wetlands | |
| Depth to Free Water in Pit(in.): >24 | | |
| Depth to Saturated Soils(in.): >24 | | |

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-6	A	10YR 6/2				Silt Loam
6-18	B	10YR 4/2				Silt Loam

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg) Taxonomy: Dystric Fluventic Eutrochrepts
 Drainage Class: [X] Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 This data point lacked all three wetland criteria.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-1 .

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 03, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID:

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Osmunda cinnamomea</i>	Fern, Cinnamon	30	FACW
<i>Onoclea sensibilis</i>	Fern, Sensitive	10	FACW
Tree			
X <i>Acer saccharinum</i>	Maple, Silver	10	FACW
<i>Platanus occidentalis</i>	Sycamore, American	5	FACW-

% Species that are OBL, FACW, or FAC (except FAC-): 100 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input checked="" type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input checked="" type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input checked="" type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

Remarks
 Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor. Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-14	A/B GLEY1 5/5PB	5YR 6/6	few	faint	Silt Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks
 All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-I

Project/Site: Vrooman Road Date: November 03, 2004
 Applicant/Owner: ODOT County: Lake
 Investigator: BMF/JRA State: Ohio
 Do normal circumstances exist on the site? Community ID: Floodplain
 Have vegetation, soils, or hydrology been disturbed? Station ID: upl
 Is the area a potential problem area? Plot ID: .upl-i

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Verbesina alternifolia</i>	Wingstem	10	FAC
Shrub			
X <i>Acer negundo</i>	Box-Elder	5	FAC+
X <i>Rosa multiflora</i>	Rose, Multiflora	50	FACU
Tree			
X <i>Robinia pseudoacacia</i>	Locust, Black	35	FACU-
Vine			
X <i>Vitis aestivalis</i>	Grape, Summer	5	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 40 Cowardin Classification:

Remarks
 Less than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor. Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	10YR 5/2			Silt Loam

Hydric Soils Indicators

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer
- Organic Streaking
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Unit Name: Tioga loam (Tg) Taxonomy: Dystric Fluventic Eutrochrepts
 Drainage Class: [X] Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present
- Hydric Soils Present
- Wetland Hydrology Present
- This Data Point is a Wetland

Remarks
 This data point lacked all three wetland criteria.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-J

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator:

Date: November 03, 2004
 County: Lake
 State: Ohio
 Community ID: PFO
 Station ID:
 Plot ID: pfo

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Lysimachia nummularia</i>	Jennie, Creeping	20	OBL
<i>Carex sp</i>		5	
Tree			
X <i>Acer saccharinum</i>	Maple, Silver	20	FACW
<i>Acer rubrum</i>	Maple, Red	5	FAC
<i>Ulmus americana</i>	Elm, American	5	FACW-
<i>Salix nigra</i>	Willow, Black	5	FACW+

% Species that are OBL, FACW, or FAC (except FAC-): 100 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

- Primary Wetland Hydrology Indicators**
 Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

- Secondary Hydrology Indicators**
 Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:
 Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks
 Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-4	A	7.5YR 5/6	10YR 6/1	many	distinct	Silty Clay
4-18	B	10YR 5/1	7.5YR 5/6	few	distinct	Silty Clay

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Lobdell silt loam (Lb)
 Drainage Class:

Taxonomy: **Fluvaquentic Eutrochrepts**
 Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
- [X] This Data Point is a Wetland

Remarks
 All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-J

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator:

Date: November 03, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: Floodplain
 Station ID:
 Plot ID: UPL

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Osmunda cinnamomea</i>	Fern, Cinnamon	15	FACW
X <i>Impatiens capensis</i>	Touch-Me-Not, Spotted	10	FACW
X <i>Lysimachia nummularia</i>	Jennie, Creeping	10	OBL
X <i>Vernonia gigantea</i>	Ironweed, Tall	40	FAC
X <i>Solidago gigantea</i>	Golden-Rod, Giant	35	FACW
Shrub			
X <i>Viburnum trilobum</i>	Cranberrybush, American	10	FACW
X <i>Rubus allegheniensis</i>	Blackberry, Allegheny	10	FACU-
Tree			
X <i>Acer negundo</i>	Box-Elder	10	FAC+

% Species that are OBL, FACW, or FAC (except FAC-): 87

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-10	A	10YR 4/2				Silt Loam
10-18	B	10YR 4/1	10YR 4/4	few	faint	Silt Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Lobdell silt loam (Lb)
 Drainage Class: Well Drained

Taxonomy: Fluvaquentic Eutrochrepts
 Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks

This data point lacks wetland hydrology therefore it can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-K

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 03, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID: PFO

Vegetation

Dominant Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>			
X <i>Carex sp</i>	sedge species	15	
<u>Tree</u>			
X <i>Ulmus americana</i>	Elm,American	20	FACW-
X <i>Populus deltoides</i>	Cotton-Wood,Eastern	5	FAC
X <i>Acer saccharinum</i>	Maple,Silver	15	FACW
X <i>Acer rubrum</i>	Maple,Trident Red	5	FACW+

% Species that are OBL, FACW, or FAC (except FAC-): 80 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input checked="" type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input checked="" type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input checked="" type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input checked="" type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

Remarks
 Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-4	A	10YR 3/2	7.5YR 4/6	few	faint	Clay Loam
4-18	B	10YR 3/1	10YR 4/6	common	distinct	Silt Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Lobdell silt loam (Lb)
 Drainage Class:

Taxonomy: Fluvaquentic Eutrochrepts
 Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-K

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 03, 2004
 County: Lake
 State: Ohio
 Community ID: Upland Forest
 Station ID:
 Plot ID: UPL

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Toxicodendron radicans</i>	Ivy,Poison	30	FAC
	<i>Solidago</i>	5	
Shrub			
X <i>Rosa multiflora</i>	Rose,Multiflora	15	FACU
X <i>Rubus allegheniensis</i>	Blackberry,Allegheny	10	FACU-
Tree			
X <i>Ulmus americana</i>	Elm,American	5	FACW-
X <i>Acer saccharinum</i>	Maple,Silver	10	FACW
X <i>Acer negundo</i>	Box-Elder	5	FAC+
Vine			
X <i>Vitis aestivalis</i>	Grape,Summer	5	FACU

% Species that are OBL, FACW, or FAC(except FAC-): 57 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

- | | Primary Wetland Hydrology Indicators | Secondary Hydrology Indicators |
|--|--|---|
| <input type="checkbox"/> Recorded Data (describe in remarks) | <input type="checkbox"/> Inundated | <input type="checkbox"/> Oxidized root channels |
| <input type="checkbox"/> Stream, Lake, or Tide Gage | <input type="checkbox"/> Saturated in upper 12 inches | <input type="checkbox"/> Water-stained leaves |
| <input type="checkbox"/> Aerial Photograph | <input type="checkbox"/> Water marks | <input type="checkbox"/> Local soil survey data |
| <input type="checkbox"/> Other (describe in remarks) | <input type="checkbox"/> Drift lines | <input type="checkbox"/> FAC-Neutral test |
| Field Observations: | <input type="checkbox"/> Sediment deposits | <input type="checkbox"/> Other (explain in remarks) |
| Depth of Surface Water(in.): 0 | <input type="checkbox"/> Drainage patterns in wetlands | |
| Depth to Free Water in Pit(in.): >24 | | |
| Depth to Saturated Soils(in.): >24 | | |

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-14	A	10YR 3/2				Silt Loam
14-18	B	10YR 4/2	10YR 4/6	common	faint	Silt Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Lobdell silt loam (Lb)
 Drainage Class:

Taxonomy: Fluvaquentic Eutrochrepts
 Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 This data point lacks wetland hydrology therefore it can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-L

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 03, 2004
 County: Lake
 State: Ohio
 Community ID: PSS
 Station ID:
 Plot ID:

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Poa palustris</i>	Bluegrass,Fowl	10	FACW
X <i>Leersia oryzoides</i>	Cutgrass,Rice	50	OBL
X <i>Impatiens capensis</i>	Touch-Me-Not,Spotted	45	FACW
Shrub			
X <i>Cornus stolonifera</i>	Dogwood,Red-Osier	40	FACW+
Vine			
X <i>Solanum dulcamara</i>	Nightshade,Climbing	10	FAC-

% Species that are OBL, FACW, or FAC (except FAC-): 80 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input checked="" type="checkbox"/> Saturated in upper 12 inches	<input checked="" type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input checked="" type="checkbox"/> FAC-Neutral test
Field Observations:	<input checked="" type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): surf	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): surf		
Depth to Saturated Soils(in.): surf		

Remarks
 Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-3	A	GLE Y2 3/5B	5YR 4/3	common	distinct	Silt Loam
3-18	B	GLE Y2 4/10BG				Silt Loam

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Gosport silty clay loam Taxonomy: Typic Dystrochrepts
 Drainage Class: [X] Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-L

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 03, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: Upland Forest
 Station ID:
 Plot ID: UPL-L

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Shrub			
X <i>Lonicera tatarica</i>	Honeysuckle, Tartarian	15	FACU*
X <i>Rosa multiflora</i>	Rose, Multiflora	25	FACU
X <i>Ligustrum vulgare</i>	Privet, European	25	FACU
Tree			
X <i>Acer saccharum</i>	Maple, Sugar	25	FACU-
X <i>Ulmus americana</i>	Elm, American	10	FACW-

% Species that are OBL, FACW, or FAC (except FAC-): 20

Cowardin Classification:

Remarks

Less than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-9	A/B	10YR 3/3				Silty Clay

Hydric Soils Indicators

- Histosol
 Histic Epipedon
 Sulfidic Odor
 Probable Aquatic Moist Regime
 Reducing Conditions
 Gleyed or Low-Chroma Colors
 Concretions
 High Organic % in Surface Layer
 Organic Streaking
 Listed on Local Hydric Soils List
 Listed on National Hydric Soils List
 Other (explain in remarks)

Unit Name: Gosport silty clay loam
 Drainage Class:

Taxonomy: Typic Dystrochrepts
 Field Observations match map

Remarks

Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
 This Data Point is a Wetland

Remarks

This data point lacked all three wetland criteria.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-M

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 03, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PFO
 Station ID:
 Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
X	<i>Osmunda cinnamomea</i>	Fern, Cinnamon	25	FACW
X	<i>Onoclea sensibilis</i>	Fern, Sensitive	20	FACW
Shrub				
X	<i>Cephalanthus occidentalis</i>	Buttonbush, Common	25	OBL
Tree				
X	<i>Acer saccharinum</i>	Maple, Silver	40	FACW
X	<i>Acer rubrum</i>	Maple, Red	40	FAC

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): 10

Remarks

Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	10YR 4/1	10YR 4/6	common	distinct	Silty Clay Loam

Hydric Soils Indicators

- Histosol
 Histic Epipedon
 Sulfidic Odor
 Probable Aquatic Moist Regime
 Reducing Conditions
 Gleyed or Low-Chroma Colors

- Concretions
 High Organic % in Surface Layer
 Organic Streaking
 Listed on Local Hydric Soils List
 Listed on National Hydric Soils List
 Other (explain in remarks)

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present

This Data Point is a Wetland

Remarks

All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-M

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 03, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
- Have vegetation, soils, or hydrology been disturbed?
- Is the area a potential problem area?

Community ID: Floodplain
 Station ID:
 Plot ID: UPL-M

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Polygonum cuspidatum</i>	Knotweed, Japanese	45	FACU-
X <i>Verbesina alternifolia</i>	Wingstem	15	FAC
Shrub			
X <i>Rosa multiflora</i>	Rose, Multiflora	15	FACU
X <i>Rubus allegheniensis</i>	Blackberry, Allegheny	15	FACU-

% Species that are OBL, FACW, or FAC (except FAC-): 25 Cowardin Classification:

Remarks
 Less than 50% hydrophytic vegetation present.

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor. Color	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	10YR 3/2	10YR 3/6	few	faint	Silty Clay Loam

Hydric Soils Indicators

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer
- Organic Streaking
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Unit Name: Tioga loam (Tg)
 Drainage Class:

Taxonomy: Dystric Fluventic Eutrochrepts
 Field Observations match map

Remarks
 Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
- Hydric Soils Present
- Wetland Hydrology Present
- This Data Point is a Wetland

Remarks
 This data point lacked hydrophytic vegetation and wetland hydrology, therefore it can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: WET-N

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator: BMF/JRA

Date: November 10, 2004
 County: Lake
 State: Ohio

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Community ID: PEM
 Station ID:
 Plot ID: WET-N

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Herbaceous				
X	<i>Glyceria striata</i>	Grass,Fowl Manna	25	OBL
X	<i>Onoclea sensibilis</i>	Fern,Sensitive	70	FACW
X	<i>Juncus effusus</i>	Rush,Soft	5	FACW+
Shrub				
X	<i>Rhamnus frangula</i>	Buckthorn,Glossy	5	FAC

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

Greater than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Wetland hydrology criteria has been met.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-3	A	10YR 3/1	7.5YR 4/6	common	distinct	Clay Loam
3-18	B	10YR 4/1	10YR 5/8	common	distinct	Clay Loam
			7.5YR 4/6	common	distinct	

Hydric Soils Indicators

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input checked="" type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Darien silt loam (DaB)

Taxonomy: Aeric Ochraqualfs

Drainage Class:

Field Observations match map

Remarks

Hydric soils criteria has been met.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present

This Data Point is a Wetland

Remarks

All three wetland indicators present.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: UPL-N

Project/Site: Vrooman Road Date: November 10, 2004
 Applicant/Owner: ODOT County: Lake
 Investigator: BMF/JRA State: Ohio
 Do normal circumstances exist on the site? Community ID: Upland Forest
 Have vegetation, soils, or hydrology been disturbed? Station ID:
 Is the area a potential problem area? Plot ID: UPL-N

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
Shrub				
X	<i>Prunus virginiana</i>	Cherry,Choke	15	FACU
X	<i>Ligustrum vulgare</i>	Privet,European	75	FACU
X	<i>Rhamnus frangula</i>	Buckthorn,Glossy	10	FAC
Tree				
X	<i>Carpinus caroliniana</i>	Hornbeam,American	10	FAC
X	<i>Maclura pomifera</i>	Osage-Orange	45	UPL
X	<i>Prunus serotina</i>	Cherry,Black	15	FACU
Vine				
X	<i>Vitis aestivalis</i>	Grape,Summer	35	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 28 Cowardin Classification:

Remarks

Less than 50% hydrophytic vegetation present.

Hydrology

<input type="checkbox"/> Recorded Data (describe in remarks) <input type="checkbox"/> Stream, Lake, or Tide Gage <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >24 Depth to Saturated Soils(in.): >24	Primary Wetland Hydrology Indicators <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in upper 12 inches <input type="checkbox"/> Water marks <input type="checkbox"/> Drift lines <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Drainage patterns in wetlands	Secondary Hydrology Indicators <input type="checkbox"/> Oxidized root channels <input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Local soil survey data <input type="checkbox"/> FAC-Neutral test <input type="checkbox"/> Other (explain in remarks)
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Remarks

Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor. Color	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-6	A/B	10YR 3/2				Loam

Hydric Soils Indicators

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic % in Surface Layer
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking
<input type="checkbox"/> Probable Aquatic Moist Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (explain in remarks)

Unit Name: Darien silt loam (DaB)

Taxonomy: Aeric Ochraqualfs

Drainage Class:

Field Observations match map

Remarks

rocky after 6 inches
 Hydric soils criteria has been met.

Wetland Determination

Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks

This data point lacked hydrophytic vegetation and wetland hydrology, therefore it can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: DP-1

Project/Site: Vrooman Road Date: November 03, 2004
 Applicant/Owner: ODOT County: Lake
 Investigator: State: Ohio
 Do normal circumstances exist on the site? Community ID:
 Have vegetation, soils, or hydrology been disturbed? Station ID:
 Is the area a potential problem area? Plot ID:

Vegetation

Dominant	Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>				
X	<i>Verbesina alternifolia</i>	Wingstem	30	FAC
X	<i>Polygonum virginianum</i>	Knotweed, Virginia	10	FAC
<u>Shrub</u>				
X	<i>Rosa multiflora</i>	Rose, Multiflora	10	FACU
<u>Tree</u>				
X	<i>Acer negundo</i>	Box-Elder	5	FAC+
X	<i>Ulmus americana</i>	Elm, American	10	FACW-
<u>Vine</u>				
X	<i>Vitis aestivalis</i>	Grape, Summer	5	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 66 Cowardin Classification:

Remarks
 Greater than 50% hydrophytic vegetation present.

Hydrology

<input type="checkbox"/> Recorded Data (describe in remarks) <input type="checkbox"/> Stream, Lake, or Tide Gage <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >24 Depth to Saturated Soils(in.): >24	<i>Primary Wetland Hydrology Indicators</i> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in upper 12 inches <input type="checkbox"/> Water marks <input type="checkbox"/> Drift lines <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Drainage patterns in wetlands	<i>Secondary Hydrology Indicators</i> <input type="checkbox"/> Oxidized root channels <input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Local soil survey data <input type="checkbox"/> FAC-Neutral test <input type="checkbox"/> Other (explain in remarks)
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Remarks
 Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	7.5YR 4/2				Silt Loam

Hydric Soils Indicators

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic % in Surface Layer
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking
<input type="checkbox"/> Probable Aquatic Moist Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (explain in remarks)

Unit Name: Lobdell silt loam (Lb) Taxonomy: Fluvaquentic Eutrochrepts
 Drainage Class: [X] Field Observations match map

Remarks
 Indicators of hydric soils were not present.

Wetland Determination

Hydrophytic Vegetation Present This Data Point is a Wetland
 Hydric Soils Present
 Wetland Hydrology Present

Remarks
 This data point lacked hydric soils and wetland hydrology and therefore can not be considered a wetland.

Data Form
Routine Wetland Determination

Job Number: P403030081
 City:
 Wetland Data Point: DP-2

Project/Site: Vrooman Road
 Applicant/Owner: ODOT
 Investigator:

Date: February 15, 2005
 County: Lake
 State: Ohio
 Community ID:
 Station ID:
 Plot ID:

- Do normal circumstances exist on the site?
 Have vegetation, soils, or hydrology been disturbed?
 Is the area a potential problem area?

Vegetation

Dominant Species	Common Name	% Cover	Indicator
Herbaceous			
X <i>Geum canadense</i>	Avens, White	1	FACU
X <i>Fragaria virginiana</i>	Strawberry, Virginia	1	FACU
Shrub			
X <i>Rosa multiflora</i>	Rose, Multiflora	30	FACU
X <i>Viburnum trilobum</i>	Cranberrybush, American	5	FACW
Tree			
X <i>Prunus serotina</i>	Cherry, Black	5	FACU
X <i>Quercus palustris</i>	Oak, Pin	10	FACW
X <i>Malus pumila</i>	apple	50	upl

% Species that are OBL, FACW, or FAC (except FAC-): 28

Cowardin Classification:

Remarks

Less than 50% hydrophytic vegetation present.

Hydrology

- Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0
 Depth to Free Water in Pit(in.): >24
 Depth to Saturated Soils(in.): >24

Remarks

Indicators of wetland hydrology were not present.

Soils

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-18	A/B	7.5YR 4/2				Loamy Fine Sand

Hydric Soils Indicators

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic % in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (explain in remarks) |

Unit Name: Gosport silty clay loam
 Drainage Class:

Taxonomy: Typic Dystrochrepts
 Field Observations match map

Remarks

Indicators of hydric soils were not present.

Wetland Determination

- Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks

This data point lacked all three wetland criteria.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/22/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102208</u> <u>WET01</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>PFO</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>0.02 acre</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Juncus effusus</i>	Herb	FACW+	9.		
2. <i>Rosa multiflora</i>	Herb	FACU	10.		
3. <i>Maianthemum racemosum</i>	Herb	FACU	11.		
4. <i>Viburnum dentatum</i>	Herb	FACW-	12.		
5. <i>Scirpus atrovirens</i>	Herb	OBL	13.		
6. <i>Onoclea sensibilis</i>	Herb	FACW	14.		
7. <i>Lonicera tatarica</i>	Shrub	FACU	15.		
8. <i>Acer rubrum</i>	Tree	FAC	16.		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). <u>63%</u>					
Remarks:					

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream Lake or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>>12</u> Inches</p> <p>Depth to Saturated Soil: <u>9</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 In.</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks:	

SOILS

102208 WET01

Map Unit Name (Series and Phase): <u>Gosport silty clay loam, 25-70% slope</u> Drainage Class: <u>Well-drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Oxyaquic Dystrudepts</u>			Confirm Mapped Type? YES <u>x</u> NO <u> </u>		
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-12</u>	<u>A</u>	<u>10Y 5/0</u>	<u>2.5YR 4/6</u>	<u>Many/Prominent</u>	<u>Silt loam</u>
Hydric Soil Indicators:					
<u> </u> Histosol		<u> </u> Concretions			
<u> </u> Histic Epipedon		<u> </u> High Organic Content in Surface Layer (Sandy Soils)			
<u> </u> Sulfidic Odor		<u> </u> Organic Streaking in Sandy Soils			
<u> </u> Aquic Moisture Regime		<u> </u> Listed on Local Hydric Soils List			
<u> </u> Reducing Conditions		<u> </u> Listed on National Hydric Soils List			
<u> X</u> Gleyed or Low-Chroma Colors		<u> </u> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u> X </u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> X </u> NO <u> </u>
Wetland Hydrology Present? YES <u> X </u> NO <u> </u>	
Hydric Soils Present? YES <u> X </u> NO <u> </u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/22/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102208</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>Upland</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>n/a</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u><i>Solidago rugosa</i></u>	<u>Herb</u>	<u>FAC</u>	9. _____	_____	_____
2. <u><i>Virburnum dentatum</i></u>	<u>Herb</u>	<u>FACW-</u>	10. _____	_____	_____
3. <u><i>Vaccinium corymbosum</i></u>	<u>Shrub</u>	<u>FACW-</u>	11. _____	_____	_____
4. <u><i>Lonicera tatarica</i></u>	<u>Shrub</u>	<u>FACU</u>	12. _____	_____	_____
5. <u><i>Fraxinus americana</i></u>	<u>Tree</u>	<u>FACU</u>	13. _____	_____	_____
6. <u><i>Acer saccharum</i></u>	<u>Tree</u>	<u>FACU-</u>	14. _____	_____	_____
7. <u><i>Acer rubrum</i></u>	<u>Tree</u>	<u>FAC</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 57%

Remarks:

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream Lake or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><u>X</u> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>>14</u> Inches</p> <p>Depth to Saturated Soil: <u>>14</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><u>X</u> Oxidized Root Channels in Upper 12 In.</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Remarks:</p>	

SOILS

102208 UPL01

Map Unit Name (Series and Phase): <u>Gosport silty clay loam, 25-70% slope</u> Drainage Class: <u>Well-drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Oxyaquic Dystrudepts</u> Confirm Mapped Type? YES <u>x</u> NO <u> </u>					
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10	A	10YR 4/2	7.5YR 5/6	Many/Prominent	Silt loam
10-14	B	10YR 5/2	10YR 7/6	Many/Prominent	Silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer (Sandy Soils)			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u>X</u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> </u> NO <u>X</u>
Wetland Hydrology Present? YES <u> </u> NO <u>X</u>	
Hydric Soils Present? YES <u>X</u> NO <u> </u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/22/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102208</u> <u>WET02</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>PEM</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>0.03 acre</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u><i>Phragmites australis</i></u>	<u>Herb</u>	<u>FACW</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream Lake or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><u>X</u> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>>12</u> Inches</p> <p>Depth to Saturated Soil: <u>3</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p><u>X</u> Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><u>X</u> Oxidized Root Channels in Upper 12 In.</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
Remarks:	

SOILS**102208 WET02**

Map Unit Name (Series and Phase): <u>Darien silt loam, 1-4% slope</u> Drainage Class: <u>Somewhat poorly drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Aeric Endoaqualfs</u> Confirm Mapped Type? YES <u>x</u> NO <u> </u>					
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 3/2	7.5YR 4/4	Few/Prominent	Silt loam
Hydric Soil Indicators:					
<u> </u> Histosol			<u> X </u> Concretions		
<u> </u> Histic Epipedon			<u> </u> High Organic Content in Surface Layer (Sandy Soils)		
<u> </u> Sulfidic Odor			<u> </u> Organic Streaking in Sandy Soils		
<u> </u> Aquic Moisture Regime			<u> </u> Listed on Local Hydric Soils List		
<u> </u> Reducing Conditions			<u> </u> Listed on National Hydric Soils List		
<u> X </u> Gleyed or Low-Chroma Colors			<u> </u> Other (Explain in Remarks)		
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u> X </u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> X </u> NO <u> </u>
Wetland Hydrology Present? YES <u> X </u> NO <u> </u>	
Hydric Soils Present? YES <u> X </u> NO <u> </u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/22/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102208</u> <u>WET03</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>PSS</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>0.03 acre</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u><i>Juncus effusus</i></u>	<u>Herb</u>	<u>FACW+</u>	9. <u><i>Acer rubrum</i></u>	<u>Tree</u>	<u>FAC</u>
2. <u><i>Rosa multiflora</i></u>	<u>Herb</u>	<u>FACU</u>	10. _____	_____	_____
3. <u><i>Rubus allegheniensis</i></u>	<u>Herb</u>	<u>FACU</u>	11. _____	_____	_____
4. <u><i>Aster vimineus</i></u>	<u>Herb</u>	<u>FAC</u>	12. _____	_____	_____
5. <u><i>Toxicodendron radicans</i></u>	<u>Herb</u>	<u>FAC</u>	13. _____	_____	_____
6. <u><i>Solidago rugosa</i></u>	<u>Herb</u>	<u>FAC</u>	14. _____	_____	_____
7. <u><i>Viburnum dentatum</i></u>	<u>Herb</u>	<u>FACW-</u>	15. _____	_____	_____
8. <u><i>Vaccinium corymbosum</i></u>	<u>Shrub</u>	<u>FACW-</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 78%

Remarks: *Juncus effusus* is the dominant species.

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream Lake or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><u>X</u> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>>14</u> Inches</p> <p>Depth to Saturated Soil: <u>8</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p><u>X</u> Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><u>X</u> Oxidized Root Channels in Upper 12 In.</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
Remarks:	

SOILS**102208 WET03**

Map Unit Name (Series and Phase): <u>Darien silt loam, 1-4% slope</u> Drainage Class: <u>Somewhat poorly drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Aeric Endoaqualfs</u>			Confirm Mapped Type? YES <u>x</u> NO <u> </u>		
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-8	A	10YR 5/2	7.5YR 4/6	Many/Prominent	Silt loam
8-14	B	10YR 7/2	10YR 6/8	Many/Prominent	Silt loam
Hydric Soil Indicators:					
<u> </u> Histosol			<u> X </u> Concretions		
<u> </u> Histic Epipedon			<u> </u> High Organic Content in Surface Layer (Sandy Soils)		
<u> </u> Sulfidic Odor			<u> </u> Organic Streaking in Sandy Soils		
<u> </u> Aquic Moisture Regime			<u> </u> Listed on Local Hydric Soils List		
<u> </u> Reducing Conditions			<u> </u> Listed on National Hydric Soils List		
<u> X </u> Gleyed or Low-Chroma Colors			<u> </u> Other (Explain in Remarks)		
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u> X </u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> X </u> NO <u> </u>
Wetland Hydrology Present? YES <u> X </u> NO <u> </u>	
Hydric Soils Present? YES <u> X </u> NO <u> </u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/22/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102208</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>Upland</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>n/a</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Virburnum dentatum</i>	Herb	FACW-	9.		
2. <i>Toxicodendron radicans</i>	Herb	FAC	10.		
3. <i>Vaccinium corymbosum</i>	Shrub	FACW-	11.		
4. <i>Lonicera tatarica</i>	Shrub	FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks: UNK = unknown, not counted in percent

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream Lake or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>>14</u> Inches</p> <p>Depth to Saturated Soil: <u>>14</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 In.</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks:	

SOILS

102208 UPL03

Map Unit Name (Series and Phase): <u>Darien silt loam, 1-4% slope</u> Drainage Class: <u>Somewhat poorly drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Aeric Endoaqualfs</u>			Confirm Mapped Type? YES <u>x</u> NO <u> </u>		
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-14	A	10YR 4/3	10YR 6/6	Few/Prominent	Sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer (Sandy Soils)			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u>X</u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> </u> NO <u>X</u>
Wetland Hydrology Present? YES <u> </u> NO <u>X</u>	
Hydric Soils Present? YES <u> </u> NO <u>X</u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/23/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102308</u> <u>WET01</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>PEM</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>0.04 acre</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u><i>Eleocharis acicularis</i></u>	<u>Herb</u>	<u>OBL</u>	9. _____	_____	_____
2. <u><i>Echinochloa crus-galli</i></u>	<u>Herb</u>	<u>FACU</u>	10. _____	_____	_____
3. <u><i>Scirpus atrovirens</i></u>	<u>Herb</u>	<u>OBL</u>	11. _____	_____	_____
4. <u><i>Setaria pumila</i></u>	<u>Herb</u>	<u>FAC</u>	12. _____	_____	_____
5. <u><i>Rhynchospora sp.</i></u>	<u>Herb</u>	<u>OBL*</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 80%

Remarks: *Indicator based on location and distribution among other dominant species.

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream Lake or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><u>X</u> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>8</u> Inches</p> <p>Depth to Saturated Soil: <u>2</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p><u>X</u> Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><u>X</u> Oxidized Root Channels in Upper 12 In.</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
Remarks:	

SOILS**102308 WET01**

Map Unit Name (Series and Phase): <u>Conneaut silt loam, 0-1% slope</u> Drainage Class: <u>Poorly drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Aeric Epiaquepts</u> Confirm Mapped Type? YES <u>x</u> NO <u> </u>					
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10	A	10YR 3/2	10YR 5/8	Few/Prominent	Silt loam
10-14	B	10YR 4/1	10YR 6/8	Many/Prominent	Silt loam
Hydric Soil Indicators:					
<u> </u> Histosol			<u> X </u> Concretions		
<u> </u> Histic Epipedon			<u> </u> High Organic Content in Surface Layer (Sandy Soils)		
<u> </u> Sulfidic Odor			<u> </u> Organic Streaking in Sandy Soils		
<u> </u> Aquic Moisture Regime			<u> </u> Listed on Local Hydric Soils List		
<u> </u> Reducing Conditions			<u> </u> Listed on National Hydric Soils List		
<u> X </u> Gleyed or Low-Chroma Colors			<u> </u> Other (Explain in Remarks)		
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u> X </u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> X </u> NO <u> </u>
Wetland Hydrology Present? YES <u> X </u> NO <u> </u>	
Hydric Soils Present? YES <u> X </u> NO <u> </u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/23/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102308 UPL01</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>Upland</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>n/a</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Phleum pratense</i>	Herb	FACU	9.		
2. <i>Echinochloa crus-galli</i>	Herb	FACU	10.		
3. <i>Scirpus atrovirens</i>	Herb	OBL	11.		
4. <i>Setaria pumila</i>	Herb	FAC	12.		
5. <i>Plantago major</i>	Herb	FACU	13.		
6. <i>Polygonum persicaria</i>	Herb	FACW	14.		
7. <i>Acer rubrum</i>	Tree	FAC	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 57%

Remarks:

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream Lake or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>>14</u> Inches</p> <p>Depth to Saturated Soil: <u>>14</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 In.</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks:	

SOILS

102308 UPL01

Map Unit Name (Series and Phase): <u>Conneaut silt loam, 0-1% slope</u> Drainage Class: <u>Poorly drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Aeric Epiaquepts</u> Confirm Mapped Type? YES <u>x</u> NO <u> </u>					
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-14	A	10YR 4/1	7.5YR 5/6	Many/Prominent	Silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol			<input type="checkbox"/> Concretions		
<input type="checkbox"/> Histic Epipedon			<input type="checkbox"/> High Organic Content in Surface Layer (Sandy Soils)		
<input type="checkbox"/> Sulfidic Odor			<input type="checkbox"/> Organic Streaking in Sandy Soils		
<input type="checkbox"/> Aquic Moisture Regime			<input type="checkbox"/> Listed on Local Hydric Soils List		
<input type="checkbox"/> Reducing Conditions			<input type="checkbox"/> Listed on National Hydric Soils List		
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Other (Explain in Remarks)		
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u>x</u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> </u> NO <u>x</u>
Wetland Hydrology Present? YES <u> </u> NO <u>x</u>	
Hydric Soils Present? YES <u>x</u> NO <u> </u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/23/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102308</u> <u>WET02</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>PEM</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>0.09 acre</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u><i>Echinochloa crus-galli</i></u>	<u>Herb</u>	<u>FACU</u>	9. _____	_____	_____
2. <u><i>Polygonum persicaria</i></u>	<u>Herb</u>	<u>FACW</u>	10. _____	_____	_____
3. <u><i>Scirpus atrovirens</i></u>	<u>Herb</u>	<u>OBL</u>	11. _____	_____	_____
4. <u><i>Setaria pumila</i></u>	<u>Herb</u>	<u>FAC</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 75%

Remarks:

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream Lake or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><u>X</u> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>10</u> Inches</p> <p>Depth to Saturated Soil: <u>4</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p><u>x</u> Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><u>x</u> Oxidized Root Channels in Upper 12 In.</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
Remarks:	

SOILS**102308 WET02**

Map Unit Name (Series and Phase): <u>Conneaut silt loam, 0-1% slope</u> Drainage Class: <u>Poorly drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Aeric Epiaquepts</u> Confirm Mapped Type? YES <u>x</u> NO <u> </u>					
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 3/1	10YR 5/6	Many/Prominent	Silt loam
Hydric Soil Indicators:					
<u> </u> Histosol			<u> X </u> Concretions		
<u> </u> Histic Epipedon			<u> </u> High Organic Content in Surface Layer (Sandy Soils)		
<u> </u> Sulfidic Odor			<u> </u> Organic Streaking in Sandy Soils		
<u> </u> Aquic Moisture Regime			<u> </u> Listed on Local Hydric Soils List		
<u> </u> Reducing Conditions			<u> </u> Listed on National Hydric Soils List		
<u> X </u> Gleyed or Low-Chroma Colors			<u> </u> Other (Explain in Remarks)		
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <u> X </u> NO <u> </u>	Is this Sampling Point a Wetland? YES <u> X </u> NO <u> </u>
Wetland Hydrology Present? YES <u> X </u> NO <u> </u>	
Hydric Soils Present? YES <u> X </u> NO <u> </u>	
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site: <u>Vrooman Road Bridge Replacement project</u>	Date: <u>10/23/08</u>
Applicant/Owner: <u>Lake County Engineer</u>	County: <u>Lake</u>
Investigator(s): <u>M. Vanderhoof, K. Schroeder, D. White</u>	State: <u>Ohio</u>
Do normal circumstances exist on the site? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Wetland ID: <u>102308</u>
Is the site significantly disturbed? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Classification: <u>Upland</u>
Is the area a potential problem area? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Area: <u>n/a</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Phleum pratense</i>	Herb	FACU	9.		
2. <i>Echinochloa crus-galli</i>	Herb	FACU	10.		
3. <i>Setaria pumila</i>	Herb	FAC	11.		
4. <i>Daucus carota</i>	Herb	UPL	12.		
5. <i>Acer rubrum</i>	Sapling	FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 40%

Remarks:

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream Lake or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> Inches</p> <p>Depth to Free Water in Pit: <u>>14</u> Inches</p> <p>Depth to Saturated Soil: <u>>14</u> Inches</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 In.</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks:	

SOILS

102308 UPL02

Map Unit Name (Series and Phase): <u>Conneaut silt loam, 0-1% slope</u> Drainage Class: <u>Poorly drained</u>					
Field Observations					
Taxonomy (Subgroup): <u>Aeric Epiaquepts</u> Confirm Mapped Type? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>					
Profile Description:					
Depth (inches)	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-14	A	10YR 4/2	10YR 6/8	Many/Prominent	Silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer (Sandy Soils)			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Is this Sampling Point a Wetland? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Wetland Hydrology Present? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Hydric Soils Present? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
Remarks:	

APPENDIX D

ORAM FORMS

0	0
max 6 pts.	Subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to < 10.1 ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- 0.1 acres (0.04ha) (0 pts)

9	9
max 14 pts.	Subtotal

Metric 2. Upland Buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- VERY NARROW. Buffers average <10m «32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

12	21
max 30 pts.	Subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- High pH groundwater (5)
- Other groundwater (3)
- Precipitation (1)
- Seasonal/Intermittent surface water (3)
- Perennial surface water (lake or stream) (5) 3b.

3c. Maximum water depth. Select only one and assign score.

- >0.7 (27.6in) (3)
- 0.4 to 0.7m (15.7 to 27.6in) (2)
- <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- None or none apparent (12)
- Recovered (7)
- Recovering (3)
- Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- 100 year floodplain (1)
- Between stream/lake and other human use (1)
- Part of wetland/upland (e.g. forest), complex (1)
- Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- Semi- to permanently inundate/saturate (4)
- Regularly inundated/saturated (3)
- Seasonally inundated (2)
- Seasonally saturated in upper 30cm (12 in) (1)

Check all disturbances observed	
<input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input	<input type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input type="checkbox"/> other _____

14	35
max 20 pts.	Subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- None or none apparent (4)
- Recovered (3)
- Recovering (2)
- Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- Excellent (7)
- Very good (6)
- Good (5)
- Fair (3)
- Poor to fair (2)
- Poor (1)

4c. Habitat alteration. Score one or double check and average.

- None or none apparent (9)
- Recovered (6)
- Recovering (3)
- Recent or no recover (1)

Check all disturbances observed	
<input type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants	<input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input checked="" type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment

35

35

Subtotal this page

0

35

max 10 pts.

Subtotal

Metric 5. Specific Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See question 1 Qualitative Rating (-10)

5

40

max 20 pts.

Subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open Water
- Other _____

6b. Horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high (4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage.

- Extensive >75% cover (-5)
- Moderately 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/tussucks
- Coarse woody debris >15 cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality.
high	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality.

Mudflat and Open Water Class Quality

0	Absent or comprises <0.1ha (0.2471 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres or more)

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

40

GRAND TOTAL (max 100 pts.)

0	0
max 6 pts.	Subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to < 10.1 ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- 0.1 acres (0.04ha) (0 pts)

3	3
max 14 pts.	Subtotal

Metric 2. Upland Buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- VERY NARROW. Buffers average <10m «32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

4	7
max 30 pts.	Subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- High pH groundwater (5)
- Other groundwater (3)
- Precipitation (1)
- Seasonal/Intermittent surface water (3)
- Perennial surface water (lake or stream) (5) 3b.

3c. Maximum water depth. Select only one and assign score.

- >0.7 (27.6in) (3)
- 0.4 to 0.7m (15.7 to 27.6in) (2)
- <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- None or none apparent (12)
- Recovered (7)
- Recovering (3)
- Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- 100 year floodplain (1)
- Between stream/lake and other human use (1)
- Part of wetland/upland (e.g. forest), complex (1)
- Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- Semi- to permanently inundate/saturate (4)
- Regularly inundated/saturated (3)
- Seasonally inundated (2)
- Seasonally saturated in upper 30cm (12 in) (1)

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____

3	10
max 20 pts.	Subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- None or none apparent (4)
- Recovered (3)
- Recovering (2)
- Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- Excellent (7)
- Very good (6)
- Good (5)
- Fair (3)
- Poor to fair (2)
- Poor (1)

4c. Habitat alteration. Score one or double check and average.

- None or none apparent (9)
- Recovered (6)
- Recovering (3)
- Recent or no recover (1)

Check all disturbances observed	
<input type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input checked="" type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input checked="" type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

10
Subtotal this page

10

Subtotal this page

0 10

max 10 pts. Subtotal

Metric 5. Specific Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See question 1 Qualitative Rating (-10)

-5 5

max 20 pts. Subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open Water
- Other _____

6b. Horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high (4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage.

- Extensive >75% cover (-5)
- Moderately 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/tussucks
- Coarse woody debris >15 cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality.
high	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality.

Mudflat and Open Water Class Quality

0	Absent or comprises <0.1ha (0.2471 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres or more)

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

5

GRAND TOTAL (max 100 pts.)

0	0
max 6 pts.	Subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to < 10.1 ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- 0.1 acres (0.04ha) (0 pts)

3	3
max 14 pts.	Subtotal

Metric 2. Upland Buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- VERY NARROW. Buffers average <10m «32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

11	14
max 30 pts.	Subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- High pH groundwater (5)
- Other groundwater (3)
- Precipitation (1)
- Seasonal/Intermittent surface water (3)
- Perennial surface water (lake or stream) (5) 3b.

3c. Maximum water depth. Select only one and assign score.

- >0.7 (27.6in) (3)
- 0.4 to 0.7m (15.7 to 27.6in) (2)
- <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- None or none apparent (12)
- Recovered (7)
- Recovering (3)
- Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- 100 year floodplain (1)
- Between stream/lake and other human use (1)
- Part of wetland/upland (e.g. forest), complex (1)
- Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- Semi- to permanently inundate/saturate (4)
- Regularly inundated/saturated (3)
- Seasonally inundated (2)
- Seasonally saturated in upper 30cm (12 in) (1)

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____

14	28
max 20 pts.	Subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- None or none apparent (4)
- Recovered (3)
- Recovering (2)
- Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- Excellent (7)
- Very good (6)
- Good (5)
- Fair (3)
- Poor to fair (2)
- Poor (1)

4c. Habitat alteration. Score one or double check and average.

- None or none apparent (9)
- Recovered (6)
- Recovering (3)
- Recent or no recover (1)

Check all disturbances observed	
<input type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

28
Subtotal this page

28

Subtotal this page

0

28

max 10 pts.

Subtotal

Metric 5. Specific Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See question 1 Qualitative Rating (-10)

7

35

max 20 pts.

Subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open Water
- Other _____

6b. Horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high (4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage.

- Extensive >75% cover (-5)
- Moderately 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/tussucks
- Coarse woody debris >15 cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality.
high	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality.

Mudflat and Open Water Class Quality

0	Absent or comprises <0.1ha (0.2471 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres or more)

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

35

GRAND TOTAL (max 100 pts.)

0	0
max 6 pts.	Subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to < 10.1 ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- 0.1 acres (0.04ha) (0 pts)

4	4
max 14 pts.	Subtotal

Metric 2. Upland Buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- VERY NARROW. Buffers average <10m «32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

4	8
max 30 pts.	Subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- High pH groundwater (5)
- Other groundwater (3)
- Precipitation (1)
- Seasonal/Intermittent surface water (3)
- Perennial surface water (lake or stream) (5) 3b.

3c. Maximum water depth. Select only one and assign score.

- >0.7 (27.6in) (3)
- 0.4 to 0.7m (15.7 to 27.6in) (2)
- <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- None or none apparent (12)
- Recovered (7)
- Recovering (3)
- Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- 100 year floodplain (1)
- Between stream/lake and other human use (1)
- Part of wetland/upland (e.g. forest), complex (1)
- Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- Semi- to permanently inundate/saturate (4)
- Regularly inundated/saturated (3)
- Seasonally inundated (2)
- Seasonally saturated in upper 30cm (12 in) (1)

Check all disturbances observed	
<ul style="list-style-type: none"> <input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input 	<ul style="list-style-type: none"> <input type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input type="checkbox"/> other _____

3	11
max 20 pts.	Subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- None or none apparent (4)
- Recovered (3)
- Recovering (2)
- Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- Excellent (7)
- Very good (6)
- Good (5)
- Fair (3)
- Poor to fair (2)
- Poor (1)

4c. Habitat alteration. Score one or double check and average.

- None or none apparent (9)
- Recovered (6)
- Recovering (3)
- Recent or no recover (1)

Check all disturbances observed	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input checked="" type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants 	<ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input checked="" type="checkbox"/> farming <input checked="" type="checkbox"/> nutrient enrichment

11
Subtotal this page

11

Subtotal this page

0 11

max 10 pts. Subtotal

Metric 5. Specific Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See question 1 Qualitative Rating (-10)

1 12

max 20 pts. Subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open Water
- Other _____

6b. Horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high (4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage.

- Extensive >75% cover (-5)
- Moderately 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/tussucks
- Coarse woody debris >15 cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality.
high	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality.

Mudflat and Open Water Class Quality

0	Absent or comprises <0.1ha (0.2471 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres or more)

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

12

GRAND TOTAL (max 100 pts.)

0	0
max 6 pts.	Subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to < 10.1 ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- 0.1 acres (0.04ha) (0 pts)

2	2
max 14 pts.	Subtotal

Metric 2. Upland Buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
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- VERY NARROW. Buffers average <10m «32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

4	6
max 30 pts.	Subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- High pH groundwater (5)
- Other groundwater (3)
- Precipitation (1)
- Seasonal/Intermittent surface water (3)
- Perennial surface water (lake or stream) (5) 3b.

3c. Maximum water depth. Select only one and assign score.

- >0.7 (27.6in) (3)
- 0.4 to 0.7m (15.7 to 27.6in) (2)
- <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- None or none apparent (12)
- Recovered (7)
- Recovering (3)
- Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- 100 year floodplain (1)
- Between stream/lake and other human use (1)
- Part of wetland/upland (e.g. forest), complex (1)
- Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- Semi- to permanently inundate/saturate (4)
- Regularly inundated/saturated (3)
- Seasonally inundated (2)
- Seasonally saturated in upper 30cm (12 in) (1)

Check all disturbances observed	
<input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input	<input type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input type="checkbox"/> other _____

3	9
max 20 pts.	Subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- None or none apparent (4)
- Recovered (3)
- Recovering (2)
- Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- Excellent (7)
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Check all disturbances observed	
<input checked="" type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants	<input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input checked="" type="checkbox"/> farming <input checked="" type="checkbox"/> nutrient enrichment

9

Subtotal this page

9

Subtotal this page

0	9
max 10 pts.	Subtotal

Metric 5. Specific Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See question 1 Qualitative Rating (-10)

-4	5
max 20 pts.	Subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open Water
- Other _____

6b. Horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high (4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage.

- Extensive >75% cover (-5)
- Moderately 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/tussucks
- Coarse woody debris >15 cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
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Narrative Description of Vegetation Quality

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2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres or more)

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

5

GRAND TOTAL (max 100 pts.)

APPENDIX E
ENDANGERED SPECIES
COORDINATION



Ohio Department of Natural Resources

TED STRICKLAND, GOVERNOR

SEAN D. LOGAN, DIRECTOR

Division of Natural Areas and Preserves

Steven D. Maurer, Chief

2045 Morse Rd., Bldg. F-1

Columbus, OH 43229-6693

Phone: (614) 265-6453; Fax: (614) 267-3096

November 13, 2008

RECEIVED

NOV 17

Debra White
Michael Baker Jr., Inc.
1228 Euclid Ave., Suite 1050
Cleveland, OH 44115

Michael Baker Jr., Inc
Cleveland, Ohio

Dear Ms. White:

I have reviewed our Natural Heritage maps and files for the Vrooman Rd. Bridge Replacement project area, including a one mile radius, in Perry and Leroy Townships, Lake County, and on the Painesville Quad (113107). The numbers/letters on the list below correspond to the areas marked on the accompanying map. Common name, scientific name and status are given for each species. Status codes are defined as: E=endangered, T=threatened, P=potentially threatened and SC=species of concern.

Painesville Quad

- A. Conley Paradise Metropark - Lake Metroparks
- B. Grand State Scenic River
- C. Mason's Landing Park - Lake Metroparks
- D. Indian Point Park - Lake Metroparks
- E. Paine Falls Park - Lake Metroparks
1. *Epioblasma triquetra* - Snuffbox, E
Simpsonaias ambigua - Salamander Mussel, SC
2. Mussel Bed
3. *Sparganium androcladum* - Keeled Bur-reed, T
4. *Carex straminea* - Straw Sedge, P
5. *Hypericum ellipticum* - Few-flowered St. John's-wort, T
6. *Carex straminea* - Straw Sedge, P
Rheopelopia acra - midge, E
Potamogeton natans - Floating Pondweed, P
7. *Castanea dentata* - American Chestnut, P
8. Hemlock-Hardwood Forest Plant Community
Rheopelopia acra - midge, E
9. *Cornus rugosa* - Round-leaved Dogwood, P
10. Mussel Bed
Pleuroberma sintoxia - Round Pigtoe, SC
Lampsilis fasciola - Wavy-rayed Lampmussel, SC
Truncilla truncata - Deertoe, SC
Epioblasma triquetra - Snuffbox, E
Simpsonaias ambigua - Salamander Mussel, SC
11. *Amelanchier sanguinea* - Rock Serviceberry, P



Debra White
November 13, 2008
Page 2

This project is located within 1000 feet of a state designated scenic river. The approval of the Director of ODNR may be required in accordance with Ohio Revised Code section 1517.16. Please contact the Scenic River Manager in the project area for further information. Steve Roloson can be reached at 330-527-4184.

There are no state nature preserves at the project site. We are unaware of any geologic features, state parks, state forests or state wildlife areas within a one mile radius of the project area. We also have no records for Indiana Bat (*Myotis sodalis*, state endangered, federal endangered) capture locations or hibernacula within a ten mile radius of the project site.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 if I can be of further assistance.

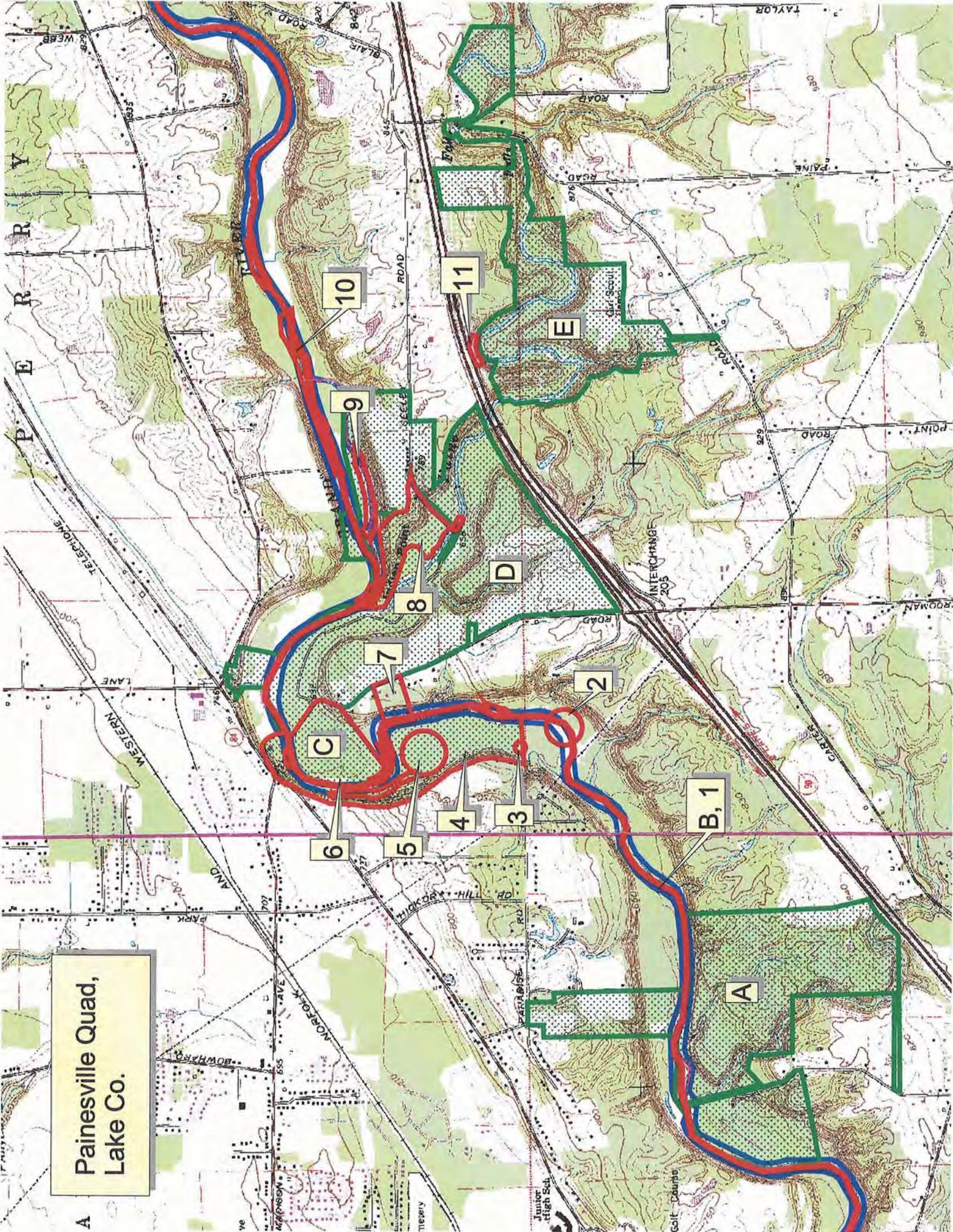
Sincerely,

A handwritten signature in blue ink, appearing to read "Debbie Woischke".

Debbie Woischke, Ecological Analyst
Natural Heritage Program

cc Steve Roloson, ODNR-DNAP, Northeast Ohio Scenic River Manager

**A Painesville Quad,
Lake Co.**



Ohio Natural Heritage Database
Rare Plant List for Lake County
As of 06/04/2008

<u>Scientific Name</u>	<u>Common Name</u>	<u>Last Observed</u>	<u>State Status</u>	<u>Federal Status</u>
Vascular Plants:				
<i>Acorus americanus</i>	American Sweet-flag	2004	P	
<i>Amelanchier sanguinea</i>	Rock Serviceberry	1998	P	
<i>Ammophila breviligulata</i>	American Beach Grass	2000	T	
<i>Arabis lyrata</i>	Lyre-leaved Rock Cress	1996	T	
<i>Aralia hispida</i>	Bristly Sarsaparilla	2001	E	
<i>Astragalus neglectus</i>	Cooper's Milk-vetch	1980	E	
<i>Cakile edentula</i>	Inland Sea Rocket	2003	P	
<i>Callitriche verna</i>	Vernal Water-starwort	2001	T	
<i>Carex aquatilis</i>	Leafy Tussock Sedge	1999	P	
<i>Carex argyrantha</i>	Silvery Sedge	1990	P	
<i>Carex aurea</i>	Golden-fruited Sedge	1983	T	
<i>Carex lupuliformis</i>	False Hop Sedge	1998	P	
<i>Carex pallescens</i>	Pale Sedge	1984	T	
<i>Carex projecta</i>	Necklace Sedge	1986	T	
<i>Carex straminea</i>	Straw Sedge	2001	P	
<i>Castanea dentata</i>	American Chestnut	2001	P	
<i>Comptonia peregrina</i>	Sweet-fern	1967	E	
<i>Corallorhiza maculata</i>	Spotted Coral-root	1999	P	
<i>Cornus rugosa</i>	Round-leaved Dogwood	2001	P	
<i>Corydalis sempervirens</i>	Rock-harlequin	1990	P	
<i>Dryopteris celsa</i>	Log Fern	2001	E	
<i>Eleocharis parvula</i>	Least Spike-rush	2001	E	
<i>Euphorbia polygonifolia</i>	Seaside Spurge	2003	P	
<i>Fallopia cilinodis</i>	Mountain Bindweed	1990	E	
<i>Gentianopsis crinita</i>	Fringed Gentian	2000	P	
<i>Gentianopsis procera</i>	Small Fringed Gentian	1982	P	
<i>Hieracium umbellatum</i>	Canada Hawkweed	2001	T	
<i>Hypericum canadense</i>	Canada St. John's-wort	2001	E	
<i>Hypericum ellipticum</i>	Few-flowered St. John's-wort	2001	T	
<i>Juncus alpinus</i>	Alpine Rush	1993	P	
<i>Juncus balticus</i>	Baltic Rush	1997	P	
<i>Larix laricina</i>	Tamarack	1953	P	
<i>Lathyrus japonicus</i>	Inland Beach Pea	2003	T	
<i>Lathyrus ochroleucus</i>	Yellow Vetchling	2001	E	
<i>Lipocarpa micrantha</i>	Dwarf Bulrush	1997	T	
<i>Melampyrum lineare</i>	Cow-wheat	1989	T	
<i>Najas gracillima</i>	Thread-like Naiad	2001	E	
<i>Oenothera oakesiana</i>	Oakes' Evening-primrose	2003	P	
<i>Oenothera parviflora</i>	Small-flowered Evening-primrose	2003	P	

Ohio Natural Heritage Database
Rare Plant List for Lake County
As of 06/04/2008

<u>Scientific Name</u>	<u>Common Name</u>	<u>Last Observed</u>	<u>State Status</u>	<u>Federal Status</u>
Vascular Plants:				
<i>Oryzopsis asperifolia</i>	Large-leaved Mountain-rice	2001	T	
<i>Oxalis montana</i>	White Wood-sorrel	1977	E	
<i>Persicaria robustior</i>	Coarse Smartweed	1999	P	
<i>Phegopteris connectilis</i>	Long Beech Fern	2001	P	
<i>Phragmites australis ssp. americanus</i>	American Reed Grass	2004	T	
<i>Physalis virginiana</i>	Virginia Ground-cherry	1977	P	
<i>Piptatherum racemosum</i>	Mountain-rice	1989	P	
<i>Potamogeton natans</i>	Floating Pondweed	2003	P	
<i>Potamogeton richardsonii</i>	Richardson's Pondweed	1987	P	
<i>Potamogeton zosteriformis</i>	Flat-stemmed Pondweed	1987	P	
<i>Potentilla paradoxa</i>	Bushy Cinquefoil	1997	T	
<i>Ranunculus fascicularis</i>	Early Buttercup	1986	P	
<i>Schizachyrium littorale</i>	Coastal Little Bluestem	2000	E	
<i>Shepherdia canadensis</i>	Canada Buffalo-berry	2001	P	
<i>Solidago squarrosa</i>	Leafy Goldenrod	1985	T	
<i>Sparganium androcladum</i>	Keeled Bur-reed	2001	T	
<i>Spiranthes lucida</i>	Shining Ladies'-tresses	1983	P	
<i>Toxicodendron rydbergii</i>	Northern Poison-ivy	1991	E	
<i>Triplasis purpurea</i>	Purple Sand Grass	2003	P	
<i>Viburnum alnifolium</i>	Hobblebush	2001	P	
<i>Viola lanceolata</i>	Lance-leaved Violet	2001	P	

Number of rare plant species for this county: 60

APPENDIX F

PHOTOGRAPHS



1. Stream 1 - Looking east (upstream) at a portion of the Grand River.



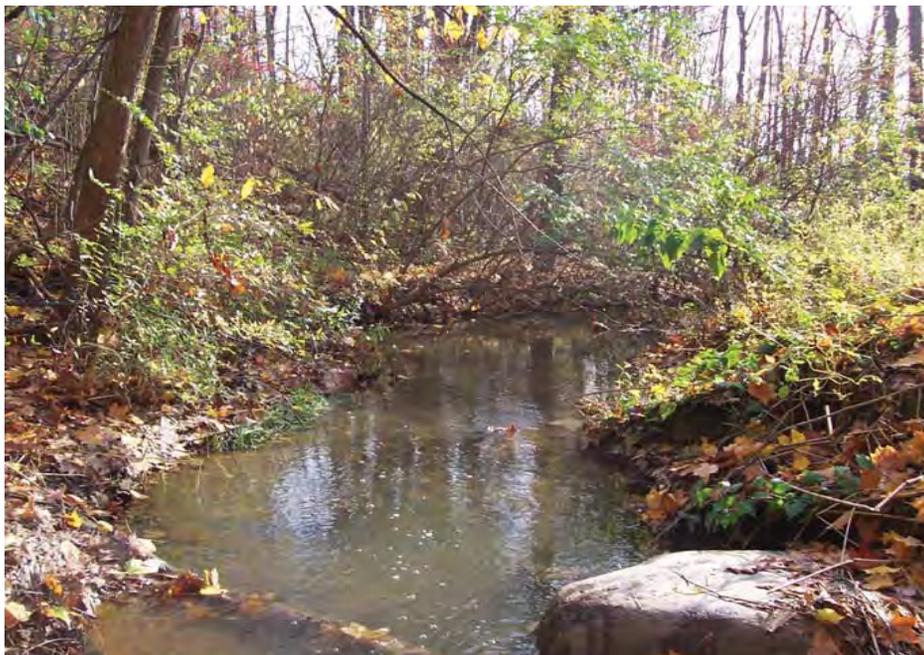
2. Stream 1 - Looking east (upstream) at a portion of the Grand River.



3. Stream 1 - Looking east (upstream) at a portion of the Grand River.



4. Stream 2 - Looking south (downstream) at an unnamed tributary to the Grand River.



5. Stream 2 -Looking southwest (downstream) at an unnamed tributary to the Grand River.



6. Stream2 - Looking Northeast (upstream) at an unnamed tributary to the Grand River.



7. Wetland A-Looking east at PFO habitat of this adjacent wetland.



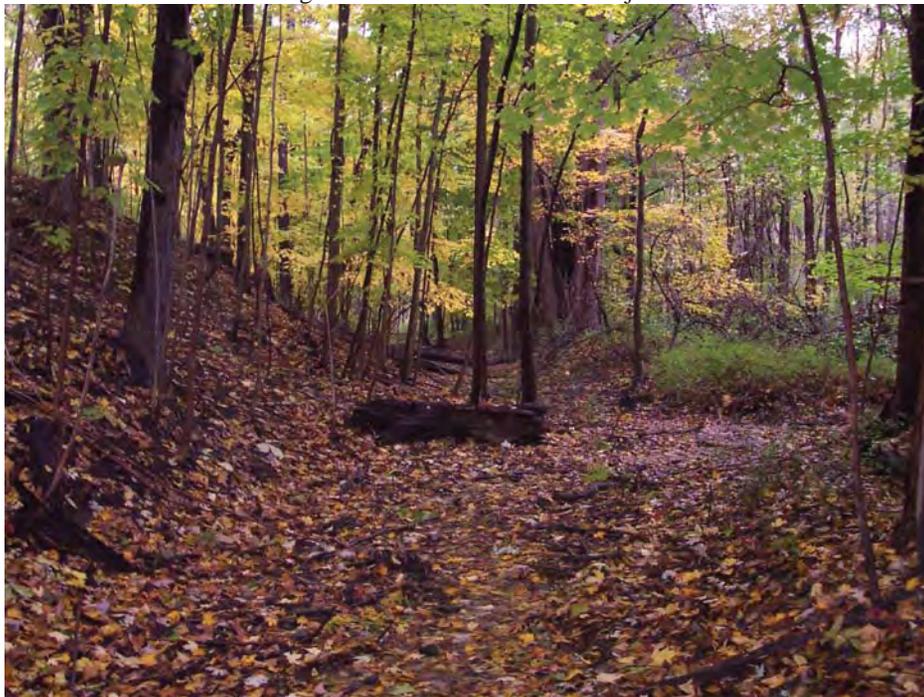
8. Wetland B-Looking north at PFO habitat of this adjacent wetland.



9. Wetland C-Looking east at PFO habitat of this adjacent wetland.



10. Wetland D-Looking northeast at PFO habitat of this adjacent wetland.



11. Wetland E-Looking southwest at PFO habitat of this adjacent wetland.



12. Wetland F-Looking north at PEM habitat of this adjacent wetland.



13. Wetland G-Looking northwest at PEM habitat of this adjacent wetland.



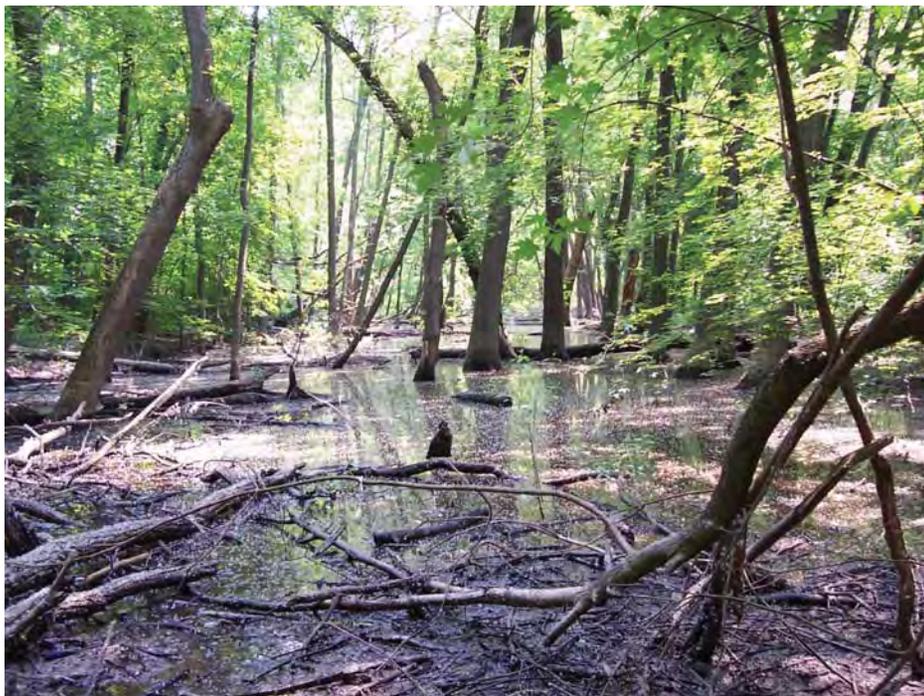
14. Wetland H-Looking southwest at PFO habitat of this adjacent wetland.



15. Wetland I-Looking north at PFO habitat of this adjacent wetland.



16. Wetland J-Looking north at PFO habitat of this adjacent wetland.



17. Wetland K-Looking east at PFO habitat of this adjacent wetland.



18. Wetland L-Looking northeast at PSS habitat of this adjacent wetland.



19. Wetland M-Looking west at PFO habitat of this adjacent wetland.



20. Wetland N-Looking northwest at PEM habitat of this adjacent wetland.



21. Non-jurisdictional southwest ditch recently dredged through upland soils.



22. View looking north at DP 2 upland forest.



23. View looking north at agriculture field with residential in background.



24. View looking north at landscape nursery field.



25. Wetland 1 – Looking west – October 2008.



26. Wetland 2 – Looking west – October 2008.



27. Wetland 3 – North facing view – October 2008.



28. Wetland 4 – South facing view – October 2008.



29. Wetland 5 – North facing view – October 2008.



30. West facing view of mussel survey area (east side of bridge).



31. Stream 3 – East facing view – October 2008.



32. Stream 3 – Sampling location – October 2008.



Front facing view of Mucket (*Actinonaias ligamentina*).



Rear facing view of *Actinonaias ligamentina*.



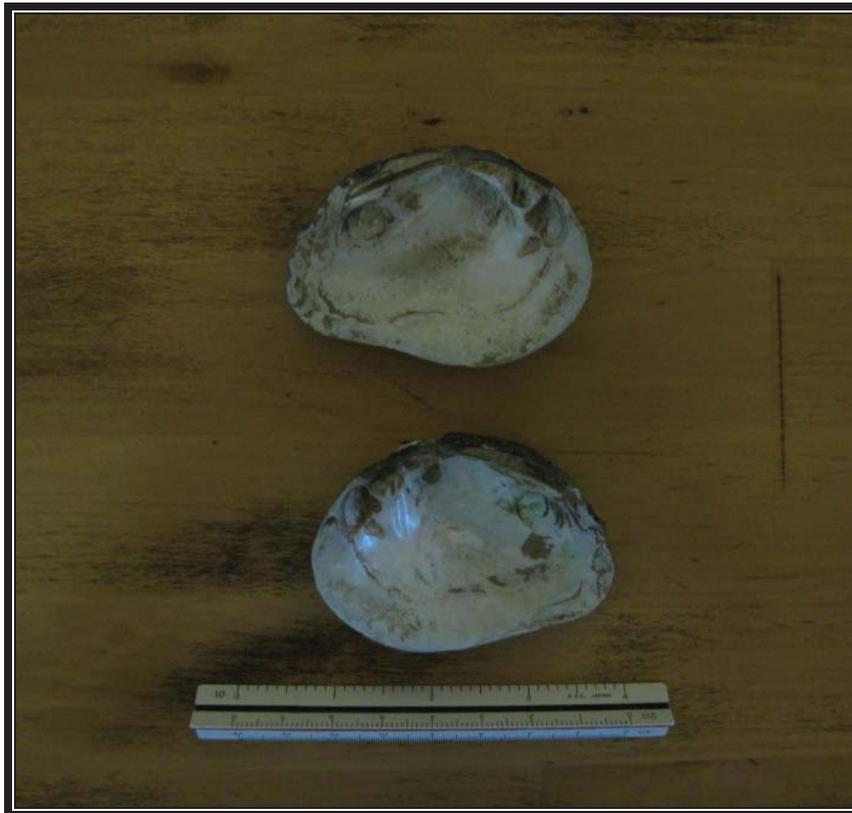
Front facing view of spike (*Elliptio dilatata*).



Rear facing view of *Elliptio dilatata*.



Front facing view of Wabash pigtoe (*Fusconaia flava*).



Rear facing view of *Fusconaia flava*.



Front facing view of Eastern lampmussel (*Lampsilis radiata*).



Rear facing view of *Lampsilis radiata*.



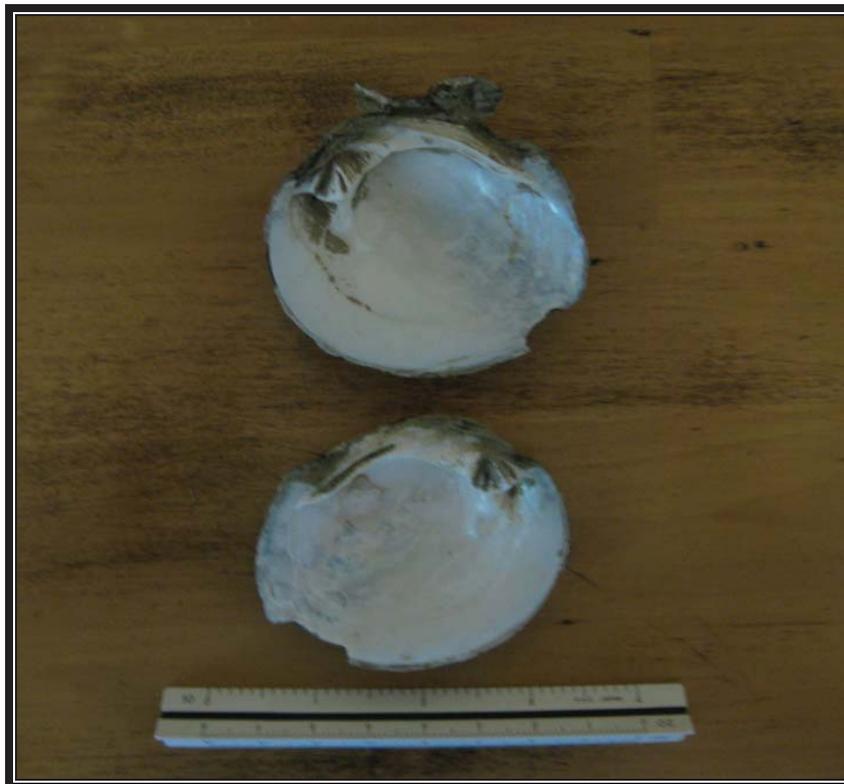
Front facing view of fluted shell (*Lasmigona costata*).



Rear facing view of *Lasmigona costata*.



Front facing view of round hickorynut (*Obovaria subrotunda*).



Rear facing view of *Obovaria subrotunda*.



Front facing view of round pig-toe (*Pleurobema sintoxia*) juvenile.



Rear facing view of *Pleurobema sintoxia* (juvenile).



Front facing view of pink heelsplitter (*Potamilus alatus*).



Rear facing view of *Potamilus alatus*.



Front facing view of kidneyshell (*Ptychobranchus fasciolaris*).



Rear facing view of *Ptychobranchus fasciolaris*.



Front facing view of rainbow (*Villosa iris*).



Rear facing view of *Villosa iris*.

Indiana Bat (Federally Endangered, Ohio Endangered)

The proposed project area is located within the range of the federally endangered Indiana bat in the Northeastern Management Unit as defined by the USFWS biological opinion (USFWS 2007). This species roosts in living or dead trees with cavities or shedding bark and feeds along wooded stream corridors. Suitable roost trees for the Indiana bat are present within most of the onsite forested community and some of the successional forest areas. The study area contains shagbark hickory trees and/or dead or living trees with cavities, exfoliating or peeling bark or broken limbs. If these characteristics are only found on the branches of the tree, the branches must be at least 8 inches in diameter at the site of the habitat characteristics. Maternity Roost Trees must have solar exposure and must be within site distance of at least one other potential maternity roost tree. These trees must also be part of a forested area or within a fence row of trees at least two trees wide or connected to a travel corridor or larger forested area. Indiana bat habitat field surveys were conducted on July 14, 23 and 30 of 2009 within the preliminary construction limits of Alignment A and Alignment B. Potential Indiana bat roost trees and potential maternity roost trees were identified and marked using a submeter accurate GPS.

A total of 81 roost trees and eight maternity roost trees were identified within the proposed alignments that may be impacted by the proposed project. Alternative A has 52 roost trees and six maternity roost trees and Alternative B has 55 roost trees and six maternity roost tree on Alternative B. Maternity Roost Tree and Roost Tree Mapping can be found in Appendix A and photographs can be found in Appendix B.

Maternity Roost Tree 1 is found along side SR 84. It's a large tree along the hillside. The tree has lots of dead limbs and afternoon solar exposure (Appendix B, Figure 1 and 2).

Maternity Roost Tree 2 is found at the bottom on the hillside within the flood plain. The tree was dead with exfoliating bark. It was located in a small opening in the woods thus this tree got more solar exposure than the trees surrounding it (Appendix B, Figure 3 and 4).

Maternity Roost Tree 3 is found just off the road side. This tree may be missed by construction. The tree is dead with broken branches, cavities and exfoliating bark. Because of its location on the crest of the steep hillside it receives lots of solar exposure (Appendix B, Figure 5 and 6).

Maternity Roost Tree 4 is found on Alignment B within the woodlot. The large tree had lots of potential habitat but may have limited solar exposure (Appendix B, Figure 7 and 8).

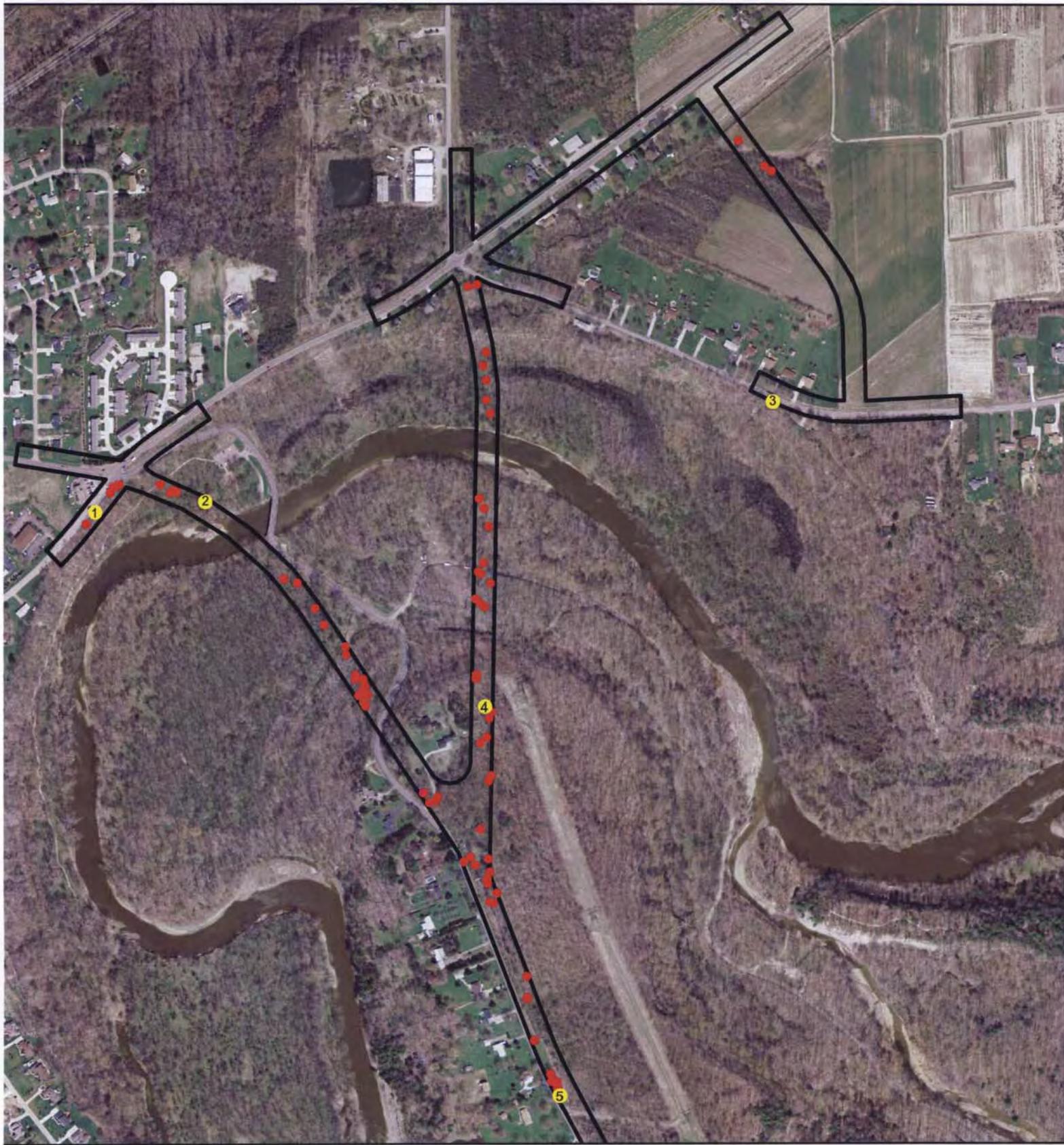
Maternity Roost Tree 5 is found along Vrooman Road. It may have been a yard tree but no house exists in this area now. The tree has lots of potential habitat that includes cavities, broken branches and exfoliating bark. The tree gets solar exposure most of the day (Appendix B, Figure 9 and 10).

Maternity Roost Tree 6, 7 and 8 is found in a densely forested area. Only pictures of MRT 6 are included in the report as pictures of 7 and 8 did not turn out. All three of these trees appear to be old yard trees. Only the foundation of the house exists on this site now. All three trees had great potential habitat for bats but may also be limited to bat usage by the limited solar exposure (Appendix B, Figure 11 and 12).

Refer to Indiana bat tree mapping and Indiana bat habitat photos for documentation of trees and suitable habitat identified during the field investigation. Photographs only show representative trees as so many roost trees were found during the field survey.

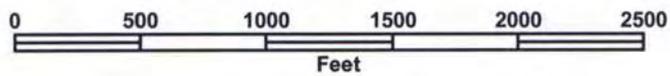
APPENDIX A

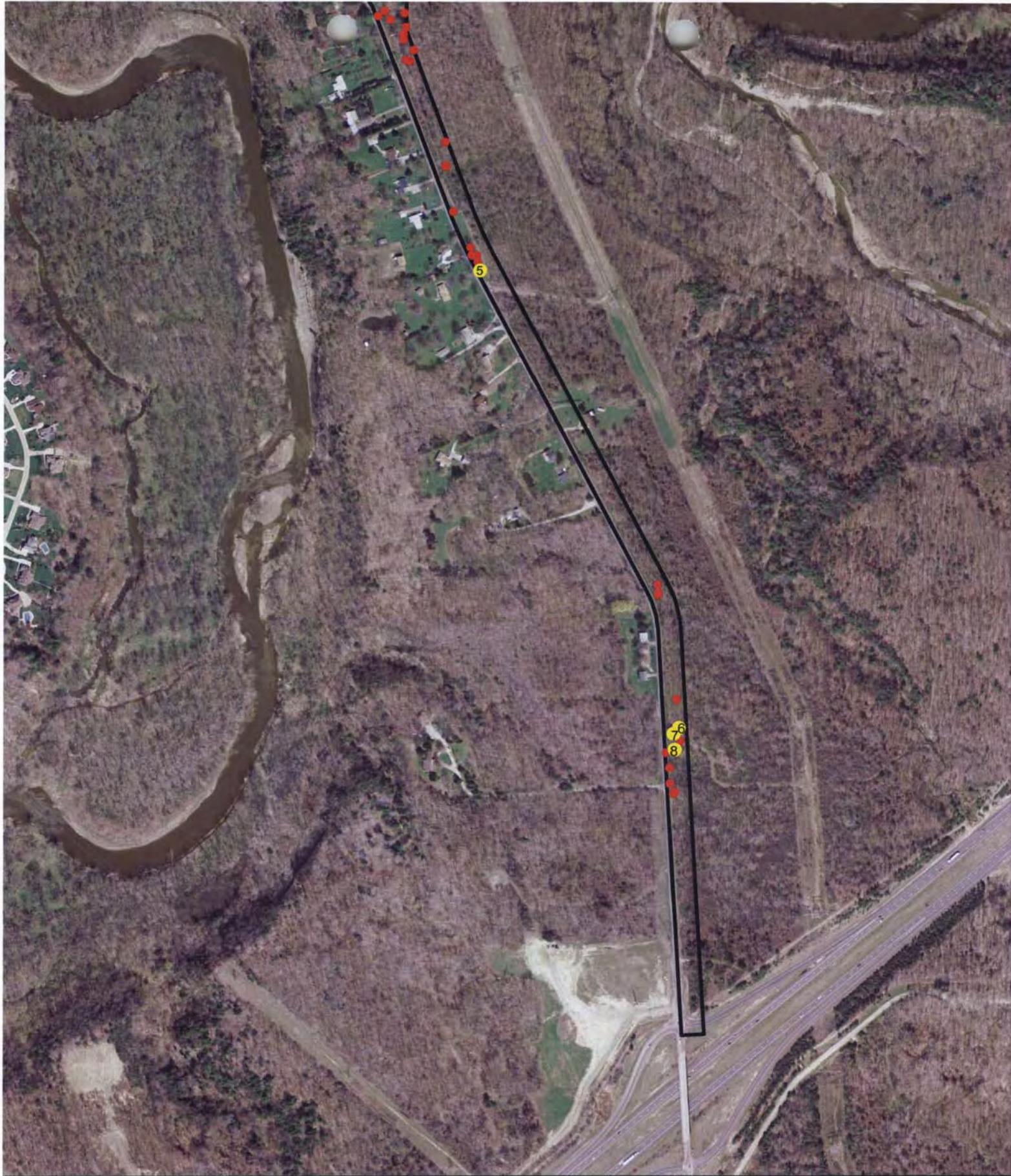
Bat Tree Location Mapping



Legend

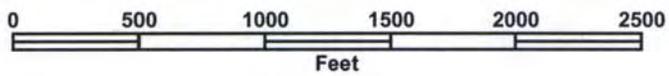
-  Maturity Roost Trees
-  Roost Trees
-  100ft corridor





Legend

- Maturity Roost Trees
- Roost Trees
- 100ft corridor



APPENDIX B

Photographs



Figure 1-2. MRT 1



Figure 3-4 - MRT 2



Figure 5-6 - MRT 3



Figure 7-8 - MRT 4

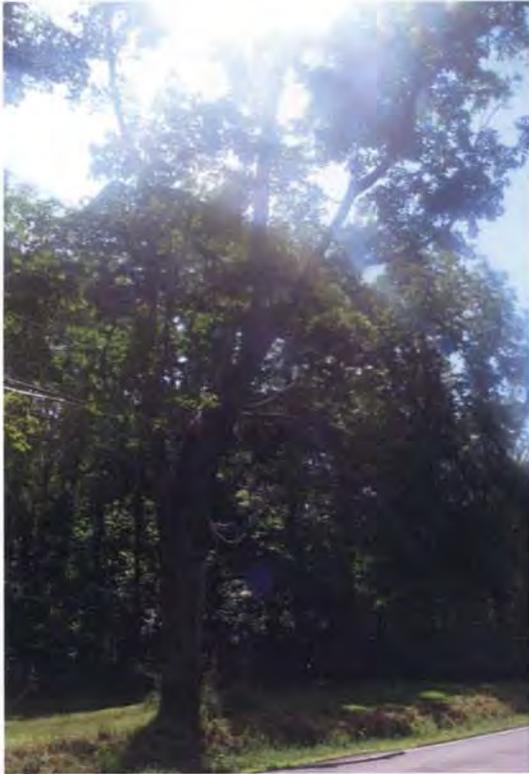


Figure 9-10 – MRT 5

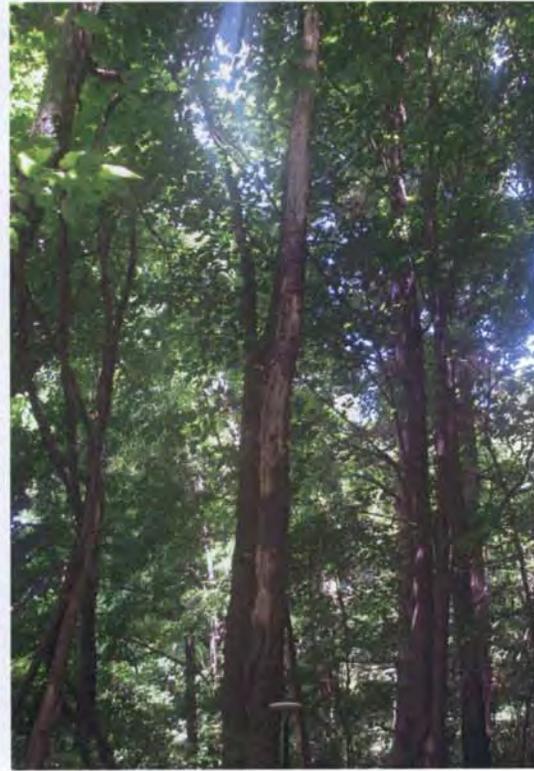


Figure 11-12 - MRT 6



Figure 13 - Roost tree near MRT 6, 7 and 8



Figure 14 - Roost tree with limited bark



Figure 15-16 - Examples of Roost trees with the corridor



Figure 17-18 - Roost trees within the corridor



Figure 19-20 - Roost trees within the corridors

APPENDIX C

Mitigation Site Parcel Data and Mapping

Data For Parcel 03A0020000050

Base Land Valuation Sales Sketch Tax Improvements Permit Residential Agricultural Commercial

Base Data

Parcel: 03A0020000050
Owner: R W SIDLEY INC
Address: S RIDGE RD



Mailing Address

Mailing Name: R W SIDLEY INC
Address: BOX 150
City State Zip: PAINESVILLE OH 44077

Geographic

City: UNINCORPORATED
Township: PERRY TOWNSHIP
School District: PERRY LSD

Legal

Neighborhood: 03R13000	Legal Acres: 16.7
Legal Description: L[20 A[MADISON AVE EST	Land Use: (502) R - RESIDENTIAL, 10-19.99 AC
Map Number: 0-0-1-0	Property Class: RESIDENTIAL
	Range Township Section: 0-0-0

Valuation

	Appraised	Assessed (35%)
Land Value:	\$15,740.00	\$5,510.00
Building Value:	\$0.00	\$0.00
Total Value:	\$15,740.00	\$5,510.00
CAUV Value:		\$0.00
Taxable Value:		\$5,510.00

Tax Credits

2.5% Homesite Rollback: NO
Homestead Reduction: NO

Notes

Notes: CURRENT DEED (BOOK/PAGE): 0628/0021

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CAMA database last updated 9/27/2009 11:42:47 PM.



Property lines are graphic representations and are not survey accurate. Lake County assumes no responsibility for the information contained on this page. Questions may be directed to the Tax Map Office (440) 350-2501.