0 50 100 Feet

**SCALE:** 1 " = 100 '

- Delineated Stream
- Delineated Wetland
- Delineated Wetland Boundary
- Right-Of-Way (ROW) - *[Existing]*
- Right-Of-Way (ROW) - *[Proposed]*
- Temporary Workspace (TWS)

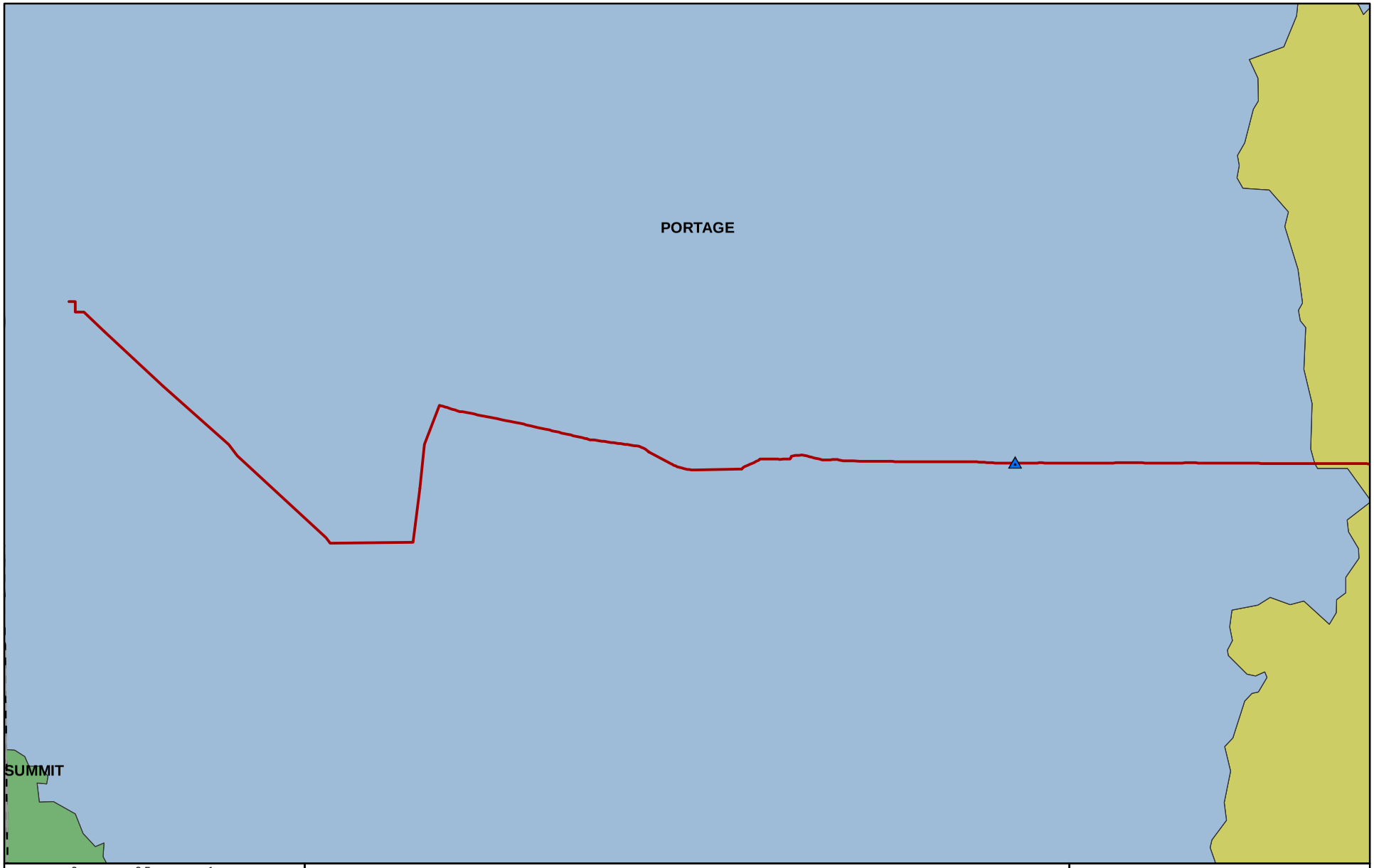
N

# WETLAND LOCATION MAP
# ALLEGHENY ACCESS (Mogadore-Vanport)
# USACE BUFFALO DISTRICT

WETLAND CROSSING: ***DN***

**SOURCE:** United States Army Corps of Engineers (USACE)
Bing Maps Web Mapping Service (Aerial)

**CREATED BY:** STV Energy Services, Inc.




0 0.5 1 Miles

**SCALE:** 1 inch = 1 mile

- Mogadore-Vanport Alignment
- County Boundary
- Stream/Wetland Location
- USACE - Buffalo District
- USACE - Huntington District
- USACE - Pittsburgh District

N

# STREAM and WETLAND OVERVIEW MAP
# ALLEGHENY ACCESS (Mogadore-Vanport)
# USACE BUFFALO DISTRICT

STREAM / WETLAND: ***DN***

**SOURCE:** United States Army Corps of Engineers (USACE)
United States Census Bureau (TIGER/Line Data)

**CREATED BY:** STV Energy Services, Inc.

STV 100 Years

**PHOTOGRAPH 1**

Wetland DN facing east.

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Mogadore to Vanport Pipeline Project City/County: Portage Sampling Date: 6-20-12
Applicant/Owner: Sunoco Pipeline LP State: Ohio Sampling Point: Wet.-DN
Investigator(s): Dotty Daly & Andrew Thompson Section, Township, Range: OH91 T1N R8W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 0-1% Lat.: 41° 02' 52.20"N Long.: 81° 15' 04.84"W Datum: NAD 83
Soil Map Unit Name ReB-Ravenna silt loam, 2-6% slopes NWI Classification: U
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? No
(If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

| | | | |
|---|---|---|---|
| Hydrophytic vegetation present? | Y | **Is the sampled area within a wetland?** | Y |
| Hydric soil present? | Y | | |
| Wetland hydrology present? | Y | If yes, optional wetland site ID: | |

Remarks: (Explain alternative procedures here or in a separate report.)

Previously disturbed

### HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)

| | | | | | |
|---|---|---|---|---|---|
| | Surface Water (A1) | | Water-Stained Leaves (B9) | | Surface Soil Cracks (B6) |
| | High Water Table (A2) | | Aquatic Fauna (B13) | | Drainage Patterns (B10) |
| | Saturation (A3) | | Marl Deposits (B15) | | Moss Trim Lines (B16) |
| | Water Marks (B1) | | Hydrogen Sulfide Odor (C1) | | Dry-Season Water Table (C2) |
| | Sediment Deposits (B2) | | Oxidized Rhizospheres on Living | | Crayfish Burrows (C8) |
| | Drift Deposits (B3) | X | Roots (C3) | | Saturation Visible on Aerial Imagery |
| | Algal Mat or Crust (B4) | | Presence of Reduced Iron (C4) | | (C9) |
| | Iron Deposits (B5) | | Recent Iron Reduction in Tilled | | Stunted or Stressed Plants (D1) |
| | Inundation Visible on Aerial | | Soils (C6) | | Geomorphic Position (D2) |
| | Imagery (B7) | | Thin Muck Surface (C7) | | Shallow Aquitard (D3) |
| | Sparsely Vegetated Concave | | Other (Explain in Remarks) | | FAC-Neutral Test (D5) |
| | Surface (B8) | | | | Microtopographic Relief (D4) |

Secondary Indicators (minimum of two required)

Field Observations:

| | | | | | | |
|---|---|---|---|---|---|---|
| Surface water present? | Yes | | No | X | Depth (inches): | |
| Water table present? | Yes | | No | X | Depth (inches): | |
| Saturation present? (includes capillary fringe) | Yes | | No | X | Depth (inches): | |

**Wetland hydrology present?** Y

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Large phragmites stand, herbaceous fringe on edges. Located in the middle of a corn field.

**VEGETATION** - Use scientific names of plants

**Sampling Point:** Wet.-DN

| Tree Stratum | Plot Size ( ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Sapling/Shrub Stratum | Plot Size ( 15' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Herb Stratum | Plot Size ( 5' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Phragmites australis* | 40 | Y | FACW |
| 2 | *Cyperus diandrus* | 25 | Y | FACW |
| 3 | *Juncus tenuis* | 20 | Y | FAC |
| 4 | *Solidago canadensis* | 7 | N | FACU |
| 5 | *Euthamia graminifolia* | 5 | N | FACW |
| 6 | *Erigeron philadelphicus* | 3 | N | FACW |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 100 | = Total Cover | |

| Woody Vine Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 | = Total Cover | |

**50/20 Thresholds**

| | 20% | 50% |
|---|---|---|
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 20 | 50 |
| Woody Vine Stratum | 0 | 0 |

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

| | | | | |
|---|---|---|---|---|
| OBL species | 0 | x 1 = | 0 | |
| FACW species | 73 | x 2 = | 146 | |
| FAC species | 20 | x 3 = | 60 | |
| FACU species | 7 | x 4 = | 28 | |
| UPL species | 0 | x 5 = | 0 | |
| Column totals | 100 | (A) | 234 | (B) |

Prevalence Index = B/A = 2.34

**Hydrophytic Vegetation Indicators:**

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)

Other species in wooded portion of the wetland include sensitive fern and stinging nettle.

**SOIL** **Sampling Point:** Wet.-DN

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (Inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type* | Loc** | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-16 | 10YR 5/2 | | | | | | clay loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Suface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: None
Depth (inches): _____

**Hydric soil present?** Y

Remarks:

Small wetland edge of woods and in ROW.

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Mogadore to Vanport Pipeline Project City/County: Portage Sampling Date: 6-20-12
Applicant/Owner: Sunoco Pipeline LP State: Ohio Sampling Point: Up.-DN
Investigator(s): Dotty Daly & Andrew Thompson Section, Township, Range: OH91 T1N R8W
Landform (hillslope, terrace, etc.): Plains Local relief (concave, convex, none): none
Slope (%): 0-1% Lat.: 41° 02' 52.20"N Long.: 81° 15' 04.84"W Datum: NAD 83
Soil Map Unit Name ReB_ Ravenna siltl loam, 2-6% NWI Classification: U
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X , soil ____ , or hydrology ____ significantly disturbed? Are "normal
Are vegetation ____ , soil ____ , or hydrology ____ naturally problematic? circumstances" present? No
(If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

| | | | |
|---|---|---|---|
| Hydrophytic vegetation present? | N | **Is the sampled area within a wetland?** | N |
| Hydric soil present? | N | | |
| Wetland hydrology present? | N | If yes, optional wetland site ID: | |

Remarks: (Explain alternative procedures here or in a separate report.)

Previously disturbed

### HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

| | | | | | |
|---|---|---|---|---|---|
| Surface water present? | Yes | ____ | No | X | Depth (inches): ____ |
| Water table present? | Yes | ____ | No | X | Depth (inches): ____ |
| Saturation present? (includes capillary fringe) | Yes | ____ | No | X | Depth (inches): ____ |

**Wetland hydrology present?** N

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

soil moist

Remarks:

**VEGETATION** - Use scientific names of plants

**Sampling Point:** Up.-DN

| Tree Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Sapling/Shurb Stratum | Plot Size ( 15' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Herb Stratum | Plot Size ( 5' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Zea mays* | 85 | Y | UPL |
| 2 | *Leersia oryzoides* | 10 | N | OBL |
| 3 | *Taraxacum officinale* | 5 | N | FACU |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 100 | = Total Cover | |

| Woody Vine Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 | = Total Cover | |

**50/20 Thresholds**

| | 20% | 50% |
|---|---|---|
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 20 | 50 |
| Woody Vine Stratum | 0 | 0 |

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

| | | | | |
|---|---|---|---|---|
| OBL species | 10 | x 1 = | 10 | |
| FACW species | 0 | x 2 = | 0 | |
| FAC species | 0 | x 3 = | 0 | |
| FACU species | 5 | x 4 = | 20 | |
| UPL species | 85 | x 5 = | 425 | |
| Column totals | 100 | (A) | 455 | (B) |

Prevalence Index = B/A = 4.55

**Hydrophytic Vegetation Indicators:**

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** N

Remarks: (Include photo numbers here or on a separate sheet)

**SOIL** **Sampling Point:** Up.-DN

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (Inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type* | Loc** | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-16 | 10YR 4/3 | 90 | 10YR 4/6 | 10 | C | PL/M | clay loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Suface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: None
Depth (inches): _____

**Hydric soil present?** N

Remarks:

Cow pasture

| | | |
|---|---|---|
| **Version 5.0** | **Ohio Rapid Assessment Method for Wetlands**<br>**10 Page Form for Wetland Categorization** | |
| | **Background Information**<br>**Scoring Boundary Worksheet**<br>**Narrative Rating**<br>**Field Form Quantitative Rating**<br>**ORAM Summary Worksheet**<br>**Wetland Categorization Worksheet** | Ohio EPA, Division of Surface Water<br>Final: February 1, 2001 |

## Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

# Background Information

| | |
|---|---|
| **Name:** | Dorothy Daly |
| **Date:** | 6/20/12 |
| **Affiliation:** | STV Energy Services Inc. (Consultant for Sunoco Pipeline, L.P.) |
| **Address:** | 205 West Welsh Drive, Douglassville, PA 19518 |
| **Phone Number:** | 610-385-8443 (Jim McGinley) |
| **e-mail address:** | Jim.McGinley@stvinc.com |
| **Name of Wetland:** | DN |
| **Vegetation Communit(ies):** | Emergent-Reed Canary Grass Dominant |
| **HGM Class(es):** | Depression |

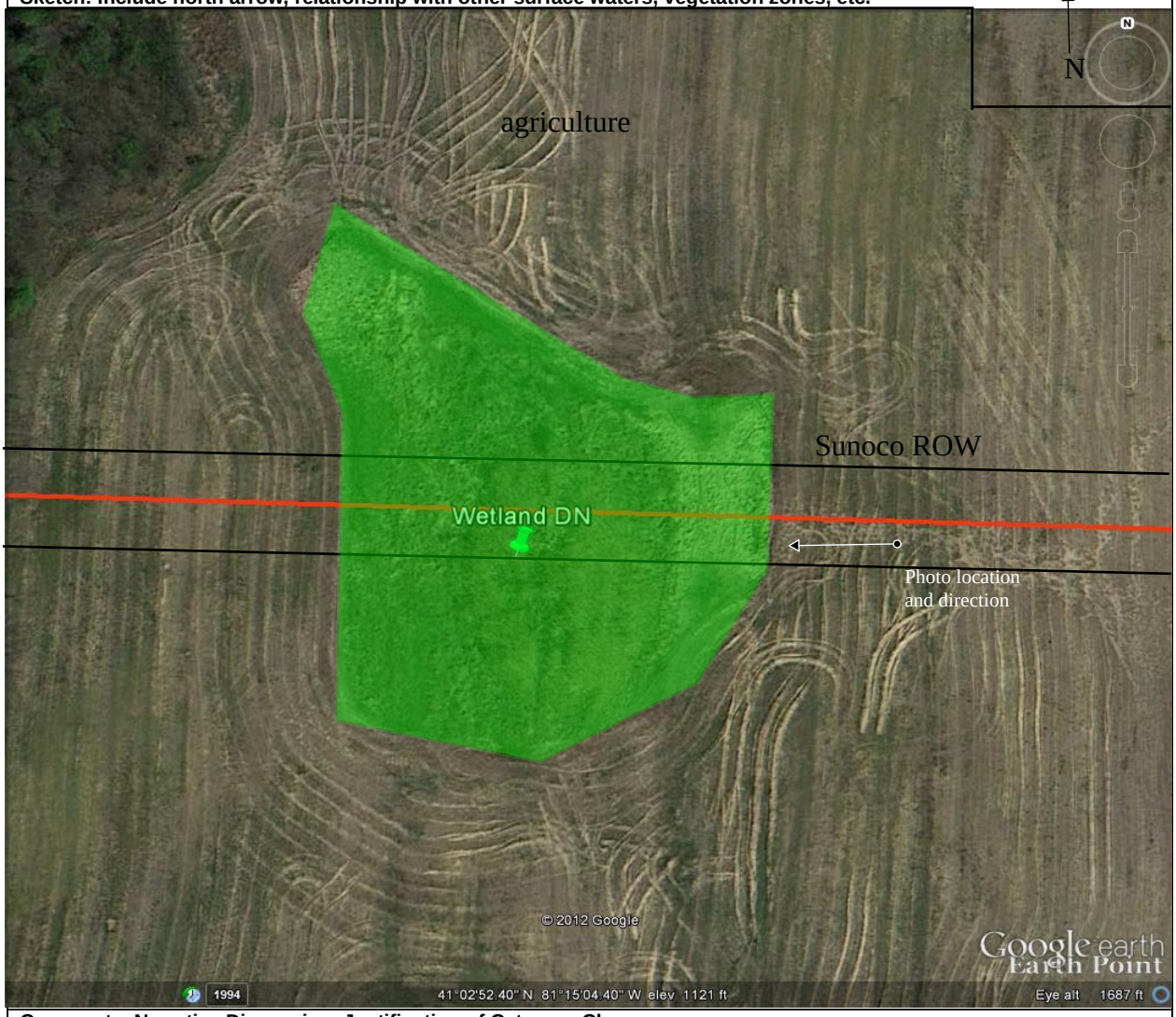
**Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.**

See Attachment 1.

| | |
|---|---|
| Lat/Long or UTM Coordinate 41° 02' 52.20"N 81° 15' 04.84"W | |
| USGS Quad Name Suffield | |
| County Portage | |
| Township Randolph | |
| Section and Subsection OH91 1N 8W | |
| Hydrologic Unit Code 04110002 | |
| Site Visit Yes | |
| National Wetland Inventory Map N/A | |
| Ohio Wetland Inventory Map N/A | |
| Soil Survey ReB-Ravenna silt loam, 2-6% slopes | |
| Delineation report/map See Attachment 2. | |

| | |
|---|---|
| **Name of Wetland:** DN | |
| **Wetland Size (acres, hectares):** > 0.1 | |

**Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.**




**Comments, Narrative Discussion, Justification of Category Changes:**

Wetland DN is a filled in pond that is now comprised primarily of Phragmites australis. It has a herbaceous fringe on edges. Wetland DN is located in the middle of a corn field. Wetland DN drains to the DS-73 complex that wetlands DK, DL and DM drain into. Soils exhibited a depleted matrix.

| | | | |
|---|---|---|---|
| **Final score :** | 15 | **Category:** | 1 |

# Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

| # | Steps in properly establishing scoring boundaries | done? | not applicable |
|---|---|---|---|
| **Step 1** | Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc. | | |
| **Step 2** | Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland. | | |
| **Step 3** | Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary. | | |
| **Step 4** | Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes. | | |
| **Step 5** | In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately. | | |
| **Step 6** | Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications. | | |

**End of Scoring Boundary Determination. Begin Narrative Rating on next page.**

# Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap . The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

| # | Question | Circle one | |
|---|---|---|---|
| 1 | **Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000). | YES<br><br>Wetland should be evaluated for possible Category 3 status<br><br>Go to Question 2 | NO<br><br>Go to Question 2 |
| 2 | **Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species? | YES<br><br>Wetland is a Category 3 wetland.<br><br>Go to Question 3 | NO<br><br>Go to Question 3 |
| 3 | **Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland? | YES<br><br>Wetland is a Category 3 wetland<br><br>Go to Question 4 | NO<br><br>Go to Question 4 |
| 4 | **Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas? | YES<br><br>Wetland is a Category 3 wetland<br><br>Go to Question 5 | NO<br><br>Go to Question 5 |
| 5 | **Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation? | YES<br><br>Wetland is a Category 1 wetland<br><br>Go to Question 6 | NO<br><br>Go to Question 6 |
| 6 | **Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%? | YES<br><br>Wetland is a Category 3 wetland<br><br>Go to Question 7 | NO<br><br>Go to Question 7 |
| 7 | **Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%? | YES<br><br>Wetland is a Category 3 wetland<br><br>Go to Question 8a | NO<br><br>Go to Question 8a |
| 8a | **"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs? | YES<br><br>Wetland is a Category 3 wetland.<br><br>Go to Question 8b | NO<br><br>Go to Question 8b |

| | | | |
|---|---|---|---|
| **8b** | **Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh? | YES<br><br>Wetland should be evaluated for possible Category 3 status.<br><br>Go to Question 9a | NO<br><br>Go to Question 9a |
| **9a** | **Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish? | YES<br><br>Go to Question 9b | NO<br><br>Go to Question 10 |
| **9b** | Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls? | YES<br><br>Wetland should be evaluated for possible Category 3 status<br><br>Go to Question 10 | NO<br><br>Go to Question 9c |
| **9c** | Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation. | YES<br><br>Go to Question 9d | NO<br><br>Go to Question 10 |
| **9d** | Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present? | YES<br><br>Wetland is a Category 3 wetland<br><br>Go to Question 10 | NO<br><br>Go to Question 9e |
| **9e** | Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities? | YES<br><br>Wetland should be evaluated for possible Category 3 status<br><br>Go to Question 10 | NO<br><br>Go to Question 10 |
| **10** | **Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality. | YES<br><br>Wetland is a Category 3 wetland.<br><br>Go to Question 11 | NO<br><br>Go to Question 11 |
| **11** | **Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.). | YES<br><br>Wetland should be evaluated for possible Category 3 status<br><br>Complete Quantitative Rating | NO<br><br>Complete Quantitative Rating |

**Table 1. Characteristic plant species.**

| invasive/exotic spp | fen species | bog species | 0ak Opening species | wet prairie species |
|---|---|---|---|---|
| *Lythrum salicaria* | *Zygadenus elegans var. glaucus* | *Calla palustris* | *Carex cryptolepis* | *Calamagrostis canadensis* |
| *Myriophyllum spicatum* | *Cacalia plantaginea* | *Carex atlantica var. capillacea* | *Carex lasiocarpa* | *Calamogrostis stricta* |
| *Najas minor* | *Carex flava* | *Carex echinata* | *Carex stricta* | *Carex atherodes* |
| *Phalaris arundinacea* | *Carex sterilis* | *Carex oligosperma* | *Cladium mariscoides* | *Carex buxbaumii* |
| *Phragmites australis* | *Carex stricta* | *Carex trisperma* | *Calamagrostis stricta* | *Carex pellita* |
| *Potamogeton crispus* | *Deschampsia caespitosa* | *Chamaedaphne calyculata* | *Calamagrostis canadensis* | *Carex sartwellii* |
| *Ranunculus ficaria* | *Eleocharis rostellata* | *Decodon verticillatus* | *Quercus palustris* | *Gentiana andrewsii* |
| *Rhamnus frangula* | *Eriophorum viridicarinatum* | *Eriophorum virginicum* | | *Helianthus grosseserratus* |
| *Typha angustifolia* | *Gentianopsis spp.* | *Larix laricina* | | *Liatris spicata* |
| *Typha xglauca* | *Lobelia kalmii* | *Nemopanthus mucronatus* | | *Lysimachia quadriflora* |
| | *Parnassia glauca* | *Schechzeria palustris* | | *Lythrum alatum* |
| | *Potentilla fruticosa* | *Sphagnum spp.* | | *Pycnanthemum virginianum* |
| | *Rhamnus alnifolia* | *Vaccinium macrocarpon* | | *Silphium terebinthinaceum* |
| | *Rhynchospora capillacea* | *Vaccinium corymbosum* | | *Sorghastrum nutans* |
| | *Salix candida* | *Vaccinium oxycoccos* | | *Spartina pectinata* |
| | *Salix myricoides* | *Woodwardia virginica* | | *Solidago riddellii* |
| | *Salix serissima* | *Xyris difformis* | | |
| | *Solidago ohioensis* | | | |
| | *Tofieldia glutinosa* | | | |
| | *Triglochin maritimum* | | | |
| | *Triglochin palustre* | | | |

**End of Narrative Rating. Begin Quantitative Rating on next page.**

| Site: DN | Rater(s): DD | Date: 6/20/12 |
|---|---|---|

| 1 | 1 |
|---|---|
| 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 <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [X] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

| 1 | 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)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [X] 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), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [X] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| 7 | 9 |
|---|---|
| max 30 pts. | subtotal |

## Metric 3. Hydrology.

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

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

none

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)

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)
- [X] <0.4m (<15.7in) (1)

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

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

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

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

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [/] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [/] other Farming

| 6 | 15 |
|---|---|
| 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)
- [X] Recovering (2)
- [ ] Recent or no recovery (1)

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [X] Poor (1)

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

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [X] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [/] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [/] farming
- [ ] nutrient enrichment

| 15 |
|---|
| subtotal this page |

last revised 1 February 2001 jjm

| Site: DN | Rater(s): DD | Date: 6/20/12 |
|---|---|---|

15
subtotal first page

| 0 | 15 |
|---|---|
| max 10 pts. | subtotal |

## Metric 5. Special Wetlands.

None

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)

| 0 | 15 |
|---|---|
| max 20 pts. | subtotal |

## Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] 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)
- [X] None (0)

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

- [ ] Extensive >75% cover (-5)
- [X] Moderate 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.

- [1] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] 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 vegetation 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 | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

**Mudflat and Open Water Class Quality**

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 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 |

15

**End of Quantitative Rating. Complete Categorization Worksheets.**

# ORAM Summary Worksheet

| | | circle answer or insert score | Result |
|---|---|---|---|
| Narrative Rating | Question 1 Critical Habitat | YES NO | If yes, Category 3. |
| | Question 2. Threatened or Endangered Species | YES NO | If yes, Category 3. |
| | Question 3. High Quality Natural Wetland | YES NO | If yes, Category 3. |
| | Question 4. Significant bird habitat | YES NO | If yes, Category 3. |
| | Question 5. Category 1 Wetlands | YES NO | If yes, Category 1. |
| | Question 6. Bogs | YES NO | If yes, Category 3. |
| | Question 7. Fens | YES NO | If yes, Category 3. |
| | Question 8a. Old Growth Forest | YES NO | If yes, Category 3. |
| | Question 8b. Mature Forested Wetland | YES NO | If yes, evaluate for Category 3; may also be 1 or 2. |
| | Question 9b. Lake Erie Wetlands - Restricted | YES NO | If yes, evaluate for Category 3; may also be 1 or 2. |
| | Question 9d. Lake Erie Wetlands – Unrestricted with native plants | YES NO | If yes, Category 3 |
| | Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants | YES NO | If yes, evaluate for Category 3; may also be 1 or 2. |
| | Question 10. Oak Openings | YES NO | If yes, Category 3 |
| | Question 11. Relict Wet Prairies | YES NO | If yes, evaluate for Category 3; may also be 1 or 2. |
| Quantitative Rating | Metric 1. Size | 1 | |
| | Metric 2. Buffers and surrounding land use | 1 | |
| | Metric 3. Hydrology | 7 | |
| | Metric 4. Habitat | 6 | |
| | Metric 5. Special Wetland Communities | 0 | |
| | Metric 6. Plant communities, interspersion, microtopography | 0 | |
| | TOTAL SCORE | 15 | Category based on score breakpoints 1 |

**Complete Wetland Categorization Worksheet**.

# Wetland Categorization Worksheet

| Choices | Circle one | | Evaluation of Categorization Result of ORAM |
|---|---|---|---|
| Did you answer "Yes" to any of the following questions:<br><br>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10 | YES<br><br>Wetland is categorized as a Category 3 wetland | NO | Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM |
| Did you answer "Yes" to any of the following questions:<br><br>Narrative Rating Nos. 1, 8b, 9b, 9e, 11 | YES<br><br>Wetland should be evaluated for possible Category 3 status | NO | Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category. |
| Did you answer "Yes" to<br><br>Narrative Rating No. 5 | YES<br><br>Wetland is categorized as a Category 1 wetland | NO | Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM |
| Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland? | YES<br><br>Wetland is assigned to the appropriate category based on the scoring range | NO | If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score. |
| Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands? | YES<br><br>Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria | NO | Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C). |
| Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method? | YES<br><br>Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form | NO<br><br>Wetland is assigned to category as determined by the ORAM. | A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided. |

**Final Category**

| Choose one | Category 1 | Category 2 | Category 3 |
|---|---|---|---|

## End of Ohio Rapid Assessment Method for Wetlands.

# Wetland Crossing

**Sequence Number:** 33

**Name:** CE

**Type:** PEM

**ORAM Score:** 33*

**County:** Portage County

**Watershed:** Middle Cuyahoga River

**Crossing Method:** Open Trench

| Impact Type | Impact Acreage | Impact Square Footage |
|---|---|---|
| PEM/PFO | 0.497 | 21662.79 |

*Wetlands CE and CF were scored together. See Wetland CF for completed ORAM form.

0 50 100 Feet

**SCALE:** 1 " = 100 '

- Delineated Stream
- Delineated Wetland
- Delineated Wetland Boundary
- Right-Of-Way (ROW) - *[Existing]*
- Right-Of-Way (ROW) - *[Proposed]*
- Temporary Workspace (TWS)

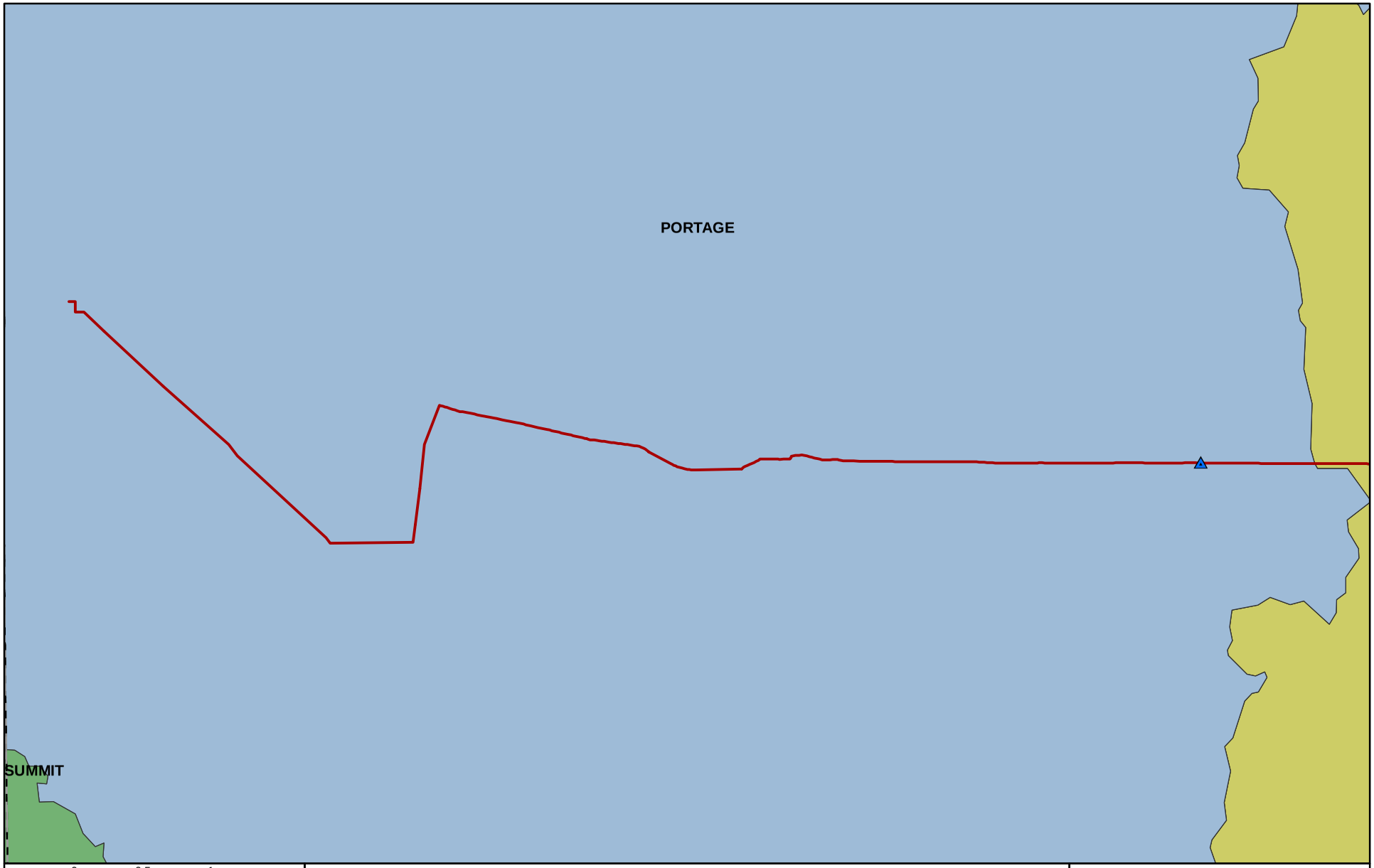
N

# WETLAND LOCATION MAP
# ALLEGHENY ACCESS (Mogadore-Vanport)
# USACE BUFFALO DISTRICT

WETLAND CROSSING: ***CE***

**SOURCE:** United States Army Corps of Engineers (USACE)
Bing Maps Web Mapping Service (Aerial)

**CREATED BY:** STV Energy Services, Inc.




0 0.5 1 Miles

**SCALE:** 1 inch = 1 mile

- Mogadore-Vanport Alignment
- County Boundary
- Stream/Wetland Location
- USACE - Buffalo District
- USACE - Huntington District
- USACE - Pittsburgh District

N

# STREAM and WETLAND OVERVIEW MAP
# ALLEGHENY ACCESS (Mogadore-Vanport)
# USACE BUFFALO DISTRICT

STREAM / WETLAND: ***CE***

**SOURCE:** United States Army Corps of Engineers (USACE)
United States Census Bureau (TIGER/Line Data)

**CREATED BY:** STV Energy Services, Inc.

STV 100 Years

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Mogadore to Vanport Junction Pipeline City/County: Portage Sampling Date: 6-20-12
Applicant/Owner: Sunoco Pipeline LP State: OH Sampling Point: Wet.- CE
Investigator(s): Joe Kopajtic & Laura Rowlands Section, Township, Range: OH91 T1N R8W
Landform (hillslope, terrace, etc.): plains Local relief (concave, convex, none): none
Slope (%): 0-1% Lat.: 41° 2'51.40"N Long.: 81°13'31.25"W Datum: Nad 83
Soil Map Unit Name Frenchtown silt loam and Ravenna silt loam NWI Classification: U
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X, soil X, or hydrology X significantly disturbed? Are "normal circumstances" present? No
Are vegetation ___, soil ___, or hydrology ___ naturally problematic?
(If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

| | | | |
|---|---|---|---|
| Hydrophytic vegetation present? | Y | **Is the sampled area within a wetland?** | Y |
| Hydric soil present? | Y | | |
| Wetland hydrology present? | Y | If yes, optional wetland site ID: | |

Remarks: (Explain alternative procedures here or in a separate report.)

Located within ROW. Previously Disturbed.

### HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- X Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

| | | | | | |
|---|---|---|---|---|---|
| Surface water present? | Yes | ___ | No | X | Depth (inches): ___ |
| Water table present? | Yes | ___ | No | X | Depth (inches): ___ |
| Saturation present? (includes capillary fringe) | Yes | ___ | No | X | Depth (inches): ___ |

**Wetland hydrology present?** Y

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** - Use scientific names of plants

**Sampling Point:** Wet.- CE

| Tree Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Sapling/Shurb Stratum | Plot Size ( 15' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Herb Stratum | Plot Size ( 5' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Phalaris arundinacea* | 95 | Y | FACW |
| 2 | *Carex grayi* | 5 | N | FACW |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 100 | = Total Cover | |

| Woody Vine Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 | = Total Cover | |

**50/20 Thresholds**

| | 20% | 50% |
|---|---|---|
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 0 | 0 |
| Herb Stratum | 20 | 50 |
| Woody Vine Stratum | 0 | 0 |

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

| | | | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 100 | x 2 = | 200 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column totals | 100 (A) | | 200 (B) |

Prevalence Index = B/A = 2.00

**Hydrophytic Vegetation Indicators:**

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)

**SOIL** **Sampling Point:** Wet.- CE

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (Inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type* | Loc** | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 10YR 3/1 | 100 | | | | | loam | high organic |
| 2-9 | 10YR 3/1 | 100 | | | | | loam | |
| 9-16+ | 2.5Y 5/2 | 100 | | | | | silty loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Suface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
X Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: None
Depth (inches): _____

**Hydric soil present?** Y

Remarks:

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Mogadore to Vanport Junction Pipeline City/County: Portage Sampling Date: 6-20-12
Applicant/Owner: Sunoco Pipeline LP State: OH Sampling Point: Upland-CE
Investigator(s): Laura Rowlands & Joe Kopajtic Section, Township, Range: OH91 T1N R8W
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): none
Slope (%): 0-1% Lat.: 41° 2'51.39"N Long.: 81°13'28.35"W Datum: Nad 83
Soil Map Unit Name Frenchtown silt loam and Ravenna silt loam NWI Classification: U
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X, soil X, or hydrology X significantly disturbed? Are "normal circumstances" present? No
Are vegetation ___, soil ___, or hydrology ___ naturally problematic?
(If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

| | | | |
|---|---|---|---|
| Hydrophytic vegetation present? | N | **Is the sampled area within a wetland?** | N |
| Hydric soil present? | Y | | |
| Wetland hydrology present? | N | If yes, optional wetland site ID: | |

Remarks: (Explain alternative procedures here or in a separate report.)

Evidence of disturbance.

### HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

| | | | | | |
|---|---|---|---|---|---|
| Surface water present? | Yes | ___ | No | X | Depth (inches): ___ |
| Water table present? | Yes | ___ | No | X | Depth (inches): ___ |
| Saturation present? (includes capillary fringe) | Yes | ___ | No | X | Depth (inches): ___ |

**Wetland hydrology present?** N

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** - Use scientific names of plants

**Sampling Point:** Upland-CE

| Tree Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Sapling/Shurb Stratum | Plot Size ( 15' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Cornus amomum* | 15 | Y | FACW |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 15 | = Total Cover | |

| Herb Stratum | Plot Size ( 5' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Solidago canadensis* | 35 | Y | FACU |
| 2 | *Rosa multiflora* | 10 | N | FACU |
| 3 | *Phalaris arundinacea* | 10 | N | FACW |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 55 | = Total Cover | |

| Woody Vine Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 | = Total Cover | |

**50/20 Thresholds**

| | 20% | 50% |
|---|---|---|
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 3 | 8 |
| Herb Stratum | 11 | 28 |
| Woody Vine Stratum | 0 | 0 |

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

| | | | | |
|---|---|---|---|---|
| OBL species | 0 | x 1 = | 0 | |
| FACW species | 25 | x 2 = | 50 | |
| FAC species | 0 | x 3 = | 0 | |
| FACU species | 45 | x 4 = | 180 | |
| UPL species | 0 | x 5 = | 0 | |
| Column totals | 70 | (A) | 230 | (B) |

Prevalence Index = B/A = 3.29

**Hydrophytic Vegetation Indicators:**

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** N

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

**Sampling Point:** Upland-CE

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type* | Redox Features Loc** | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/2 | 100 | | | | | Loam | |
| 6-16+ | 10YR 3/2 | 60 | 10YR 4/4 | 40 | | | Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Suface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: None
Depth (inches): _____

**Hydric soil present?** Y

Remarks:

Evidence of disturbance: debris in upper 18".

# Wetland Crossing

**Sequence Number:** 34

**Name:** CF

**Type:** PEM/PFO

**ORAM Score:** 33*

**County:** Portage County

**Watershed:** Middle Cuyahoga River

**Crossing Method:** Open Trench

| Impact Type | Impact Acreage | Impact Square Footage |
|---|---|---|
| PEM/PFO | 0.222 | 9690.82 |

*Wetlands CE and CF were scored together. See Wetland CF for completed ORAM form.

0 50 100 Feet

**SCALE:** 1 " = 100 '

- Delineated Stream
- Delineated Wetland
- Delineated Wetland Boundary
- Right-Of-Way (ROW) - *[Existing]*
- Right-Of-Way (ROW) - *[Proposed]*
- Temporary Workspace (TWS)

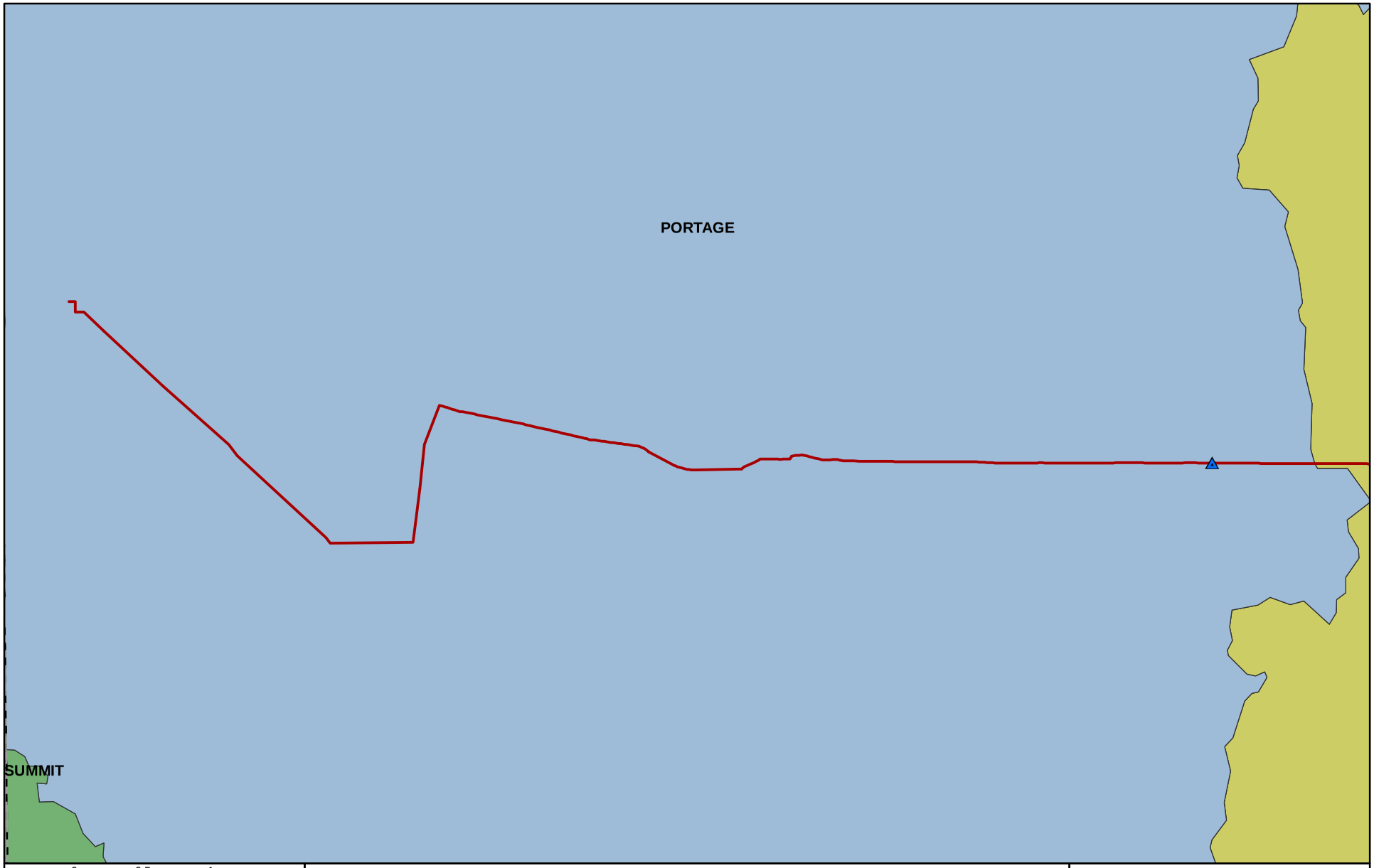
N

# WETLAND LOCATION MAP
# ALLEGHENY ACCESS (Mogadore-Vanport)
# USACE BUFFALO DISTRICT

WETLAND CROSSING: ***CF***

**SOURCE:** United States Army Corps of Engineers (USACE)
Bing Maps Web Mapping Service (Aerial)

**CREATED BY:** STV Energy Services, Inc.




0 0.5 1 Miles

**SCALE:** 1 inch = 1 mile

- Mogadore-Vanport Alignment
- County Boundary
- Stream/Wetland Location
- USACE - Buffalo District
- USACE - Huntington District
- USACE - Pittsburgh District

N

# STREAM and WETLAND OVERVIEW MAP
# ALLEGHENY ACCESS (Mogadore-Vanport)
# USACE BUFFALO DISTRICT

STREAM / WETLAND: ***CF***

**SOURCE:** United States Army Corps of Engineers (USACE)
United States Census Bureau (TIGER/Line Data)

**CREATED BY:** STV Energy Services, Inc.

STV 100 Years

**PHOTOGRAPH 1**

Wetland CF facing northwest.

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Mogadore to Vanport Junction Pipeline City/County: Portage Sampling Date: 6-20-12
Applicant/Owner: Sunoco Pipeline LP State: OH Sampling Point: Wet.- CF
Investigator(s): Joe Kopajtic & Laura Rowlands Section, Township, Range: OH91 T1N R8W
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-1% Lat.: 41° 2'51.33"N Long.: 81°13'25.21"W Datum: Nad 83
Soil Map Unit Name Frenchtown silt loam and Ravenna silt loam NWI Classification: U
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X , soil X , or hydrology X significantly disturbed? Are "normal
Are vegetation ____ , soil ____ , or hydrology ____ naturally problematic? circumstances" present? No
(If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

| | | | |
|---|---|---|---|
| Hydrophytic vegetation present? | Y | **Is the sampled area within a wetland?** | Y |
| Hydric soil present? | Y | | |
| Wetland hydrology present? | Y | If yes, optional wetland site ID: | |

Remarks: (Explain alternative procedures here or in a separate report.)

Located within ROW. Previously disturbed.

### HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)

| | | | | | |
|---|---|---|---|---|---|
| | Surface Water (A1) | | Water-Stained Leaves (B9) | | Surface Soil Cracks (B6) |
| X | High Water Table (A2) | X | Aquatic Fauna (B13) | X | Drainage Patterns (B10) |
| X | Saturation (A3) | | Marl Deposits (B15) | | Moss Trim Lines (B16) |
| | Water Marks (B1) | | Hydrogen Sulfide Odor (C1) | | Dry-Season Water Table (C2) |
| | Sediment Deposits (B2) | | Oxidized Rhizospheres on Living | | Crayfish Burrows (C8) |
| | Drift Deposits (B3) | X | Roots (C3) | | Saturation Visible on Aerial Imagery |
| | Algal Mat or Crust (B4) | | Presence of Reduced Iron (C4) | | (C9) |
| | Iron Deposits (B5) | | Recent Iron Reduction in Tilled | | Stunted or Stressed Plants (D1) |
| | Inundation Visible on Aerial | | Soils (C6) | | Geomorphic Position (D2) |
| | Imagery (B7) | | Thin Muck Surface (C7) | | Shallow Aquitard (D3) |
| | Sparsely Vegetated Concave | | Other (Explain in Remarks) | | FAC-Neutral Test (D5) |
| | Surface (B8) | | | | Microtopographic Relief (D4) |

Secondary Indicators (minimum of two required)

Field Observations:

| | | | | | | |
|---|---|---|---|---|---|---|
| Surface water present? | Yes | | No | X | Depth (inches): | |
| Water table present? | Yes | X | No | | Depth (inches): | 5-6" |
| Saturation present? (includes capillary fringe) | Yes | X | No | | Depth (inches): | to surface |

**Wetland hydrology present?** Y

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** - Use scientific names of plants

**Sampling Point:** Wet.- CF

| Tree Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Quercus palustris* | 5 | Y | FACW |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 5 = | Total Cover | |

| Sapling/Shurb Stratum | Plot Size ( 15' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Cornus amomum* | 15 | Y | FACW |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 15 = | Total Cover | |

| Herb Stratum | Plot Size ( 5' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Phalaris arundinacea* | 95 | Y | FACW |
| 2 | *Impatiens capensis* | 5 | N | FACW |
| 3 | *Carex pedunculata* | 5 | N | FACU |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 105 = | Total Cover | |

| Woody Vine Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 = | Total Cover | |

**50/20 Thresholds**

| | 20% | 50% |
|---|---|---|
| Tree Stratum | 1 | 3 |
| Sapling/Shrub Stratum | 3 | 8 |
| Herb Stratum | 21 | 53 |
| Woody Vine Stratum | 0 | 0 |

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

| | | | | |
|---|---|---|---|---|
| OBL species | 0 | x 1 = | 0 | |
| FACW species | 120 | x 2 = | 240 | |
| FAC species | 0 | x 3 = | 0 | |
| FACU species | 5 | x 4 = | 20 | |
| UPL species | 0 | x 5 = | 0 | |
| Column totals | 125 | (A) | 260 | (B) |

Prevalence Index = B/A = 2.08

**Hydrophytic Vegetation Indicators:**

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)

**SOIL** **Sampling Point:** Wet.- CF

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (Inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type* | Loc** | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 2.5Y 3/1 | 30 | | | | | Loam | 70 % organic |
| 4-16+ | 2.5Y 3/1 | 100 | | | | | Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Suface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
X Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: None
Depth (inches): _____

**Hydric soil present?** Y

Remarks:

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Mogadore to Vanport Pipeline Project City/County: Portage Sampling Date: 6-20-12
Applicant/Owner: Sunoco Pipeline LP State: OH Sampling Point: Upland- CF
Investigator(s): Joe Kopajtic & Laura Rowlands Section, Township, Range: OH91 T1N R8W
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): none
Slope (%): 0-1% Lat.: 41° 2'51.27"N Long.: 81°13'26.95"W Datum: Nad 83
Soil Map Unit Name Frenchtown silt loam and Ravenna silt loam NWI Classification: U
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
Are vegetation X, soil X, or hydrology X significantly disturbed? Are "normal
Are vegetation ___, soil ___, or hydrology ___ naturally problematic? circumstances" present? No
(If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

| | | | |
|---|---|---|---|
| Hydrophytic vegetation present? | N | **Is the sampled area within a wetland?** | N |
| Hydric soil present? | Y | | |
| Wetland hydrology present? | N | If yes, optional wetland site ID: | |

Remarks: (Explain alternative procedures here or in a separate report.)

Maintained utility right-of-way, previously disturbed

### HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

| | | | | | |
|---|---|---|---|---|---|
| Surface water present? | Yes | ___ | No | X | Depth (inches): ___ |
| Water table present? | Yes | ___ | No | X | Depth (inches): ___ |
| Saturation present? (includes capillary fringe) | Yes | ___ | No | X | Depth (inches): ___ |

**Wetland hydrology present?** N

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** - Use scientific names of plants

**Sampling Point:** Upland- CF

| Tree Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 0 | = Total Cover | |

| Sapling/Shurb Stratum | Plot Size ( 15' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Rubus allegheniensis* | 45 | Y | FACU |
| 2 | *Rosa multiflora* | 15 | Y | FACU |
| 3 | *Phalaris arundinacea* | 10 | N | FACW |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| | | 70 | = Total Cover | |

| Herb Stratum | Plot Size ( 5' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | *Solidago canadensis* | 50 | Y | FACU |
| 2 | *Ranunculus ficaria* | 5 | N | NI |
| 3 | *Ipomoea purpurea* | 2 | N | FACU |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| | | 57 | = Total Cover | |

| Woody Vine Stratum | Plot Size ( 30' ) | Absolute % Cover | Dominant Species | Indicator Staus |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | 0 | = Total Cover | |

**50/20 Thresholds**

| | 20% | 50% |
|---|---|---|
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 14 | 35 |
| Herb Stratum | 11 | 29 |
| Woody Vine Stratum | 0 | 0 |

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

| | | | | |
|---|---|---|---|---|
| OBL species | 0 | x 1 = | 0 | |
| FACW species | 10 | x 2 = | 20 | |
| FAC species | 0 | x 3 = | 0 | |
| FACU species | 112 | x 4 = | 448 | |
| UPL species | 0 | x 5 = | 0 | |
| Column totals | 122 | (A) | 468 | (B) |

Prevalence Index = B/A = 3.84

**Hydrophytic Vegetation Indicators:**

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

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**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** N

Remarks: (Include photo numbers here or on a separate sheet)

## SOIL

**Sampling Point:** Upland- CF

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type* | Redox Features Loc** | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-8 | 10YR 3/2 | 100 | | | | | Loam | |
| 8-16+ | 10YR 3/2 | 55 | 10YR 4/4 | 45 | | | Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Suface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: None
Depth (inches): _____

**Hydric soil present?** Y

Remarks:

Evidence of disturbance: charcoal and debris in upper 18"

| | | |
|---|---|---|
| **Version 5.0** | **Ohio Rapid Assessment Method for Wetlands**<br>**10 Page Form for Wetland Categorization** | |
| | **Background Information**<br>**Scoring Boundary Worksheet**<br>**Narrative Rating**<br>**Field Form Quantitative Rating**<br>**ORAM Summary Worksheet**<br>**Wetland Categorization Worksheet** | Ohio EPA, Division of Surface Water<br>Final: February 1, 2001 |

## Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

# Background Information

| | |
|---|---|
| **Name:** | Joe Kopajtic and Laura Rowlands |
| **Date:** | June 20, 2012 |
| **Affiliation:** | STV Energy Services, Inc. (Consultant for Sunoco Pipeline L.P.) |
| **Address:** | 205 West Welsh Drive, Douglassville, PA 19518 |
| **Phone Number:** | 610-385-8443 (Jim McGinley) |
| **e-mail address:** | Jim.McGinley@stvinc.com |
| **Name of Wetland:** | Wetland CE & CF |
| **Vegetation Communit(ies):** | Emergent, Wet Meadow, Forested |
| **HGM Class(es):** | Riverine/Depression, Groundwater |

**Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.**

See Attachment 1.

| | |
|---|---|
| Lat/Long or UTM Coordinate 41° 2'51.59"N, 81°13'33.46"W | |
| USGS Quad Name Atwater | |
| County Portage County | |
| Township Randolph | |
| Section and Subsection 1N 8W | |
| Hydrologic Unit Code 04110002 | |
| Site Visit Yes | |
| National Wetland Inventory Map Not Listed | |
| Ohio Wetland Inventory Map Scrub/Shrub, Shallow Marsh | |
| Soil Survey Frenchtown silt loam and Ravenna silt loam | |
| Delineation report/map See Attachment 2 | |