

APPENDIX A**U.S. ARMY CORPS OF ENGINEERS WETLAND FORMS**

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071018-02

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 7N **R.** 18W

Landform (hillslope, terrace, etc.): Lowland **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.427326 **Long.:** -82.263555 **Datum:** NAD 83

Soil Map Unit Name: FuA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |

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

Hydrology

| | |
|---|--|
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of 2 required) |
| Primary Indicators (minimum of one required; check all that apply) | |
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input checked="" type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Aquatic Fauna (B13) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | |
| <input type="checkbox"/> Presence of Reduced Iron (C4) | |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | |
| <input type="checkbox"/> Thin Muck Surface (C7) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: w-jbl-071018-02

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. <i>Cornus alba</i> | 3 | <input checked="" type="checkbox"/> | FACW | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 3 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Typha x glauca</i> | 85 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Leersia oryzoides</i> | 10 | <input type="checkbox"/> | OBL | |
| 3. <i>Phalaris arundinacea</i> | 5 | <input type="checkbox"/> | FACW | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 100 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>95</u> | x 1 = <u>95</u> |
| FACW species <u>8</u> | x 2 = <u>16</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>103</u> (A) | <u>111</u> (B) |
| Prevalence Index = B/A = <u>1.078</u> | |

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River

City/County: Lorain

Sampling Date: 10-Jul-18

Applicant/Owner: FirstEnergy

State: OH

Sampling Point: w-jbl-071018-03

Investigator(s): JBL,AEH

Section, Township, Range: S.

T. 7N

R. 18W

Landform (hillslope, terrace, etc.): Flat

Local relief (concave, convex, none): flat

Slope: 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R

Lat.: 41.426640

Long.: -82.263029

Datum: NAD 83

Soil Map Unit Name: FuA

NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes ☒ No ☐

(If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| <div>Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> | <div>Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/></div> |
| <div>Remarks: (Explain alternative procedures here or in a separate report.)</div> <div>wetland 3</div> | |

Hydrology

| | |
|--|--|
| <div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one required; check all that apply)</div> <div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input checked="" type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</div></div> <div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> Marl Deposits (B15)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div> | |
|--|--|

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-071018-03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Phragmites australis</i> | 60 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Carex vulpinoidea</i> | 5 | <input type="checkbox"/> | OBL | |
| 3. <i>Phalaris arundinacea</i> | 10 | <input type="checkbox"/> | FACW | |
| 4. <i>Juncus effusus</i> | 5 | <input type="checkbox"/> | OBL | |
| 5. <i>Dichanthelium clandestinum</i> | 10 | <input type="checkbox"/> | FACW | |
| 6. <i>Scirpus cyperinus</i> | 5 | <input type="checkbox"/> | OBL | |
| 7. <i>Onoclea sensibilis</i> | 5 | <input type="checkbox"/> | FACW | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 100 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>15</u> | x 1 = <u>15</u> |
| FACW species <u>85</u> | x 2 = <u>170</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>185</u> (B) |
| Prevalence Index = B/A = <u>1.850</u> | |

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl-071018-03

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River

City/County: Lorain

Sampling Date: 09-Jul-18

Applicant/Owner: FirstEnergy

State: OH

Sampling Point: w-jbl-070918-01

Investigator(s): JBL,AEH

Section, Township, Range: S. T. 7N R. 18W

Landform (hillslope, terrace, etc.): Swale

Local relief (concave, convex, none): concave

Slope: 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R

Lat.: 41.420329

Long.: -82.263102

Datum: NAD 83

Soil Map Unit Name: FuA

NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes ☒ No ☐

(If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| <div>Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> | <div>Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/></div> |
| <div>Remarks: (Explain alternative procedures here or in a separate report.)</div> | |

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 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)

☐ Microtopographic Relief (D4)

☒ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Water Table Present? Yes ☐ No ☒

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches):

Depth (inches):

Depth (inches): 9

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sampling Point: w-jbl-070918-01

| Tree Stratum (Plot size: _____) | | | | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------------------|-------|-------|---------------------|-------------------------------------|---------------------|
| 1. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 2. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 3. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 4. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 5. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 6. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 7. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| | | | | 0 | = Total Cover | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 2. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 3. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 4. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 5. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 6. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 7. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| | | | | 0 | = Total Cover | |
| Herb Stratum (Plot size: _____) | | | | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | <i>Juncus effusus</i> | _____ | _____ | 20 | <input checked="" type="checkbox"/> | OBL |
| 2. | <i>Scirpus atrovirens</i> | _____ | _____ | 15 | <input type="checkbox"/> | OBL |
| 3. | <i>Agrostis stolonifera</i> | _____ | _____ | 15 | <input type="checkbox"/> | FACW |
| 4. | <i>Microstegium vimineum</i> | _____ | _____ | 17 | <input checked="" type="checkbox"/> | FAC |
| 5. | <i>Carex lurida</i> | _____ | _____ | 10 | <input type="checkbox"/> | OBL |
| 6. | <i>Phalaris arundinacea</i> | _____ | _____ | 25 | <input checked="" type="checkbox"/> | FACW |
| 7. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 8. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 9. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 10. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 11. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 12. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| | | | | 102 | = Total Cover | |
| Woody Vine Stratum (Plot size: _____) | | | | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 2. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 3. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| 4. | _____ | _____ | _____ | 0 | <input type="checkbox"/> | _____ |
| | | | | 0 | = Total Cover | |

| 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: _____ 100.0% (A/B) | | | |
| Prevalence Index worksheet: | | | |
| Total % Cover of: | | Multiply by: | |
| OBL species | 45 | x 1 = | 45 |
| FACW species | 40 | x 2 = | 80 |
| FAC species | 17 | x 3 = | 51 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 102 | (A) | 176 (B) |
| Prevalence Index = B/A = _____ 1.725 | | | |
| Hydrophytic Vegetation Indicators: | | | |
| <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation | | | |
| <input checked="" type="checkbox"/> Dominance Test is > 50% | | | |
| <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | | |
| <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | | |
| <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | |
| ¹ 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 (1m) tall.. | | | |
| Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | | |
| Woody vine - All woody vines greater than 3.28 ft in height. | | | |
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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)

☐ 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, M)

☐ 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 (F21)

☐ Very Shallow Dark Surface (TF12)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: gravel

Depth (inches): 7

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 09-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-070918-02

Investigator(s): JBL,AEH **Section, Township, Range:** S. T. 7N R. 18W

Landform (hillslope, terrace, etc.): Lowland **Local relief (concave, convex, none):** flat **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.418587 **Long.:** -82.263223 **Datum:** NAD 83

Soil Map Unit Name: Mr, FuA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|-----------------------------|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | <u>1</u> |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | <u> </u> |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | <u> </u> |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantSampling Point: w-jbl-070918-02

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Scirpus cyperinus</i> | 25 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Phalaris arundinacea</i> | 20 | <input checked="" type="checkbox"/> | FACW | |
| 3. <i>Typha x glauca</i> | 15 | <input type="checkbox"/> | OBL | |
| 4. <i>Juncus effusus</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 5. <i>Apocynum cannabinum</i> | 10 | <input type="checkbox"/> | FAC | |
| 6. <i>Pycnanthemum tenuifolium</i> | 5 | <input type="checkbox"/> | FAC | |
| 7. <i>Persicaria pensylvanica</i> | 5 | <input type="checkbox"/> | FACW | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>60</u> | x 1 = <u>60</u> |
| FACW species <u>25</u> | x 2 = <u>50</u> |
| FAC species <u>15</u> | x 3 = <u>45</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>155</u> (B) |
| Prevalence Index = B/A = <u>1.550</u> | |

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl-070918-02

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River

City/County: Lorain

Sampling Date: 09-Jul-18

Applicant/Owner: FirstEnergy

State: OH

Sampling Point: w-jbl-070918-03

Investigator(s): JBL,AEH

Section, Township, Range: S. T. 7N R. 18W

Landform (hillslope, terrace, etc.): Lowland

Local relief (concave, convex, none): concave

Slope: 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR M

Lat.: 41.41757

Long.: -82.26396

Datum: NAD 83

Soil Map Unit Name: FuA

NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes ☒ No ☐

(If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| <div>Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> | <div>Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/></div> |
| <div>Remarks: (Explain alternative procedures here or in a separate report.)</div> <div>wet'and 03</div> | |

Hydrology

| | |
|---|--|
| <div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one required; check all that apply)</div> <div><div><input type="checkbox"/> Surface Water (A1)</div><div><input checked="" type="checkbox"/> High Water Table (A2)</div><div><input checked="" type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</div></div> <div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> Marl Deposits (B15)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div> | |
|---|--|

VEGETATION - Use scientific names of plantSampling Point: w-jbl-070918-03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|--------------------------|------------------|--|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | Total Number of Dominant Species Across All Strata: <u>1</u> (B) | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | | |
| | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: _____ Multiply by: _____ | |
| | | | | OBL species <u>8</u> x 1 = <u>8</u> | |
| | | | | FACW species <u>93</u> x 2 = <u>186</u> | |
| | | | | FAC species <u>0</u> x 3 = <u>0</u> | |
| | | | | FACU species <u>0</u> x 4 = <u>0</u> | |
| | | | | UPL species <u>0</u> x 5 = <u>0</u> | |
| | | | | Column Totals: <u>101</u> (A) <u>194</u> (B) | |
| | | | | Prevalence Index = B/A = <u>1.921</u> | |
| | | | | Hydrophytic Vegetation Indicators: | |
| | | | | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| | | | | <input checked="" type="checkbox"/> Dominance Test is > 50% | |
| | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ | |
| | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| | | | | ¹ 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 (1m) tall.. | |
| | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| | | | | Woody vine - All woody vines greater than 3.28 ft in height. | |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl-070918-03

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input checked="" type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 09-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-070918-04

Investigator(s): JBL,AEH **Section, Township, Range:** S. T. 7N R. 18W

Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.416618 **Long.:** 41.416618 **Datum:** NAD 83

Soil Map Unit Name: FuA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|----|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 10 |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 3 |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantSampling Point: w-jbl-20180709-04

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|--------------------------|------------------|---|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | | |
| | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: _____ Multiply by: _____ | |
| | | | | OBL species <u>50</u> x 1 = <u>50</u> | |
| | | | | FACW species <u>35</u> x 2 = <u>70</u> | |
| | | | | FAC species <u>0</u> x 3 = <u>0</u> | |
| | | | | FACU species <u>60</u> x 4 = <u>240</u> | |
| | | | | UPL species <u>0</u> x 5 = <u>0</u> | |
| | | | | Column Totals: <u>145</u> (A) <u>360</u> (B) | |
| | | | | Prevalence Index = B/A = <u>2.483</u> | |
| | | | | Hydrophytic Vegetation Indicators: | |
| | | | | <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| | | | | <input checked="" type="checkbox"/> Dominance Test is > 50% | |
| | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ | |
| | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| | | | | ¹ 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 (1m) tall.. | |
| | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| | | | | Woody vine - All woody vines greater than 3.28 ft in height. | |
| | | | | | |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl-20180709-04

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River

City/County: Lorain

Sampling Date: 09-Jul-18

Applicant/Owner: FirstEnergy

State: OH

Sampling Point: w-jbl-070918-05

Investigator(s): JBL,AEH

Section, Township, Range: S. T. 7N R. 18W

Landform (hillslope, terrace, etc.): Hillside

Local relief (concave, convex, none): concave

Slope: 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R

Lat.: 41.413613

Long.: -82.267288

Datum: NAD 83

Soil Map Unit Name: AIA

NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes ☒ No ☐

(If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| <div>Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> | <div>Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/></div> |
| <div>Remarks: (Explain alternative procedures here or in a separate report.)</div> | |

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 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)

☐ Microtopographic Relief (D4)

☒ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐

Water Table Present? Yes ☐ No ☒

Saturation Present? (includes capillary fringe) Yes ☐ No ☒

Depth (inches): 1

Depth (inches):

Depth (inches):

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

standing water in north section of wetland

VEGETATION - Use scientific names of plantSampling Point: w-jbl20180709-05

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|--------------------------|------------------|--|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | Total Number of Dominant Species Across All Strata: <u>1</u> (B) | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | | |
| | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: _____ Multiply by: _____ | |
| | | | | OBL species <u>5</u> x 1 = <u>5</u> | |
| | | | | FACW species <u>100</u> x 2 = <u>200</u> | |
| | | | | FAC species <u>0</u> x 3 = <u>0</u> | |
| | | | | FACU species <u>0</u> x 4 = <u>0</u> | |
| | | | | UPL species <u>0</u> x 5 = <u>0</u> | |
| | | | | Column Totals: <u>105</u> (A) <u>205</u> (B) | |
| | | | | Prevalence Index = B/A = <u>1.952</u> | |
| | | | | Hydrophytic Vegetation Indicators: | |
| | | | | <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| | | | | <input checked="" type="checkbox"/> Dominance Test is > 50% | |
| | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ | |
| | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| | | | | ¹ 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 (1m) tall.. | |
| | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| | | | | Woody vine - All woody vines greater than 3.28 ft in height. | |
| | | | | | |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl20180709-05

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ridrap

Depth (inches): 10

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River

City/County: Lorain

Sampling Date: 09-Jul-18

Applicant/Owner: FirstEnergy

State: OH

Sampling Point: w-jbl-70918-06

Investigator(s): JBL,AEH

Section, Township, Range: S. T. 6N R. 19W

Landform (hillslope, terrace, etc.): Swale

Local relief (concave, convex, none): concave

Slope: 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R

Lat.: 41.410007

Long.: -82.267564

Datum: NAD 83

Soil Map Unit Name: AIA

NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes ☒ No ☐

(If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| <div>Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> | <div>Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/></div> |
| <div>Remarks: (Explain alternative procedures here or in a separate report.)</div> | |

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 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)

☐ Microtopographic Relief (D4)

☒ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐

Water Table Present? Yes ☒ No ☐

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches): 1

Depth (inches): 0

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plantSampling Point: w-jbl-20180709-06

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Juncus tenuis</i> | 30 | <input checked="" type="checkbox"/> | FAC | |
| 2. <i>Juncus effusus</i> | 40 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Scirpus atrovirens</i> | 5 | <input type="checkbox"/> | OBL | |
| 4. <i>Phalaris arundinacea</i> | 15 | <input type="checkbox"/> | FACW | |
| 5. <i>Carex vulpinoidea</i> | 10 | <input type="checkbox"/> | OBL | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>55</u> | x 1 = <u>55</u> |
| FACW species <u>15</u> | x 2 = <u>30</u> |
| FAC species <u>30</u> | x 3 = <u>90</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>175</u> (B) |

Prevalence Index = B/A = 1.750

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl-20180709-06

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 09-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-070918-07

Investigator(s): JBL,AEH **Section, Township, Range:** S. **T.** 6N **R.** 19W

Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.408519 **Long.:** -82.267709 **Datum:** NAD 83

Soil Map Unit Name: AIA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|---|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 1 |
| Water Table Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 0 |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 6 |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: water in middle of wetland | | | |

VEGETATION - Use scientific names of plantSampling Point: w-jbl-20180709-07

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Juncus tenuis</i> | 35 | <input checked="" type="checkbox"/> | FAC | |
| 2. <i>Juncus effusus</i> | 25 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Carex vulpinoidea</i> | 15 | <input type="checkbox"/> | OBL | |
| 4. <i>Carex scoparia</i> | 20 | <input type="checkbox"/> | FACW | |
| 5. <i>Phalaris arundinacea</i> | 10 | <input type="checkbox"/> | FACW | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 105 | = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>40</u> | x 1 = <u>40</u> |
| FACW species <u>30</u> | x 2 = <u>60</u> |
| FAC species <u>35</u> | x 3 = <u>105</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>105</u> (A) | <u>205</u> (B) |
| Prevalence Index = B/A = <u>1.952</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl-20180709-07

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River

City/County: Lorain

Sampling Date: 09-Jul-18

Applicant/Owner: FirstEnergy

State: OH

Sampling Point: w-jbl-070918-08

Investigator(s): JBL,AEH

Section, Township, Range: S. 6N R. 19W

Landform (hillslope, terrace, etc.): Swale

Local relief (concave, convex, none): concave

Slope: 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R

Lat.: 41.406576

Long.: -82.267687

Datum: NAD 83

Soil Map Unit Name: FuA, Mr

NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes ☒ No ☐

(If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| <div>Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> <div>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></div> | <div>Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/></div> |
| <div>Remarks: (Explain alternative procedures here or in a separate report.)</div> | |

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 2 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)

☐ Microtopographic Relief (D4)

☒ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Water Table Present? Yes ☐ No ☒

Saturation Present? (includes capillary fringe) Yes ☐ No ☒

Depth (inches):

Depth (inches):

Depth (inches):

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plantSampling Point: w-jbl-20180709-08

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------------------------|------------------|--|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | Prevalence Index worksheet: _____ Total % Cover of: _____ Multiply by: _____ | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | OBL species <u>5</u> x 1 = <u>5</u> | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | FACW species <u>80</u> x 2 = <u>160</u> | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | FAC species <u>25</u> x 3 = <u>75</u> | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | FACU species <u>0</u> x 4 = <u>0</u> | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | UPL species <u>0</u> x 5 = <u>0</u> | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | Column Totals: <u>110</u> (A) <u>240</u> (B) | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | Prevalence Index = B/A = <u>2.182</u> | |
| Herb Stratum (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 1. <i>Phragmites australis</i> | 80 | <input checked="" type="checkbox"/> | FACW | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| 2. <i>Juncus tenuis</i> | 25 | <input checked="" type="checkbox"/> | FAC | | |
| 3. <i>Eleocharis palustris</i> | 5 | <input type="checkbox"/> | OBL | | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | | |
| Woody Vine Stratum (Plot size: _____) | | | | 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 (1m) tall.. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | | |
| _____ = Total Cover | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: w-jbl-20180709-08

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071018-04

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 7N **R.** 18W

Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.404906 **Long.:** -82.267591 **Datum:** NAD 83

Soil Map Unit Name: Mr, RdA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|---|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 5 |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 0 |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-20180710-04

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Typha angustifolia</i> | 35 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Phragmites australis</i> | 35 | <input checked="" type="checkbox"/> | FACW | |
| 3. <i>Carex cristatella</i> | 10 | <input type="checkbox"/> | FACW | |
| 4. <i>Juncus torreyi</i> | 10 | <input type="checkbox"/> | FACW | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 90 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>35</u> | x 1 = <u>35</u> |
| FACW species <u>55</u> | x 2 = <u>110</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>90</u> (A) | <u>145</u> (B) |

Prevalence Index = B/A = 1.611

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071018-01

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 19W

Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.398872 **Long.:** -82.267912 **Datum:** NAD 83

Soil Map Unit Name: has, LcB **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|----|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 10 |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 6 |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-071018-01

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Phalaris arundinacea</i> | 90 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Scirpus atrovirens</i> | 5 | <input type="checkbox"/> | OBL | |
| 3. <i>Lythrum salicaria</i> | 5 | <input type="checkbox"/> | OBL | |
| 4. <i>Bidens frondosa</i> | 2 | <input type="checkbox"/> | FACW | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| 102 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>10</u> | x 1 = <u>10</u> |
| FACW species <u>92</u> | x 2 = <u>184</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>102</u> (A) | <u>194</u> (B) |

Prevalence Index = B/A = 1.902

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0¹**

☐ **Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)**

☐ **Problematic Hydrophytic Vegetation¹ (Explain)**

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

monkey flower 2;

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071018-07

Investigator(s): JBL/AEH **Section, Township, Range:** S. T. 6N R. 18W

Landform (hillslope, terrace, etc.): Hillside **Local relief (concave, convex, none):** rolling **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.390814 **Long.:** -82.268229 **Datum:** NAD 83

Soil Map Unit Name: MtA, OtB **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|---|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 8 |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 0 |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-2080710-07

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Scirpus cyperinus</i> | 25 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Phalaris arundinacea</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 3. <i>Phragmites australis</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 4. <i>Juncus effusus</i> | 15 | <input checked="" type="checkbox"/> | OBL | |
| 5. <i>Typha angustifolia</i> | 15 | <input checked="" type="checkbox"/> | OBL | |
| 6. <i>Onoclea sensibilis</i> | 10 | <input type="checkbox"/> | FACW | |
| 7. <i>Carex frankii</i> | 10 | <input type="checkbox"/> | OBL | |
| 8. <i>Impatiens capensis</i> | 5 | <input type="checkbox"/> | FACW | |
| 9. <i>Apocynum cannabinum</i> | 5 | <input type="checkbox"/> | FAC | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 115 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>65</u> | x 1 = <u>65</u> |
| FACW species <u>45</u> | x 2 = <u>90</u> |
| FAC species <u>5</u> | x 3 = <u>15</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>115</u> (A) | <u>170</u> (B) |

Prevalence Index = B/A = 1.478

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input checked="" type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071018-06

Investigator(s): JBL,AEH **Section, Township, Range:** S. **T.** 6N **R.** 19W

Landform (hillslope, terrace, etc.): Lowland **Local relief (concave, convex, none):** flat **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.392978 **Long.:** -82.264996 **Datum:** NAD 83

Soil Map Unit Name: Om **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|----|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 10 |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 0 |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-20180710-06

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Scirpus cyperinus</i> | 15 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Juncus effusus</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Apocynum cannabinum</i> | 15 | <input checked="" type="checkbox"/> | FAC | |
| 4. <i>Carex lurida</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 5. <i>Scirpus atrovirens</i> | 10 | <input type="checkbox"/> | OBL | |
| 6. <i>Impatiens capensis</i> | 5 | <input type="checkbox"/> | FACW | |
| 7. <i>Onoclea sensibilis</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 100 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>65</u> | x 1 = <u>65</u> |
| FACW species <u>20</u> | x 2 = <u>40</u> |
| FAC species <u>15</u> | x 3 = <u>45</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>150</u> (B) |

Prevalence Index = B/A = 1.500

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

joe pye weed 5%

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071018-05

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 19W

Landform (hillslope, terrace, etc.): Hillside **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.393474 **Long.:** -82.264152 **Datum:** NAD 83

Soil Map Unit Name: Om, WeB **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|----|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 10 |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: w-jbl_20180710-05

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Phalaris arundinacea</i> | 45 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Juncus effusus</i> | 15 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Apocynum cannabinum</i> | 15 | <input checked="" type="checkbox"/> | FAC | |
| 4. <i>Carex frankii</i> | 10 | <input type="checkbox"/> | OBL | |
| 5. <i>Typha angustifolia</i> | 5 | <input type="checkbox"/> | OBL | |
| 6. <i>Carex crinita</i> | 5 | <input type="checkbox"/> | OBL | |
| 7. <i>Scirpus pendulus</i> | 5 | <input type="checkbox"/> | OBL | |
| 8. <i>Impatiens capensis</i> | 2 | <input type="checkbox"/> | FACW | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 102 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>40</u> | x 1 = <u>40</u> |
| FACW species <u>47</u> | x 2 = <u>94</u> |
| FAC species <u>15</u> | x 3 = <u>45</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>102</u> (A) | <u>179</u> (B) |

Prevalence Index = B/A = 1.755

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 11-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071118-01

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 18W

Landform (hillslope, terrace, etc.): Valley bottom **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.396660 **Long.:** -82.261015 **Datum:** NAD 83

Soil Map Unit Name: Qu **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) wetland - pss pem , nhd indicated quarry creek but its impounded | |

Hydrology

| | | | |
|--|--|--|---|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input checked="" type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): | 3 |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| | | Wetland Hydrology Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: sloping down to north | | | |

VEGETATION - Use scientific names of plants

Sampling Point: w-jbl-071118-01

| Tree Stratum | (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|----------------------------------|------------------|-------------------------------------|------------------|
| 1. | | 0 | <input type="checkbox"/> | |
| 2. | | 0 | <input type="checkbox"/> | |
| 3. | | 0 | <input type="checkbox"/> | |
| 4. | | 0 | <input type="checkbox"/> | |
| 5. | | 0 | <input type="checkbox"/> | |
| 6. | | 0 | <input type="checkbox"/> | |
| 7. | | 0 | <input type="checkbox"/> | |
| | | 0 | = Total Cover | |
| Sapling/Shrub Stratum | (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | <i>Cephalanthus occidentalis</i> | 70 | <input checked="" type="checkbox"/> | OBL |
| 2. | <i>Salix nigra</i> | 10 | <input type="checkbox"/> | OBL |
| 3. | | 0 | <input type="checkbox"/> | |
| 4. | | 0 | <input type="checkbox"/> | |
| 5. | | 0 | <input type="checkbox"/> | |
| 6. | | 0 | <input type="checkbox"/> | |
| 7. | | 0 | <input type="checkbox"/> | |
| | | 80 | = Total Cover | |
| Herb Stratum | (Plot size: 30 _____) | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | <i>Phalaris arundinacea</i> | 20 | <input checked="" type="checkbox"/> | FACW |
| 2. | <i>Leersia oryzoides</i> | 8 | <input type="checkbox"/> | OBL |
| 3. | <i>Impatiens capensis</i> | 10 | <input type="checkbox"/> | FACW |
| 4. | <i>Sagittaria cuneata</i> | 15 | <input checked="" type="checkbox"/> | OBL |
| 5. | | | <input type="checkbox"/> | |
| 6. | | | <input type="checkbox"/> | |
| 7. | | | <input type="checkbox"/> | |
| 8. | | | <input type="checkbox"/> | |
| 9. | | | <input type="checkbox"/> | |
| 10. | | 0 | <input type="checkbox"/> | |
| 11. | | 0 | <input type="checkbox"/> | |
| 12. | | 0 | <input type="checkbox"/> | |
| | | 53 | = Total Cover | |
| Woody Vine Stratum | (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. | | 0 | <input type="checkbox"/> | |
| 2. | | 0 | <input type="checkbox"/> | |
| 3. | | 0 | <input type="checkbox"/> | |
| 4. | | 0 | <input type="checkbox"/> | |
| | | 0 | = Total Cover | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>103</u> | x 1 = <u>103</u> |
| FACW species <u>30</u> | x 2 = <u>60</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>133</u> (A) | <u>163</u> (B) |

Prevalence Index = B/A = 1.226

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-20180711-02

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. <i>Salix nigra</i> | 5 | <input checked="" type="checkbox"/> | OBL | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 5 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Impatiens capensis</i> | 45 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Carex lacustris</i> | 15 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Phalaris arundinacea</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 4. <i>Onoclea sensibilis</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 5. <i>Phragmites australis</i> | 10 | <input type="checkbox"/> | FACW | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>20</u> | x 1 = <u>20</u> |
| FACW species <u>85</u> | x 2 = <u>170</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>105</u> (A) | <u>190</u> (B) |

Prevalence Index = B/A = 1.810

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0¹**

☐ **Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)**

☐ **Problematic Hydrophytic Vegetation¹ (Explain)**

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**Project/Site:** Brownhelm-Beaver-Black River**City/County:** Lorain**Sampling Date:** 12-Jul-18**Applicant/Owner:** FirstEnergy**State:** OH**Sampling Point:** w-aeH-071218-01**Investigator(s):** JBL/AEH**Section, Township, Range: S.****T.** 6N**R.** 18W**Landform (hillslope, terrace, etc.):** Swale**Local relief (concave, convex, none):** concave**Slope:** 0.0 % / 0.0 °**Subregion (LRR or MLRA):** LRR R**Lat.:** 41.408097**Long.:** -82.236791**Datum:** NAD 83**Soil Map Unit Name:** DsB**NWI classification:** N/A**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes ☒ No ☐ (If no, explain in Remarks.)**Are Vegetation** ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?****Are "Normal Circumstances" present?** Yes ☒ No ☐**Are Vegetation** ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?**

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|---|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input checked="" type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input checked="" type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| | | Wetland Hydrology Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: w-aeh-20180712-01

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Scirpus atrovirens</i> | 35 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Typha angustifolia</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Apocynum cannabinum</i> | 15 | <input type="checkbox"/> | FAC | |
| 4. <i>Juncus effusus</i> | 10 | <input type="checkbox"/> | OBL | |
| 5. <i>Phragmites australis</i> | 5 | <input type="checkbox"/> | FACW | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 85 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 10 | <input checked="" type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 10 = Total Cover | | | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>65</u> | x 1 = <u>65</u> |
| FACW species <u>5</u> | x 2 = <u>10</u> |
| FAC species <u>15</u> | x 3 = <u>45</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>85</u> (A) | <u>120</u> (B) |

Prevalence Index = B/A = 1.412

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

VEGETATION - Use scientific names of plantsSampling Point: EnterIDw-aeH20180712-0

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Phalaris arundinacea</i> | 95 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Phragmites australis</i> | 10 | <input type="checkbox"/> | FACW | |
| 3. <i>Juncus effusus</i> | 10 | <input type="checkbox"/> | OBL | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 115 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>10</u> | x 1 = <u>10</u> |
| FACW species <u>105</u> | x 2 = <u>210</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>115</u> (A) | <u>220</u> (B) |

Prevalence Index = B/A = 1.913

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**Project/Site:** Brownhelm-Beaver-Black River**City/County:** Lorain**Sampling Date:** 12-Jul-18**Applicant/Owner:** FirstEnergy**State:** OH**Sampling Point:** w-aeH-071218-03**Investigator(s):** JBL/AEH**Section, Township, Range:** S. T. 6N R. 18W**Landform (hillslope, terrace, etc.):** Floodplain**Local relief (concave, convex, none):** tussocks **Slope:** 0.0 % / 0.0 °**Subregion (LRR or MLRA):** LRR R**Lat.:** 41.410637**Long.:** -82.229309**Datum:** NAD 83**Soil Map Unit Name:** LcB**NWI classification:** N/A**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes ☒ No ☐ (If no, explain in Remarks.)**Are Vegetation** ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐**Are Vegetation** ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)**Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc**

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|---|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input checked="" type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input checked="" type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| | | Wetland Hydrology Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plants

Sampling Point: w-aeh-20180712-03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. <i>Cephalanthus occidentalis</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Salix nigra</i> | 15 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Quercus palustris</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 50 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Carex lacustris</i> | 35 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Typha angustifolia</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Phalaris arundinacea</i> | 15 | <input type="checkbox"/> | FACW | |
| 4. <i>Salix nigra</i> | 10 | <input type="checkbox"/> | OBL | |
| 5. <i>Quercus palustris</i> | 10 | <input type="checkbox"/> | FACW | |
| 6. <i>Impatiens capensis</i> | 5 | <input type="checkbox"/> | FACW | |
| 7. <i>Apocynum cannabinum</i> | 5 | <input type="checkbox"/> | FAC | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 100 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>100</u> | x 1 = <u>100</u> |
| FACW species <u>45</u> | x 2 = <u>90</u> |
| FAC species <u>5</u> | x 3 = <u>15</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>150</u> (A) | <u>205</u> (B) |
| Prevalence Index = B/A = <u>1.367</u> | |

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-20180711-04

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Scirpus cyperinus</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Carex annectens</i> | 10 | <input type="checkbox"/> | FACW | |
| 3. <i>Juncus tenuis</i> | 5 | <input type="checkbox"/> | FAC | |
| 4. <i>Poa pratensis</i> | 15 | <input type="checkbox"/> | FACU | |
| 5. <i>Juncus effusus</i> | 35 | <input checked="" type="checkbox"/> | OBL | |
| 6. <i>Acer rubrum</i> | 5 | <input type="checkbox"/> | FAC | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 90 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------------|-----------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>55</u> | x 1 = <u>55</u> |
| FACW species <u>10</u> | x 2 = <u>20</u> |
| FAC species <u>10</u> | x 3 = <u>30</u> |
| FACU species <u>15</u> | x 4 = <u>60</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>90</u> (A) | <u>165</u> (B) |

Prevalence Index = B/A = 1.833

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-20180711-03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Eleocharis palustris</i> | 60 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Typha angustifolia</i> | 15 | <input type="checkbox"/> | OBL | |
| 3. <i>Juncus effusus</i> | 15 | <input type="checkbox"/> | OBL | |
| 4. <i>Scirpus atrovirens</i> | 15 | <input type="checkbox"/> | OBL | |
| 5. <i>Rorippa nasturtium-aquaticum</i> | 25 | <input checked="" type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 130 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>105</u> | x 1 = <u>105</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>105</u> (A) | <u>105</u> (B) |

Prevalence Index = B/A = 1.000

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0¹**

☐ **Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)**

☐ **Problematic Hydrophytic Vegetation¹ (Explain)**

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

watercress 25

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 11-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** w-jbl-071118-05

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 18W

Landform (hillslope, terrace, etc.): Swale **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.424057 **Long.:** -82.210402 **Datum:** NAD 83

Soil Map Unit Name: Ch **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: (Explain alternative procedures here or in a separate report.) pem pfo | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) | | Secondary Indicators (minimum of 2 required) | |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): _____ | | |
| Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): _____ | | |
| Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): _____ | Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: w-jbl-20180711-05

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|---|
| 1. <i>Fraxinus pennsylvanica</i> | 25 | <input checked="" type="checkbox"/> | FACW | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <i>Ulmus americana</i> | 20 | <input checked="" type="checkbox"/> | FACW | |
| 3. <i>Acer saccharum</i> | 5 | <input type="checkbox"/> | FACU | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| Sapling/Shrub Stratum (Plot size: _____) | | 50 = Total Cover | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>8</u> x 1 = <u>8</u> FACW species <u>108</u> x 2 = <u>216</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>131</u> (A) <u>274</u> (B) Prevalence Index = B/A = <u>2.092</u> |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| Herb Stratum (Plot size: _____) | | 0 = Total Cover | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <i>Leersia virginica</i> | 20 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Phalaris arundinacea</i> | 35 | <input checked="" type="checkbox"/> | FACW | |
| 3. <i>Carex grayi</i> | 8 | <input type="checkbox"/> | FACW | |
| 4. <i>Carex crinita</i> | 8 | <input type="checkbox"/> | OBL | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| Woody Vine Stratum (Plot size: _____) | | 71 = Total Cover | | 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 (1m) tall.. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. |
| 1. <i>Toxicodendron radicans</i> | 10 | <input checked="" type="checkbox"/> | FAC | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 10 = Total Cover | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

| | | | | | | | |
|---|--------------------------|--|---------------|------------------------|-------------------|---------------|--------|
| Project/Site | Beaver Brownhelm Project | City/County | Lorain County | Sampling Date: | 08-Oct-18 | | |
| Applicant/Owner | First Energy | State: | OH | Sampling Point: | w-aeh-20181008-01 | | |
| Investigator(s) | AEH, TL | Section, Township, Range: | T 6N R. 18W | | | | |
| Landform (hillslope, terrace, etc) | Swale | Local relief (concave, convex, non) | concave | Slope | 0.0 % / 0.0 ° | | |
| Subregion (LRR or MLRA) | LRR R | Lat.: | 41.409526 | Long.: | -82.237905 | Datum: | NAD 83 |
| Soil Map Unit Nam | DsB | NWI classificatio | N/A | | | | |

Are climatic/hydrologic conditions on the site typical for this time of Yes ☒ No ☐ (If no, explain in Remarks

Are Vegetatio ☐ , Soil ☐ , or Hydrolog ☐ significantly disturbed Are "Normal Circumstances" presen Yes ☒ No ☐

Are Vegetatio ☐ , Soil ☐ , or Hydrolog ☐ naturally problematic (If needed, explain any answers in Remark

Summary of Findings - Attach site map showing sampling point locations, transects, important features,

| | | | |
|---|---|----------------------------|---|
| Hydrophytic Vegetation Presen | Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area | Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydic Soil Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | | |
| Remarks: (Explain alternative procedures here or in a separate rep | | | |

Hydrology

| | | |
|--|--|--|
| Wetland Hydrology Indicator | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | |
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B | <input type="checkbox"/> Surface Soil Cracks (B6 |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13 | <input type="checkbox"/> Drainage Patterns (B10 |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C | <input type="checkbox"/> Dry Season Water Table (C |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C | <input type="checkbox"/> Crayfish Burrows (C |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4 | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C |
| <input type="checkbox"/> Algal Mat or Crust (B4 | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C | <input type="checkbox"/> Stunted or Stressed Plants (D |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7 | <input checked="" type="checkbox"/> Geomorphic Position (D2 |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B | <input type="checkbox"/> Other (Explain in Remarks | <input type="checkbox"/> Shallow Aquitard (D3 |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (| | <input type="checkbox"/> Microtopographic Relief (D |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D |
| Field Observations: | | |
| Surface Water Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): 4 |
| Water Table Present? | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): 0 |
| Saturation Present? (includes capillary fringe) | Yes <input checked="" type="radio"/> No <input type="radio"/> | Depth (inches): 0 |
| Wetland Hydrology Presen Yes <input checked="" type="radio"/> No <input type="radio"/> | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | |
| Remarks: | | |

VEGETATION - Use scientific names of plantsSampling Point w-aeh-20181008-01

| Tree Stratu (Plot size: _____) | Absolut e | Dominan t | Indicato r | |
|---|--------------|-------------------------------------|---------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 | = Total Cove | |
| Sapling/Shrub Stratu (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 | = Total Cove | |
| Herb Stratu (Plot size: _____) | | | | |
| 1. <i>Eleocharis palustris</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 2. <i>Typha angustifolia</i> | 20 | <input checked="" type="checkbox"/> | OBL | |
| 3. <i>Persicaria pensylvanica</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 4. <i>Symphyotrichum lateriflorum</i> | 10 | <input type="checkbox"/> | FAC | |
| 5. <i>Persicaria virginiana</i> | 10 | <input type="checkbox"/> | FAC | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 75 | = Total Cove | |
| Woody Vine Stratu (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 | = Total Cove | |

Dominance Test workshee

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 100.0% (A/B)

Prevalence Index workshee

Total % Cover of: _____ Multiply by: _____

OBL species 40 x 1 = 40

FACW species 15 x 2 = 30

FAC species 20 x 3 = 60

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 75 (A) 130 (B)

Prevalence Index = B/A = 1.733

Hydrophytic Vegetation Indicator

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50**

☒ **Prevalence Index is ≤ 3.** ¹

☐ **Morphological Adaptations** ¹ (Provide supporting data in Remarks or on a separate

☐ **Problematic Hydrophytic Vegetation** ¹ (Expla

¹ **Indicators of hydric soil and wetland hydrology must**

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 (1m) tall..

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

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

Hydrophytic Vegetation Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined b

Soil

Sampling Point

w-aeH-20181008-01

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M

Hydric Soil Indicators:

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) LRR K, |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A1) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A1) | <input type="checkbox"/> Depleted Dark Surface (F |
| <input type="checkbox"/> Sandy Muck Mineral (S | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soil ³

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149)
- ☐ Coast Prairie Redox (A16) (LRR K, L,
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L,
- ☐ Dark Surface (S7) (LRR K, L,
- ☐ Polyvalue Below Surface (S8) (LRR K,
- ☐ Thin Dark Surface (S9) (LRR K,
- ☐ Iron-Manganese Masses (F12) (LRR K, L,
- ☐ Piedmont Floodplain Soils (F19) (MLRA 14
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 14
- ☐ Red Parent Material (F21
- ☐ Very Shallow Dark Surface (TF1
- ☐ Other (Explain in Remarks

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or probed.

Restrictive Layer (if observed)

Type: _____

Depth (inches): _____

Hydric Soil Present Yes ☒ No ☐

Remarks:

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-071018-03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Andropogon virginicus</i> | 30 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Erigeron philadelphicus</i> | 25 | <input checked="" type="checkbox"/> | FAC | |
| 3. <i>Juncus torreyi</i> | 20 | <input checked="" type="checkbox"/> | FACW | |
| 4. <i>Solidago canadensis</i> | 25 | <input checked="" type="checkbox"/> | FACU | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>20</u> | x 2 = <u>40</u> |
| FAC species <u>25</u> | x 3 = <u>75</u> |
| FACU species <u>55</u> | x 4 = <u>220</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>335</u> (B) |
| Prevalence Index = B/A = <u>3.350</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

| | | |
|---|---|--|
| Project/Site: Brownhelm-Beaver-Black River | City/County: Lorain | Sampling Date: 10-Jul-18 |
| Applicant/Owner: FirstEnergy | State: OH | Sampling Point: upl-jbl-071018-04 |
| Investigator(s): JBL/AEH | Section, Township, Range: S. 6N R. 19W | |
| Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): flat | Slope: 0.0 % / 0.0 ° |
| Subregion (LRR or MLRA): LRR R | Lat.: 41.426320 | Long.: -82.2629910 |
| Soil Map Unit Name: RdA | Datum: NAD 83 | |
| Soil Map Unit Name: RdA | | NWI classification: N/A |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-071018-04

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Apocynum cannabinum</i> | 40 | <input checked="" type="checkbox"/> | FAC | |
| 2. <i>Carex vulpinoidea</i> | 10 | <input type="checkbox"/> | OBL | |
| 3. <i>Festuca arundinacea</i> | 25 | <input checked="" type="checkbox"/> | FACU | |
| 4. <i>Dichanthelium clandestinum</i> | 15 | <input type="checkbox"/> | FACW | |
| 5. <i>Onoclea sensibilis</i> | 5 | <input type="checkbox"/> | FACW | |
| 6. <i>Bromus arvensis</i> | 10 | <input type="checkbox"/> | FACU | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 105 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |

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: 50.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>10</u> | x 1 = <u>10</u> |
| FACW species <u>20</u> | x 2 = <u>40</u> |
| FAC species <u>40</u> | x 3 = <u>120</u> |
| FACU species <u>35</u> | x 4 = <u>140</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>105</u> (A) | <u>310</u> (B) |

Prevalence Index = B/A = 2.952

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

| | | |
|---|---|--|
| Project/Site: Brownhelm-Beaver-Black River | City/County: Lorain | Sampling Date: 09-Jul-18 |
| Applicant/Owner: FirstEnergy | State: OH | Sampling Point: upl-jbl-070918-01 |
| Investigator(s): JBL,AEH | Section, Township, Range: S. T. 7N R. 18W | |
| Landform (hillslope, terrace, etc.): Mound | Local relief (concave, convex, none): flat | Slope: 0.0 % / 0.0 ° |
| Subregion (LRR or MLRA): LRR R | Lat.: 41.419674 | Long.: 41.419674 Datum: NAD 83 |
| Soil Map Unit Name: FuA | NWI classification: N/A | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantSampling Point: upl-jbl-070918-01

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Lotus corniculatus</i> | 15 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Festuca arundinacea</i> | 18 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Dactylis glomerata</i> | 20 | <input checked="" type="checkbox"/> | FACU | |
| 4. <i>Apocynum cannabinum</i> | 10 | <input type="checkbox"/> | FAC | |
| 5. <i>Phleum pratense</i> | 12 | <input type="checkbox"/> | FACU | |
| 6. <i>Cirsium arvense</i> | 9 | <input type="checkbox"/> | FACU | |
| 7. <i>Coronilla varia</i> | 20 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 104 | = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |

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: 0.0% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>10</u> | x 3 = <u>30</u> |
| FACU species <u>74</u> | x 4 = <u>296</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>84</u> (A) | <u>326</u> (B) |

 Prevalence Index = B/A = 3.881

Hydrophytic Vegetation Indicators:
☐ **Rapid Test for Hydrophytic Vegetation**
☐ **Dominance Test is > 50%**
☐ **Prevalence Index is ≤ 3.0**¹
☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)
☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: (Include photo numbers here or on a separate sheet.)
 crwn vetch 20

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: upl-jbl-070918-01

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: gravel

Depth (inches): 8

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

| | | |
|---|---|---|
| Project/Site: Brownhelm-Beaver-Black River | City/County: Lorain | Sampling Date: 09-Jul-18 |
| Applicant/Owner: FirstEnergy | State: OH | Sampling Point: upl-jbl-070918-02;03 |
| Investigator(s): JBL,AEH | Section, Township, Range: S. T. 7N R. 18W | |
| Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): none | Slope: 0.0 % / 0.0 ° |
| Subregion (LRR or MLRA): LRR L | Lat.: 41.417563 | Long.: -82.263780 Datum: NAD 83 |
| Soil Map Unit Name: FuA | NWI classification: N/A | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantSampling Point: upl-jbl-070918-02;03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Festuca arundinacea</i> | 25 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Achillea millefolium</i> | 15 | <input type="checkbox"/> | FACU | |
| 3. <i>Lotus corniculatus</i> | 20 | <input checked="" type="checkbox"/> | FACU | |
| 4. <i>Solidago canadensis</i> | 35 | <input checked="" type="checkbox"/> | FACU | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 95 | = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. <i>Lonicera japonica</i> | 5 | <input checked="" type="checkbox"/> | FACU | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 5 | = Total Cover | | |

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>100</u> | x 4 = <u>400</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>400</u> (B) |
| Prevalence Index = B/A = <u>4.000</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Sampling Point: upl-jbl-070918-02;03

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

| | | |
|--|---|---|
| Project/Site: Brownhelm-Beaver-Black River | City/County: Lorain | Sampling Date: 09-Jul-18 |
| Applicant/Owner: FirstEnergy | State: OH | Sampling Point: upl-jbl-070918-04 |
| Investigator(s): JBL,AEH | Section, Township, Range: S. T. 7N R. 18W | |
| Landform (hillslope, terrace, etc.): Hillside | Local relief (concave, convex, none): none | Slope: 0.0 % / 0.0 ° |
| Subregion (LRR or MLRA): | Lat.: 41.416419 | Long.: -82.264918 Datum: NAD 83 |
| Soil Map Unit Name: FuA | NWI classification: N/A | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

Northcentral and Northeast Region - Version 2.0

upl-jbl20180702-04

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck 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)

☐ 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, M)

☐ 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 (F21)

☐ Very Shallow Dark Surface (TF12)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

| | | |
|---|---|---|
| Project/Site: Brownhelm-Beaver-Black River | City/County: Lorain | Sampling Date: 09-Jul-18 |
| Applicant/Owner: FirstEnergy | State: OH | Sampling Point: upl-jbl-070918-05 |
| Investigator(s): JBL,AEH | Section, Township, Range: S. T. 7N R. 18W | |
| Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): none | Slope: 0.0 % / 0.0 ° |
| Subregion (LRR or MLRA): LRR R | Lat.: 41.413703 | Long.: -82.267306 Datum: NAD 83 |
| Soil Map Unit Name: AIA | NWI classification: N/A | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantSampling Point: upl-jbl20180709-05

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|--------------------------|------------------|---|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | | |
| | | | | Prevalence Index worksheet: | |
| | | | | Total % Cover of: _____ Multiply by: _____ | |
| | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| | | | | FACW species <u>15</u> x 2 = <u>30</u> | |
| | | | | FAC species <u>0</u> x 3 = <u>0</u> | |
| | | | | FACU species <u>60</u> x 4 = <u>240</u> | |
| | | | | UPL species <u>35</u> x 5 = <u>175</u> | |
| | | | | Column Totals: <u>110</u> (A) <u>445</u> (B) | |
| | | | | Prevalence Index = B/A = <u>4.045</u> | |
| | | | | Hydrophytic Vegetation Indicators: | |
| | | | | <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation | |
| | | | | <input type="checkbox"/> Dominance Test is > 50% | |
| | | | | <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ | |
| | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| | | | | ¹ 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 (1m) tall.. | |
| | | | | Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | |
| | | | | Woody vine - All woody vines greater than 3.28 ft in height. | |
| | | | | | |
| | | | | Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: upl-jbl20180709-05

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 09-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-070918-06,07

Investigator(s): JBL,AEH **Section, Township, Range:** S. 6N R. 19W

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** none **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.409385 **Long.:** -82.267578 **Datum:** NAD 83

Soil Map Unit Name: AIA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: | | <u>Secondary Indicators (minimum of 2 required)</u> | |
| <u>Primary Indicators (minimum of one required; check all that apply)</u> | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantSampling Point: upl-jbl-20180709-06

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Festuca arundinacea</i> | 40 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Lotus corniculatus</i> | 20 | <input type="checkbox"/> | FACU | |
| 3. <i>Phalaris arundinacea</i> | 40 | <input checked="" type="checkbox"/> | FACW | |
| 4. <i>Juncus tenuis</i> | 15 | <input type="checkbox"/> | FAC | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 115 | = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |

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: 50.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>40</u> | x 2 = <u>80</u> |
| FAC species <u>15</u> | x 3 = <u>45</u> |
| FACU species <u>70</u> | x 4 = <u>280</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>125</u> (A) | <u>405</u> (B) |
| Prevalence Index = B/A = <u>3.240</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Sampling Point:

upl-jbl-20180709-06

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

| | | |
|--|---|---|
| Project/Site: Brownhelm-Beaver-Black River | City/County: Lorain | Sampling Date: 09-Jul-18 |
| Applicant/Owner: FirstEnergy | State: OH | Sampling Point: upl-jbl-070918-08 |
| Investigator(s): JBL,AEH | Section, Township, Range: S. T. 6N R. 19W | |
| Landform (hillslope, terrace, etc.): Hillside | Local relief (concave, convex, none): none | Slope: 0.0 % / 0.0 ° |
| Subregion (LRR or MLRA): LRR R | Lat.: 41.406233 | Long.: -82.267870 Datum: NAD 83 |
| Soil Map Unit Name: FuA | NWI classification: N/A | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantSampling Point: upl-jbl-20180709-08

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Solidago canadensis</i> | 45 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Apocynum cannabinum</i> | 15 | <input checked="" type="checkbox"/> | FAC | |
| 3. <i>Dipsacus fullonum</i> | 5 | <input type="checkbox"/> | FACU | |
| 4. <i>Rubus flagellaris</i> | 15 | <input type="checkbox"/> | FACU | |
| 5. <i>Leucanthemum vulgare</i> | 20 | <input type="checkbox"/> | UPL | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | 0 | = Total Cover | | |

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: 50.0% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>15</u> | x 3 = <u>45</u> |
| FACU species <u>50</u> | x 4 = <u>200</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>65</u> (A) | <u>245</u> (B) |

Prevalence Index = B/A = 3.769

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

oxeye 20

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Sampling Point: upl-jbl-20180709-08

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-071018-05

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Solidago altissima</i> | 45 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Andropogon virginicus</i> | 25 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Dichanthelium clandestinum</i> | 20 | <input checked="" type="checkbox"/> | FACW | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 90 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. <i>Rubus flagellaris</i> | 5 | <input checked="" type="checkbox"/> | FACU | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5 = Total Cover | | | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>25</u> | x 2 = <u>50</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>70</u> | x 4 = <u>280</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>95</u> (A) | <u>330</u> (B) |
| Prevalence Index = B/A = <u>3.474</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-071018-02

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Ambrosia artemisiifolia</i> | 80 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Daucus carota</i> | 8 | <input type="checkbox"/> | UPL | |
| 3. <i>Dipsacus fullonum</i> | 5 | <input type="checkbox"/> | FACU | |
| 4. <i>Juncus tenuis</i> | 2 | <input type="checkbox"/> | FAC | |
| 5. <i>Allium cernuum</i> | 5 | <input type="checkbox"/> | FACU | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | | | |
| 0 = Total Cover | | | | |

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: 0.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>2</u> | x 3 = <u>6</u> |
| FACU species <u>90</u> | x 4 = <u>360</u> |
| UPL species <u>8</u> | x 5 = <u>40</u> |
| Column Totals: <u>100</u> (A) | <u>406</u> (B) |
| Prevalence Index = B/A = <u>4.060</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-20180710-08

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Lotus corniculatus</i> | 35 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Poa pratensis</i> | 20 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Taraxacum officinale</i> | 15 | <input type="checkbox"/> | FACU | |
| 4. <i>Achillea millefolium</i> | 15 | <input type="checkbox"/> | FACU | |
| 5. <i>Symphyotrichum ericoides</i> | 5 | <input type="checkbox"/> | FACU | |
| 6. <i>Solidago canadensis</i> | 5 | <input type="checkbox"/> | FACU | |
| 7. <i>Dichanthelium clandestinum</i> | 5 | <input type="checkbox"/> | FACW | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>5</u> | x 2 = <u>10</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>95</u> | x 4 = <u>380</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>390</u> (B) |

Prevalence Index = B/A = 3.900

Hydrophytic Vegetation Indicators:

☐ **Rapid Test for Hydrophytic Vegetation**

☐ **Dominance Test is > 50%**

☐ **Prevalence Index is ≤ 3.0** ¹

☐ **Morphological Adaptations** ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation** ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-071018-07

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 18W

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** none **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.392228 **Long.:** -82.265763 **Datum:** NAD 83

Soil Map Unit Name: TyB **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> | | <u>Secondary Indicators (minimum of 2 required)</u> | |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ | | | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl20180710-07

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Festuca arundinacea</i> | 45 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Solidago canadensis</i> | 15 | <input type="checkbox"/> | FACU | |
| 3. <i>Achillea millefolium</i> | 15 | <input type="checkbox"/> | FACU | |
| 4. <i>Apocynum cannabinum</i> | 10 | <input type="checkbox"/> | FAC | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 85 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. <i>Rubus flagellaris</i> | 25 | <input checked="" type="checkbox"/> | FACU | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 25 = Total Cover | | | | |

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>10</u> | x 3 = <u>30</u> |
| FACU species <u>100</u> | x 4 = <u>400</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>110</u> (A) | <u>430</u> (B) |
| Prevalence Index = B/A = <u>3.909</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl20180710-06

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Apocynum cannabinum</i> | 65 | <input checked="" type="checkbox"/> | FAC | |
| 2. <i>Phalaris arundinacea</i> | 30 | <input checked="" type="checkbox"/> | FACW | |
| 3. <i>Solidago canadensis</i> | 5 | <input type="checkbox"/> | FACU | |
| 4. <i>Scirpus cyperinus</i> | 2 | <input type="checkbox"/> | OBL | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 102 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. <i>Rubus flagellaris</i> | 5 | <input checked="" type="checkbox"/> | FACU | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 5 = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>2</u> | x 1 = <u>2</u> |
| FACW species <u>30</u> | x 2 = <u>60</u> |
| FAC species <u>65</u> | x 3 = <u>195</u> |
| FACU species <u>10</u> | x 4 = <u>40</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>107</u> (A) | <u>297</u> (B) |
| Prevalence Index = B/A = <u>2.776</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 11-Jul-18
Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-071118-01
Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 18W
Landform (hillslope, terrace, etc.): Hillside **Local relief (concave, convex, none):** none **Slope:** 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR R **Lat.:** 41.396572 **Long.:** -82.26115 **Datum:** NAD 83
Soil Map Unit Name: Qu **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> | | <u>Secondary Indicators (minimum of 2 required)</u> | |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-071118-01

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. <i>Rhamnus cathartica</i> | 30 | <input checked="" type="checkbox"/> | FAC | |
| 2. <i>Quercus alba</i> | 15 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Quercus palustris</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 60 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Dichanthelium clandestinum</i> | 50 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Solidago canadensis</i> | 10 | <input type="checkbox"/> | FACU | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| 60 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. <i>Rubus allegheniensis</i> | 10 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Toxicodendron radicans</i> | 15 | <input checked="" type="checkbox"/> | FAC | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 25 = Total Cover | | | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>65</u> | x 2 = <u>130</u> |
| FAC species <u>45</u> | x 3 = <u>135</u> |
| FACU species <u>35</u> | x 4 = <u>140</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>145</u> (A) | <u>405</u> (B) |
| Prevalence Index = B/A = <u>2.793</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 11-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-071118-02

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 18W

Landform (hillslope, terrace, etc.): Hillside **Local relief (concave, convex, none):** none **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.403874 **Long.:** -82.250077 **Datum:** NAD 83

Soil Map Unit Name: TyC **NWI classification:** NAD 83

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) | | Secondary Indicators (minimum of 2 required) | |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl20180711-02

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. <i>Juglans nigra</i> | 25 | <input checked="" type="checkbox"/> | FACU | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 25 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Impatiens capensis</i> | 45 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Solidago canadensis</i> | 40 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Parthenocissus quinquefolia</i> | 15 | <input type="checkbox"/> | FACU | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. <i>Rubus flagellaris</i> | 15 | <input checked="" type="checkbox"/> | FACU | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 15 = Total Cover | | | | |

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>45</u> | x 2 = <u>90</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>95</u> | x 4 = <u>380</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>140</u> (A) | <u>470</u> (B) |
| Prevalence Index = B/A = <u>3.357</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

VEGETATION - Use scientific names of plantsSampling Point: upl-aeh-20180712-01

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Apocynum cannabinum</i> | 15 | <input type="checkbox"/> | FAC | |
| 2. <i>Solidago canadensis</i> | 20 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Juncus effusus</i> | 10 | <input type="checkbox"/> | OBL | |
| 4. <i>Verbena urticifolia</i> | 10 | <input type="checkbox"/> | FAC | |
| 5. <i>Juncus tenuis</i> | 20 | <input checked="" type="checkbox"/> | FAC | |
| 6. <i>Cornus drummondii</i> | 15 | <input checked="" type="checkbox"/> | FAC | |
| 7. <i>Rubus flagellaris</i> | 10 | <input type="checkbox"/> | FACU | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 100 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>10</u> | x 1 = <u>10</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>65</u> | x 3 = <u>195</u> |
| FACU species <u>25</u> | x 4 = <u>100</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>100</u> (A) | <u>305</u> (B) |

Prevalence Index = B/A = 3.050

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

[illegible]

VEGETATION - Use scientific names of plantsSampling Point: upl-aeH20180712-02

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Solidago canadensis</i> | 95 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Impatiens capensis</i> | 10 | <input type="checkbox"/> | FACW | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| 105 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 0 = Total Cover | | | | |

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: 0.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>10</u> | x 2 = <u>20</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>95</u> | x 4 = <u>380</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>105</u> (A) | <u>400</u> (B) |
| Prevalence Index = B/A = <u>3.810</u> | |

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

¹ 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 (1m) tall.

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|---|------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-18 | 10YR | 3/1 | 95 | 10YR | 7/6 | 5 | C | M | Silty Clay | |
| | | | | | | | | | | |
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¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck 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 :³

☐ 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, M)

☐ 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 (F21)

☐ Very Shallow Dark Surface (TF12)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| Restrictive Layer (if observed): | | | |
|----------------------------------|--|-----------------------------|------------|
| Type: _____ | | Hydric Soil Present? | Yes ● No ○ |
| Depth (inches): _____ | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-aeh-20180712-03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|---|
| 1. <i>Pinus strobus</i> | 45 | <input checked="" type="checkbox"/> | FACU | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) |
| 2. <i>Acer rubrum</i> | 35 | <input checked="" type="checkbox"/> | FAC | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| Sapling/Shrub Stratum (Plot size: _____) | | 80 = Total Cover | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>35</u> x 3 = <u>105</u> FACU species <u>55</u> x 4 = <u>220</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>375</u> (B) Prevalence Index = B/A = <u>3.261</u> |
| 1. <i>Fraxinus pennsylvanica</i> | 15 | <input checked="" type="checkbox"/> | FACW | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| Herb Stratum (Plot size: _____) | | 15 = Total Cover | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <i>Fraxinus pennsylvanica</i> | 10 | <input checked="" type="checkbox"/> | FACW | |
| 2. <i>Parthenocissus quinquefolia</i> | 5 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Rubus flagellaris</i> | 5 | <input checked="" type="checkbox"/> | FACU | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| Woody Vine Stratum (Plot size: _____) | | 20 = Total Cover | | 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 (1m) tall.. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Northcentral and Northeast Region - Version 2.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 11-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-071118-04

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 18W

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** flat **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.412658 **Long.:** -82.224535 **Datum:** NAD 83

Soil Map Unit Name: MKA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> | | <u>Secondary Indicators (minimum of 2 required)</u> | |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ | | | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-20180711-04

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|---|
| 1. <i>Acer rubrum</i> | 10 | <input checked="" type="checkbox"/> | FAC | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B) |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| Sapling/Shrub Stratum (Plot size: _____) | | 10 = Total Cover | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>95</u> x 4 = <u>380</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>420</u> (B) Prevalence Index = B/A = <u>3.818</u> |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| Herb Stratum (Plot size: _____) | | 0 = Total Cover | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <i>Poa pratensis</i> | 60 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Festuca arundinacea</i> | 35 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Carex annectens</i> | 5 | <input type="checkbox"/> | FACW | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| Woody Vine Stratum (Plot size: _____) | | 100 = Total Cover | | 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 (1m) tall.. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| | | 0 = Total Cover | | Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 11-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-071118-03

Investigator(s): JBL/AEH **Section, Township, Range:** S. **T.** 6N **R.** 18W

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** none **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.413465 **Long.:** -82.224350 **Datum:** NAD 83

Soil Map Unit Name: MKA **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> | | <u>Secondary Indicators (minimum of 2 required)</u> | |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ | | | |
| | | Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-20180711-03

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 5. _____ | 0 | <input type="checkbox"/> | | |
| 6. _____ | 0 | <input type="checkbox"/> | | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <i>Erigeron annuus</i> | 35 | <input checked="" type="checkbox"/> | FACU | |
| 2. <i>Trifolium repens</i> | 35 | <input checked="" type="checkbox"/> | FACU | |
| 3. <i>Juncus tenuis</i> | 5 | <input type="checkbox"/> | FAC | |
| 4. <i>Eleocharis palustris</i> | 5 | <input type="checkbox"/> | OBL | |
| 5. <i>Achillea millefolium</i> | 5 | <input type="checkbox"/> | FACU | |
| 6. <i>Juncus effusus</i> | 5 | <input type="checkbox"/> | OBL | |
| 7. _____ | 0 | <input type="checkbox"/> | | |
| 8. _____ | 0 | <input type="checkbox"/> | | |
| 9. _____ | 0 | <input type="checkbox"/> | | |
| 10. _____ | 0 | <input type="checkbox"/> | | |
| 11. _____ | 0 | <input type="checkbox"/> | | |
| 12. _____ | 0 | <input type="checkbox"/> | | |
| 90 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | | |
| 2. _____ | 0 | <input type="checkbox"/> | | |
| 3. _____ | 0 | <input type="checkbox"/> | | |
| 4. _____ | 0 | <input type="checkbox"/> | | |
| 0 = Total Cover | | | | |

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>10</u> | x 1 = <u>10</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>5</u> | x 3 = <u>15</u> |
| FACU species <u>75</u> | x 4 = <u>300</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>90</u> (A) | <u>325</u> (B) |

Prevalence Index = B/A = 3.611

Hydrophytic Vegetation Indicators:

☐ **Rapid Test for Hydrophytic Vegetation**

☐ **Dominance Test is > 50%**

☐ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 11-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-071118-05

Investigator(s): JBL/AEH **Section, Township, Range:** S. T. 6N R. 18W

Landform (hillslope, terrace, etc.): Hillside **Local relief (concave, convex, none):** none **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.424017 **Long.:** -82.210342 **Datum:** NAD 83

Soil Map Unit Name: Ch **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

Hydrology

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) | | Secondary Indicators (minimum of 2 required) | |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ | | | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: | | | |

VEGETATION - Use scientific names of plantsSampling Point: upl-jbl-20180711-05

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|--|
| 1. <i>Prunus serotina</i> | 65 | <input checked="" type="checkbox"/> | FACU | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B) |
| 2. <i>Acer saccharum</i> | 40 | <input checked="" type="checkbox"/> | FACU | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| Sapling/Shrub Stratum (Plot size: _____) | | 105 = Total Cover | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>105</u> x 4 = <u>420</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>430</u> (B) Prevalence Index = B/A = <u>3.909</u> |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| Herb Stratum (Plot size: _____) | | 0 = Total Cover | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤ 3.0¹ <input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <i>Leersia virginica</i> | 5 | <input checked="" type="checkbox"/> | FACW | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| Woody Vine Stratum (Plot size: _____) | | 5 = Total Cover | | 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 (1m) tall.. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site

Beaver Brownhelm Project

City/County

Lorain County

Sampling Date:

08-Oct-18

Applicant/Owner

First Energy

State:

OH

Sampling Point:

upl-aeh-20181008-01

Investigator(s)

AEH, TL

Section, Township, Range:

T 6N R. 18W

Landform (hillslope, terrace, etc)

Hillside

Local relief (concave, convex, non

none

Slope

0.0 % / 0.0 °

Subregion (LRR or MLRA)

LRR R

Lat.:

41.40943

Long.:

-82.238283

Datum:

NAD 83

Soil Map Unit Nam

DsB

NWI classificatio

N/A

Are climatic/hydrologic conditions on the site typical for this time of

Yes ☒ No ☐

(If no, explain in Remarks

Are Vegetatio

☐

, Soil

☐

, or Hydrolog

☐

significantly disturbed

Are "Normal Circumstances" presen

Yes ☒ No ☐

Are Vegetatio

☐

, Soil

☐

, or Hydrolog

☐

naturally problematic

(If needed, explain any answers in Remark

Summary of Findings - Attach site map showing sampling point locations, transects, important features,

| | | | |
|---|---|--|---|
| <div>Hydrophytic Vegetation Presen</div> <div>Yes <input type="radio"/> No <input checked="" type="radio"/></div> | <div>Hydic Soil Present?</div> <div>Yes <input type="radio"/> No <input checked="" type="radio"/></div> | <div>Wetland Hydrology Present?</div> <div>Yes <input type="radio"/> No <input checked="" type="radio"/></div> | <div>Is the Sampled Area</div> <div>Yes <input type="radio"/> No <input checked="" type="radio"/></div> |
| <div>Remarks: (Explain alternative procedures here or in a separate rep</div> | | | |

Hydrology

Wetland Hydrology Indicator

Primary Indicators (minimum of one 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 (B

☐ Sparsely Vegetated Concave Surface (

☐ Water-Stained Leaves (B

☐ Aquatic Fauna (B13)

☐ Marl Deposits (B15)

☐ Hydrogen Sulfide Odor (C

☐ Oxidized Rhizospheres along Living Roots (C

☐ Presence of Reduced Iron (C4

☐ Recent Iron Reduction in Tilled Soils (C

☐ Thin Muck Surface (C7

☐ Other (Explain in Remarks

Secondary Indicators (minimum of 2 required)

☐ Surface Soil Cracks (B6)

☐ Drainage Patterns (B10)

☐ Moss Trim Lines (B16)

☐ Dry Season Water Table (C

☐ Crayfish Burrows (C

☐ Saturation Visible on Aerial Imagery (C

☐ Stunted or Stressed Plants (D

☐ Geomorphic Position (D2

☐ Shallow Aquitard (D3

☐ Microtopographic Relief (D

☐ FAC-neutral Test (D

Field Observations:

Surface Water Present?

Yes ☐ No ☒

Depth (inches):

Water Table Present?

Yes ☐ No ☒

Depth (inches):

Saturation Present?

Yes ☐ No ☒

Depth (inches):

(includes capillary fringe)

Wetland Hydrology Presen

Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point upl-aeh-20181008-01

| |
|--|
| <div><div>Tree Stratu (Plot size:)</div><div><div>1.</div><div>2.</div><div>3.</div><div>4.</div><div>5.</div><div>6.</div><div>7.</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div> <div><div>Sapling/Shrub Stratu (Plot size:)</div><div><div>1.</div><div>2.</div><div>3.</div><div>4.</div><div>5.</div><div>6.</div><div>7.</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div> <div><div>Herb Stratu (Plot size:)</div><div><div>1. <i>Schedonorus arundinaceus</i></div><div>2. <i>Cirsium arvense</i></div><div>3. <i>Plantago lanceolata</i></div><div>4. <i>Trifolium repens</i></div><div>5.</div><div>6.</div><div>7.</div><div>8.</div><div>9.</div><div>10.</div><div>11.</div><div>12.</div></div><div><div>75</div><div>15</div><div>10</div><div>5</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div><div>0</div></div><div><div><input checked="" type="checkbox"/></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>FACU</div><div>FACU</div><div>FACU</div><div>FACU</div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div> <div><div>Woody Vine Stratu (Plot size:)</div><div><div>1.</div><div>2.</div><div>3.</div><div>4.</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div> <div><div>105</div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div></div> |
|--|

0

Soil

Sampling Point upl-aeH-20181008-01

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Brownhelm-Beaver-Black River **City/County:** Lorain **Sampling Date:** 10-Jul-18

Applicant/Owner: FirstEnergy **State:** OH **Sampling Point:** upl-jbl-071018-01

Investigator(s): JBL/AEH **Section, Township, Range:** S. T. 6N R. 19W

Landform (hillslope, terrace, etc.): Lowland **Local relief (concave, convex, none):** flat **Slope:** 0.0 % / 0.0 °

Subregion (LRR or MLRA): LRR R **Lat.:** 41.393363 **Long.:** -82.268063 **Datum:** NAD 83

Soil Map Unit Name: HsA, LcB **NWI classification:** N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐

Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: (Explain alternative procedures here or in a separate report.) upland - phragmites patch mixed veg | |

Hydrology

| | | | |
|--|--|--|---|
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of 2 required) | |
| Primary Indicators (minimum of one required; check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry Season Water Table (C2) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-neutral Test (D5) | |
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Water Table Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes <input type="radio"/> No <input checked="" type="radio"/> | Depth (inches): | |
| | | Wetland Hydrology Present? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: sloping down to north | | | |

VEGETATION - Use scientific names of plants

Sampling Point: upl-jbl-071018-01

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |
| Herb Stratum (Plot size: 30 _____) | | | | |
| 1. <i>Lotus corniculatus</i> | 3 | <input type="checkbox"/> | FACU | |
| 2. <i>Phragmites australis</i> | 65 | <input checked="" type="checkbox"/> | FACW | |
| 3. <i>Scirpus atrovirens</i> | 5 | <input type="checkbox"/> | OBL | |
| 4. <i>Apocynum cannabinum</i> | 4 | <input type="checkbox"/> | FAC | |
| 5. <i>Phalaris arundinacea</i> | 10 | <input type="checkbox"/> | FACW | |
| 6. <i>Trifolium pratense</i> | 5 | <input type="checkbox"/> | FACU | |
| 7. <i>Juncus torreyi</i> | 8 | <input type="checkbox"/> | FACW | |
| 8. <i>Solidago canadensis</i> | 5 | <input type="checkbox"/> | FACU | |
| 9. <i>Agrostis stolonifera</i> | 4 | <input type="checkbox"/> | FACW | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | _____ | |
| 12. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 109 = Total Cover | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| | | 0 = Total Cover | | |

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: 100.0% (A/B)

Prevalence Index worksheet:

| | |
|---------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>5</u> | x 1 = <u>5</u> |
| FACW species <u>87</u> | x 2 = <u>174</u> |
| FAC species <u>4</u> | x 3 = <u>12</u> |
| FACU species <u>13</u> | x 4 = <u>52</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>109</u> (A) | <u>243</u> (B) |
| Prevalence Index = B/A = <u>2.229</u> | |

Hydrophytic Vegetation Indicators:

☒ **Rapid Test for Hydrophytic Vegetation**

☒ **Dominance Test is > 50%**

☒ **Prevalence Index is ≤ 3.0**¹

☐ **Morphological Adaptations**¹ (Provide supporting data in Remarks or on a separate sheet)

☐ **Problematic Hydrophytic Vegetation**¹ (Explain)

¹ 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 (1m) tall..

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

crwn vetch 20

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck 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 : ³

- ☐ 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, M)
- ☐ 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 (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: gravel

Depth (inches): 8

Hydric Soil Present? Yes ☐ No ☒

Remarks:

APPENDIX B
OEPA WETLAND ORAM FORMS

Wetland BBR-01

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071018-02

0.02 acres
 extends outside SC

4 5

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)

7.5 12.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

7 19.5

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

19.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-01

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

19.5

subtotal this page

0 19.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-1 18.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ Extensive >75% cover (-5)
- ☐ 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 hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ 1 Amphibian breeding pools

Field Id:

w-jbl-071018-02

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

18.5 GRAND TOTAL(max 100 pts)

Wetland BBR-02

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

2 2

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071018-03

0.26 acres
extends outside SC

4 6

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)

7.5 13.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

6 19.5

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

19.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-02

| | | |
|---------------------------------------|---------------------------------|-----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/10/2018 |
|---------------------------------------|---------------------------------|-----------------|

Field Id:

w-jbl-071018-03

19.5

subtotal this page

| | |
|---|------|
| 0 | 19.5 |
|---|------|

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

| | |
|----|------|
| -1 | 18.5 |
|----|------|

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ Extensive >75% cover (-5)
- ☐ 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 hummocks/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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 1

| | |
|------|--------------------------|
| 18.5 | GRAND TOTAL(max 100 pts) |
|------|--------------------------|

Wetland BBR-03

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/9/2018

2 **2**

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-01

2.78

acres
extends outside SC**7** **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)

7.5 **16.5**

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

6 **22.5**

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

22.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-03

| | | |
|---------------------------------------|---------------------------------|----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/9/2018 |
|---------------------------------------|---------------------------------|----------------|

22.5

subtotal this page

0 22.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

0 22.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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 hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ 1 Amphibian breeding pools

Field Id:

w-jbl-070918-01

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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 1

22.5 GRAND TOTAL(max 100 pts)

Wetland BBR-04

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/9/2018

3 **3**

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

3.57 acres

Field Id:

w-jbl-070918-02

10 **13**

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)

8.5 **21.5**

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☒ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

5.5 **27**

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

27

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-04

| | | |
|---------------------------------------|---------------------------------|----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/9/2018 |
|---------------------------------------|---------------------------------|----------------|

Field Id:

w-jbl-070918-02

27

subtotal this page

0 27

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

0 27

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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 hummocks/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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

27 GRAND TOTAL(max 100 pts)

Wetland BBR-05

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/9/2018

2 2

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-03

0.25 acres
extends outside SC

10 12

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)

6.5 18.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

4.5 23

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" 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 type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

23

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-05

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/9/2018

Field Id:

w-jbl-070918-03

23

subtotal this page

0 23

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-3 20

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ Extensive >75% cover (-5)
- ☐ 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 hummocks/tussucks
- ☐ Coarse woody debris >15cm (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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

20 GRAND TOTAL(max 100 pts)

Wetland BBR-06

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/9/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-04

0.14 acres

10 **11**

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)

6.5 **17.5**

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

4.5 **22**

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" 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 type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

22

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-06

| | | |
|---------------------------------------|---------------------------------|----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/9/2018 |
|---------------------------------------|---------------------------------|----------------|

Field Id:

w-jbl-070918-04

22

subtotal this page

| | |
|---|----|
| 0 | 22 |
|---|----|

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

| | |
|----|----|
| -3 | 19 |
|----|----|

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ Extensive >75% cover (-5)
- ☐ 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 hummocks/tussucks
- ☐ Coarse woody debris >15cm (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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 1

| | |
|----|--------------------------|
| 19 | GRAND TOTAL(max 100 pts) |
|----|--------------------------|

Wetland BBR-07

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/9/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-05

0.25 acres

10 11

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)

6.0 17.0

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

3.5 20.5

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" 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 type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

20.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-07

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/9/2018

20.5

subtotal this page

0 20.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-4 16.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ Extensive >75% cover (-5)
- ☐ 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.

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

Field Id:

w-jbl-070918-05

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

16.5 GRAND TOTAL(max 100 pts)

Wetland BBR-08

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/9/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-06

0.11 acres

10 **11**

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)

6.5 **17.5**

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

6 **23.5**

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" 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 type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

23.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-08

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/9/2018

23.5

subtotal this page

0 23.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

0 23.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ 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.

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

Field Id:

w-jbl-070918-06

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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 1

23.5 GRAND TOTAL(max 100 pts)

Wetland BBR-09

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/9/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-07

0.19 acres

10 11

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)

6.5 17.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

6 23.5

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" 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 type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

23.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-09

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/9/2018

23.5

subtotal this page

0 23.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

0 23.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ 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.

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

Field Id:

w-jbl-070918-07

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

23.5 GRAND TOTAL(max 100 pts)

Wetland BBR-10

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/9/2018

2 **2**

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-08

0.76 acres

10 **12**

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)

6.5 **18.5**

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

5 **23.5**

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" 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 type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

23.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-10

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/9/2018

23.5

subtotal this page

0

23.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-2

21.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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.

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

Field Id:

w-jbl-070918-08

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

21.5 GRAND TOTAL(max 100 pts)

Wetland BBR-11

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071018-04

0.02 acres
extends outside SC

4 5

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)

5.5 10.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

5 15.5

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

15.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-11

| | | |
|---------------------------------------|---------------------------------|-----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/10/2018 |
|---------------------------------------|---------------------------------|-----------------|

Field Id:

w-jbl-071018-04

15.5

subtotal this page

| | |
|---|------|
| 0 | 15.5 |
|---|------|

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

| | |
|----|------|
| -2 | 13.5 |
|----|------|

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ x Extensive >75% cover (-5)
- ☐ 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 hummocks/tussucks
- ☐ Coarse woody debris >15cm (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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 1

| | |
|------|--------------------------|
| 13.5 | GRAND TOTAL(max 100 pts) |
|------|--------------------------|

Wetland BBR-12

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

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)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071018-01

0.09 acres
extends outside SC

5 6

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)

6.5 12.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☒ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input
- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☐ dredging
- ☐ Other:

5 17.5

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)
- ☐ Moderately good (4)
- ☐ 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 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

17.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-12

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

17.5

subtotal this page

0 17.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-3 14.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ Extensive >75% cover (-5)
- ☐ 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 hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Field Id:

w-jbl-071018-01

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

14.5 GRAND TOTAL(max 100 pts)

Wetland BBR-13

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

2 2

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071018-07

0.80 acres

8 10

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)

5.0 15.0

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

6 21

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

21

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-13

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

Field Id:

w-jbl-071018-07

21

subtotal this page

0

21

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

1

22

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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 hummocks/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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

22

GRAND TOTAL(max 100 pts)

Wetland BBR-14

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

2 2

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)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071018-06

0.26 acres
extends outside SC

5 7

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)

6.0 13.0

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

9 22

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)
- ☒ Moderately good (4)
- ☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

22

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-14

| | | |
|---------------------------------------|---------------------------------|-----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/10/2018 |
|---------------------------------------|---------------------------------|-----------------|

Field Id:

w-jbl-071018-06

22

subtotal this page

| | |
|---|----|
| 0 | 22 |
|---|----|

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

| | |
|---|----|
| 1 | 23 |
|---|----|

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ 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.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 1

| | |
|----|--------------------------|
| 23 | GRAND TOTAL(max 100 pts) |
|----|--------------------------|

Wetland BBR-15

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

2 2

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071018-05

0.30 acres

5 7

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)

6.5 13.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input checked="" type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

7 20.5

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)
☐ Moderately good (4)
☒ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

20.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-15

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/10/2018

20.5

subtotal this page

0 20.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-1 19.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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.

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

Field Id:

w-jbl-071018-05

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

19.5 GRAND TOTAL(max 100 pts)

Wetland BBR-16

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

2 2

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071118-01

0.76 acres
extends outside SC

8 10

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)

10.5 20.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input checked="" type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

9.5 30

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)
☒ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

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

30

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-16

| | | |
|---------------------------------------|---------------------------------|-----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/11/2018 |
|---------------------------------------|---------------------------------|-----------------|

Field Id:
w-jbl-071118-01

| | |
|--------------------|----------|
| 30 | |
| subtotal this page | |
| 0 | 30 |
| max 10 pts. | subtotal |

Metric 5. Special 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 5 Qualitative Rating (-10)

| | |
|------------|----------|
| 8 | 38 |
| max 20pts. | subtotal |

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ 1 Emergent
- ☐ 2 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 (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ 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 hummocks/tussucks
- ☐ 1 Coarse woody debris >15cm (6in)
- ☐ 0 Standing dead >25cm (10in) dbh
- ☐ 2 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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 2

38 GRAND TOTAL(max 100 pts)

Wetland BBR-17

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

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)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071118-02

0.14 acres

4 5

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)

8.5 13.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input checked="" type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

7 20.5

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)
- ☐ Moderately good (4)
- ☐ 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 recovery (1)

Check all disturbances observed

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

20.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-17

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

20.5

subtotal this page

0 20.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-1 19.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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.

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

Field Id:

w-jbl-071118-02

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

19.5 GRAND TOTAL(max 100 pts)

Wetland BBR-18

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

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 <10.1ha) (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)

Field Id:

w-aeH-071218-01

0.07 acres

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)

5.0 9.0

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

6.5 15.5

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)
- ☐ Moderately good (4)
- ☐ 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 recovery (1)

Check all disturbances observed

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

15.5

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-18

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/11/2018

15.5

subtotal this page

0

15.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-1

14.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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.

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

Field Id:

w-aeH-071218-01

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 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

Category 1

14.5 GRAND TOTAL(max 100 pts)

Wetland BBR-19

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

2 2

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)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-aeH-071218-02

0.43 acres

7 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)

6.0 15.0

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input
- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☐ dredging
- ☐ Other:

5.5 20.5

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)
- ☐ Moderately good (4)
- ☐ 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 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

20.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-19

| | | |
|---------------------------------------|---------------------------------|-----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/11/2018 |
|---------------------------------------|---------------------------------|-----------------|

20.5

subtotal this page

0 20.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-1 19.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☒ x Extensive >75% cover (-5)
- ☐ 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 hummocks/tussucks
- ☐ 1 Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Field Id:

w-aeH-071218-02

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

19.5 GRAND TOTAL(max 100 pts)

Wetland BBR-20

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

2 2

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-aeH-071218-03

0.62 acres

8 10

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)

12.5 22.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
☐ tile
☐ dike
☐ weir
☐ stormwater input
☐ point source (nonstormwater)
☒ filling/grading
☒ road bed/RR track
☐ dredging
☐ Other:

8 30.5

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)
☐ Moderately good (4)
☒ 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 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

30.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-20

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

30.5

subtotal this page

0 30.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

2 32.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ 1 Emergent
- ☐ 1 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 (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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 hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Field Id:

w-aeH-071218-03

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 2

32.5 GRAND TOTAL(max 100 pts)

Wetland BBR-21

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071118-04

0.04 acres
extends outside SC

3 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)

6.0 10.0

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input checked="" type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

7 17

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

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

17

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-21

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

Field Id:

w-jbl-071118-04

17

subtotal this page

0 17

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

1 18

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ 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.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

18 GRAND TOTAL(max 100 pts)

Wetland BBR-22

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/11/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

0.13 acres

Field Id:

w-jbl-071118-03

3 **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)

5.0 **9.0**

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input checked="" type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input checked="" type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

4 **13**

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

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

13

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-22

Site: FE Brownhelm-Beaver-Black River Rater(s): J. Lubbers; A. Hanner Date: 7/11/2018

Field Id:

w-jbl-071118-03

13

subtotal this page

0 13

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

0 13

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☒ x 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 >15cm (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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

13 GRAND TOTAL(max 100 pts)

Wetland BBR-23

Site: FE Brownhelm-Beaver-Black River

Rater(s): J. Lubbers; A. Hanner

Date:

7/11/2018

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)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-071118-05

0.11 acres

8 **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)

11.0 **20.0**

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

10 **30**

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)
☐ Moderately good (4)
☒ 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 recovery (1)

Check all disturbances observed

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

30

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-23

| | | |
|---------------------------------------|---------------------------------|-----------------|
| Site: FE Brownhelm-Beaver-Black River | Rater(s): J. Lubbers; A. Hanner | Date: 7/11/2018 |
|---------------------------------------|---------------------------------|-----------------|

Field Id:

w-jbl-071118-05

30

subtotal this page

0

30

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

2

32

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☒ 2 Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☒ x Moderately low (2)
- ☐ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer

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.

- ☐ Vegetated hummocks/tussucks
- ☒ 1 Coarse woody debris >15cm (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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 2

32

GRAND TOTAL(max 100 pts)

Wetland BBR-24

Site: FE Brownhelm-Beaver-Black River Rater(s): T. Lipp; A. Hanner Date: 10/8/2018

2 2

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)
☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

Field Id:

w-jbl-070918-01

1.50 acres
extends outside SC

5 7

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)

7.5 14.5

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)

3c. Maximum water depth. Select one.

- ☐ >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 inundated/saturated (4)
☐ Regularly inundated/saturated (3)
☒ Seasonally inundated (2)
☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

6 20.5

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)
☐ Moderately good (4)
☐ 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 recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input checked="" 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 |

20.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland BBR-24

Site: FE Brownhelm-Beaver-Black River Rater(s): T. Lipp; A. Hanner Date: 10/8/2018

20.5

subtotal this page

0 20.5

max 10 pts.

subtotal

Metric 5. Special 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 5 Qualitative Rating (-10)

-2 18.5

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, 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)
- ☒ None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ 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.

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

Field Id:

w-jbl-070918-01

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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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

Category 1

18.5 GRAND TOTAL(max 100 pts)

APPENDIX C

OEPA QHEI AND HHEI STREAM FORMS


$$\mathbb{D}(\mathbb{R}^3) \ni \varphi \in \mathcal{S}' \setminus \{0\} \gg \varphi^{1/4} \in \mathcal{S}' \setminus \{0\} \ni \varphi^{3/4} \in \hat{U}^a \ni \varphi' \gg \varphi^{\pm 2} \in \mathcal{U}^{\pm}(\mathbb{R})$$

25

HHEI Score (sum of metrics 1, 2, 3) :

[illegible]

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWHH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ ONÒÙ ÌÒÏÏË ÌÒÏ ÆÒÒÒÒÒ ☐ ÌÙÝ ÑËÙÌÙ Ù ☐ ÌÙÝ ÑËÙÌ×ÒÙ ☒ ÌÙÝ ÙÒÌ ÑÌ ÒÑ ÌÙ ÝÑËÙÌÇ

- [illegible]

| TYPE | | PERCENT | TYPE | | PERCENT |
|--|-----------------------------------|---------|---|------------------------------------|---------|
| <input type="checkbox"/> <input type="checkbox"/> | ᐅᑕᑎᑦ ᑦᑕᑎᐅᑦ ᐱᑦᑦᑦᑦᑦᑦ | 0% | <input type="checkbox"/> <input type="checkbox"/> | ᑦᑕᑎᑦ ᐱᑦᑦᑦᑦᑦᑦ | 20% |
| <input type="checkbox"/> <input type="checkbox"/> | ᐅᑎᑦᑕᑎᑎᑦ ᑎᑦᑎᑦᑦᑦᑦᑦᑦ ÷ ᐱᑦᑦᑦᑦᑦᑦ | 0% | <input type="checkbox"/> <input type="checkbox"/> | ᑕᑎᑎᑦ ᑎᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑎᑦᑦᑦᑦᑦᑦ ÷ ᐱᑦᑦᑦᑦᑦᑦ | 10% |
| <input type="checkbox"/> <input type="checkbox"/> | ᐅᑕᑎᑎᑦ ᑎᑎᑦᑦᑦᑦᑦᑦ ᐱᑦᑦᑦᑦᑦᑦ | 0% | <input type="checkbox"/> <input type="checkbox"/> | ᑕᑎᑎᑦ ᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑦᑦᑦᑦᑦᑦ ÷ ᐱᑦᑦᑦᑦᑦᑦ | 0% |
| <input type="checkbox"/> <input type="checkbox"/> | ᑎᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑦᑦᑦᑦᑦᑦᑦ ÷ ᐱᑦᑦᑦᑦᑦᑦᑦᑦᑦᑦ | 15% | <input type="checkbox"/> <input type="checkbox"/> | ᑎᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑎᑦᑦᑦᑦᑦᑦ | 0% |
| <input type="checkbox"/> <input checked="" type="checkbox"/> | ᑎᑦ ᑎᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑦᑦᑦᑦᑦᑦ ÷ ᐱᑦᑦᑦᑦᑦᑦᑦᑦ | 30% | <input type="checkbox"/> <input type="checkbox"/> | ᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑦᑦᑦᑦᑦᑦᑦ | 0% |
| <input checked="" type="checkbox"/> <input type="checkbox"/> | ᑦᑕᑎᑎᑦ ᑎᑎᑦᑦᑦᑦᑦᑦ ÷ ᐱᑦᑦᑦᑦᑦᑦᑦᑦ | 25% | <input type="checkbox"/> <input type="checkbox"/> | ᑎᑎᑦᑦᑦᑦᑦᑦ ᑎᑎᑦᑦᑦᑦᑦᑦᑦᑦᑦᑦᑦᑦ | 0% |

15.00%

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES: 5

- [illegible]

| | | | |
|--------------------------|--|-------------------------------------|--|
| <input type="checkbox"/> | $\alpha \dot{\iota} \delta^{\circ} \rightarrow \omega \otimes \Lambda \delta^{\circ} \rightarrow \tilde{A}$ | <input type="checkbox"/> | $\alpha e^{1/2} - \dot{\iota} \delta^{1/2} \Lambda e^{\circ} \rightarrow \tilde{A}$ |
| <input type="checkbox"/> | $\alpha \dot{\iota} \dot{\iota} \delta e \dot{o} \dot{\iota} \delta^{1/2} \Lambda \delta^{\circ} \rightarrow \tilde{A}$ | <input type="checkbox"/> | $\alpha e^{1/2} \Lambda e^{\circ} \rightarrow \tilde{A}$ |
| <input type="checkbox"/> | $\alpha \dot{\iota} \dot{\delta} \dot{o} \dot{\iota} \dot{\iota} \alpha e^{1/2} \Lambda e^{\circ} \rightarrow \tilde{A}$ | <input checked="" type="checkbox"/> | $\dot{O}\dot{N} \dot{E} \dot{\beta} \dot{\iota} \dot{U} \dot{\iota} \dot{N} \dot{\iota} \dot{O} \dot{N} \dot{x} \dot{\iota} \dot{Y} \dot{O} \dot{\beta} \dot{O} \dot{D} \dot{O} \dot{U} \dot{O} \dot{A} \dot{e}^{\circ} \rightarrow \tilde{A}$ |

COMMENTS: MAXIMUM POOL DEPTH $\varnothing \times 21/2$ »-÷ 0.00

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

| | | | |
|--------------------------|--|-------------------------------------|--|
| <input type="checkbox"/> | a i t̃³ » ㄣᵀ ḁ i t̃ i t̃ A l̃ o ° = A | <input type="checkbox"/> | a i t̃³ ó i t̃³ ḁ i ú i p̃ó i u e p̃ A ē ° = Ā |
| <input type="checkbox"/> | a i t̃³ ó i t̃³ ḁ ç u è p̃ ó i t̃ i t̃ A ē ° = Ā | <input checked="" type="checkbox"/> | ≤ i t̃³ ḁ a i ú i p̃ A ē ° = Ā |
| <input type="checkbox"/> | a i t̃³ ó i t̃³ ḁ ç u è p̃ ó i u e p̃ A ò ° = Ā | | |

COMMENTS: AVERAGE BANKFULL WIDTH 200

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆ Ò Ñ Ì Û ^a » (R) ⁰ - ∅ ÷ ² 1 / 4! · ¹ · - ∅ ÷ ¹ - ' ± ± μ ² 1 1 / 4 C ² - (R) ³ ☆

$$\hat{I} \times \mathbb{D}^3 \hat{I} \times \mathbb{D}^3 \rightarrow \mathbb{E} \times \mathbb{U}^1 \rightarrow \emptyset$$

ÚÔÑÑÜĐÔ×Ò ĬĚ ßÔĲ

[illegible][illegible]

- FLOW REGIME** (At Time of Evaluation) \dot{Q} , » 1/4 ONLY ± 2 » 3/4 ± 2 »

[illegible]

SINUOSITY ø Ò ¢ ¾ » ® ± ° ¾ » 21/4- ° » ® ei ¾ ø î õ ð ° ÷ ± ° 1/2 ; 22 » ' ÷ ø ý » 1/4 ONLY Y ± 2 » ¾ ± ÷ æ

| | | | | | | | |
|--------------------------|-------|-------------------------------------|-----|--------------------------|-----|--------------------------|-----|
| <input type="checkbox"/> | Ô±² » | <input checked="" type="checkbox"/> | ï œ | <input type="checkbox"/> | ï œ | <input type="checkbox"/> | ï œ |
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STREAM GRADIENT ESTIMATE

[illegible]

HHEI Metric Points

Substrate
Max = 40

20

A + B

Pool Depth
Max = 30

0

**Bankfull
Width
Max=30**

5

Reset Form


$$\mathbb{D}(\mathbb{R}^3) \cap (\mathbb{S} \setminus \emptyset) \gg \zeta^{1/4} \zeta^{-\gamma} \mathbb{R} \setminus \zeta^{3/4} \zeta^{-\gamma} \hat{\mathcal{U}}^a \zeta' \ll \zeta^{-\pm 2} \hat{\mathcal{U}}_{\pm}(\mathbb{R})$$

26

HHEI Score (sum of metrics 1, 2, 3) :

[illegible]

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWHH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ ÕÑÒÙ ñòßİĖ İßÐ ÝÐßÒÐÒÐ ☐ İŰÝ ÑĖŰİŰ Û ☐ İŰÝ ÑĖŰİ×ÒŰ ☒ İŰÝ ÛÒİ Ñİ ÕÑ İŰ ÝÑĖŰİÇ

- 1. SUBSTRATE** (Estimate percent of every type of substrate present. Y, »¼ ONLY Y «¾®¼±³·² ¯-«¾®¼» TYPE ½¾» -
ø¿ ±° í ðòó¼¼±¾ ·² «¾®¼»¹·² ¯-«¾®¼»¸» - «¾¼¼ø¿ ±° è÷Ú¿ ¿³ »«¾¼½®» - «¾ ±°½¾» - ß ú þò

| TYPE | | PERCENT | TYPE | | PERCENT |
|--------------------------|-------------------------------------|---------------------|-------------------------------------|--------------------------|---------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ |
| <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ | <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ |
| <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ | <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ |
| <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ | <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ | <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ |
| <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ | <input type="checkbox"/> | <input type="checkbox"/> | ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ ᐅᐅᐅᐅ |
| | | | | | |

0.00%

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES: 4

- [illegible]

| | | | |
|--------------------------|-----------------------------|-------------------------------------|---------------------------------|
| <input type="checkbox"/> | a í ð ½ ↗ » ⑦ Å ð ° → A | <input type="checkbox"/> | a ë ½ - i ð ½ Å ë ° → Ä |
| <input type="checkbox"/> | a î ð è ó í ð ½ ° Å ð ° → Ä | <input checked="" type="checkbox"/> | a ë ½ Å ° → Ä |
| <input type="checkbox"/> | a i ð ó i i æ ½ Å ë ° → Ä | <input type="checkbox"/> | ÒÑ Éß ì Ûî Ñî ÓÑíì ÝÐÒÒÙÓÅ° → Ä |

COMMENTS: MAXIMUM POOL DEPTH $\varnothing \times 21/2$ » - ÷ 1.00

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

| | | | |
|--------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> | $\alpha \iota \theta^{\circ} \gg \tau @ \alpha \tau i \iota \bar{t} A \theta^{\circ} = A$ | <input type="checkbox"/> | $\alpha \iota \theta^{\circ} \quad \acute{o} \tau \theta \epsilon^{\circ} \quad \alpha \delta i \bar{u} \iota \rho \acute{o} \iota \upsilon \epsilon \bar{p} A \epsilon^{\circ} = \tilde{A}$ |
| <input type="checkbox"/> | $\alpha \iota \theta^{\circ} \quad \acute{o} \iota \theta^{\circ} \quad \alpha \chi \epsilon \bar{u} \epsilon \rho \acute{o} \iota \bar{t} A \epsilon^{\circ} = \tilde{A}$ | <input checked="" type="checkbox"/> | $\leq \tau \theta^{\circ} \quad \alpha \delta i \bar{u} \iota \bar{p} A \epsilon^{\circ} = \tilde{A}$ |
| <input type="checkbox"/> | $\alpha \tau \theta \epsilon^{\circ} \quad \acute{o} \iota \theta^{\circ} \quad \alpha \chi \epsilon \bar{u} \epsilon \rho \acute{o} \iota \bar{u} \epsilon \bar{p} A \theta^{\circ} = \tilde{A}$ | | |

COMMENTS: AVERAGE BANKFULL WIDTH 300

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆ Ò Ñ Ì Û ^a » (R) ⁰ - ∅ ÷ ² 1 / 4 ¹ · ¹ · ∅ ÷ ¹ - ' ± ± μ ² 1 ¹ / 4 C ² - ∅ (R) ³ ☆

[illegible]

FLOW REGIME (At Time of Evaluation) $\dot{Q} \gg 1/4$ ONLY $\pm 2 \gg 3/4 \pm \infty$

☒ ☐

| | |
|--|--|
| $\left \langle \mathbb{R} \rangle^{\mathbb{R}} \right \leq \left \mathbb{R} \right ^{2^{\mathbb{R}}}$ | $\left \langle \mathbb{R} \rangle^{\mathbb{R}} \right \leq \left \mathbb{R} \right ^{2^{\mathbb{R}}}$ |
| $\left \langle \mathbb{R} \rangle^{\mathbb{R}} \right \leq \left \mathbb{R} \right ^{2^{\mathbb{R}}}$ | $\left \langle \mathbb{R} \rangle^{\mathbb{R}} \right \leq \left \mathbb{R} \right ^{2^{\mathbb{R}}}$ |

SINUOSITY ø Ò ¢ ¾ » ® ± ° ¾ » 21/4- ° » ® ei ¾ ø î õ ð ° ¼ ± ° 1/2 ; 22 » ' ÷ ø ý » 1/4 ONLY Y ± 2 » ¾ ± ÷ æ

| | | | | | | | |
|--------------------------|-------|-------------------------------------|-----|--------------------------|-----|--------------------------|-----|
| <input type="checkbox"/> | Ô±² » | <input checked="" type="checkbox"/> | ï œ | <input type="checkbox"/> | ï œ | <input type="checkbox"/> | ï œ |
| <input type="checkbox"/> | ôœ | <input type="checkbox"/> | ï œ | <input type="checkbox"/> | ï œ | <input type="checkbox"/> | ai |

STREAM GRADIENT ESTIMATE

☐ \dot{U}' ; $\nabla \cdot \vec{u} = 0$ ☒ \dot{U}' ; $\nabla \cdot \vec{u} = \pm \frac{1}{4} \mathbb{R}$ ☐ \dot{U}' ; $\nabla \cdot \vec{u} = \pm \frac{1}{4} \mathbb{R}$ ☐ \dot{U}' ; $\nabla \cdot \vec{u} = \pm \frac{1}{4} \mathbb{R}$ ☐ \dot{U}' ; $\nabla \cdot \vec{u} = \pm \frac{1}{4} \mathbb{R}$

HHEI Metric Points

Substrate
Max = 40

16

A + B

Pool Depth
Max = 30

5

**Bankfull
Width
Max=30**

5

AJ SAMPLED REACH

Check ALL that apply

METHOD

- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE

- ☐ HIGH
- ☐ UP
- ☐ NORMAL
- ☐ LOW
- ☐ DRY

DISTANCE

- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

CLARITY

- ☐ < 20 cm
- ☐ 20-40 cm
- ☐ 40-70 cm
- ☐ > 70 cm/ CTB
- ☐ SECCHI DEPTH

CANOPY

- ☐ > 85%- OPEN
- ☒ 55%-<85%
- ☐ 30%-<55%
- ☐ 10%-<30%
- ☐ <10%- CLOSED

CJ REC

ION AREA DEPTH
POOL: ☐ >100R2 ☐ >3ft

BJAESTHETIC

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

DJ MAINTENANCE

- ☐ PUBLIC / PRIVATE / BOTH / NA
- ☐ ACTIVE / HISTORIC / BOTH / NA
- ☐ YOUNG-SUCCESSION-OLD
- ☐ SPRAY / SNAG / REMOVED
- ☐ MODIFIED / DIPPED OUT / NA
- ☐ LEVEED / ONE SIDED
- ☐ RELOCATED / CUTOFFS
- ☐ MOVING-BEDLOAD-STABLE
- ☐ ARMoured / SLUMPS
- ☐ ISLANDS / SCOURED
- ☐ IMPOUNDED / DESICCATED
- ☐ FLOOD CONTROL / DRAINAGE

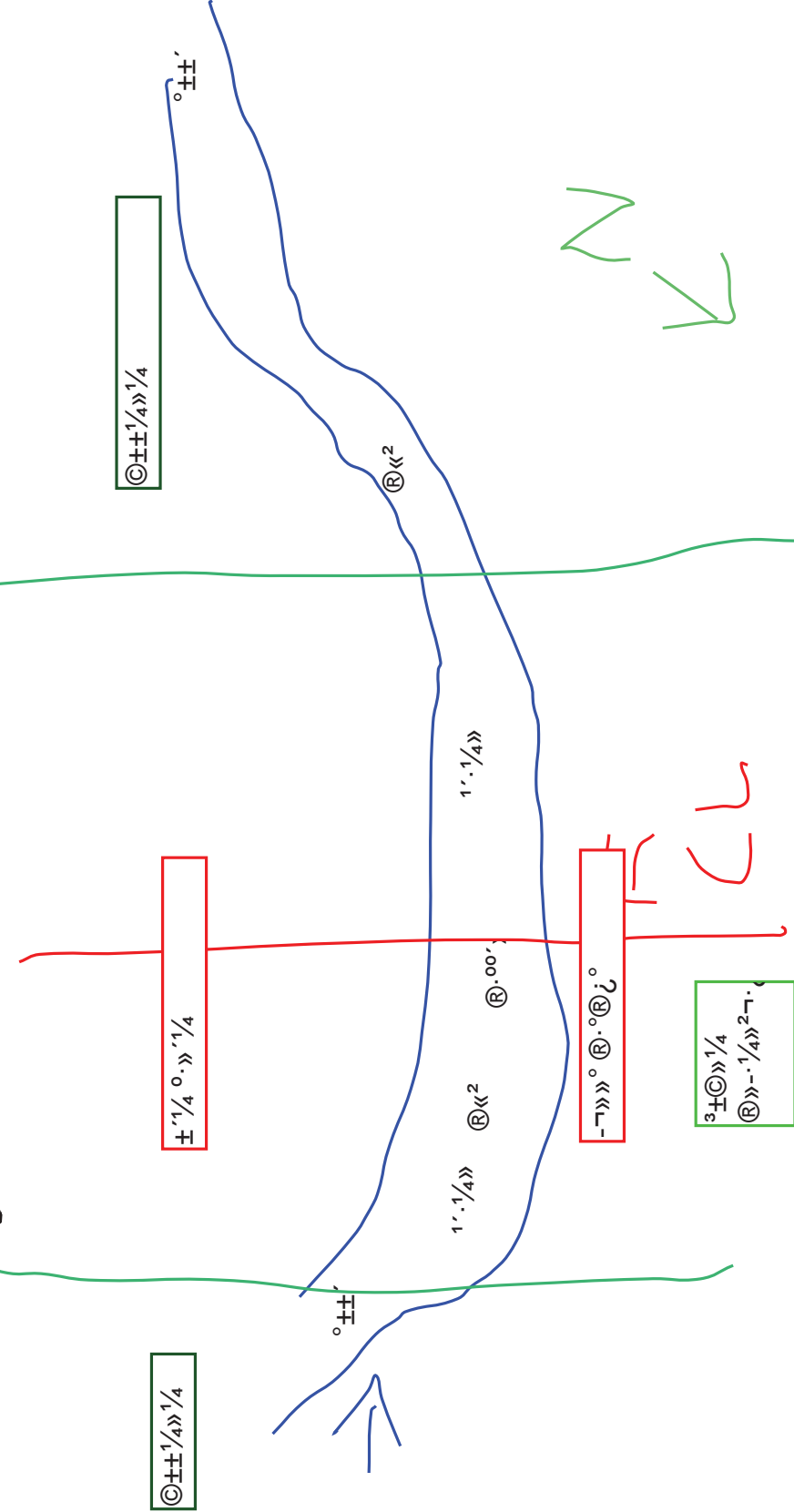
EJ ISSUES

- ☐ WWTP / CSO / NPDES / INDUSTRY
- ☐ HARDENED / URBAN / DIRT&GRIME
- ☐ CONTAMINATED / LANDFILL
- ☐ BMPs-CONSTRUCTION-SEDIMENT
- ☐ LOGGING / IRRIGATION / COOLING
- ☐ BANK / EROSION / SURFACE
- ☐ FALSE BANK / MANURE / LAGOON
- ☐ WASH H₂O / TILE / H₂O TABLE
- ☐ ACID / MINE / QUARRY / FLOW
- ☐ NATURAL / WETLAND / STAGNANT
- ☐ PARK / GOLF / LAWN / HOME
- ☐ ATMOSPHERE / DATA PAUCITY

FJ MEASUREMENTS

- ☐ width
- ☐ depth
- ☐ max. depth
- ☐ bankfull width
- ☐ bankfull depth
- ☐ W/D ratio
- ☐ bankfull max. depth
- ☐ floodprone x² width
- ☐ entrench. ratio
- ☐ Le
- ☐ Tree:

Stream Drawing:




$$\mathbb{D}(\mathbb{R}^3) \cap (\mathbb{S} \setminus \emptyset) \gg \zeta^{1/4} \zeta^{-\gamma} \mathbb{R} \setminus \zeta^{3/4} \zeta^{-\gamma} \hat{\mathcal{U}}^a \zeta' \ll \zeta^{-\pm 2} \hat{\mathcal{U}}_{\pm}(\mathbb{R})$$

56

HHEI Score (sum of metrics 1, 2, 3) :

[illegible]

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWHH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ ÕÑÒÙ ÆÒßÏË ÌßÐ ÝÐßÒÒÙÒ ☐ ÌÛÝ ÑËÙÌÙ Û ☒ ÌÛÝ ÑËÙÌ×ÒÙ ☐ ÌÛÝ ÛÒÌ ÑÌ ÕÑ ÌÙ ÝÑËÙÌÇ

- 1. SUBSTRATE** (Estimate percent of every type of substrate present. Y, »¼ ONLY Y «® ®¼±³·² ¯-«¾«®» TYPE ½«» -
ø¿ ±° í ðòß¼¼±¸²·³ ¾«®±·¹²·º½² ¯-«¾«®»«» ±²¼²øØ ±° èèÚ² ¿³ »«®½¼«®» -«³ ±°½«»- ß ú þò

[illegible]

25.00%

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES: 6

- 2. Maximum Pool Depth** (*Measure the maximum pool depth within the 61 meter (200 ft)*) » $\alpha^{\circ}\epsilon^{\circ}\zeta^{-\frac{1}{2}}\otimes\zeta^{\frac{1}{2}}\gamma^{-\frac{1}{2}}$ » α°
 » $\alpha^{\circ}\zeta^{\circ}\langle\zeta^{+\frac{1}{2}}\otimes\beta^{\pm\frac{1}{4}}\rangle^{\circ}{}_{\cdot}{}^{\circ}\pm^{\pm}$ · \ominus^{\oplus} ⊗ $\zeta^{\frac{1}{2}}\gamma^{\frac{1}{2}}\alpha^{\circ}$ ⊗ $\gamma^{-\frac{1}{2}}\otimes\pm^{\oplus}$ ⊙ $\zeta^{\frac{1}{2}}\gamma^{\frac{1}{2}}\otimes^{\circ}$ ·÷ $\otimes Y^{\circ}\gamma^{\frac{1}{2}}$ ONLY \pm^{\pm} $\frac{3}{4}\pm^{\pm}\otimes$

| | | | |
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COMMENTS: AA MAXIMUM POOL DEPTH $\varnothing \times 21/2$ » ÷ \varnothing **3.00**

3. **BANK FULL WIDTH (Measured as the average of 3-4 measurements)** (Check *ONLY* one box):

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COMMENTS: AVERAGE BANKFULL WIDTH 500

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆ Ò Ñ Ì Û ^a » (R) ⁰ - ∅ ÷ ² 1 / 4 ¹ · ¹ · ∅ ÷ ¹ - ' ± ± μ ² 1 ¹ / 4 C ² - ∅ (R) ³ ☆

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[illegible]

- FLOW REGIME** (At Time of Evaluation) m^3/s ONLY $\pm 2\%$ $\frac{3}{4} \pm \frac{1}{4}$

[illegible]

SINUOSITY ø Ò ¢³/₄ ® ± °³/₄ ¤²¹/₄- ° » ® ë³ ø î õ ð ° ¬ ÷ ± °¹/₂ ¿²²» ' ÷ ø Ÿ³ »¹/_p ONLY Y ±²»³/₄ ± ÷ æ

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STREAM GRADIENT ESTIMATE

[illegible]

HHEI Metric Points

Substrate
Max = 40

21

A + B

Pool Depth
Max = 30

15

**Bankfull
Width
Max=30**

20

QHEI PERFORMED?

☐ ÉÉ Ø Òì³ »æ AA Ü.-7²¹⁄₂» °®± Üª ¿ :«¿-¼/-®)¾³ AAAAAAAAAAAAAAAAAA

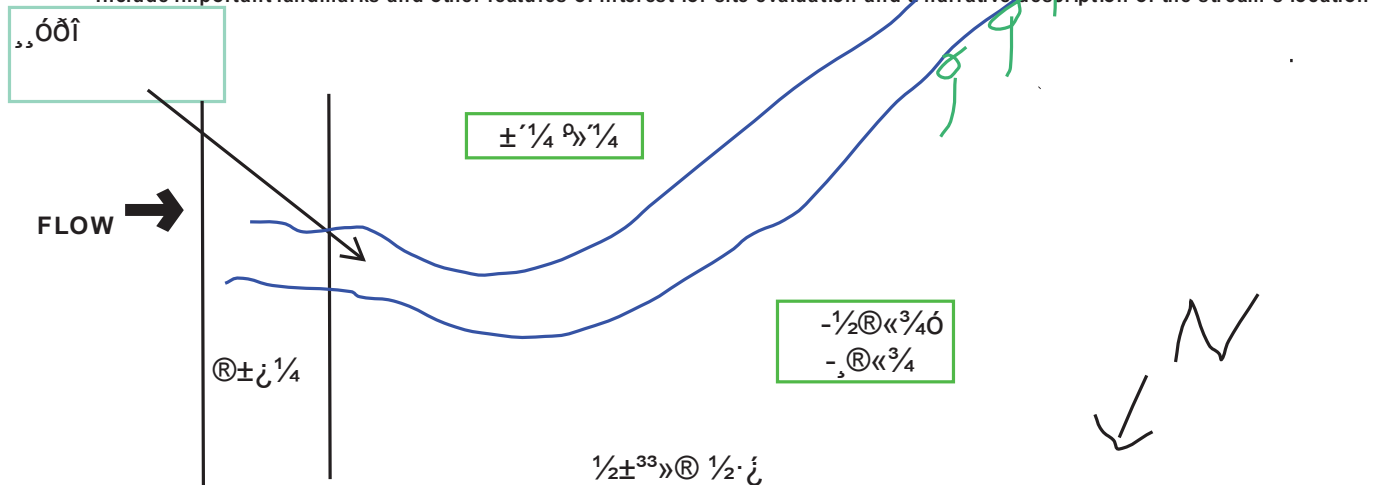
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☐ ÚÊ Ø Òì³ »æ AA Ü.-7²¹⁄₂» °®± Üª ¿ :«¿-¼/-®)¾³ AAAAAAAAAAAAAAAAAA

Él Úl Í« Ì¹«²¹» ÒÌ³ »æAAAAAAAAAAAAAAAAAAAAAAAAAAAAA ÒÝ Í Í±·ÓÌ° ÐÌ¹»AAAAA ÒÌ ÝÍ Í±·ÓÌ° Í·Ò³» ÑÒ¹Ò»AAAAA
Ý±«²·Sæ Lorain Á Ì ±Ò° ·· ñÝ·Sæ Black River Township AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

[illegible][illegible]

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location




$$\mathbb{D}^{\otimes 3} \wr \mathbb{S} \wr \mathbb{O} \gg \wr^{1/4} \mathbb{C} \wr \neg \mathbb{R} \wr \wr^{3/4} \neg \hat{\mathbf{U}}^a \wr \langle \wr \pm^2 \quad \dot{\mathbf{U}} \pm^{\otimes}$$

21

HHEI Score (sum of metrics 1, 2, 3) :

ixIU ŌRŌUŌYI BI×NŌ **EE Brownhelm Beaver Black River**
hh-aeH-071218-92
 ŌŪŌUŌ NŪ il IŪB Ō IŪ B YŌ Ø^{o=} **299** ŌBŌ **41.43700** ŌŌŪŌ **82.17144** i ×EŪI YNŪŪ AAAAAAAAAA i ×EŪI Ō×Ō AAAAAAA
07/12/18 **aeH** AAAAAAAAAA MA YNŌŌŪŌI **ephemeral**

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWHH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ ONÒÙ ñòßiĖ İßÐ ÝØßÒÒÙÐ ☐ İŰÝ ÑĖŰİŰ Ü ☐ İŰÝ ÑĖŰİ×ÒÜ ☒ İŰÝ ÜÒİ Ñİ ÒÑ İŰ ÝÑĖŰİÇ

- 1. SUBSTRATE** (Estimate percent of every type of substrate present. Y, »¼ ONLY Y «® ®¼±³·² ¯-«¾«®» TYPE ½«» -
ø¿ ±° í ðòß¼¼±¸²·³ ¾«®±·¹²·º½² ¯-«¾«®»«» - ±²¼²øØ ±° èèÚ² ¿³ »«®½¼«®» - «³ ±°½«» - ß ú þò

[illegible]

10.00%

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES: 4

- [illegible]

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COMMENTS: MAXIMUM POOL DEPTH $\varnothing \times 21/2$ »-÷ 0.00

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

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COMMENTS: AVERAGE BANKFULL WIDTH 200

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆ Ò Ñ Ì Û ^a » (R) ⁰ - ∅ ÷ ² 1 / 4 ⋅ ¹ , - ∅ ÷ ¹ - ' ± ± μ ² 1 1 / 4 C ² - (R) ³ ☆

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FLOW REGIME (At Time of Evaluation) $\dot{Q} \gg 1/4$ ONLY $\pm 2 \gg 3/4 \pm 2$

[illegible]

SINUOSITY $\emptyset \dot{\mathcal{O}}^{\mathfrak{z}} \text{ } ^3\text{ } _4 \text{ } (\mathbb{R}^{\pm} \text{ } ^3\text{ } _4 \text{ } ^{21}\text{ } _4 \text{ } ^{\circ} \text{ } \gg \mathbb{R}^{\hat{\mathfrak{e}}\mathfrak{i}} \text{ } ^3 \text{ } \emptyset \hat{\mathfrak{i}} \ddot{\mathcal{O}} \text{ } ^{\circ} \neg \div \pm \text{ } ^0 \text{ } ^1\text{ } _2 \text{ } \dot{\mathfrak{z}} \text{ } ^{22} \text{ } \gg \text{ } ' \div \emptyset \acute{\mathfrak{Y}} \text{ } \gg \text{ } ^1\text{ } _4 \text{ } \textit{ONLY} \text{ } Y^{\pm 2} \text{ } \gg \text{ } ^3\text{ } _4 \text{ } \pm \text{ } \div \mathfrak{ae}$

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STREAM GRADIENT ESTIMATE

☐ \dot{U}' ; $\nabla \cdot \vec{u} = 0$
 ☒ \dot{U}' ; $\nabla \cdot \vec{u} = \pm \frac{1}{4} \mathbb{R}$
 ☐ $\dot{O} \pm \frac{1}{4} \mathbb{R}$; $\nabla \cdot \vec{u} = 0$
 ☐ $\dot{O} \pm \frac{1}{4} \mathbb{R}$; $\nabla \cdot \vec{u} = \pm \frac{1}{4} \mathbb{R}$
 ☐ \dot{U} ; $\nabla \cdot \vec{u} = \pm \frac{1}{4} \mathbb{R}$

HHEI Metric Points

Substrate
Max = 40

16

A + B

Pool Depth
Max = 30

0

**Bankfull
Width
Max=30**

5

QHEI PERFORMED? ☐ Ç»- ✓ Ò± ĩ ØÛí¼½® ÁÁÁÁÁÁÁÁÁÁ°Ç»-ôß¾½ Ý±³ °»¾¼Ø Û×Ú±® ÷

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| Él Úl Ì« ȷ¹ŋ²¹ » Òȷ³ » | Lorain | ÒŸ Í Í ± · Óȷ° Đȷ¹» | Òl Ýl Í ± · Óȷ° Í · ŋ³ Ŋŋ³» |
| Ÿ ± «² » | Lorain | Á Ì ± ¸² · · ŋŸ · | Black River Township |

[illegible][illegible]

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

11/15/2018 3:15:38 PM

in

Case No(s). 18-1395-EL-BLN

Summary: Letter of Notification Application Appendices 9 of 10 electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.