OPSB Application to Amend Carroll County Energy

Appendix A: Wetland Delineation and Stream Identification Report

Wetland Delineation and Stream Identification Report for Carroll County Energy Carroll County, Ohio



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ACRONYMS

1987 Manual Corps of Engineers Wetland Delineation Manual

AWS Agricultural Water Source

FAC Facultative

FACU Facultative Upland FACW Facultative Wetland

GIS Geographic Information Systems

GPS Global Positioning System

HHEI Headwater Habitat Evaluation Index

IWS Industrial Water Source

NRCS Natural Resources Conservation Service

NWI National Wetlands Inventory

OBL Obligate

Ohio EPA Ohio Environmental Protection Agency

ORAM Ohio Rapid Assessment Method for Wetlands

OWI Ohio Wetlands Inventory
PCR Primary Contact Recreation

PEM Palustrine emergent

PHWH Primary Headwater Habitat

PFO Palustrine Forested

PSS Palustrine Scrub Shrub

QHEI Qualitative Habitat Evaluation Index

SF Square-foot

UNT Unnamed tributary

UPL Upland

USACE United States Army Corps of Engineers
USFWS United States Fish and Wildlife Service

USGS United States Geological Survey

WWH Warm Water Habitat

1.0 INTRODUCTION

This Wetland Delineation and Stream Identification Report for the proposed Carroll County Energy project has been prepared by Tetra Tech, Inc. on behalf of Carroll County Energy, LLC. Wetland areas were delineated on site using methodology enumerated in the United States Army Corps of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory, 1987) (1987 Manual) and the Eastern Mountains and Piedmont Regional Supplement (USACE, 2012) (Regional Supplement), as well as the Ohio Rapid Assessment Method (ORAM) for Wetlands (Mack, 2001). Headwater streams were evaluated using the Field Evaluation Manual for Ohio's Primary Headwater Streams (Ohio EPA, 2012).

The subject of this report is the potential site of proposed electric generation facility (the Project) located in Carroll County, Ohio, approximately 2.5 miles north of Carrollton, Ohio. Although the Project site will be smaller, a 182-acre Study Area was considered for this wetland delineation in order to identify and avoid jurisdictional features to the greatest extent possible. The 182-acre Study Area extends from Mobile Road NE to the east and continues approximately 1,000 feet beyond Route 9 (Kensington Road) to the west. Pasturelands, agricultural areas, and forested uplands are located north of the site, with forested uplands and residential properties to the south. The Study Area contains active agricultural areas as well as upland field, upland thicket, forested upland, and wetland vegetational communities.

The Study Area is located in the Tuscarawas River Watershed (05040001). East of Route 9 (Kensington Road), the Study Area contains ephemeral, intermittent, and perennial unnamed tributaries (UNTs) to Pipes Fork. An intermittent UNT and ephemeral UNT to Pipe Run are located west of Route 9. Pipe Run, Pipes Fork, and tributaries are designated as Warmwater Habitat (WWH), Agricultural Water Source (AWS), Industrial Water Source (IWS), and Primary Contact Recreation (PCR) under Ohio Administrative Code 3745-1-07, as further discussed in Section 2.0. Wetlands and other waters of the U.S., including ephemeral, intermittent, and perennial streams, are described in detail in Section 4.0.

2.0 REGULATORY FRAMEWORK FOR WETLANDS AND OTHER WATERS OF THE U.S.

The United States Army Corps of Engineers (USACE) is the lead agency for making jurisdictional determinations for freshwater wetlands and waters of the U.S. within Carroll County, Ohio. Section 404 of the U.S. Clean Water Act (CWA) of 1977 requires the USACE to use the procedures and criteria enumerated in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual (1987 Corps Manual) and the Regional Supplement to Corps of Engineers Wetland Delineation Manual: Eastern Mountain and Piedmont Region (Regional Supplement) in making jurisdictional determinations (Environmental Laboratory, 1987). Wetlands are defined in the 1987 Corps Manual and by the U.S. Environmental Protection Agency as:

... areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Pursuant to 33 CFR 328 (Section 328.3), waters of the U.S. (which also includes wetlands), as it is applied to the jurisdiction limits of authority of USACE under the U.S. Clean Water Act of 1977, is defined as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- 2. All interstate waters including interstate wetlands;
- 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - iii. Which are used or could be used for industrial purpose by industries in interstate commerce:
- 4. All impoundments of waters otherwise defined as waters of the United States under the definition;
- 5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;

- 6. The territorial seas;
- 7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition), are not waters of the United States.
- 8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Additionally, two (2) recent U.S. Supreme Court decisions have limited the jurisdiction which USACE can exert over areas that meet the definition of wetlands or waters of the U.S. according to the *Corps Manual*. The first of these decisions, issued in 2001, was the *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers* (SWANCC). This ruling held that the USACE does not have jurisdiction over wetlands or waters of the U.S. that are not surface water tributaries of other wetlands or waters of the U.S., based solely upon its Migratory Bird Rule (MBR). As a result of this decision, the USACE has issued guidance to its field offices not to assert jurisdiction over these isolated wetlands or waters of the US unless a clear link to interstate commerce is present.

The second such Supreme Court decision, issued in 2006, was regarding the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Rapanos). This ruling held that the USACE can only assert jurisdiction over Traditional Navigable Waters (TNW) and their associated wetlands, as well as relatively permanently flowing tributaries or relatively permanent waters (RPWs) of TNWs and their adjacent wetlands, or over those tributaries and associated wetlands that possess a significant nexus to the TNW s to which it eventually flows. As a result of this ruling, the U.S. Environmental Protection Agency (USEPA) and USACE have issued various guidance documents to their field offices regarding how and when to conduct analyses of tributaries of TNWs to determine whether they contain either relatively permanent flows or a significant nexus to downstream TNWs.

The various guidance documents are summarized in a publication entitled U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook (JD Guidebook) (USACE and USEPA, 2007). According to this guidebook, among the classes of water bodies subject to Federal CWA jurisdiction are:

- TNWs:
- All wetlands adjacent to TNWs;
- Non-navigable tributaries of TNWs that are relatively permanent (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally; and
- Wetlands that directly abut such relatively permanent tributaries.

Federal CWA jurisdiction also covers the following classes of waters when a fact-specific analysis determines that those waters have a significant nexus with a TNW:

- Non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally;
- · Wetlands adjacent to such tributaries; and
- Wetlands adjacent to, but that do not directly abut a relatively permanent non-navigable tributary.

A significant nexus exists if the tributary, together with its adjacent wetlands, has more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of the downstream TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the functions performed by the tributary and all of its adjacent wetlands.

The USACE has developed a Significant Nexus Checklist for use in determining whether a significant nexus exists between a tributary of a TNW that does not have relatively permanent flow and the downstream TNW. It has also developed a new Jurisdictional Determination (JD) form for its use in determining whether it can assert jurisdiction over watercourses and associated wetlands, taking into consideration the SWANCC and Rapanos decisions.

The Ohio Environmental Protection Agency (OEPA) regulates isolated wetland systems that may not be jurisdictional by USACE. Ohio Administrative Code 6111.02 defines an "Isolated wetland" as a wetland that is not subject to regulation under the Federal Water Pollution Control Act. Therefore, any area that meets the USACE criteria and is determined to be a wetland, though it may not meet the jurisdictional definitions presented previously, would be subject to the regulations set forth by the OEPA. Any activity within isolated wetlands would require coordination with the USACE for a Jurisdictional Determination confirming the wetlands are isolated features followed by coordination with OEPA.

From the Ohio Administrative Code 3745-1-07 Water Use Designations and Statewide Criteria, Water Quality Standards contain two distinct elements: designated uses; and numerical or

narrative criteria designed to protect and measure attainment of the uses. Each water body in the state is assigned one or more aquatic life habitat use designations. Each water body may be assigned one or more water supply use designations and/or one recreational use designation.

Aquatic life habitat designations include:

- (a) "Warmwater" these are waters capable of supporting and maintaining a balanced, integrated, adaptive community of warmwater aquatic organisms having a species composition, diversity, and functional organization comparable to the twenty-fifth percentile of the identified reference sites within each of the following ecoregions: the interior plateau ecoregion, the Erie/Ontario lake plains ecoregion, the western Allegheny plateau ecoregion and the eastern corn belt plains ecoregion. For the Huron/Erie lake plains ecoregion, the comparable species composition, diversity and functional organization are based upon the ninetieth percentile of all sites within the ecoregion.
- (b) "Limited warmwater" these are waters that were temporarily designated in the 1978 water quality standards as not meeting specific warmwater habitat criteria.
- (c) "Exceptional warmwater" these are waters capable of supporting and maintaining an exceptional or unusual community of warmwater aquatic organisms having a species composition, diversity, and functional organization comparable to the seventy-fifth percentile of the identified reference sites on a statewide basis. (d) "Modified warmwater" these are waters that have been the subject of a use attainability analysis and have been found to be incapable of supporting and maintaining a balanced, integrated, adaptive community of warmwater organisms due to irretrievable modifications of the physical habitat.
- (e) "Seasonal salmonid" these are rivers, streams and embayments capable of supporting the passage of salmonids from October to May and are water bodies large enough to support recreational fishing. This use will be in effect the months of October to May. Another aquatic life habitat use designation will be enforced the remainder of the year (June to September).
- (f) "Coldwater" these are waters that meet one or both of the characteristics as either "Coldwater habitat, inland trout streams" these are waters which support trout stocking and management under the auspices of the Ohio Department of Natural Resources, Division of Wildlife, excluding waters in lake run stocking programs, lake or reservoir stocking programs, experimental or trial stocking programs, and put and take programs on waters without, or without the potential restoration of, natural coldwater attributes of temperature and flow or "Coldwater habitat, native fauna" these are waters capable of supporting populations of native coldwater fish and associated vertebrate and invertebrate organisms and plants on an annual basis.

(g) "Limited resource water" - these are waters that have been the subject of a use attainability analysis and have been found to lack the potential for any resemblance of any other aquatic life habitat as determined by the biological criteria in table 7-15 of the rule.

Water supply designations include:

- (a) "Public" these are waters that, with conventional treatment, will be suitable for human intake and meet federal regulations for drinking water.
- (b) "Agricultural" these are waters suitable for irrigation and livestock watering without treatment.
- (c) "Industrial" these are waters suitable for commercial and industrial uses, with or without treatment.

Recreation use designations are in effect only during the recreation season, which is the period from May first to October thirty-first and include:

- (a) "Bathing waters" these are waters that, during the recreation season, are heavily used for swimming.
- (b) "Primary contact" these are waters that, during the recreation season, are suitable for one or more full-body contact recreation activities such as, but not limited to, wading, swimming, boating, water skiing, canoeing, kayaking, and scuba diving. Three classes of primary contact recreation use are defined to reflect differences in the observed and potential frequency and intensity of usage.
- (c) "Secondary contact" these are waters that result in minimal exposure potential to water borne pathogens because the waters are: rarely used for water based recreation such as, but not limited to, wading; situated in remote, sparsely populated areas; have restricted access points; and have insufficient depth to provide full body immersion, thereby greatly limiting the potential for water based recreation activities.

3.0 METHODOLOGY

Field investigations were performed on 23 April 2013, 24 April 2013, and 25 April 2013 within the 182-acre Study Area. A preliminary site reconnaissance of the study area was conducted through a review of available Geographic Information Systems (GIS) resources. Existing information reviewed included the following:

- United States Geological Survey (USGS) topographic mapping (Figure 1)
- Natural Resources Conservation Service (NRCS) National Cooperative Soil Survey (Figure 2)
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI)
 Mapping (Figure 3A)
- Ohio Wetlands Inventory (Figure 3B)

The field identification of wetlands within the study area was based on the 1987 Corps Manual's three (3) parameter approach of wetland delineation requiring the presence of the following three (3) wetland characteristics under normal environmental conditions: the predominance of hydrophytic vegetation, hydric soils, and indicators of wetland hydrology. The delineation consisted of establishment of the wetland/upland margin with flagging hung at intervals that accurately depicted the outline of the boundary. The individual flags were then located using a Global Positioning System (GPS) receiver and later added to the project area mapping (Figures 4 and 5).

Data concerning soils, hydrology, and vegetation were collected and recorded on USACE wetland determination data forms, which are provided in Appendix A. In addition to the USACE wetland delineation, a wetland evaluation was performed to determine the quality and function of each wetland as required by the OEPA. The Ohio Rapid Assessment Method for Wetlands (ORAM) (Mack, 2001) was used to perform this evaluation. Data concerning wetland size, adjacent upland land use, hydrology, habitat alteration, special habitats, and plant communities was collected and recorded on the ORAM 10 Page Form for Wetland Categorization (Appendix B). Wetlands can be designated as Category 1, Category 2, Modified Category 2, or Category 3 based on the results of the ORAM. The categories correspond to wetlands of low, medium, and high quality.

Headwater streams, those streams with a maximum pool depth less than 40 centimeters (15.4 inches) and/or drainage areas less than one square mile, were evaluated using the Field Evaluation Manual for Ohio's Primary Headwater Streams (OEPA, 2012) and the associated

Primary Headwater Habitat Evaluation Index (HHEI) forms (Appendix C). Streams can be designated as either Modified Class I, Modified Class II, Class I, Class II, or Class III Primary Headwater Habitats (PHWH) under Ohio Administrative Code 3745-1-07 (F)(9)(d). OEPA (2012) defines Class I PHWH streams as ephemeral streams that have little or no aquatic life potential, except seasonally when flowing water is present for short time periods following precipitation or snow melt. Class II PHWH streams are defined as streams that are normally intermittent but may have perennial flow. These watercourses may exhibit moderately diverse communities of warm water-adapted native fauna present either seasonally or year-round. The native fauna is characterized by species of vertebrates (temperature facultative species of amphibians and pioneering species of fish) and benthic macroinvertebrates (OEPA, 2012). Class III PHWH streams are perennial streams in which the prevailing flow and temperature conditions in are influenced by groundwater. They exhibit moderately diverse to highly diverse communities of cold water adapted native fauna present year-round (OEPA, 2012).

Photographs depicting wetland topography and vegetation, streams, and uplands onsite are included in Appendix D. Appendix E contains the Hydric Soils List for Carroll County, Ohio. Resumes of personnel are included as Appendix F.

4.0 RESULTS

Although the Project site will be smaller, a 182-acre Study Area was considered for this wetland delineation in order to identify and avoid jurisdictional features to the greatest extent possible. The field investigation identified eighteen areas within the Study Area that met the wetland criteria outlined in the 1987 Corps Manual, as amended by the Corps Regional Supplement. A narrative summary of field data collected for these systems is presented below. Fourteen watercourses were identified within the study area with general descriptions included below. The detail map provided as Figure 5 illustrates the project location and the wetlands and watercourses within the Study Area.

Hydric soils and soils with hydric components are often associated with wetlands. A review of the NRCS soil survey and hydric soil list indicated that there are two soil types mapped within the study area that are classified as hydric or containing hydric components. These are the Glenford silt loam, eight to fifteen percent slopes (GfC) and the Library-Variant silt loam, three to eight percent slopes (LbB) soil types. These soils are known to have major and/or minor hydric inclusions. The NRCS soil survey map is included as Figure 2. Confirmation of the soil mapping units was not performed during this site evaluation.

A review of U.S. Fish and Wildlife Service National Wetland Inventory mapping and Ohio Wetland Inventory (OHWI) mapping do not indicate the presence of NWI or OHWI-mapped wetlands within the Study Area. The National Wetland Inventory Map is included as Figure 3A and the Ohio Wetland Inventory Map is included as Figure 3B.

4.1 STUDY AREA WETLAND DELINEATION

Based on field evidence and best professional judgment, it was determined that there are eighteen wetlands within the Study Area. Data sheets that detail the existing vegetation, soil characteristics, and hydrology were prepared at each wetland area (Appendix A).

Wetland A

Wetland A is a 405-square foot (SF) palustrine emergent (PEM) wetland located adjacent to an intermittent stream/seep (Stream 2) within the north-central portion of the study area (Figure 5). Hydrology for this wetland is supported by groundwater and surficial runoff from adjacent uplands. Dominant vegetation consists of an unidentified sedge (*Carex* sp.) and jewelweed (*Impatiens capensis*). The soil within the upper five inches exhibited a low-chroma matrix color (10YR 4/2) with a sandy loam texture that contained redoximorphic features (7.5YR 4/6). Below

five inches, the soil profile exhibited a low-chroma matrix (2.5Y 4/1) with a sandy loam texture that contained redoximorphic features (7.5YR 4/6). Indicators of wetland hydrology included saturation within the upper twelve inches of the soil profile, high water table, surface water in portions of the wetland, and drainage patterns.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. The wetland exhibits a significant nexus to Stream 2 and would be considered jurisdictional by USACE.

Wetland B

Wetland B is a 293-SF PEM wetland located at the toe of slope and abutting Stream 10 within the eastern portion of the study (Figure 5). Hydrology for this wetland system is supported by groundwater and surficial runoff from adjacent uplands. Dominant vegetation consists of elderberry (*Sambucus nigra* var. *canadensis*), jewelweed, an unidentified sedge (*Carex* sp.), and an unidentified grass species (*Poaceae* sp.). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/1) with a silt texture that contained redoximorphic features (5YR 4/4). Indicators of wetland hydrology included surface water is portions of the wetland, high water table, saturation within the upper twelve inches of the soil profile, drainage patterns, geomorphic position, and positive FAC-Neutral test.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 10 and would be considered jurisdictional by USACE.

Wetland C

Wetland C is an isolated 287-SF PEM wetland located within a historic diversion ditch within the east-central portion of the study (Figure 5). Hydrology is supported by precipitation and drainage from adjacent uplands. Dominant vegetation consists of redtop (*Agrostris gigantea*). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 5/1) with a clay loam texture that contained redoximorphic features (10YR 4/6). Indicators of wetland hydrology included surface water in portions of the wetland, saturation within the upper twelve inches of the soil profile, and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland system does not exhibit a significant nexus to a RPW or TNW. The historic diversion ditch constructed in the 1930's and does not connect to a RPW or TNW. Therefore, this wetland would not likely be considered jurisdictional by USACE; however, this wetland would be regulated by OEPA.

Wetland D

Wetland D is an isolated 117-SF PEM wetland located within a historic diversion ditch within the east-central portion of the study (Figure 5). Hydrology is supported by precipitation and drainage from adjacent uplands. Dominant vegetation consists of redtop (*Agrostris gigantea*). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 5/1) with a clay loam texture that contained redoximorphic features (5YR 5/6). Indicators of wetland hydrology included water-stained leaves and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland system does not exhibit a significant nexus to a RPW or TNW. The historic diversion ditch constructed in the 1930's does not connect to a RPW or TNW. Therefore, this wetland would not likely be considered jurisdictional by USACE; however, this wetland would be regulated by OEPA.

Wetland E

Wetland 5 is a 580-SF PEM wetland located adjacent to the south-central portion of the Study Area and abuts Stream 4 (Figure 5). Hydrology is supported by surficial runoff from adjacent uplands and occasional overtopping of Stream 4. Dominant vegetation consists of an unidentified grass species (*Poaceae* sp.). The soil within the upper seven inches exhibited low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (5YR 5/6). The soil between seven and twelve inches exhibited a low-chroma matrix (2.5Y 4/1) with a silt loam texture and contained redoximorphic features (5YR 5/6). Indicators of wetland hydrology included surface water within portions of the wetland, saturation within the upper twelve inches of the soil profile, oxidized rhizospheres, geomorphic position, and microtopographic relief.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic

plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 4 and would be considered jurisdictional by USACE.

Wetland F

Wetland F is a 328-SF PEM wetland located adjacent to the south-central portion of the Study Area, abutting Stream 5 (Figure 5). Hydrology for this wetland is supported by surficial runoff from adjacent uplands and occasional overtopping of Stream 5. Dominant vegetation consists of an unidentified grass (*Poaceae* sp.), white grass (*Leersia virginica*), and Japanese stilt grass (*Microstegium vimineum*). The soil within the upper ten inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (10YR 4/6). The soil below ten inches exhibits a higher chroma (2.5Y 4/3) with a silt loam texture and contained redoximorphic features (10YR 4/6). Indicators of wetland hydrology included surface water within portions of the wetland, saturation within the upper twelve inches of the soil profile, wetland drainage patterns, and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 5 and would be considered jurisdictional by USACE.

Wetland G

Wetland G is an 8,018-SF PEM wetland located within the north-central portion of the study area (Figure 5). Hydrology for this wetland is supported by groundwater and drainage from adjacent uplands. An existing access road is located within the western portion of Wetland G. Dominant vegetation consists of an unidentified grass (*Poaceae* sp.), and fox sedge (*Carex vulpinoidea*). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 4/6). Indicators of wetland hydrology included saturation within the upper twelve inches of the soil profile and wetland drainage patterns.

This area demonstrated the presence of hydric soils and wetland hydrology indicator parameters required by the 1987 Corps Manual and the Regional Supplement. Due to unidentified grass and sedge species, the wetland determination was weighted to soils and hydrology indicators. Drainage patterns from this wetland extend to an ephemeral stream channel (Stream 6);

therefore, this wetland exhibits a significant nexus to Stream 6 and would be considered jurisdictional by USACE.

Wetland H

Wetland H is a 920-SF PEM wetland that abuts Stream 7 within the north-central portion of the Study Area (Figure 5). Hydrology for this wetland is supported by drainage from adjacent uplands and occasional overtopping of the bank of Stream 7. Dominant vegetation consists of elderberry and an unidentified grass species (*Poaceae* sp.). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (10YR 5/6). Indicators of wetland hydrology included evidence of seasonal ponding, wetland drainage patterns, and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 7 and would be considered jurisdictional by USACE.

Wetland I

Wetland I is a 9,667-SF PEM wetland located within the eastern portion of the Study Area (Figure 5). This wetland occurs in a marginal depression at the toe of a steep slope and abuts Stream 9 and Stream 10. Hydrology for this wetland is supported by groundwater, drainage from adjacent uplands, and periodic inundation from Stream 10 during storm events. Dominant vegetation consists of skunk cabbage (*Symplocarpus foetidus*). The soil to a depth of six inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 5/6). At a depth of six to twelve inches, the soil exhibited a gleyed matrix (G1 6/10Y) with a fine sand texture and contained redoximorphic features (10YR 5/6). Indicators of wetland hydrology included surface water within portions of the wetland, high water table, saturation within the upper twelve inches of the soil profile, oxidized rhizospheres, wetland drainage patterns, geomorphic position, and positive FAC-neutral test.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 10 and would be considered jurisdictional by USACE.

Wetland J

Wetland J is an 86-SF PEM wetland located within the eastern portion of the Study Area (Figure 5). This wetland occurs within a marginal drainageway/depression and hydrology is supported by groundwater as well as drainage from Mobile Road NE and adjacent uplands to Stream 10. Dominant vegetation consists of an unidentified grass species (*Poaceae* sp.). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 4/6). Indicators of wetland hydrology included high water table, saturation within the upper twelve inches of the soil profile, wetland drainage patterns.

This area demonstrated the presence of hydric soils and wetland hydrology indicator parameters required by the 1987 Corps Manual and the Regional Supplement. Due to unidentified grass and sedge species, the wetland determination was weighted to soils and hydrology indicators. This wetland exhibits a significant nexus to Stream 10 and would be considered jurisdictional by USACE.

Wetland K

Wetland K is a 5,454-SF PSS wetland located east of Mobile Road NE within the northeastern portion of the Study Area (Figure 5). This wetland abuts Stream 10 and hydrology is supported by drainage from adjacent uplands. Dominant vegetation consists of musclewood (*Carpinius caroliniana*), silky dogwood (*Cornus amomum*), black willow (*Salix nigra*), elderberry, an unidentified grass species (*Poaceae* sp.), and skunk cabbage. The soil within the upper twelve inches exhibited a low-chroma matrix color (10YR 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 4/6). Indicators of wetland hydrology included geomorphic position and positive FAC-Neutral test.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 10 and would be considered jurisdictional by USACE.

Wetland L

Wetland L is a 109-SF PEM wetland located adjacent to Stream 10 within the eastern portion of the Study Area (Figure 5). This wetland occurs in a marginal depression/drainageway near the toe of a steep slope. Hydrology is supported by drainage from the adjacent slope. Dominant vegetation consists of an unidentified grass species (*Poaceae* sp.) and jewelweed. The soil

within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 4/6). Indicators of wetland hydrology included saturation within the upper twelve inches of the soil profile and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 10 and would be considered jurisdictional by USACE.

Wetland M

Wetland M is a 1,373-SF PEM wetland within the eastern portion of the Study Area adjacent to Stream 10 (Figure 5). This wetland occurs in a marginal depression/drainageway near the toe of a steep slope. Hydrology is supported by drainage from adjacent uplands. Dominant vegetation consists of elderberry, jewelweed, an unidentified grass species (*Poaceae* sp.), and skunk cabbage. The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 5/6). Indicators of wetland hydrology included saturation within the upper twelve inches of the soil profile, wetland drainage patterns, and positive FAC-neutral test.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 10 and would be considered jurisdictional by USACE.

Wetland N

Wetland N is a 460-SF PEM wetland located in a depression abutting Stream 10 within the southeastern portion of the Study Area (Figure 5). Hydrology is supported by groundwater, drainage from adjacent uplands, and periodic inundation from Stream 10 during storm events. Dominant vegetation consists of jewelweed and an unidentified grass species (*Poaceae* sp.). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/1) with a sand texture (alluvium) and contained organic streaking. Indicators of wetland hydrology included surface water in portions of the wetland, high water table, saturation within the upper twelve inches of the soil profile, sparsely vegetated concave surface, drainage patterns, and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained hydrologic indicators. This wetland exhibits a significant nexus to Stream 10 and would be considered jurisdictional by USACE.

Wetland O

Wetland O is a 2,920-SF PSS wetland located between two (2) agricultural fields within the northern portion of the Study Area (Figure 5). Hydrology is supported by drainage from adjacent agricultural fields and forested uplands. This wetland is hydrologically connected to Stream 12. Dominant vegetation consists of elderberry, jewelweed, and white grass. The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 5/6). Indicators of wetland hydrology included surface water in portions of the wetland, saturation within the upper twelve inches of the soil profile, wetland drainage patterns, and positive FAC-Neutral test.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained primary hydrologic indicators. This wetland exhibits a significant nexus to Stream 12 and would be considered jurisdictional by USACE.

Wetland P

Wetland P is a 4,001-SF PEM that abuts Stream 13 and Stream 14 within the southwestern portion of the Study Area (Figure 5). Hydrology is supported by groundwater, drainage from adjacent uplands, and occasional overtopping of Stream 13. Dominant vegetation consists of an unidentified grass species (*Poaceae* sp.) and jewelweed. The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (7.5YR 5/6). Indicators of wetland hydrology included surface water in portions of the wetland, saturation within the upper twelve inches of the soil profile, high water table, geomorphic position, and drainage patterns.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained primary hydrologic indicators. This wetland exhibits a significant nexus to Stream 13 and would be considered jurisdictional by USACE.

Wetland Q

Wetland Q is a 1,192-SF PEM wetland that abuts Stream 13 and is located adjacent to a power line right-of-way within the southwestern portion of the Study Area (Figure 5). Hydrology is supported by groundwater, drainage from adjacent uplands, and occasional overtopping of Stream 13. Dominant vegetation consists of elderberry, fox sedge, sensitive fern (*Onoclea sensibilis*), and jewelweed. The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (10YR 4/6). Indicators of wetland hydrology included high water table, saturation within the upper twelve inches of the soil profile, drainage patterns, positive FAC-Neutral test, and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Corps Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained primary hydrologic indicators. This wetland exhibits a significant nexus to Stream 13 and would be considered jurisdictional by USACE.

Wetland R

Wetland R is a 1,179-SF PSS wetland that abuts Stream 13 and is located within the southeastern portion of the study area (Figure 5). Hydrology is supported by drainage from adjacent uplands and occasional overtopping of Stream 13. Dominant vegetation consists of box elder (*Acer negundo*) and an unidentified grass species (*Poaceae* sp.). The soil within the upper twelve inches exhibited a low-chroma matrix color (2.5Y 4/2) with a silt loam texture and contained redoximorphic features (10YR 5/6). Indicators of wetland hydrology included drainage patterns and geomorphic position.

This area demonstrated the presence of all three wetland parameters required by the 1987 Manual and the Regional Supplement. The vegetative community was dominated by hydrophytic plant species, the soils exhibited hydric characteristics, and the area contained primary hydrologic indicators. This wetland exhibits a significant nexus to Stream 13 and would be considered jurisdictional by USACE.

4.2 OHIO RAPID ASSESSMENT METHOD FOR WETLANDS ASSESSMENT

A wetland assessment was performed using the ORAM. Data sheets that detail wetland size, upland land use, hydrology, habitat alteration, special habitats, plant communities, and scoring calculations were prepared for each wetland (Appendix B). Wetlands were designated as a Category 1, Category 2, or Category 3 based on the results of the ORAM. Category 1 corresponds to wetlands of limited quality. Category 2 corresponds to wetlands of medium quality. Category 3 corresponds to wetland of high quality. Table 1 presents the results of the ORAM scoring summary and Category for the wetlands identified at the site.

Table 1.

Ohio Rapid Assessment Method for Wetlands Results Summary

Wetland Name	ORAM Score	ORAM Category
WL A	52	2
WL B	60	2
WL C and WL D	27	1
WL E and WL F	52	2
WL G	52	2
WL H	53	2
WLI	76	3
Mr 1	33	2
WL K	58	2
WL L	50	2
WL M	56	2
WL N	59	2
WL O	56	2
WL P and WL Q	61	2
WL R	59	2

4.3 STUDY AREA STREAM EVALUATION

Headwater streams were evaluated using the Field Evaluation Manual for Ohio's Primary Headwater Streams (OEPA, 2012) and the associated HHEI forms (Appendix C). Streams were classified as either Class I, Class II, or Class III PHWHs based on the results of the evaluation forms. OEPA (2012) defines Class I PHWH streams as ephemeral streams that have little or no aquatic life potential, except seasonally when flowing water is present for short time periods following precipitation or snow melt. Class II PHWH streams are defined as streams that are normally intermittent but may have perennial flow. They may exhibit moderately diverse communities of warm water adapted native fauna present either seasonally or year-round. The native fauna is characterized by species of vertebrates (temperature facultative species of amphibians and pioneering species of fish) and benthic macroinvertebrates (OEPA, 2012). Class III PHWH streams are perennial streams in which the prevailing flow and temperature conditions are influenced by groundwater. They exhibit moderately diverse to highly diverse communities of cold water adapted native fauna present year-round (OEPA, 2012). None of the streams within the Study Area had a maximum pool depth greater than forty (40) centimeters (15.4 inches) and/or drainage areas greater than one (1) square mile, so no streams were evaluated using the Qualitative Habitat Evaluation Index (QHEI) and associated Qualitative Habitat Evaluation and Use Assessment Field Sheet.

General descriptions of each stream and results of the PHWH HHEI scoring are discussed below. The results of the HHEI are also summarized in Table 2.

Stream 1

Stream 1 is an ephemeral, headwater, unnamed tributary (UNT) of Pipes Fork located within the north-central portion of the Study Area (Figure 5). This stream is approximately 30 feet in length and flows south from an access road to its confluence with Stream 7. This watercourse is supported by drainage from an access road and from adjacent uplands. The stream channel is approximately 1.5 feet and contains a silt substrate. The stream did not exhibit any flow at the time of field investigations. The stream was classified as a Class I PHWH based on a HHEI score of 9.

Stream 2

Stream 2 is an intermittent, headwater, UNT of Pipes Fork located within the north-central portion of the Study Area (Figure 5). This watercourse is supported by a pipe associated with a well/seep and drainage from adjacent uplands. The stream channel is approximately 3 feet in width and contains a silt, gravel, and cobble substrate. The stream exhibited moderate flow at

the time of field investigations with a water depth of approximately 0.25 inch at riffles and 1 inch within pools. The stream was classified as a Class I PHWH based on a HHEI score of 26.5.

Stream 3

Stream 3 is an ephemeral, headwater, UNT of Pipes Fork located within the eastern portion of the Study Area (Figure 5). This stream flows west from a culvert adjacent to Mobile Road NE to its confluence with Stream 10. This watercourse is supported by drainage from Mobile Road, surficial runoff from adjacent uplands, and drainage from a riprap channel adjacent to a residential dwelling east of Mobile Road. The stream channel is approximately 6 feet in width and contains a clay, silt, gravel, and cobble substrate. The stream exhibited moderate flow at the time of field investigations with a water depth of approximately 0.25 inch depth at riffles and 3 inches within pools. The stream was classified as a Class II PHWH based on an HHEI score of 49.

Stream 4

Stream 4 is an ephemeral, headwater, unnamed tributary (UNT) of Pipes Fork located within the southwestern portion of the Study Area (Figure 5). This stream flows south through a forested upland community. This watercourse is supported by drainage from adjacent uplands. The stream channel is approximately 1.5 feet in width and contains a silt substrate with leaf litter. The stream exhibited low flow at the time of field investigations with a water depth of approximately 0.25 inch depth at riffles and 1 inch within pools. The stream was classified as a Class I PHWH based on a HHEI score of 18.

Stream 5

Stream 5 is an ephemeral, headwater, UNT of Pipes Fork located within the southwestern portion of the Study Area (Figure 5). This stream flows southeast through a forested upland community. This watercourse is supported by drainage from forested uplands and an adjacent agricultural field. The stream channel is approximately 1 foot in width and contains a silt and gravel substrate. The stream exhibited low flow at the time of field investigations with a water depth of approximately 0.25 inch depth at riffles and 1 inch within pools. The stream was classified as a Class I PHWH based on a HHEI score of 24.

Stream 6

Stream 6 is an ephemeral, headwater, UNT of Pipes Fork located within the north-central portion of the Study Area (Figure 5). This stream flows north from Wetland G to its confluence with Stream 7. This watercourse is supported by drainage from Wetland G and adjacent uplands. The stream channel is approximately 2 feet in width and contains a clay, silt, sand, gravel, and cobble substrate. The stream exhibited moderate flow at the time of field investigations with a

water depth of approximately 0.5 inch depth at riffles and 2.0 inches within pools. The stream was classified as a Class I PHWH based on an HHEI score of 28.

Stream 7

Stream 7 is an intermittent, headwater, UNT of Pipes Fork located within the north-central portion of the Study Area (Figure 5). This stream flows east from pasturelands on the property to the west to its confluence with Stream 10. This watercourse is supported by groundwater, drainage from tributaries, drainage from the aforementioned pastureland, and surficial runoff from adjacent uplands. The stream channel is approximately 6 to 7 feet in width and contains a sand, gravel, cobble, and boulder substrate. The stream exhibited moderate flow at the time of field investigations with a water depth of approximately 0.5 inch depth at riffles and 2 to 3 inches within pools. The stream was classified as a Class II PHWH based on HHEI scores of 48 and 55. Tadpoles (*Rana* sp.) were observed within the lower portions of the reach.

Stream 8

Stream 8 is an ephemeral, headwater, unnamed tributary (UNT) of Pipes Fork located within the northeast-central portion of the Study Area (Figure 5). This stream flows south to its confluence with Stream 7. This watercourse is supported by drainage from adjacent uplands. The stream channel is approximately two feet in width and contains a clay, sand, and gravel substrate. The stream exhibited low flow at the time of field investigations with a water depth of approximately 0.25 inch depth at riffles and 1 inch within pools. The stream was classified as a Class I PHWH based on a HHEI score of 22.

Stream 9

Stream 9 is an ephemeral, headwater, UNT of Pipes Fork located within the eastern portion of the Study Area (Figure 5). This stream flows west and conveys drainage from Mobile Road NE to its confluence with Stream 10. This watercourse is supported by drainage from Mobile Road and surficial runoff from adjacent uplands. The stream channel is approximately 3 feet in width and contains a silt, clay, and cobble substrate. Vegetation is also present within the stream channel. The stream exhibited moderate flow at the time of field investigations with a water depth of approximately 1 inch depth at riffles and 2 inches within pools. The stream was classified as a Class I PHWH based on a HHEI score of 17.

Stream 10

Stream 10 is a perennial, unnamed tributary of Pipes Fork located within the eastern portion of the study area (Figure 5). This watercourse is supported by groundwater, drainage from adjacent uplands, surficial runoff from adjacent uplands, and drainage from tributaries. The stream channel is approximately 7 to 10 feet in width and contains a silt, sand, gravel, and cobble

substrate. The stream exhibited medium flow at the time of field investigations, with an average water depth of approximately 0.25 to 0.50 inch at riffles and 3 to 4 inches within pools. The stream was classified as a Class III PHWH based on a HHEI score of 61 because the percent of bedrock, boulder, boulder slab, and cobble was greater than 10 percent (50 percent cobble).

Stream 11

Stream 11 is an intermittent, headwater, UNT of Pipes Fork located within the southeastern portion of the Study Area (Figure 5). This stream flows west from a partially collapsed culvert adjacent to Mobile Road NE to its confluence with Stream 10. This watercourse is supported by groundwater, drainage from Mobile Road, and surficial runoff from adjacent uplands. The stream channel is approximately 7 feet in width and contains a silt, sand, gravel, cobble, and boulder substrate. The stream exhibited moderate flow at the time of field investigations with a water depth of approximately 1 inch depth at riffles and 2 inches within pools. The stream was classified as a Class II PHWH based on a HHEI score of 45.

Stream 12

Stream 12 is an intermittent, headwater, UNT of Pipes Fork located within the northern portion of the Study Area (Figure 5). This stream flows south within a forested fringe between two agricultural fields to its confluence with Stream 7. A buried culvert associated with an access road between the agricultural fields affects flow of the stream. This watercourse is supported by drainage from Wetland O and surficial runoff from adjacent uplands. The stream channel ends at a collapsed culvert, with drainage conveyed within an existing access road to Stream 1. The upper portion of the reach is approximately 3 feet in width and contains a silt substrate. The lower portion of the stream channel is approximately 1.5 feet in width and contains a silt, gravel, cobble, and boulder substrate. The upper portion of the reach contained0.25 to 0.5 inch of water in pool areas at the time of field investigations; the lower portion of the reach did not contain any water at the time of field investigations. The upper portion of the stream was classified as a Class II PHWH based on an HHEI score of 36. The lower portion of the stream was classified as a Class I PHWH based on an HHEI score of 24.

Stream 13

Stream 13 is an UNT of Pipe Run and is located within the western portion of the Study Area, west of Route 9. Hydrology is supported by drainage from Route 9 as well as existing farm facilities, upland fields, and forested uplands. Hydrology within the lower portion of the reach is also supported by groundwater and drainage from a tributary (Stream 14). The stream drains west through the Study Area within a narrow ravine. The upper portion of the reach is ephemeral and is approximately 2 feet in width and exhibited a moist streambed with no flow. The stream

channel is approximately 2 feet in width and contains a silt, sand, gravel and cobble substrate. The lower portion is intermittent with an approximately 0.25 inch depth at riffles and 2 inches within pools. The stream channel within the lower portion of the reach is approximately 3.50 feet in width and contains a silt, sand, gravel, and cobble substrate. The stream was classified as Class I PHWH based on an HHEI score of 17 within the upper portion of the reach and as a Class II PHWH based on an HHEI score of 33 within the lower portion of the reach.

Stream 14

Stream 14 is an ephemeral, headwater, UNT of Pipe Run located within the southwestern portion of the Study Area (Figure 5). This stream flows southeast through a forested upland community. This watercourse is supported by drainage from forested uplands and an adjacent agricultural field. The stream channel is approximately 2.5 feet in width and contains a silt and gravel substrate. The stream exhibited moderate flow at the time of field investigations with a water depth of approximately 0.25 inch depth at riffles and 0.5 inches within pools. The stream was classified as a Class I PHWH based on a HHEI score of 24.

Table 2.

Headwater Habitat Evaluation Index and Qualitative Habitat Evaluation Index Results Summary

Stream ID	HHEI Score	PHWH Class
Stream 1	9	I
Stream 2	26.5	I
Stream 3	49	II
Stream 4	18	I
Stream 5	24	I
Stream 6	28	I
Stream 7	48/55	II
Stream 8	22	I
Stream 9	17	I
Stream 10	61	III
Stream 11	49	II
Stream 12-1	36	II
Stream 12-2	24	I
Stream 13-1	17	ļ
Stream 13-2	33	II
Stream 14	24	I

5.0 CONCLUSIONS

As a result of the on-site investigation, eighteen areas were identified within the Study Area that exhibited all three criteria necessary to be classified as a wetland according to the 1987 Corps Manual and the Regional Supplement.

- The areas had a vegetative community that contained a predominance (greater than 50% aerial coverage) of hydrophytic plant species.
- Hydric soil conditions were present at each location.
- There were indicators of wetland hydrology at each location.

Of the eighteen wetlands that occur within the Study Area, two were classified as a Category 1, fifteen were classified as Category 2, one was classified as Category 3 based on the ORAM scoring system for assessing quality and function of wetlands. Two of the eighteen wetlands (Wetlands C and D) were identified as isolated non-jurisdictional wetlands during field investigations. Though the USACE would not have jurisdiction over these wetlands, the OEPA does regulate isolated wetlands. Of the 182-acre Study Area, only 0.85 acres was identified as containing wetlands.

Fourteen streams were also identified during field investigations. Two streams (Streams 12 and 13) had upper and lower segments that scored as Class I and Class II PHWH streams. Of the remaining twelve streams, eight were classified as Class I PHWH streams, three were classified as Class II PHWH streams, and one was classified as a Class III PHWH stream.

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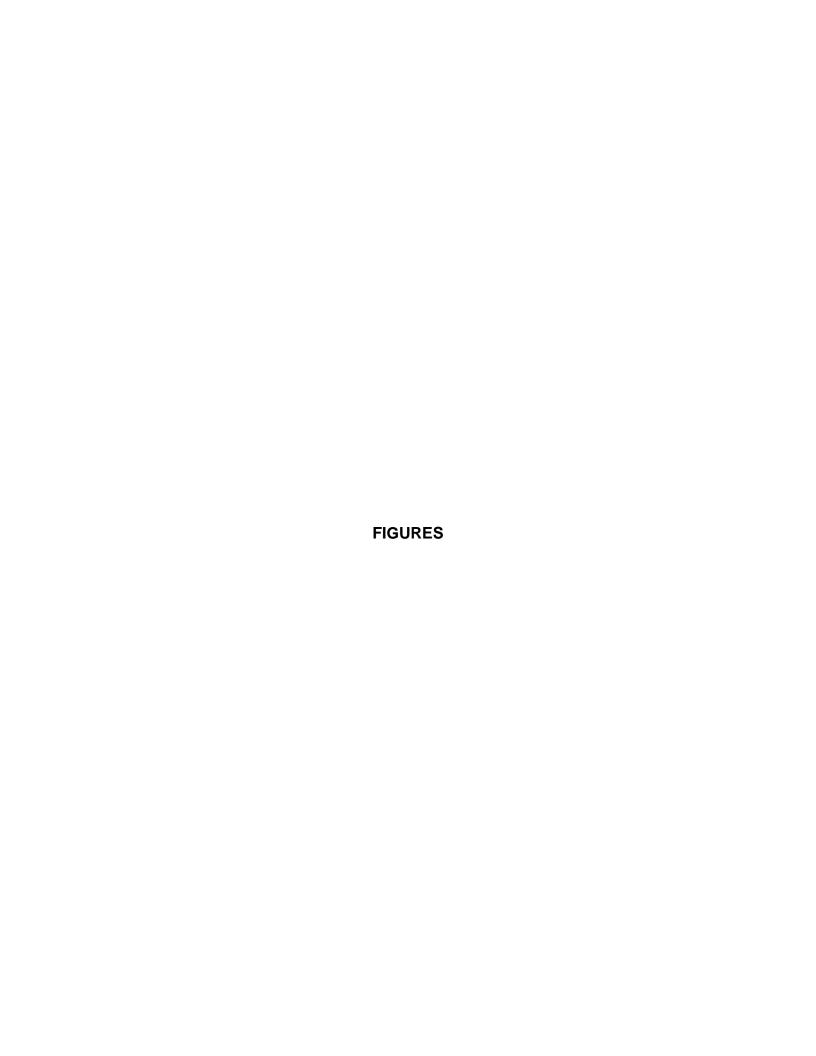
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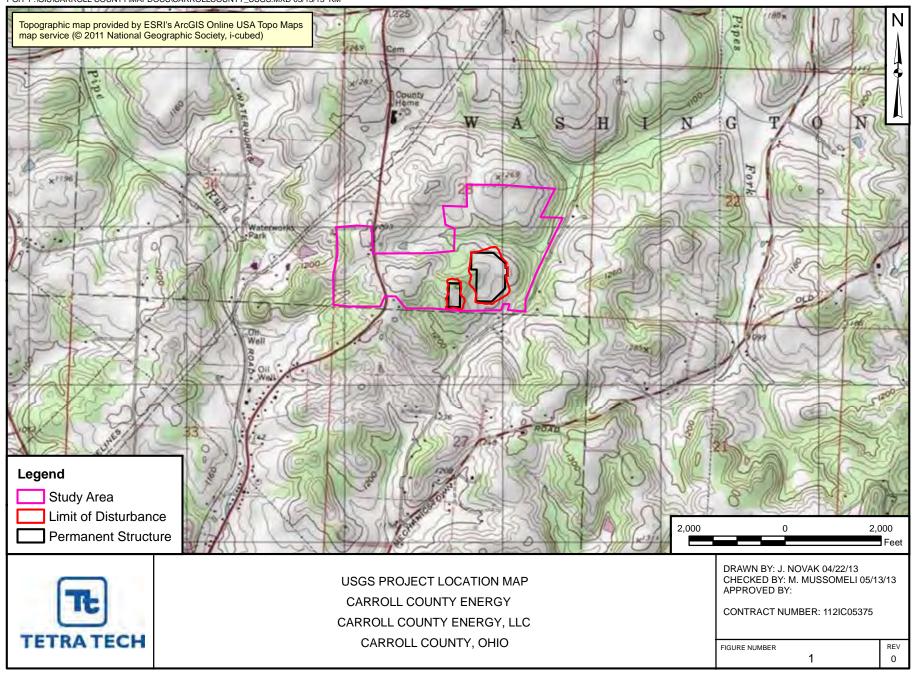
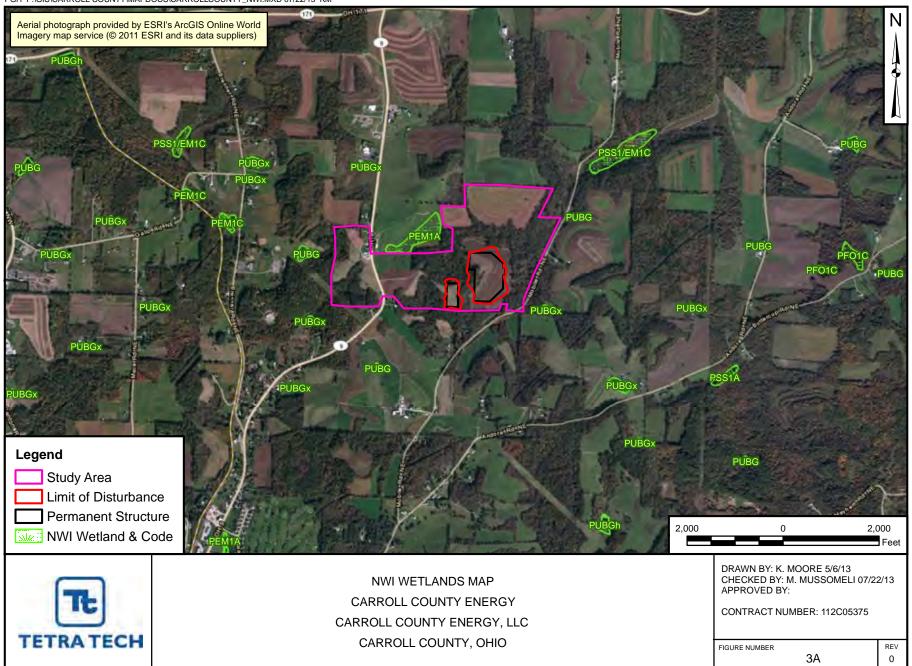


FIGURE NUMBER

2

REV

0





CARROLL COUNTY, OHIO

FIGURE NUMBER

3B

REV 0

REVISION

CONTRACT NUMBER: 112C05375

Permanent Structure

Study Area

APPENDIX A

USACE WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: County County English City/Cou	Complete Co. II Co. Sampling Date: 22 She il Jest
Applicant/Owner: Altract Proces	State: OH Sampling Point: W.C. A
Investigator(s): Mike Mindson and Proston Smith Section	
• • • • • • • • • • • • • • • • • • • •	· · · — · · · · · · · · · · · · · · · ·
Landform (hillslope, terrace, etc.): hills it seen Local relief	
	Long: - (1, 05) Datum: MAD (1)
Soil Map Unit Name: Westmere lead - Costuction 5:14 lawn 15-29	5/6 slages (Wmb) NWI classification: PEm (not maps /)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	s No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology/_ significantly disturbe	
Are Vegetation, Soil, or Hydrology naturally problemate	· · · · · · · · · · · · · · · · · · ·
SUMMARY OF FINDINGS – Attach site map showing samp	oling point locations, transects, important features, etc.
	is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks:	
Seep, Cruinnye gips	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B1	14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor	(C1) Drainage Patterns (B10)
✓ Saturation (A3) Oxidized Rhizospheres	on Living Roots (C3) Mass Trim Lines (B16)
Water Marks (B1) Presence of Reduced In	
Sediment Deposits (62) Recent from Reduction i	
Drift Deposits (93) Thiri Muck Surface (C7)	
Algel Met or Crust (B4) Other (Explain in Rema	· · · · · · · · · · · · · · · · · · ·
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Reflet (D4) FAC-Neutral Test (D5)
Aquetic Fauna (B13)	
Field Observations: Surface Water Present? Yes No Depth (Inches): 6 6 7	25"
Water Table Present? Yes V No Depth (inches): 6"	·
Saturation Present? Yes V No Depth (inches): 0 "	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo	ous inspections), if available:
Remarks:	·
surfus maker in actions of without	
souther made in boughered of mapping	
	I

Samolino	Point:	Lί	H	

Deminance Test workshed:
Total Number of Dominant (8) Percent of Dominant Species Across All Strata: (8) Percent of Dominant Species (nat Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OHL species x 1 =
Species Across All Strata: (8) Percent of Dominant Species 100 (A/B FACW, or FAC: (A/B FACW F
Percent of Dominant Species
That Are OBL, FACW, or FAC:
Prevalence Index worksheet: Total % Cover of: Multiply by:
Total % Cover of:
OHL species
FACW species
FAC species x 3 = FACU species x 4 = UPL species x 5 =
FACU species x 4 UPL species x 5 =
UPL species x 5 =
(D)
Column Totals:
 ,
Prevalence Index - B/A ~
Hydrophytic Vegetation Indicators:
2 - Dominance Test is >50%
3 - Prevalence Index is ≤3.0¹
al Cover
data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation ¹ (Explain)
FALW .
FAC be present, unless disturbed or problematic.
FA(v Definitions of Four Vegetation Strata:
Definitions of Four Vegetation Strates:
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
height.
Sapling/Shrub - Woody plants, excluding vines, less
than 3 in. DBH and greater than or equal to 3.28 ft. (1
m) tall.
Herb - All herbaceous (non-woody) plants, regardles:
of size, and woody plants less than 3.28 ft tall.
cover: 16 Woody vine – All woody vines greater than 3.28 ft in
height
— — <u> </u>
— — <u> </u>
Hydrophytic Vegetation
Vegetation Present? Yes No
cover:

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Profile Desi	cription: (Describe t	o the dept	noob at bebeen the	ment the i	ndicator	or confirm	n the absence	of indicators.)
Depth	Matrix			x Features		. ,	- .	
(inches)	Color (moist)	<u>%</u>	Color (moist)		_lypa'_			Remarks
<u>01</u>	10 yr 4/)	40	29404/8	<u>10</u>		- <u>m</u>	50. lo	
_5·j2+	257 4/1	35	7.54R4K	15		_rr_	506	
	, , ,		•					
								-
						_		
								
¹ Type: C=C	oncentration, D=Depl	etion, RM-	Reduced Matrix, M.	S=Masked	Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Solls ^a :
Histosol	I (A1)		Dark Surface	(S7)			2	om Muck (A10) (MLRA 147)
Histic E	рі реdo л (A2)		Polyvalue Br	low Surfac	e (S8) (A	ALRA 147,	148) 0	Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Si			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleyn		F2)		, P	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark					fery Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Da					Other (Explain in Remarks)
	ark Surface (A12) ducky Mineral (S1) (L	DD N	Redox Depre Iron-Mangar			DEN		
	ошску колыялаг (S1) (С A. 147, 148)	KK M,	MLRA 13		:5 (F 2) (LIGHT N.		
	Gleyed Matrix (S4)		Umbric Surfa		MLRA 13	(6. 122)	3Ind	licators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					alland hydrology must be prosent.
	Matrix (S6)		Red Parent I					less disturbed or problematic.
	Layer (if observed):							· ·
Type:	•							_
Depth (in	ches):						Hydric Soil	Present? Yes No
Remarks:			_				1 - 2	
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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Carroll G	into Enios	City/County:Corrett s	Co. Sampling Date: 33 April 3vi
Amplicant/Owner: Aflycation	1 Power		State: Fild Sampling Point: 104 A +4
investigator(s): m. 4 M	essenti and Preston Son.	鬼_ Section, Township, Range:	528 +142 RSW
Landform (hillslope, terrace, e			one); (%): /\$7-75
Subregion (LRR or MLRA)		Long:	
		my 15.25% Jagy (WmD)) Nhatt classification: W.C.
		e of year? Yes No	
	utons on the site typical for this tim , or Hydrology signif		
			al Circumstances' present? Yes No
	or Hydrology natur		explain any answers in Remarks.)
SUMMARY OF FINDIN	IGS - Attach site map sho	wing sampling point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Pres Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes No	Is the Sampled Area within a Wetland?	Yes No
HYDROLOGY			
Wetland Hydrology Indicat	AFC:		Secondary Indicators (minimum of two required)
	of one is required; check all that a	(vinas	Surface Soil Cracks (B6)
Surface Water (A1)		uatic Plants (B14)	Sparsely Vegetated Concave Surface (H8)
High Water Table (A2)		n Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)		Rhizospheres on Living Roots (C3)	Moss 1rim Lines (B15)
Water Marks (B1)	Presence	e of Reduced from (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Racent la	ron Reduction in Tilled Soils (C6)	Craylish Burrows (C8)
Drift Deposits (B3)		ck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (84)	Other (E:	xplain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	rial Images, (1971)		Geomorphic Position (D2)
Inundation Visible on Ae Water-Stained Leaves (f			Shallow Aquitard (D3) Microtopographic Relief (D4)
Aquatic Fauna (B13)	59		FAC-Neutral Test (D5)
Field Observations:		1	
Surface Water Present?	Yes No Depth (i	nches):	
Water Table Present?	Yes No Depth (i	nches):	
Saturation Present?	Yes No Depth (i	nches): Wetland	Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (str	eam baupe, monitorino well, aeria	 photos, previous inspections), if av	aitable:
	**************************************	, p-101000, p-0-10000 110p-0-10000	****
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet:

Sampling	Point:	we is up	

<u>Tree Stratum</u> (Plot size:)		Species?		Number of Dominant Species
1. Carya or to	45		FAN	That Are OBL, FACW, or FAC:(A)
2. Perny geration	10		FACU	Total Number of Dominant 7
3				Species Across All Strata:(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 19% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
50% of total cover: 34.5	- 308 9	- Total Cover:	³¹	OBL species x1 =
Sapling/Shrub Stratum (Plot size: 15)	/0%: 0	tutai cover.		FACW species x 2
1. Poss multiplication	25	1	Face	FAC species x 3 =
2. Francis geration	10		-7X-C	FACU species x 4 =
3				UPL species x 5
4				Column 1otals: (A) (B)
5				
6				Prevalence Index - B/A
7.				Hydrophytic Vegetation Indicators:
8.				1 - Rapid Test for Hydrophytic Vegetation
9.				2 · Dominance Test is >50%
	35	= Fotal Cove		3 - Prevalence Index is \$3.01
50% of total cover: <u>/1. 4</u>	20% of	total cover:	7_	4 - Morphological Adaptations1 (Provide supporting
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
1. Gira Garatonze	_5		Furv	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Clechers halomen	_5-		FALL	,
3. Aretira minos	_5_		FACE	Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic.
4. 1. Here 30.				Definitions of Four Vegetation Strate:
5				_
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
_	18 .	= Total Cove	er_	of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of	total cover:_	36	Woody vine – All woody vines greater than 3.78 ft in
Woody Vine Stratum (Plot size: 33)	_	,		height
1. Texicolodon reliens	_5_		FAC	
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes No
50% of total cover: _ 2. 2		= Total Cove		Liazairi. 182 IAU
		(otai cover:_		
Remarks: (Include photo numbers here or on a separate si	(166(·)			

Sampling Point: 🛰 🗚 😙

Type: C=Concentydric Soil Indica Histosal (A1) Histic Epipeda Black Histic (Hydrogen Sult Stratified Laye C cm Muck Depleted Belo Thick Dark Sult Sandy Mucky MLRA 147, Sandy Gloyad Sandy Rodox Stripped Matri	In (A2) In (A2) In (A4) In (A4) In (A5) In (A5) In (LIR N) In (LIR	e (A11)	Reduced Matrix, M Dark Surface Pobyvatice is Thin Dark St Loamy Gley Depleted Ma Redox Deak Depleted Da Redox Deak Unifor Surface MR RA 12 Umbric Surface Preduont F1	IS=Masked e (S7) elow Surfar urface (S9) ed Matrix (H1) Surface (F rese Massed ace (F13) (Sand Grain (MLRA 14 F2) 6) (F7) a) as (F12) (L	IRA 147, 148)	Location: PL=F Indicator 2 cm (N Plad Very Othe	
nype: C=Concen tydric Soil Indica Histosol (A1) Histic Epipede Black Histic (A) Stratified Laye 2 cm Muck (A) Depleted Belo Thick Dark Su Sandy Mucky MLRA 147, Sandy Gloyed Sandy Rodox, Stripped Marti testrictive Leyer Type:	tration, D=Deplitors: in (A2) ide (A4) is (A5) io) (LRR N) w Dark Surface face (A12) Matrix (S4) (S5) x (S6)	etion, RM-I	Reduced Matrix, M Dark Surface Pobyvalue B Thin Dark St Loamy Gley Depleted Ma Redox Deak Depleted DA Redox Deak Unifor Surface Unifor Surface Preducet I	IS=Masked e (S7) elow Surfar urface (S9) ed Matrix (H3) Surface (F frix Surface essions (F1) ess Massa ace (F13) (Sand Grain (MLRA 14 F2) 6) (F7) 3) as (F12) (L	ins. 14	Location: PL=F Indicator 2 cm (N Pied Very Othe	Pore Lining, MMalrox. rs for Problematic Hydric Soil: n Muck (A10) (MI RA 147) st Prairie Redox (A16) ALRA 147, 148) Imoral Floodplain Soils (F19) ALRA 136, 147) y Shallow Dark Surface (1F12) er (Explain in Remarks)
ydric Soil Indica Histosal (A1) Histic Epipeda Black Histic (# Hydrogen Suli Stratified Laye 2 cm Mucky (A Depleted Bele Thick Dark Su Sandy Mucky MLRA 147, Sandy Gleyed Sandy Rodox, Stripped Mayer Type:	ration, D=Depletors: n (A2) .ide (A4) rs (A5) 10) (LRR N) w Dark Surface face (A12) Mneral (S1) (L 148) Matrix (S4) x (S6)	e (A11)	Dark Surface Polyvalue IM Thin Dark St Loarny Gley Depleted Ma Redox Dark Depleted Use Redox Depriron-Manger MLRA 1: Umbric Surf. Predmont Fi	IS=Masked e (S7) elow Surface (S9) ed Matrix (H3) Surface (Fark Surface essions (Fares Massa 36) ace (F13) (Sand Graine (S8) (MI (MILRA 14 F2) 6) (F7) 8) ss (F12) (L	ins. 14	Location: PL=findicator Indicator 2 cm (N Pied (N Very Othe	Pore Lining, MMalinx. rs for Problematic Hydric Soils in Muck (A10) (MI RA 147) st Prairie Redox (A16) MLRA 147, 148) moral Floodplain Soils (F19) MLRA 136, 147) y Shallow Dark Surface (1F12) er (Explain in Remarks)
lydric Soil Indica Histosal (A1) Histic Epipeda Black Histic (E) Hydrogen Sull Stratified Lay(a Depleted Bele Thick Dark Su Sandy Mucky MLRA 147, Sandy Gleyed Sandy Redox, Stripped Redox Type:	ration, D=Depletors: n (A2) .ide (A4) rs (A5) 10) (LRR N) w Dark Surface face (A12) Mneral (S1) (L 148) Matrix (S4) x (S6)	e (A11)	Dark Surface Polyvalue IM Thin Dark St Loarny Gley Depleted Ma Redox Dark Depleted Use Redox Depriron-Manger MLRA 1: Umbric Surf. Predmont Fi	IS=Masked e (S7) elow Surface (S9) ed Matrix (H3) Surface (Fark Surface essions (Fares Massa 36) ace (F13) (Sand Graine (S8) (MI (MILRA 14 F2) 6) (F7) 8) ss (F12) (L	ins. 14	Location: PL=findicator Indicator 2 cm (N Pied (N Very Othe	Pore Lining, MMalinx. rs for Problematic Hydric Soils in Muck (A10) (MI RA 147) st Prairie Redox (A16) MLRA 147, 148) moral Floodplain Soils (F19) MLRA 136, 147) y Shallow Dark Surface (1F12) er (Explain in Remarks)
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lydric Soil Indica Histosal (A1) Histic Epipeda Black Histic (E) Hydrogen Sull Stratified Lay(a Depleted Bele Thick Dark Su Sandy Mucky MLRA 147, Sandy Gleyed Sandy Redox, Stripped Redox Type:	ration, D=Depletors: n (A2) .ide (A4) rs (A5) 10) (LRR N) w Dark Surface face (A12) Mneral (S1) (L 148) Matrix (S4) x (S6)	e (A11)	Dark Surface Polyvalue IM Thin Dark St Loarny Gley Depleted Ma Redox Dark Depleted Use Redox Depriron-Manger MLRA 1: Umbric Surf. Predmont Fi	IS=Masked e (S7) elow Surface (S9) ed Matrix (H3) Surface (Fark Surface essions (Fares Massa 36) ace (F13) (Sand Graine (S8) (MI (MIRA 14 F2) 6) (F7) 8) 9s (F12) (L MLRA 136	LRA 147, 148) RR N. 6, 122)	Location: PL=F Indicator 2 cm (N) Plad (N) Vary Othe	Pore Lining, MMalox. rs for Problematic Hydric Soils in Muck (A10) (MI RA 147) st Prairie Redox (A16) it RA 147, 149) imoral Floodplain Soils (F19) id RA 36, 147) s Shallow Dark Surface (1F12) er (Explain in Remarks)
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Histosol (A1) Histic Epipede Black Histic (A Hydrogen Sult Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky MLRA J Sandy Gleyed Sandy Rodox Stripped Marit Restrictive Layer Type:	n (A2) .3) ide (A4) iss (A5) (I) (LRR N) w Dark Surface face (A12) Mineral (S1) (L 148) Matrix (S4) (S5)		Polyvalue B Thin Dark Si Loarny Gley Depleted Ma Redox Dark Depleted Ua Redox Depri Iron-Mangar MLRA 13 Umbit Surfi Predinont Fl	elow Surfai urface (59) ed Matrix (atrix (F3) Surface (F ark Surface essions (F4 nese Massi ace (F13) ((MLRA 14 F2) G) (F7) as (F12) (L MLRA 136	87, 14 8) RR N. 6, 122)		n Muck (A10) (MI RA 147) st Prairie Redox (A16) MLRA 147, 148) Imont Floodplain Soils (F19) MLRA 136, 147) y Shallow Dark Surface (1F12) er (Explain in Remarks)
Histic Epipedo Black Histic (4) Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Bele Thick Dark Su Sandy Mucky MLRA 147, Sandy Gleyed Sandy Rodox, Stripped Marit Restrictive Layer Type:	.3) ide (A4) rs (A5) rs (A5) (O) (LRR N) w Dark Surface rface (A12) Mineral (S1) (Li 148) Matrix (S4) (S5) x (S6)		Polyvalue B Thin Dark Si Loarny Gley Depleted Ma Redox Dark Depleted Ua Redox Depri Iron-Mangar MLRA 13 Umbit Surfi Predinont Fl	elow Surfai urface (59) ed Matrix (atrix (F3) Surface (F ark Surface essions (F4 nese Massi ace (F13) ((MLRA 14 F2) G) (F7) as (F12) (L MLRA 136	87, 14 8) RR N. 6, 122)	18) Coa: (N Pied (N Very Other	st Prairie Redox (A16) ALRA 147, 148) Import Floodplain Soils (F19) ALRA 136, 147) Ir Shallow Dark Surface (1F12) Ir (Explain in Remarks)
Black Histic (4 Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Sulf Sandy Mucky MLRA 147, Sandy Gleyed Sandy Redox. Stripped Mucky Type:	.3) ide (A4) rs (A5) rs (A5) (O) (LRR N) w Dark Surface rface (A12) Mineral (S1) (Li 148) Matrix (S4) (S5) x (S6)		Thin Dark St Loarny Gley Depleted Me Redox Deak Depleted Da Redox Depr Iron-Mangar MLRA 13 Umbric Surf Predmont FI	urface (59) ed Malrix (atrix (+3) Surface (F ark Surface essions (F4) nese Massi ace (F13) ((MLRA 14 F2) G) (F7) as (F12) (L MLRA 136	87, 14 8) RR N. 6, 122)	(N Pied (N Very Othe	ALRA 147, 149) moral Floodplain Soils (F19) ALRA 136, 147) (Shallow Dark Surface (1F12) er (Explain in Remarks)
Hydrogen Sulf Stratified Laye 2 cm Muck (A Deploted Belo Thick Dark Su Sandy Mucky MLRA 147, Sandy Gloyad Sandy Redox Stripped Matri testrictive Leyer	ide (A4) rs (A5) rs (A5) r0) (LRR N) w Dark Surface rface (A12) Mineral (S1) (Li 149) Matrix (S4) (S5) x (S6)		Loarny Gley Depleted Me Redox Deak Depleted Da Redox Den Redox Den Iron-Mangar MLRA 15 Umbric Surf. Predimont H	ed Matrix (atrix (F3) Surface (F ark Surface essions (F4 nese Masse (F13) (F2) 6) (F7) 8) es (F12) (L MLRA 136	.RR N. 5, 122)	Pied (N Very Othe	lmoral Floodplain Soils (F19) ALRA 136, 147) I Shallow Dark Surface (1F12) er (Explain in Remarks)
Stratified Laye 2 cm Muck (A Depleted Bet Thick Dark Su Sandy Mucky MLRA 147, Sandy Gleyed Sandy Redox Stripped Matri Restrictive Leyer	rs (A5) 10) (LRR N) w Dark Surface face (A12) Mineral (S1) (Li 149) Matrix (S4) (S5) x (S6)		Depleted Mic Redox Dark Depleted Da Redox Deplet	atrix (F3) Surface (F ark Surface ressions (F4 nese Massi a6) ace (F13) (6) (F7) 8) es (F12) (L MLRA 136	5, 122)	(N Very Other	ALRA 136, 147) y Shallow Dark Surface (1F12) er (Explain in Remarks)
2 cm Muck (A Depleted Belo Thick Dark Su Sondy Mucky MLRA 147, Sandy Gleyed Sandy Redox Stripped Matri Restrictive Leyer	10) (LRR N) w Dark Surface rface (A12) Mineral (S1) (Li 149) Matrix (S4) (S5) x (S6)		Redox Dark Depleted Da Redox Depl Iron-Mangar MLRA 13 Umbric Surfa	Surface (F ark Surface essions (Fa nese Massi 36) ace (F13) ((F7) 8) as (F12) (L MLRA 136	5, 122)	Othe	y Shallow Dark Surface (1612) er (Explain in Remarks)
Deploted Belo Thick Dark Su Sandy Mucky MLRA 147, Sandy Gleyed Sandy Redox Stripped Matri Restrictive Layer Type:	w Dark Surface rface (A12) Mineral (S1) (Li 149) Matrix (S4) (S5) x (S6)		Depleted Da Redox Depri Iron-Mangar MLRA 13 Umbric Surfi Prediment Fi	ork Surface ressions (Fa nese Massi (36) (ace (F13) ((F7) 8) as (F12) (L MLRA 136	5, 122)	Othe	er (Ex pl ain in Remarks)
Thick Dark Su Sondy Mucky MLRA 147, Sandy Gleyed Sandy Redox Stripped Matri Restrictive Leyer Type:	rface (A12) Mineral (S1) (Li 149) Matrix (S4) (S5) x (S6)		Redox Depri Iron-Mangar MLRA 13 Umbric Surfa Prediment Fi	essions (Fa nese Massi 36) face (F13) (8) as (F12) (L MLRA 136	5, 122)	³(ndical	
Sandy Mucky MLRA 147, Sandy Gleyed Sandy Redox Stripped Matri Restrictive Layer Type:	Mineral (S1) (Li 149) Matrix (S4) (S5) x (S6)	RR N,	Iron-Manger MLRA 13 Umbric Surfa Prediment Fi	nese Massi 36) ace (F13) (as (F12) (L MLRA 136	5, 122)		tors of hydrophyric vegetation an
MLRA 147, Sandy Gleyed Sandy Redox Stripped Matri Restrictive Leyer Type:	149) Matrix (S4) (S5) x (S6)		MLRA 13 Umbric Surfa Predmont Fi	36) ace (F13) (MLRA 136	5, 122)		tors of hydrophyric vegetation an
Sandy Gleyed Sandy Redox Stripped Matri Restrictive Leyer Type:	Matrix (S4) (S5) x (S6)		Umbric Surfa Prediment Fi	ace (F13) (tors of hydrophyric vegetation an
Sandy Redox Stripped Matri Restrictive Leyer Type:	(S5) x (S6)		Prediment Fi					
Stripped Matri Restrictive Layer Type:	x (S6)				Dils (F19) (MTKV 14R)	wetlar	nd hydrology must be present,
lestrictive Layer Type:			Red Parent	Material (F	21) (MLRA	127, 147)	unles	s disturbed or problematic.
							Hydric Soil Pre	esent? Yes No
demarks:						l		
semans.								

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WETLAND DETERMINATION DAT	A FORM – Eastern	Mountains and Piedm	iont Region
Project/Site: Carroll Conty Engra	City/County: Car	11 60	Sampling Date: 23 April 3013
Applicant/Owner: Almora Part			Sampling Point: WLB
Investigator(s): Milke Alusseine li and Persite Smi	4 Costina Township	Banna 528 7/44 6	
Landform (hillslope, terrace, etc.):			
Subregion (LRR or MLRA): LLR V. Lat: 40.4	· 5 5	Long: <u>~77 - 856~1</u>	Datum: 7230 03
Soil Map Unit Name: Works, land Cosherdon sill from			
Are climatic ℓ hydrologic conditions on the site typical for this time	e oaf yeear? YesN	o (If no, explain in F	Remarks.)
Are Vegetation, Soil or Hydrology signifi	cantly disturbed?	re "Normal Circumstances"	present? Yes No
Are Vegetation, Soit or Hydrology natura	elly problematic? (f needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	wing sampling poi	it locations, vansects	, important features, etc.
Hydrophytrc Vegetalion Present? Yes No_Hydric Soil Present? Yos No_No_Netand Hydrology Present? Yes No_Remarks:		oled Area tland? Yes	No
Tro of slope, abother stream			
HYDROLOGY			
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; chack all that a	apply)		Cracks (B6)
	iatic Plants (B14)		getated Concave Surface (H8)
	n Sulfide Odor (C1)	Drainage Pa	
	Hhizospheres on Living F		
_	of Reduced Iron (C4)		Water Table (C2)
	on Reduction in Tilled So		
i	k Surface (C7)		isible on Aerial Imagery (C9) tressed Plants (D1)
Algal Mat or Crust (84) Other (E: Iron Deposits (85)	oplain in Remarks)	7	Position (D2)
Inundation Visible on Aerial Imagery (H7)		Shallow Aqu	1 1
Water-Stained Leaves (89)			ophic Relief (D4)
Aquatic Fauna (B13)		✓ FAC Neutral	
Field Observations:			
Surface Water Present? Yes No Depth (i	nchestr C.15		
Water Table Present? Yes No Depth (i	riches):		,
Saturation Present? Yes No Depth (i	nches):	Wetland Hydrology Preser	nt? Yes No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspect	ons), if avaitable:	
Remarks:			
solution make in positions of mobile			

			ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 36° 4)	% Cover	Species?	Status	Number of Dominant Species 2
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species (0.7)
5				Percent of Octiment Species /00 That Are OBL. FACW, or FAC: (A/b)
5				
1				Prevalence Index worksheet:
		- Total Cove	r	Total % Cover of: Multiply by:
50% of total cover:	20% of	total cover:,		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: /5)		,		FACW species x 2
1. Sandras nigen (rec counting's)			FACW	FAC species x 3 =
²				FACU species x 4 =
3				UPL species x 5 =
4,				Column Futals: (A) (B
5				Prevalence Index - B/A -
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
B				2 - Dominance Test is >50%
3				3 - Prevalence Index is ≤3.01
3.5		- Total Cove	r ,	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 7.5	_ 20% of	total cover:_		data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)	2000	,		Problematic Hydrophytic Vegetation (Explain)
1 togetions Copinsis	-/5	-/-	FALL	
2 Court 50, **				Indicators of hydric soil and wetland hydrology must
5. Kercen ad.	<u> 1)</u> 5			be present, unless disturbed or problematic.
4. Viela sussia			_Fa(Definitions of Four Vegetation Strata:
5 treimacht armortor			TAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) of
5 Southern sign (ver continuis) (southy)	5		FAIW	more in diameter at breast height (DBH), regardless of
7		$\overline{}$		height.
3				Sapting/Shrub - Woody plants, excluding vines, less
9				than 3 in, DBH and greater than or equal to 3.28 ft (1 m) tall.
10				ing tall.
l1	65			Herb - All herbaceous (non-woody) plants, regardles.
50% of total cover: 25		= Total Cove		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 25 7 1	_ 2016.01	korar cover:_	70	Woody vine - All woody vines greater than 3.28 ft in
				height.
l				
2				<u> </u>
3				
·				Hydrophylic
5				Vegetation Present? Yes No
EASY of total square		Total Cove		105
50% of total cover: Remarks: (Include photo numbers here or on a separate sh		total cover:_		

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SOIL Sampling Point: <u>Wt ß</u>

pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains **Location: PL=Pore Lining, M=Matrix. dric Soil Indicators: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Dark Surface (S7)		Matrix		Red	ox Features	-17	T	B
pe: C=Concentration, D=Depletion, RMReduced Matrix, MS=Masked Sand Grains **Icocation: PL=Pore Lining, M=Mabix.** Indicators for Problematic Hydric Soils*: ### Lining	inches)							Remarks
dric Soil Indicators: Histosoil (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratfied Layers (A5) Depleted Musrix (F2) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S6) Red Parent Malerial (F2) (MLRA 187, 148) MCRA 136, 122) Piedmont Floodplain Soils (F19) Very Shallow Dark Surface (F19) Other (Explain in Remarks) Indicators of Problematic Hydric Soils': 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) Well A 147, 148) Indicators of Problematic Hydric Soils': 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) Coast Prane Redox (F19) (MLRA 147, 148) Predomont Floodplain Soils (F19) Indicators of Problematic Hydric Soils': 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) Predomont Floodplain Soils (F19) (MLRA 148) All A 147, 148) Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problematic Hydric Soils': All A 147, 148 Indicators of Problem)[1 1	1.69 4//	<u> 40</u>	59R 4/7.	13 6		5.10	
dric Soil Indicators: Indicators: Indicators for Problematic Hydric Soils*: 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalus Below Surface (S9) (MLRA 147, 148) Coast Praise Redox (A15) Hydrogen Sulfide (A4) Pedevrs (A5) Depleted Musix (F2) Pedevront Hoodpian Soils (F19) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) With A146, 147) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 148) Red Parent Malerial (F21) (MLRA 148) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Malerial (F21) (MLRA 127, 147) Type:								
dric Soil Indicators: Histosoil (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Moutrix (F2) Communic Mulck (A10) (LRR N) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, MLRA 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 148) Sandy Redox (S5) Depleted Below Dark Surface (F7) Fedox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Wery Stratified Layer Other (Exptain in Remarks) Tindicators of hydrophytic vegetation and wetland hydrotogy must be present. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Type: Depth (inches): Hydric Soil Present? Yes No								
dric Soil Indicators: Histosoil (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Moutrix (F2) Communic Mulck (A10) (LRR N) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, MLRA 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 148) Sandy Redox (S5) Depleted Below Dark Surface (F7) Fedox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Wery Stratified Layer Other (Exptain in Remarks) Tindicators of hydrophytic vegetation and wetland hydrotogy must be present. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Type: Depth (inches): Hydric Soil Present? Yes No								
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dric Soil Indicators: Histosoil (A1) Dark Surface (S7) Histo Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Motrix (F2) Comm Muck (A10) (MRA 147, 148) Loarny Gleyed Matrix (F2) Depleted Below Dark Surface (F8) Depleted Dark Surface (F7) Redox Dark Surface (F7) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, MLRA 148) MILRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Below Dark Surface (F13) (MLRA 148, 147) Wery Shallow Dark Surface (F12) Cother (Explain in Remarks) MILRA 148, 147, 148) MILRA 149, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedment Floodplain Soils (F19) (MLRA 148) Surface (F13) (MLRA 148, 142) Piedment Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Hydric Soil Present? Yes No								
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dric Soil Indicators: Histosoil (A1) Dark Surface (S7) Histo Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratfiled Layers (A5) Depleted Mutrix (F2) Stratfiled Layers (A5) Depleted Mutrix (F2) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Lydrogen Sulfide (A4) Lydrogen Sul								
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Histic Epipedon (A2) Black Histic (A3) Histic (A3) Polyvalue Below Surface (S9) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Predmont Hoodplain Soils (F19) (MLRA 147, 148) Predmont Hoodplain Soils (F19) (MLRA 136, 147) Predmont Hoodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (1F12) Depleted Below Dark Surface (FF) Depleted Below Dark Surface (FF) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbin: Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Gleyed Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Pres: Depth (inches): Hydric Soil Present? Yes No				Trouble Triberry, 17	- 111051100 GB110	0,0,1-5		
Histic Epipedon (A2) Black Histic (A3) Histic (A3) Polyvalue Below Surface (S9) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Predmont Hoodplain Soils (F19) (MLRA 147, 148) Predmont Hoodplain Soils (F19) (MLRA 136, 147) Predmont Hoodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (1F12) Depleted Below Dark Surface (FF) Depleted Below Dark Surface (FF) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbin: Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Gleyed Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Pres: Depth (inches): Hydric Soil Present? Yes No	Histosol	(A1)		Dark Surfac	e (S7)		2 cm	Muck (A10) (MLRA 147)
Hydrogen Sulfide (A4) Stratified Layors (A5) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F3) Predmont Floodplain Soils (F19) (ML RA 136, 147) Very Shallow Dark Surface (F1) Depleted Dark Surface (F2) Sandy Mucky Mineral (S1) (LRR N, ML RA 147, 148) Sandy Redox (S5) Predmont Floodplain Soils (F19) (MLRA 136, 147) Other (Explain in Remarks) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (If observed): Type: Depth (inches): Hydric Soil Present? Yes No	Histic Ep	pipedan (A2)		Polyvalue B	elow Surface (S8		148) Coas	st Pranie Redox (A16)
Stratified Layers (A5) 2 cm Muck (A10) (LRR N) 3 cm Muck (A10) (LRR N) 4 cm Surface (A11) 5 cm Muck (A10) (LRR N) 6 cm Muck (A10) (LRR N) 7 cm Muck (A						RA 147, 148)		
2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (F5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyd Matrix (S4) Sandy Redox (S5) Surface (F13) (MLRA 136, 122) Umbric Surface (F13) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Hydric Soif Present? Yes No								
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Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Siripped Matrix (S6) Strictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Redox Depressions (F12) (RR R R R R R R R R R R R R R R R R R			(611)					
MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Umbric Surface (F13) (MLRA 136, 122) Pledmont Floodplain Soils (F19) (MLRA 148) Wetland hydrotogy must be present, wetland hydrotogy must be present, unless disturbed or problematic. Type: Depth (inches): Hydric Soil Present? Yes No			, , , , ,				0	, , , , , , , , , , , , , , , , , , , ,
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Indicators of hydrophytic vagetation and Sandy Redox (S5) Piedmont Floodplain Solis (F19) (MLRA 148) wetland hydrotogy must be present, stripted Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Type:	Sandy N	Aucky Mineral (S1) (L	RR N,	Iron-Mangar	nese Masses (F1	2) (LRR N,		
Sandy Redox (SS) Pledmont Floodplain Soils (F19) (MLRA 148) wetland hydrotogy must be present. Surpped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No								
Stripped Matrix (S6) Red Parent Malerial (F21) (MLRA 127, 147) unless disturbed or problematic. Strictive Layer (if observed): Type:								
trictive Layer (If observed): Type: Depth (inches): Hydric Soil Present? Yes No								
Type:					iviateriai (FZI) (N	ILIAN ICA, ISA) briles:	susibided of problematic.
Depth (inches): Hydric Soil Present? Yes No								
	Twne:						Hydric Soil Pro	asent? Yes V
HEN NO.	Type:	rhes).					,	
	Depth (in	ches):						
	<i>,.</i> —	ches):						
	Depth (in	ches):						
	Depth (in	ches):						
	Depth (in	ches):						
	Depth (in	ches):						
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	Depth (in	ches):						
	Depth (in	ches):						
	Depth (in	ches):						

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Soil Map Unit Name: wrshorthad Gaharh sitt home 15-25th she Are climetic / hydrologic conditions on the site typical for this time of year? Yes	convex, none): (m, r)x Slope (%): 155-30 Long: - 11. 056'1 Datum: ∧-20.51' - (m, n) NWI classification: ∪P 4
	int locations, transects, important features, etc. npled Area velland? Yes No
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators [minimum of one is required; check all that apply] Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidzed Rhizospheres on Living Water Marks (B1) Presence of Reduced Iron (C4) Sadiment Deposits (B2) Recent Iron Reduction in Tilled S Drift Deposits (H3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Salmed Leaves (B9) Aquatic Fauna (B13)	Dry-Season Water Table (C2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saluration Present? Yes No Depth (inches): [includes capillary fringe] Describe Recorded Data (stream gauge, monitoring wall, aerial photos, previous inspec	Wettend Hydrology Present? Yas No

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VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: we But

Tree Stratum (Mol size: 35)		Dominant 1		Dominance Test worksheet:
TIBE STREET,	% Cover	Species?		Number of Dominant Species }
1. Prince Servien	20	- ',	FACU	That Are OHL, FACW, or FAC: (A)
2. Acres rates	15		FAIU	Total Number of Dominant 9
3. Church problem	15	_/_	FAC	Species Across All Strata: (B)
4				
5.				Percent of Dominant Species That are OBL, FACW, or FAC:
J				That are OBL, FACW, or FAC: (A/B)
б				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	50	Total Covo	f	
50% of total cover: 25	20% of t	otal cover:_	70	OBL species x1 =
Sapling/Shrub Stratum (Plot size: /5		,		FACW species x 2
1. Pose multiplon	30	✓	FACU	FAC species x 3 =
2. Popus allestinienis		$\overline{}$	FAY V	FACU species x 4 =
3 Proper Section			FACY	UPL species x 5 =
				Column Totals: (A) (B)
4				Column rotors: (A) (B)
5				Prevalence Index - B/A
6				Hydrophytic Vegetation Indicators:
7.				
8				1 - Rapid Test for Hydrophytic Vegetation
g				2 - Dominance Test is >50%
9	14.25	Total Cove		3 Prevalence Index is ≤3.01
				4 - Morphological Adaptations' (Provide supporting
50% of total cover: 32.4	20% 016	otal cover:_	<u> </u>	data in Remarks or on a separate sheet)
nero adami (Fior Size)		,		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Peterhalom er Hadem	_5	-/- -	FACU	
7. Piula Sois in			FAC	Italiana assume assume and analysis substitution of the
3. Poly stickom repushickally	5	✓	FACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Condemine constanuts	3		FACU	Definitions of Four Vegetation Strate:
5. Ris - 14186-			FACU	Delimitions of Four Vegetation South:
6 Glecken helionia	3		Fare	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
. 41 AI				more in diameter at breast height (DHH), regardless of
	3		<u> 5410</u>	height.
8. 6. live aprine			FACU	Sapting/Shrub - Woody plants, excluding vines, less
9. Importions copunits			FAC-	than 3 in. DBH and greater than or equal to 3.28 ft (1)
10				m) tall.
11.				Herb – Alf herbaceous (non-woody) ptants, regardless
	31 =	Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15. €				[
Woody Vine Stratum (Plot size: 3c)		•••••		Woody vine - All woody vines greater than 3.28 ft in
WOODY WITE STRAIGHT (PIOUSIVE.		/	Pac	height
1. Texicolombera indicana			771	
2				
3				
4				Hydrophylic
5.				1 3/5
	5 -	Total Cove	г	Present? Yes No
50% of total cover: 2 · 5				
Remarks: (Include photo numbers here or on a separate s				
Tremaks. (include protomonalis hara di bir a separata s	alder.)			

Soil Sampling Point: with the depth posted to document the indicator or confirm the absence of indicators.

epth .	Matrix		Redo	k Features	·				
inches)	Color (moist)	. <u>*</u> _	Colar (maist)		Type:	l oc'			Remarks
01	104x 4/3	100		$\overline{}$			5.1/2		
7-127	1041 4/4	100					5.10		
voe: C-Co	ncentration, D-Dep	letion RM-R	educed Matrix MS	-Masked	Sand Gra	ins	Location P	I =Pore Linin	o M-Matrix.
ydric Soil I									blematic Hydric So
Histosol	(A1)		Dark Surface	(S71					10) (MLRA 147)
	ipedon (A2)		Polyvalue Bel		e (S8) (M	LRA 147.		oast Prairie	
Black His			Thin Dark Sui					(MLRA 147	
_ Hydroger	n Sulfide (A4)		Loamy Gleye				P	redmont Floo	odplain Soils (F19)
Stratified	Layers (A5)		Depleted Mail	rix (F3)				(MLRA 136	, 147)
	ck (A10) (LRR N)		Redox Dark S						Dank Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Dark				_ c	ither (Explain	in Remarks)
	rk Surface (A12)		Redox Depre						
	ucky Mineral (S1) (I	LRR N,	Iron-Mangane		s (F12) (L	RR N,			
	147, 148)		MLRA 136			4 0.00	3		
_ Sandy G _ Sandy Re	leyed Matrix (S4)		Urntwo Surface Piedmont Flor						drophytic vegetation a egy must be present.
	edox (55) Matrix (56)		— Pleamont Flor — Red Parent M						d or problematic.
	ayer (if observed):			iatena fire	C 1) fixing rea	. 127, 147	1	iess uisiurue	o or promornance
	ayer (ii observed)								
Type:			_						V
Depth (inc	nes):		-				Hydric Soil	Present?	Yes No
əmarks•									

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Applicant/Owner: Alexandr Power City/County: County County State: CY Sampling Date: 23 4x 1208 Applicant/Owner: Alexandr Power State: CY Sampling Point: N.C.C. Investigator(s): Mille Museum I, and Presen Sight Section, rownship, Range: 526, 714N, RSN Tandform (hillstope, terrace, etc.): d-g-r55 lead Local relief (concave, convex, none): Concave Slope (%): C-2 Subregion (LRR or MLRA): LR | N | 1at: 40.6443 Long: 31.0603 Deturn: N=0.46 Soil Map Unit Name: Briks shilly silt from 15-25/2 stores (BKV) NWI classification: PEM (not mare) 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 _ (If needed, explain any answers in Remarks.) Are Vegetation ______, Soil ______, or Hydrology _____ naturally problematic? SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? within historic dilet on sideslope; isolatel HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) ___ True Aquatic Plants (B14) __ Sparsely Vegetated Concave Surface (BB) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) __ Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) ____ Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) ___ Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) __ Crayfish Burrows (C8) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) Saturation Visible on Acrial Imagery (C9) ___ Other (Explain in Remarks) Stunted or Stressed Plants (D1) ___ Algai Mat or Crust (B4) ___ Iron Deposits (B5) ✓ Geomorphic Position (D2) ___ Inundation Visible on Aerial Imagery (B7) ___ Shallow Aquitard (D3) ___ Water-Stained Leaves (B9) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: Depth (inches): 0.25 Surface Water Present? Yes ____ No / Depth (inches):_ Water Table Present? Saturation Present? Wetland Hydrology Present? Yes ____ No__ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: surface water in pertian of method

Sampling	Point:	WL	(
----------	--------	----	---

VEGETATION (Four Strata) – Use scientifi	c names of plants.	Sampling Point: KAL C
	Absolute Dominant In-	dicator Dominance Test worksheet:
Tree Stratum (Plot size: 10 2	% Cover Species? 5	
1		That Are OBL, FACW, or FAC: (A)
2		10tal Number of Dominant /
3,		Species Across All Strata:f (B)
4		Percent of Dominant Species (01)
5		That Are OBL, FACW, or FAC: 700 (A/B)
6		Prevalence Index worksheet:
7		Total 96 Cover of: Multiply by:
509C of total cover	= fotal Cover 20% of total cover:	OBL species x 1 =
Sapting/Shrub Stratum (Plot size: 10 4		FACW species x 2 =
		FAC species x 3
Z		FACU species x 4 =
3.		UPI species x b =
4		Column Totals: (A) (B)
5		Prevalence Index = B/A =
6		Hydrophytic Vegetation Indicators:
7		A - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3 0 ¹
	= Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
n -	20% of total cover:	data in Remarks or on a separate shoet)
TIERO SERIORI (FROI SIZE	20 /	Problematic Hydrophytic Vegetation (Explain)
1. Argunda's signature		1400
2. Cardemine precistion		Indicators of hydric soil and wetland hydrology must
3. Character extents 4. Collem agencies	 	De present, unless disturbed of problematic.
5		Definitions of Four Vegetation Strate:
55		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.		more in diameter at breast height (DBH), regardless of height.
8		
9		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11		Herb – All herbaceous (non-woody) plants, regardless
	85 Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>4</u>	2.5 20% of total cover:	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: /5 *)		height.
1		
2		
3		
4		Hydrophylic
5	= 1otal Cover	Vegetation Present? Yes No
50%, of total cover	= Total Cover 20% of total cover:	
Remarks: (Include photo numbers here or on a separa		
+ Old sizes a bish do to size		
TOTAL SIZES BRINGER CON SIZE	et ustland	
	-	

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Profile Desc	ription: (Describe	to the dept			dicator	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	 .	Color (moist)	u Features %	Type ¹	l oc'	Texture	Remarks
0-12+	2.5Y 5//	60	NYP 4/6	- - وړي		h	clo	in history lives in litel
	2.37 3//	- 00	7071 7/16				1110	the might be account with a
								···
							—	
¹Type: C-Co	oncentration, D=Der	letion, RM=	Reduced Matrix, M:	S=Masked S	Sand Gr	ains.	Location: Pi	L=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indica	tors for Problematic Hydric Soils ² :
Histosol	(A1)		Dark Surface					cm Muck (A30) (MLRA 147)
_	ipedon (A2)		Polyvalue Be				148) C	past Prairie Redox (A16)
Black His			Thin Dark Su			47, 148)		(ML RA 147, 148)
	n Sulfide (A4)		Loamy Gleyo Depleted Ma		2)		. "	iedmont Floodplain Soils (F19) (MLRA 136, 147)
	Layers (A5) ck (A10) (LRR N)		Redox Dark		a		V-	ery Shallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da					ther (Explain in Remarks)
	rk Surface (A12)		Redox Depre					
Sandy M	lucky Mineral (S1) (LRR N,	Iron-Mangan	ese Masses	s (F12) (LRR N,		
	147, 148)		MLRA 13					
	leyed Matrix (S4)		Umbric Surfa					icalors of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					tland hydrology must be present, less disturbed or problematic.
	Matrix (S6) ayer (if observed)		Red Parent?	vateriai (r.z	I) (MLK	A 121, 141	j uni	ess distuided of problematic.
	ayar (ii ouserveu)	•						
Type:			_				Hydric Soil	Present? Yes No
Depth (inc	nesy:			_			nyunc aun	FIRSHIL: IGS - NO
Remarks:								
1:00	sien Mich	···silvedil	in [430]s	a y				
			,	201 2167	2.04/			

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Project/Site: Correll County: Carrell County: Carrell County: Sampling Date: 23 Apr. 1 2013
Applicant/Owner: Advanced Fount Investigator(s) mile M-ssemeli and floster Smith Section, Township, Range: 528, 714N RS-Landform (hillslope, terrace, etc.): depression / Local relief (concave, convex, none): everywee Subregion (LRR or MLRA): LPR Ny Lat: 44.6349 Long: -71.064 Soil Map Unit Name: Culler Kn 5,14 loam, 3-8/2 stuping (CuB) NWI classification: FEM (not import) Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No_____ ((f no, explain in Romarks.) Are "Normal Circumstances" present? Yes Are Vegetation _____, Soit _____, or Hydrology _____ significantly disturbed? 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? is the Sampled Area Hydric Soil Present? Wetland Hydrology Present? Remarks: Instabil deposition in historic direction like on sidestone HYDROLOGY Secondary Indicators (minimum of two required) Wetland Hydrology Indicators: Surface Soil Cracks (R6) Primary Indicators (minimum of one is required; check all that apply) Sparsely Vegetated Concave Surface (B8) ___ True Aquatic Plants (B14) Surface Water (A1) ___ Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) High Water Table (A2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Moss Trim Lines (B16) Saturation (A3) Presence of Reduced Iron (C4) . __ Dry-Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Sedurient Deposits (B2) ___ Thm Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) __ Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) Iron Deposits (B5) frundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) ✓ Water-Stained Leaves (B9) ___ Microtopographic Relief (D4) FAC-Neutral Test (D5) _ Aquatic Fauna (B13) Field Observations: ___ Depth (inches): Surface Water Present? Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes _____ (includes capitlary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

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1	FC	ET	ATION	I /Ersur	Cirata)	Use scientifi	с датес	of plants

GETATION (Four Strata) – Use scientifi	ic names of pla	nts.	Samplin	ng Point: 🏎 🛭 📗	
ee Stratum (Hot size: 10 €)		minant Indicator ecies? Status	Dominance Test workships Number of Dominant Spe	cies /	
 -			That Are OSL, FACW, or	FAC: (/	A)
			Total Number of Dominar Species Across All Strata		(B)
			Percent of Dominant Sper That Are OBL, FACW, or		(A/B)
	_ _		Prevalence Index works	heet:	_
	= To	tal Cover	Fotal % Cover of:		
50% of total cover:	20% of tota	cover:	· —	x 1 =	
ling/Shrub Stratum (Plot size:/a`)			FACW species		
- -			FAC species		
			FACU species	x 4	
			UPL species	x 5 =	
			Column Totals:	(A)	(B)
			Prevalence Index =	H/A =	
			Hydrophytic Vegetation	Indicators:	_
			1 - Rapid Test for Hy	drophytic Vegetation	
			2 - Dominance Test is	s >50%	
			3 - Prevalence Index		
		tal Cover	4 - Morphological Ad	aptations ¹ (Provide suppor	artine
_50% of total cover:	20% of tota	cover:	ı —	r on a separate sheet)	
b Stratum (Plot size: 5				vic Vegetation (Explain)	
Asordin Signatur	<u></u>	V Page		Jul regulation (Explain)	
	<u></u>	Three	Undicators of budge and a	ind wetland hydrology mu:	ıcı
Cardening parables	<u> </u>	FAC.	be present, unless disturb		34
Iners of Coses		FA(~	Definitions of Four Vege	•	_
• •					
			Tree – Woody plants, exc more in diameter at breas height.	luding viries, 3 in. (7.5 cm t height (OBH), regardless	n) or is of
 -			-		
			Sapting/Shrub - Woody	plants, excluding vines, le or than or equal to 3.28 ft	99 \$
			m) tall.	s than or equal to 5.20 K	U
			Herb – All herbaceous (ne	on-woody) plants, regardle	less
	53 = 10		of size, and woody plants	less than 3.28 ft tail.	
50% of total cover:	20% of tota	I соvег:	Woody vine - All woody	vines greater than 3.28 ft	jų.
ody Vine Stratum (Plot size: 10			height.		
-					
			Hydrophytic		
				/	
		Kal Cover	Present? Yes		
			1		
50% of total cover:	20% of lota	l cover:			

Sampling Point: La 0 SOIL

	Matrix		Redo	x Feature	5		_	
(inches)	Calar (maist)	_%_						Remarks
O-12 4	2.54 5//	30	54R 5/6	20	C	r'n	sictlo	
								· ·
								· ·
								-
								_
¹ Type: C=C	oncentration, D=Dept	letion, RM=	Reduced Matrix, M	S=Masked	Sand Gr	ains.	'Location: I	PL-Pore Lining, M-Matrix.
Hydric Soll	Indicators:						Indie	cators for Problematic Hydric Soil:
Histosol	(A1)		Dank Surface	e (S7)				2 cm Muck (A10) (MI RA 147)
— Histor E	pipodan (A2)		Polyvalue Be		en (CO) M	II DA 141		Coast Prame Redox (A16)
11131L E	pipudun (A2)		Thin Dark Si				. 1407	(MLRA 147, 148)
Black Hi						47, 148)		
	en Sulfide (A4)		Loamy Gley		F2)		_	Predmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark					Very Shallow Dark Suiface (1F12)
Deplete	d Below Dark Surface	e (A11)	Depleted Da	rk Surface	(F7)		_	Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	essions (Fi	8]			
	ducky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.		
	A 147, 148)		MLRA 13		(, (
	Gleyed Matrix (S4)		Umbric Surfa		M DA 17	E 1321	310	dicators of hydrophytic vegetation ar
30109 0	neyeu waun (34)							retland hydrology must be present.
	redox (SS)		Predmont Fig.					
Sandy F			Red Parent I	Material (F	21) (MLR	A 127, 14	<i>t</i> } u	nless disturbed or problematic.
Stripped	Matrix (S6)							
	Matrix (S6) L aye r (if observed):							
Stripped Restrictive	Matrix (S6)		_					
Stripped Restrictive Type:	Matrix (S6) Leyer (if observed):		_				Hydric So	il Present7 Yes No
Stripped Restrictive Type: Depth (in	Matrix (S6)						Hy o ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			483.			Hy d ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed):			19303.			Hy d ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19303.			Hy o ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19303,			Hy d ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19303,			H yơ ic So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19303.			H yd ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19303,			Hy d ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19305			Hy d ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19355.			Hy o ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19305.			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19355,			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			103:5			Hy d ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			103/5,			Hy d ric So	il Present? Yes No
Stripped Restrictive Type: Depth (in	Matrix (S6) Leyer (if observed): ches):			19305.			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19303			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in	Matrix (S6) Leyer (if observed): ches):			19355.			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			103/5			Hydric So.	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19305			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			10303			Hydric So.	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19305.			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			193:53.			Hydric So.	il Present? Yes No
Stripped Restrictive Type: Depth (in	Matrix (S6) Leyer (if observed): ches):			19305.			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in	Matrix (S6) Leyer (if observed): ches):			19355.			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19305.			Hydric So.	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			19305.			Hydric So	il Present? Yes No
Stripped Restrictive Type: Depth (in Remarks:	Matrix (S6) Leyer (if observed): ches):			193:3.			Hydric So.	il Present? Yes No

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WETLAND DETERMI	NATION DATA FORM	- Eastern Mountai	ins and Piedm	ont Region
Projectione: Carrell County Eners	City/(County: County Co.		Sampling Date: 23 Apr. 1 2013
Applicant/Owner: Advance Pre-/	,	•	State: OH	Sampling Point: WH C/B U
Investigator(s): Mike Museumli and	Krsten Smith Spail	on, Township, Rango:	528 714N	
Landform (hillslope, terrace, etc.): hillslap.	LocaFrei	ef (concave, convex, no	one): <u>Compay</u>	Slope (%): 516
Subregion (LRR or MLRA): LAR W				Deturn: 140 56
Soil Map Unit Name: Br. x4 34-1, 37				cation: UP4
Are climatic / hydrologic conditions on the site t	,	<i>y</i> .	(If no, explain in F	
Are Vegetation, Soil, or Hydrolo				present? Yes No
Are Vegetation Soil or Hydrolo			explain any answ	
SUMMARY OF FINDINGS – Attach	**		. ,	
SUMMART OF FINDINGS - AUGCII	site map showing san	hang ponk locati	ons, transcet	
Hydric Soil Present? Yes	No /	Is the Sampled Area within a Wetland?	Yes	_ No
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indic	ators (minimum of (wo required)
Primary Indicators (minimum of one is required	d: check all that apply)		-	Cracks (B6)
Surface Water (A1)	True Aquatic Plants ((B14)	Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Pa	
Saturation (A3)	Oxidized Rhizospher	es on Living Roots (C3)	Moss Trim L	ines (B16)
Water Marks (B1)	Presence of Reducer	liron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Bu	Tows (C8)
Drift Deposits (H3)	Thin Muck Surface (0	[7]	Saturation V	isible on Acrial Imagery (C9)
, Algal Mat or Crust (B4)	Other (Explain in Ren	narks)	Stunted or S	itressed Plants (D1)
Iron Deposits (B5)			Geomorphic	Position (D2)
Inundation Visible on Aerial Imagery (B7)			Shallow Aqu	itard (D3)
Water-Stamed Leaves (H9)			Microtopogr	aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutra	Tesl (D5)
Field Observations:	/			
Surface Water Present? Yes No	Depth (inches):			
Water Table Present? Yes No				_
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland I	Hydrology Prese	nt7 Yes No
Describe Recorded Data (stream gauge, moni	toring well, aerial photos, pre	vious inspections), if ava	aitable:	
Remarks:				

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: Unt clour

	10,1100 01	promo.		Sampling Foliki	
Tree Stratum (Plot size: 35		Dominant		Dominance Test worksheet:	
TIER CHIOCOLES	% Cover	Species?	Status	Number of Dominant Species	
1. Acur mechanim	. 5		FIN	That Are OBL, FACW, or FAC:	(A)
					.,
				Total Number of Dominant	
3				Species Across All Strata:	(B)
4					
				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC:	(A/H)
6					ę,
				Prevalence Index worksheet:	
7					
	5"	= Total Cov	ar	Total % Cover of: Multiply by:	
50% of total cover:	5 700 -	- 1000 000	J	OBL species x 1	
	20% U	total cover:			
Sapling/Shrub Stratum (Plot size: /)				FACW species x 2 =	
1. Rose multiflare	2 4		FALV	FAC species x 3 =	
			140		
2				FACU species x 4	
3				UPI species x 5 =	
4				Column Totals: (A)	(D)
5					
				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	
7				1	
				1 - Rapid Test for Hydrophytic Vegetation	
8				? - Dominance Test is >50%	
9.					
	2 = 7	= Total Cove		3 - Prevalence Index is £3.01	
50% of total cover: 12.5		= Total Cove	er _e a	4 - Morphological Adaptations1 (Provide supp-	ortina
\$0% of total cover: 12.5	20% of	total cover:		1	
Herb Stratum (Plot size:)				data in Remarks or on a separate sheet)	
		,		Problomatic Hydrophytic Vegetation (Explain	ù
1. James 99 *				_ , , , , , ,	•
2. Salitar confensis	3.5		FAC		
a ob t				Indicators of hydric soil and welland hydrology ma	ust
3. Climpedian volgers			VK	be present, unless disturbed or problematic.	
4. Burbarry relancia	3		Facu		
· ·			12.1	Definitions of Four Vegetation Strate:	
5				<u> </u>	
6				Tree – Woody plants, excluding vines, 3 in. (7 6 cr more in diameter at breast height (DBH), regardles	m) or
				more in diameter at breast height (DBH), regardle:	ss of
7				height.	
8					
				Sapling/Shrub – Woody plants, excluding vines, I than 3 in. DBH and greater than or equal to 3.28 ft	less
9				than 3 in. DBH and greater than or equal to 3.28 ft	t (1
10				m) tall.	
11					
"'- <u></u>				Herb - All herbaceous (non-woody) plants, regard	iless
	\mathcal{M}_{-}	- Total Cove	er .	of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 39	20% of	total cover:	15.6		
O a		10101 00401.	7.7.0	Woody vine - All woody vines greater than 3.28 ft	t in
Woody Vine Stratum (Plot size: 30)				height.	
1					
2					
3				1	
4				Hydrophytic	
5				Manufatian	
		Tetal Com		Present? Yes No No	
		= Total Cove	r	1	
50% of total cover:	20% of	total cover:_		!	
Remarks: (include photo numbers here or on a separato s	theet.)				
* - unident fiel somes most included in	1.1	1			
	w., Kih,	17			

SOIL Sampling Point: wet C/P up

	Matrix		Redox	x Features			_		
iches)	Calor (maist)		Color (moist)	%	Type	Loc'	Texture	Remarks	
)- 12 s	2.57 5/3	10)		_	_	_	5/0		
								_ -	
					-				
	ncentration, D=Dept	elian, RM=Re	duced Mairix, MS	i=Masked	Sand Gra	ins.		Pt =Pore Lining, M=Matrix.	 .
dric Soil Ir	ndicators:						inc	dicators for Problematic Hydric	Soils':
Histosol ((A1)		Dark Surface	(S7)			_	2 cm Muck (A10) (MLRA 147)	
Histic Epi	ipedon (A2)		Polyvalue Bel	low Surfac	e (S8) (M	LRA 147,	148)	Coast Prairie Redox (A15)	
Black His	tic (A3)		Thin Dark Sur			47, 148)		(MLRA 147, 148)	
	Sulfide (A4)		Loamy Gleyer		2)		_	Piedmont Ftoodplain Soils (F19)	
Stratified	Layers (A5)		Depleted Mate					(MLRA 136, 147)	
2 cm Muc	k (A10) (LRR N)		Redox Dark S	iurface (FE	i)		_	Very Shallow Dark Surface (1F1	2)
Depleted	Below Dark Surface		Depleted Dari				_	Other (Explain in Remarks)	
	rk Surface (A12)		Redox Depre:	ssions (FB))				
Sandy Ma	ucky Mineral (S1) (Li	RRN,	fron Mangane	se Masse	s (F12) (I	RR N,			
	147, 148)		MLRA 136	i }					
Sandy Gl	eyed Matrix (S4)		Umbric Surfac	ce (F13) (N	ALRA 13	6, 122)	3	Indicators of hydrophytic vegetation	n and
Sandy Re	edox (S5)		Piedmont Flor	odplain So	ils (F19)	(MLRA 148	1)	wetland hydrology must be prese	ni,
Stripped I	Matrix (S6)		Red Parent M	laterial (F2	1) (MLR	4 127, 147)		unless disturbed or problematic.	
strictive La	ayer (if observed):								
Турв:									
Depth (incl	hac):		_				Liudric C	ioil Present? Yos No	مسه
			-				njunc 3	OIL LIBRAICS 102 NC	
narks:									

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Chronity Cherry City/County: Cherry	Compling Date: 72 April 30
Applicant/Owner: Advanced Proces	State: CT Sampling Point: WLE
Investigator(s): Mike Myssery I and froster Smith Section, Township, Range:	528 714N KOW
Landform (hillstope, terrace, etc.): 42774 Local relief (concave, convex.)	
Subregion (LRR or MLRA): 124 M Lat: 40.6030 Long:	
	NWI classification: fem Cout mayel
, , , , , , , , , , , , , , , , , , , ,	(If no, explain in Remarks.)
Are climatic? hydrologic conditions on the site typical for this time or year? Fes No	mal Circuinstances" present? Yes No
	d, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point local	tions, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Hydric Soil Present? Yes No Is the Sampled Are within a Watland? Wetland Hydrology Present? Hemarks:	
abilties infamilial strang	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concavo Surface (B8)
High Water Lable (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
✓ Saturation (A3) ✓ Oxidized Rhizospheres on Living Roots (C3	3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced from (C4)	Dry-Season Water Table (C2)
Sediment Deposits (H2) Recent Iron Raduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2) Shallow Aquitand (D3)
Inundation Visible on Aerial Imagery (87) Water-Stained Leaves (89)	Microtopographic Relief (D4)
Aquatic Fauna (813)	FAC-Neutral Test (U5)
Surface Water Present? Yes No Depth (inches): 0.711	
Water Table Present? Yes No Depth (inches):	_
Saturation Present? Yes No Depth (inches): 4 Wetland	d Hydrology Present? Yes No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a	ivaliacie:
Remarks:	
see her under the pertient of wetland	
	1

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	Absolute	Dominant In	dicator	Dominance Test worksheet:
ree Stratum (Plot size:))		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant
				Species Across All Strata:(B)
<u></u>				
				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

				Prevalence Index worksheet:
		- Total Cover		Total % Cover of: Multiply by:
50% of total cover:	70% of	total cover:	·	DBI species x1 =
pling/Shrub Stratum (Plot size: //y)				FACW species x 2 =
				FAC species x 3 =
· -				FACU species x 4 =
				UPL species x 5 =
-				Column Totals: (A) (B)
				Prevalence Index = B/A =
***				Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
<u></u>				3 - Prevalence Index is ≤3.01
50% of total cover:		= Total Cover		4 - Morphological Adaptations' (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
	43	1		Problematic Hydrophytic Vegetation1 (Explain)
Poster 50.77				
Importions copiesis			<u>≽ar</u> w	¹ Indicators of hydric soil and wetland hydrology must
Virtue particular			<u>081</u>	be present, unless disturbed or problematic.
Va becomelle radiat			FAC	Definitions of Four Vegetation Strata:
Curdamin partylerait-			DOL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
· · · · · · · · · · · · · · · · · · ·				height.
··-				Sapling/Shrub - Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
J				l ⁻
· _	Ga .			Herb - All herbaccous (non-woody) plants, regardless
50% of total cover: 3		Total Cover total cover:	3.6	of size, and woody plants less than 3.28 ft tall."
ondy Vine Stratum (Plot size: 33 3 1		IDIAI LOVEI	7. 4	Woody vine - All woody vines greater than 3.28 ft in
- (lot 30 c)				height
· · ·				
_				Hydrophytic
		= 1 plai Cover		Vegetation Present? Yes No
50% of total cover:		total cover:		
emarks: (Include photo numbers here or on a separate			_	
· plat sin abject the to sin of met	had			
aka-amelatifity gross so net mobility and included the	- w. Habre	4 : romline		hydrophydic
- differentiation weighted +	Still Har	1141	. ,	3 , , ,

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SOIL								5	Sampling Po	oint: سد ق
Profile Des	cription: (Describe t	o the dept	h needed to docur	ment the ir	ndicator	or confirm	the absence	of indicate	ors.)	
Depth	Matrix		Redo	x Features		. ,				
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type'	1.002	<u>Texture</u>		Remarks	
0.7	251 7/3	<u>90</u>	34R 5/6			<u> </u>	3.10			
200	754 4/1	85	54A 5/6	5_		21/m	5:10			
								-		
¹ Type: C~C	oncentration, D-Dept	etion, RM=:	Heduced Matrix, M	S=Masked	Sand Gra	ins.	2Location: PL	Pore Lini	ing, M⊬Matrix.	
	Indicators:					-			roblematic H	
Histosol	(A1)		Dark Surface	(S7)			2	om Muck (A10) (MLRA 1	147)
	pipedon (A2)		Polyvalue Be						e Redox (A16)	
	istic (A3)		Thin Dark Su			47, 148)		(MLRA 14		(F30)
	en Sulfide (A4) d Layers (A5)		☐ Depleted Ma		- 2]			(MLRA 13	oodplain Soils 86-1471	(r ia)
	uck (A10) (LRR N)		Redox Dark		51				v Dark Surface	e (TF12)
	d Helow Dark Surface	(A11)	Depleted Da						in in Remarks	
	ark Surface (A12)		Redox Depre							
	Mucky Mineral (ST) (LI	RR N.	Iron-Mangan		s (F12) (I	_RR N,				
	A 147, 148) Gleyed Matrix (S4)		MLRA 13		al DA 13	6 1221	3 notic	ators of b	ydrophytic ved	has neutrine
	Redox (S5)		Piedmont Fit						ilogy must be	
	Matrix (S6)		Red Parent N						ed or problem	
Restrictive	Layer (if observed):						Ì			
Type:			_						/	
Depih (in	ches):		_				Hydric Soit I	Present?	Yes	No
Remarks:										

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region State: OH Sampling Point: W4 £ UP ApplicanyOwner: Advantal Power Investigator(s): Milk Mussonali and Juston Smith Section, Township, Range: >>8, 719N RSW Landform (hillslope, terrace, etc.): 1, 1/5/6/1 Local relief (concave, convex, none): Conctv Stope (%): 1/7-10 % Subsection (LHR or MLRA): LFF V Lat: 40,6035 Long: 81,0441 Soil Map Unit Name: Backs shots sith lam, 15-25 7. stops (ORD) _____ NWI classification: _____ P と 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? is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) ___ True Aquatic Plants (B14) ___ Sparsely Vegetated Concave Surface (B8) Surface Water (A1) ___ Hydrogen Sulfide Odor (C1) ___ Drainage Patterns (B10) High Water Table (A2) Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Moss Trim Lines (H16) ___ Dry-Season Water Table (C2) Presence of Reduced Iron (C4) Water Marks (B1) ___ Sediment Deposits (H2) Recent Iron Reduction in Tilled Soils (C6) ___ Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Stunted or Stressed Plants (D1) ___ Aligal Mat or Crust (84) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (87) ___ Microtopographic Relief (D4) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: Surface Water Present? No _____ Depth (inches): Yes ____ No ____ Depth (inches):_ Water Table Present? Saturation Present? Depth (inches): Wetland Hydrology Present? Yes (includes capitlary fringe) Describe Recorded Data (stream gauge, montoring well, serial photos, previous inspections), if available: Remarks:

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: レルモック

	Abunlula	Dominant	Industria	Dominance Test worksheet:
Tree Stratum (Plot size: 32)		Species?		
TIEE SUBJUIT (FIOT SIZE:		Species:	<u>Jiotus</u>	Number of Dominant Species
1. Ulmvá rotan			FAC	That Are OBL, FACW, or FAC:(A)
2. Queen refran	25		FALU	
				Total Number of Dominant
3				Species Across All Strata:
4				
				Percent of Dominant Species That Are OHL, FACW, or FAC: 31.5% (A/B)
5				That Are OHL, FACW, or FAC:
6				
7.				Prevalence Index worksheet:
·-	*0			Total % Cover of: Multiply by:
		- Total Cov	er	1
50% of total cover: 25	20% of	total cover:	5	OBL species x 1 =
Sapting/Shrub Stratum (Ptot size: 75				FACW species x 2 =
aapingramus aratum (mot size: * *			_	·
1. Rose moltifle in	_2\3_		FACU	
2. Olmos cales	60		FAC	FACU species x 4
				UPL species x 5 =
3. Carya ox. ta			FACU	
4. Lynn garation			FACU	Column Totals: (A) (B)
5. Ashos occilentalis	_5_		-16	Prevalence Index = B/A =
6				
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				1
				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0°
-50% of total cover: 23.4 Herb Stratum (Plot size: 5)	45	- Total Cov	Cf .	
-50% of total cover: 23.4	20% 01	total cover:	9	4 Morphological Adaptations* (Provide supporting
2 30 % di total covol: _z		total cordi.		data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Alline polislata	w		FACU	Problematic Hydrophytic vegetation (Explain)
1.0. 110				
2. Rusa multilla.			FAR	¹ Indicators of hydric soil and welland hydrology must
3. 6 com Caroling	5-		FALL	be present, unless disturbed or problematic.
4. Clineselina relance				
4. Climage lives Malgaret			200	Definitions of Four Vegetation Strata:
5				,
6				Tree - Woody plants, excluding vines, 3 in. (7.5 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
				,
11				Herb - All herbaceous (non-woody) plants, regardless
	23	= Total Cov	er	of size, and woody plants less than 3.78 ft tall.
50% of total cover: 11.5	7/19/(total monore	4 6	
		roten cover:	7, 0	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 3?)		,		height.
1. Tesicologica calicans	5	<i>J</i>	FAC	h
·				
2				
3				
4				Hydrophytic
5				I Manuscriation d
=:	-5			Present? Yes No
		= Total Cov		140
50% of total cover: 2	<u>L</u> 20%-of	total cover:		
Remarks: (include photo numbers here or on a separate s	heat 1			1
Transactor (include priore mainburs note or on a separate s				

	cription: (Describe t	to the ashr				or continu	u tria absence oi i	ndicators.)
Depth inches)	Color (moist)	%	Color (moisi)	x Feature %	l vrue ¹	Loc2	Texture	Remarks
		100					5.10	
	_ 							
				_				
	oncentration, D-Depli Indicators:	etion, HM=	кесписеа маміх. М	S-Masked	Sand Gr	ains.		ore Lining, MaMatrix. s for Problematic Hydric Soils
Black Hi Hydroge Stratified 2 cm Mu Depleted Thick De Sandy N	oipedori (A2)	•	Dark Surface Pofyvalue Be Thin Dark St. Loamy Gleys Depleted Ma Redox Dark: Depleted Dark Redox Depre	elow Surfa irface (S9) ed Matrix (trix (F3) Surface (F rk Surface issions (F ese Mass	(MLRA 1 F2) 6) (F7) 8)	47, 148)	,1461) Coas (M Piedr (M Very	Muck (A10) (MLRA 147) L Prairie Redox (A16) LRA 147, 148) mont Floodplain Soils (F19) LRA 136, 147) Shallow Dark Surface (TF12) (Explain in Remarks)
Sandy Q Sandy R Stripped	Sleyed Maliix (S4) tedox (S5) I Matrix (S6)		Umbric Surfa Piedmont Flo Red Parent M	ice (F13) i iodplain S	oils (F19)	MLRA 14	18) wetlan	ors of hydrophytic vegetation and d hydrology must be present, disturbed or problematic.
	ayer (if observed):							
	_ -		_					
	ches):						Hydric Spil Pre	sent? YesNo

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Are "Normal Circumstances" present? Yes No No Are 'Normal Circumstances' present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Indicators: No Wetland Hydrology Indicators: Secondary Indicators In	Project/Site: Curr. If Conditions on the site typical for this time of yoar? Yes \(\sigma_{\text{No.}} \) No (If no. explain in Remerks.) Sampling Date: \(\frac{23}{3} \) April 13*3 Sampling Date: \(
Are Vogetation 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 Vagetation Present? Yes No Is the Sampled Area within a Wetland? Yes No	Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" prosent? Yes No
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophyse vegetation Present? Hydric Soil Present? Welland Hydrology Present? Welland Hydrology Indicators: Remarks: Wattand Hydrology Indicators: Secondary Indicators (Diffirmum of two required)	
Hydric Soil Present? Welland Hydrology Present? Welland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Within a Wetland? Westland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsety Vegetated Concave Surface (B8) High Water Table (A2) High Water Table (A2) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Water Marks (H1) Sediment Deposits (B2) Drit Deposits (B3) Thin Muck Surface (C7) Situated or Stressed Flants (D1) Inundation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (H9) Aquatic Fauna (B13) Field Observations: Surface Soil Cracks (B6) Sprasety Vegetated Concave Surface (B8) Urainage Patterns (B16) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Statustion Visible on Aerial Imagery (C9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves No Depth (Inches): Wetland Hydrology Present? Ves No Depth (Inches): Wetland Hydrology Present? Ves No Depth (Inches): Wetland Hydrology Present? Ves No Depth (Inches): Wetland Hydrology Present? Ves No Depth (Inches): Remarks:	
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) ✓ Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Most Trim Lines (B16) Water Marks (H1) Presence of Reduced fron (C4) Sediment Deposits (B2) Prix Secondary Indicators (minimum of one is required; check all that apply) Sparsety Vegetated Concave Surface (B8) Whigh Water Table (A2) Prix Indicators (B16) Prix Indicators (B16) Prix Indicators (B16) Prix Indicators (B16) Dry Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C7) Water Stained I seves (H9) Aquetic Faune (B13) Fact Neutral Test (D5) Fact Neutral Test (D5) Fact Neutral Test (D5) Remarks: Wetland Hydrology Present? Yes No Depth (inches): Inches Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inches): No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inc	Hydric Soil Present? Yes No within a Wetland? Yes No No Remarks:
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (H1) Presence of Reduced Iron (C4) Dry Season Water Table (C2) Crayfish Burrows (C8) Drit Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (H4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained I Deves (H9) Aquetic Faune (B1) Dry Season Water Table (C2) Crayfish Burrows (C8) Sturted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquiterd (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Factorial Present? Ves No Depth (inches): Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Dry Season Water Table (C2) Crayfish Burrows (C8) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquiterd (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Factorial Hydrology Present? Yes No Depth (inches): Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	distinctions of stream
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1)	HYDROLOGY
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) High Water Table (A2) Saturation (A3) Water Marks (H1) Presence of Reduced fron (C4) Dry Season Water Table (C2) Sediment Deposits (B2) Recent fron Reduction in Titled Soils (C6) Dry Season Water Table (C2) Crayfish Burrows (C8) Algal Mat or Crust (B4) Iron Deposits (B3) Chief (Explain in Remarks) John Corresponding (D3) Water Surface Water (D4) Water Surface (D7) Water Surface (D7) Saturation Visible on Aerial Imagery (C9) Shallow Aquiterd (D3) Microtopographic Relief (D4) Aquesic Faune (B13) Fac -Neutral Test (D5) Fac -Neutral Test (D5) Saturation Present? Water Lable Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Bernarks:	Watland Hydrology Indicators: Secondary Indicators (minimum of two required)
Surface Water (A1)	
High Water Table (A2) Hydrogen Sulfide Odor (C1)	
Saturation (A3) Saturation (A3) Water Marks (H1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained I eaves (H9) Aquatic Fauns (B13) Field Observations: Surface Water Present? Water Judge Present? Water Judge Present? Water Stained I eaves (H9) Depth (inches): Surface Water Present? Water Stained I eaves (H9) Depth (inches): Saturation Present? Wetland Hydrology Present? Wetland Hydrology Present? Yes No Depth (inches): Semarks: Bemarks: Bemarks: Bemarks: Mostrosop Review (B1) Wetland Hydrology Present? Yes No Depth (inches): Bemarks: Bemarks: Bemarks:	
Water Marks (#1)	
Sediment Deposits (B2) Recent fron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Fron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquiterd (D3) Water-Stained Leaves (H9) Microtopographic Relief (D4) Aquetic Faune (B13) FAC-Neutral Test (D5) FIeld Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Geomorphic Position (D2) Shallow Aquiterd (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)	
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Sturted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquiterd (D3) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Lattle Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): (includes capillary finge) Wetland Hydrology Present? Yes No Depth (inches): Bernarks:	
Algal Mat or Crust (84) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (85) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquiterd (D3) Water-Stained I eaves (H9) Microtopographic Relief (D4) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Surface Water lable Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Yes No	
Iron Deposits (B5) Geomorphic Position (D2)	
Inundation Visible on Aerial Imagery (07) Water-Stained Leaves (H9) Aquatic Raune (B13) FAC-Neutral Test (D5) FIEID Observations: Surface Water Present? Water Lable Present? Ves	
Water-Stained Leaves (H9) Aquestic Faune (B13) Field Observations: Surface Water Present? Water Present? Yes No Depth (inches): Suturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring wall, aerial photos, previous inspections), if available: Remarks:	
Field Observations: Surface Water Present? Yes No Depth (inches):	
Surface Water Present? Yes No Depth (inches): (5' Water Table Present? Yes No Depth (inches): (5' Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wet	
Water Lable Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches):	Surface Meters Person 2 Vor No Dunth (section) 5 15
Saturation Present? Yes No Depth (inches)* Wetland Hydrology Present? Yes No [includes capillary fringe] Describe Recorded Data (stream gauge, monitoring wall, aerial photos, previous inspections), if available: Remarks*	Surface Pages Present 1 to 100 Copin (more sy
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Venier results respective res 100 Deput (interes).
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Saturation Historical Yes Vio Depth (inches): wetland hydrology Present: Yes No Depth (inches):
Remarks. Surface under in public of publical	Describe Recorded Data (stream gauge, monitoring well, aerial photos, provious inspections), if available:
sucher under in public of problems	Remarks
	surface under in parties of without
	<u> </u>

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JEGETATION I	(Eour Strata) 🗕	Use scientific r	names of plants.

Sampling Point: W4 /

Tree Stratum (Plot size: 25 **)		Species?		Dominioned Tost Workshoet	
1. Her agrade	10		FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	<u> </u>
2 3				Fotal Number of Dominant Species Across All Strata:	٠ ٦ (B)
I,				Percent of Dominant Species	
j				That Are OBL. FACW, or FAC: _	257, (A/B)
i				l .	
				Prevalence Index worksheet:	hauti-hat-
		Fotal Cove		1 otal % Cover of:	
50% of total cover:	20% of 1	otal cover:_	<u>r </u>	OBL species x 1	
Sapling/Shrub Stratum (Plot size: 15)	_	,		FACW species x 7	
Rese malfille "			FACU	FAC species x 3	
<u>. </u>				FACU species x 4	
l				UPI species x 5	
				Column Totals: (A)	(B)
				Prevalence Index = H/A = _	
				Hydrophytic Vegetation Indicate	
				1 - Rapid Test for Hydrophytic	
l				2 - Dominance Test is >50%	9 - 10 - 10 - 1
l <u> </u>				3 - Prevalence Index is ≤3.01	
		Total Cove	٠,	4 - Morphological Adaptations	1 (Provide supporting
50% of total cover:	<u>5 </u>	otal cover:_		data in Remarks or on a se	
larb Stratum (Plot size: 5)				Problematic Hydrophytic Vege	•
· forme st. ++				Frodismant Trydrophrytic vege	RALIOTI (EXPIANT)
Lecrois eligioin		<u> </u>	FArw	¹ Indicators of hydric soil and wetlar	ad badanlagu must
Messelying viminery	/5		FIC	be present, unless disturbed or pro	blematic.
Impoling Captures's			FARW	Definitions of Four Vegetation S	
6 lockore heleracy			FACE	1	
3. Altimote potrologia	3		FARV	Tree – Woody plants, excluding vir more in diameter at breast height (nes, 3 in. (7.6 cm) or IDBH) regardless of
<u>- </u>				height.	,Daity, regulatess of
L					veluding vinor for r
L				than 3 in. DBH and greater than or	equal to 3.28 ft (1
o. _.				m) tall.	,
1				Herb - All herbaceous (non-wood)	y) plants, rogardiess
34	76	Total Cove	r 	of size, and woody plants less than	1 3.28 ft tall.
50% of total cover: <u>31</u>	<u>()</u> 20% of t	otal cover:_	75.7	Woody vine – All woody vines gre	ater than 3.28 ft in
Voody Vine Stralum (Plot size: 2 5)				height.	
·					
				Hydrophytic	
·				Vegetation Present? Yes	B1-
50% of total cover:		Total Cove	г	Hesentr res	NO
		atal cover:_		L	
emarks: (Include photo numbers here or on a separate					
4 - Plot sin chiesel her do sing of a	.dbJ				
Mr - withful goes not included in call	orement California				
The university of gross not included in each	r. latitus				

SOIL								Sampling Point:	1
Profile Desc	cription: (Describe I	to the dep	oth needed to docum	nent the	indicator	or confirm	the absence of	indicators.)	
Depth	Matrix		Redo	x Feature	5				
(inches)	Color (moist)	96	Color (moist)	96	Type	Loc'	Texture	Remarks	

	Matrix		Redo	x Feature:			T	B
(inches)	Color (moist)	96	Color (moist)			_Loc'		Remarks
0.10	2454 4/2	95	104R 4/6	_5_	<	_m	5.10	
10-12:	2.57 7/1	95	10414/6	_5		_~	5.6	
								
					_			
	oncentration, D=Dept	letion, RM=	Reduced Matrix, M3	S=Masked	Sand Gra	iiijs.		L=Pore Lining, M=Matrix.
lydric Soil I	Indicators:						Indic	ators for Problematic Hydric Soils
Histosol			Dark Surface					cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvafue He				148) (oast Prairie Redox (A16)
Black His			Thin Dark Su			47, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		-7)		F	Piedmont Floodplain Spils (F19)
	i Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ick (A10) (I fiR N)		Redox Dark :					ery Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A71)	Depleted Dar	rk Surface	(F7)		_ c	Other (Explain in Romarks)
	ark Surface (A12)		Redox Depre					
Sandy M	lucky Mineral (S1) (L	RR N.	Iron Mangan	ese Masse	s (F 12) (l	.RR N,		
MLRA	147, 148)		MLRA 13					
	Sleyed Matrix (S4)		Umbric Surfa	ice (F13) (MLRA 13	6, 122)	³ Ind	licators of hydrophytic vegetation and
Sandy R			Piedmont Fto					tland hydrology must be present,
	Matrix (S6)		Red Parent N					less disturbed or problematic.
				•				
Restrictive L	Layer (if observed):							
	Layer (if observed):							
Restrictive L Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc			-				Hydric Soil	Present? Yes No
Type:			 				Hydric Soil	Present? Yes No
Type: Depth (inc			_				Hydric Soil	Present? Yes / No
Type: Depth (inc			 				Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc			 				Hydric Soil	Present? Yes No
Type: Depth (inc			- -				Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No
Type: Depth (inc							Hydric Soil	Present? Yes No

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Applicant/Owner: Above 1 Sampling Point: w1 Investigator(s): m1k 1155 1251 1
Investigator(s): Prik P1-sse_rul Prish Pri
Landform (hillslope, terrace, etc.): Lillslept Local relief (concave, convex, none): Concave Stope (%): Local steller (concave, convex, none): Concave Stope (%): Local steller (concave, convex, none): Concave Stope (%): Local relief (concave, convex, none): Concave Stope S
Subregion (LRR or MLRA): LR V Lat: 49.6531 Long: 31.6659 Deturn: 140.501 Map Unit Name: 2.83 John S. 11 loss. 15.252 Steps. (6KO) NWI classification: LP Late 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. (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, Hydrophytic Vegetation Present? Yes No. Is the Sampled Area within a Wedland? Yes No. Wetland Hydrology Present? Yes No. Wetland Hydrology Present? Yes No. Secondary Indicators (minimum of two requirements) HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two requirements) Surface Soil Cracks (B6) Surface Water (A1) True Aqualic Plants (B14) Spersely Vegetated Concave Surface (Elligh Water 1able (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Soil Map Unit Name: \$2.k3
Are climate / hydrologic conditions on the site typical for this time of year? Yes
Are Vegetation
Are Vegetation
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, Hydrophytic Vegetation Present? Yes No
Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No
Hydric Sail Present? Wetland Hydrotogy Present? Wetland Hydrotogy Present? Wetland Hydrofogy Indicators: Wetland Hydrofogy Indicators: Wetland Hydrofogy Indicators: Secondary Indicators (minimum of two required: check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Prainage Patterns (B10)
Wetland Hydrofogy Indicators: Primary Indicators (minimum of two required: check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water 1able (A7) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of two required: check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Spersely Vegetated Concave Surface (E14) High Water Lable (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Spersely Vegetated Concave Surface (E High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
High Water Table (A2) Hydrogen Sulfide Odox (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss frim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Fable (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (H5) Geomorphic Position (D2) Inundation Visible on Aertal Imagery (B7) Shallow Aquitand (D3)
Inundation Visible on Aeral Imagery (87)
Aquatic Fauna (B13) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No Depth (inches):
Water Table Present? Yes No Depth (inches):
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No
(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Hemarks:
<u> </u>

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: w/ F-/

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 39		Species?	Status		
1. Accessiber	. Do	/	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
2. Carn cristin		-1/	FACU		. ,
				Total Number of Dominant	
3				Species Across All Strata:	(B)
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC:	(A/B)
6					(,-0,
7.				Prevalence Index worksheet:	
/·	2 5			1otal % Cover of: Multiply by:	
		= Total Cove	i	OBL species x1 =	
50% of total cover;	<u>5</u> 20% of	total cover:	,		
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =	
1. Rose on Hills	40	/	FALL	FAC species x 3 =	-
2				FACU species x 4 =	_
				UPI species x 5 =	
3					
4				Column Totals: (A)	[13]
5				Prevalence Index = B/A =	
6					-
7				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vagetation	
8				2 · Dominance Test is >50%	
9				3 - Prevalence Index is ≤3.01	
	40	- Total Cove	F .	4 - Morphological Adaptations1 (Provide supp	
< 50% of total cover: <u>3</u> <i>3</i>	20% of	total cover:_	<u> </u>		borung
Herb Stratum (Plot size: 5				data in Remarks or on a separate sheet)	
1. Allert polish &	10	/	SATU	Problematic Hydrophytic Vegetation¹ (Explain	n)
1. Tiller is provide					
2. Checken hoderator			FAIL	¹ Indicators of hydric soil and wetland hydrology л	ned
3. Aprilment proit to a			FACE	be present, unless disturbed or problematic.	1030
4 Importions reprosis).		Faw	Definitions of Four Vegetation Strata:	
5				Deminions of Foot vegetation strate:	
				Tree - Woody plants, excluding vines, 3 in. (7.6 c	m) or
6				more in diameter at breast height (DHH), regardle	ess of
7				height.	
8				Sapling/Shrub – Woody plants, excluding vines,	lace
9				than 3 in. DBH and greater than or equal to 3.28	U (1
10				m) tall.	
				.,	
11				Herb - All herbaceous (non-woody) plants, regard	diess
	<u></u>	- Total Cove		of size, and woody plants less than 3.28 ft tall	
50% of total cover: 10	20% o/	total cover:_		Woody vine - All woody vines greater than 3.28	n io
Woody Vine Stratum (Plot size:)				height.	
1				<u>'</u>	
2					
3					
4				Hydrophytic	
5				Vegetation	
	_	Total Cove	r	Present? Yes No	
50% of total cover:		total cover:	· i	i	
Remarks: (Include photo numbers here or on a separate st	ncet. j				
<u></u>					

nches)	Color (moist)	%	Color (moist)	ox Features % Te	rpe ¹ loc ²	lexture	Remarks
		100	troids (morse)	<u>-</u>	<u> </u>	s./o	
	10144/3	-/00				3.70	-
							·
e: C=Cc	ncentration, D-Depl	etion. RM-	Reduced Matrix, M	S=Masked Sa	nd Grains.	² Location: P	L-Pore Lining, M=Matrix.
ric Sail I	ndicators:				-	Indica	ators for Problematic Hydric Soil
Histosol			Dark Surfac	e (S7)		2	cm Muck (A10) (MLRA 147)
	ipedon (A2)				58) (MLRA 147,		oast Prairie Redox (A16)
Black His				urface (S9) (M			(MLRA 147, 148)
	n Sulfide (A4)			ed Matrix (F2)	,,	Р	iedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma				(MLRA 136, 147)
	ck (A10) (LRR N)			Surface (F6)		ν	ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)		rk Surface (F7	1		ther (Explain in Remarks)
	rk Surface (A12)		Redox Depr		•	_	
	lucky Mineral (S1) (L	RR N.		esa Masses (l	12) (LRB N.		
	147, 148)		MLRA 13		, ,,		
	leyed Matrix (S4)			, nce (F13) (MLI	RA 136, 1221	³ Ind	icators of hydrophytic vegetation a
	edox (S5)				(F19) (MLRA 14		tland hydrology must be present,
	Matrix (S6)				(MLRA 127, 14		less disturbed or problematic.
	ayer (if observed):			matanar (21)		-	
	ajor (ii ooso: vea):						
Гурв:			_				Present? Yes No '
Depth (inc	:hes):	_	_			Hydric Soil	Present? Yes No
larks:							

WETLAND DETERMINATION DATA F	ORM – Easi	ern Mountains	and Piedmont Region
weeth found fairs	City/County	6 -11 6 4	Complian Dat

Projecusive: Correll looks forming	City/County: (sees) (see) Sampling Date: 19 April 301
Applicant/Owner: Alvanil Perer	State: C# Sampling Point: Lak 6-
Investigator(s): mike Mossing and Coffee Vilens	Section Township Range: 521, 719 N RSW
	Local relief (concave, convex, none): Conserve Slope (%): 3 - 5
	653 Long: -37.66299 Datum: MAO 33
	ms 1:15% shorts (Wm() NWI classification: PEm (not maged)
Are climatic I hydrologic conditions on the site typical for this time	e of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Suil, or Hydrology signific	cantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain any answers in Remarks.)
	wing sampling point locations, transects, important features, etc.
Hydrophylic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
Remarks:	<u> </u>
soop from hillstope leading to steem 6	
a character and a short of the short of	
l	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	
Surface Water (A1) True Aqu	atic Plants (B14)Spaisely Vegetated Concave Surface (D8)
, High Water Table (A2) Hydrogen	Sulfide Odor (C1) Drainage Patterns (B10)
✓ Saturation (A3) Oxidized	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence	of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent In	on Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muc	k Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Ex	cplain in Remarks) Sturded or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (67)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
	nches):
	nches):
Saturation Present? Yes No Depth (iii	iches): Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial	photos, previous inspections), if available:
Remarks:	·
TO T	

EGETATION (Eour Strata) = Hse	scientific	names of	finlants
COLIMINATION	e vai seata	, – 036	30101111110	HOIHUS V	pionts.

Sampling Point:	le	Ĺ	4
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SOIL

The State of State of the State		iominant indicator	Dominance rescworksneed:	
Tree Stratum (Plot size: 33]	% Cover 5	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:	A)
2			Fotal Number of Dominant	B)
4			Percent of Dominant Species 100*	
5				A/B)
6				
7			Prevalence Index worksheet:	
		Fotal Cover	Total % Cover of: Multiply by:	
50% of total cover:			OBL species x1	
Sapling/Shrub Stratum (Plot size: 75)			FACW species x 2 =	
1			FAC species x 3 =	
2			FACU species x 4	
3			UPI species x 5 =	
			Column Totals: (A)	ſΗY
4			Coldina recess.	(0)
5			Prevalence Index = 8/A =	
6			Hydrophytic Vegetation Indicators:	
7				
8			2 - Dominance Test is >50%	
9			3 - Prevalence Index is ≤3.01	
	= 1	Fotal Cover	4 - Morphological Adaptations¹ (Provide suppor	dina
50% of total cover:	20% of to	tal cover:	data in Remarks or on a separate sheet)	ining
Herb Stratum (Plot size:)		,	The state of the s	
1. Porrumasy. 4	40		Problematic Hydrophytic Vegetation1 (Explain)	
2. Core selventa	/5	V 001		
3. Impetions carrentis		FAIL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	st
		Eggen		
5. Cargo lucida		793	Definitions of Four Vegetation Strata:	
6. Charles sicilis		- FAS	Tree – Woody plants, excluding vines, 3 in, (7.6 cm more in diameter at breast height (DBH), regardless	1) or
			more in diameter at breast height (DBH), regardless	s of
7. Bidens 30.	: -		height.	
1. Car canadas		FAW	Sapling/Shrub - Woody plants, excluding vines, le	55
9. Chehran Helmen		FACU	than 3 in. DBH and greater than or equal to 3.28 ft	(1
10			m) tall.	
11,	31	Total Cover	Herb – All herheceous (non-woody) plants, regardid of size, and woody plants less than 3,28 ft tall.	855
50% of total cover: 43		al cover: 16.2	1	
Woody Vine Stratum (Plot size: 35)			Woody vine – All woody vines greater than 3.28 ft height.	in
2				
3				
4			Hydrophytic	
5			Vegelation	
		otal Cover	Present? Yes No	
50% of total cover:	20% of tot	al cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)		·	
He undated goes and included in w	4.1.4			
and the property of the last t	1 2 2 4 1 1			

Sampling Point: _wt_ t

(inches)	Matrix		Redo	x Features	· ,	. ,	- .			
menea	Color (maist)	_%_	Color (moist)			Loc	Textur		Remarks	
0-11+	2.54 4/2	90	3.3424/6	_10		_m	5.10			
Type: C=Co	ncentration, D-Dept	etion, RM-	Reduced Matrix, MS	5- Masked	Sand Gra	sins, ²l			ning, M=Maurix.	
Hydric Soil II	ndicators:								Problematic Hydri	
Histosof ((A1)		Dark Surface	(S7)					(A10) (MLRA 147)	
Histic Epi	ipedon (A2)		Polyvalue Be				18) _		ie Redox (A16)	
Black His			Thiri Dark Su			47, 148)		(MLRA 1		
	i Sulfide (A4)		Eoamy Gleys		F2)		_		Toodplain Soils (F1	9)
	Layers (A5)		Depleted Ma						36, 147)	
	ck (A10) (LRR N)		Redox Dark				_		w Dark Surface (T	F 1 2)
	Helow Dark Surface	(A11)	Depleted Da				_	_ Other (Expl	lain in Remarks)	
	rk Surface (A12)		Redox Depre							
	ucky Mineral (51) (L	RR N,	Iron-Mangan		es (F17) (l	RR N,				
	147, 148)		MLRA 13							
	leyed Matrix (S4)		Umbne Surfa						hydrophytic vegeta	
	edox (S5) Matrix (S6)		Predinont Flo Hed Parent N						ology must be pres bed or problematic	
	ayer (if observed):		Reu r-allelium	vieites isi (c.	e i j (Micro	127, 1477		diliess discu	Ded di protesmatic	-
	ayer (ii observed).									
1ype:			_						/ .	_
Depth (inc	hes):					[]	Hydric	Soil Present?	Yes I	l o
Remarks:										
terial dies.										
teria sa										
Norman As										
normana.										
Terrior 43										
verilares.										
voriging.										
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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Project/Site: Carrell County England Sampling Date: 24 4.1 1013 Applicant/Owner: Aleman Pener State: EH Sampling Point: W1 6 - 7 Investigator(s): Milks Messandland Che Vilens Section, Township, Range: 526, 714N, AS-Landform (hillslope, terrace, etc.): h:115/ey Local relief (concave, convex, none): Cynery Stope (%): 4-7 Subregion (LRR or MIRA): LFA M Lat: 4. 1644 Long: 31.0627 Datum: MAD 31 Soil Map Unit Name: Washington Contact sift Irong 15-25# stops NWI classification: UPL 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 _____ significently 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? is the Sampled Area Hydric Soil Present? Yes _____ No ____ within a Wetland? Wetland Hydrology Present? Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) ___ Sparsely Vegetated Concave Surface (68) ___ True Aquatic Plants (B14) Surface Water (A1) ___ Drainage Patterns (B10) High Water Table (A2) Hydrogen Sulfide Odor (C1) __ Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Moss Trim Lines (B16) Presence of Reduced Iron (C4) __ Dry-Season Water Table (C2) Water Marks (B1) ... Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) ___ Crayfish Burrows (C8) ___ Thin Muck Surface (C7) ___ Saturation Visible on Aerial Imagery (C9) __ Drift Deposits (83) ___ Other (Explain in Remarks) ___ Algal Mat or Crust (84) Stunted or Stressed Plants (D1) Geomorphic Position (D2) __ Iron Deposits (B5) __ Inundation Visible on Aerial Imagery (B1) Shaflow Aquitard (D3) Water-Stained Leaves (89) ___ Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neulral Test (D5) Field Observations: Yes No Depth (inches):_ Yes No Depth (inches):_ Depth (inches):_ Depth (inches):_ Surface Water Present? Water Table Present? Saturation Present? Wetland Hydrology Present? Yes _____ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Tree Stratum (Plot size:30^\)	Absolute % Cover	Dominant Species?		Dominance Test worksheet: Number of Dominant Species
	. 20		FAC	That Are OBL, FACW, or FAC:(A)
2. Arriver policem	_10_		FAR	Total Number of Dominant 5
				Total Number of Dominant Species Across All Strate: (H)
4				
5			-	Percent of Dominant Species 1hat Are OBL, FACW, or FAC: (A/B)
6				Prevalence index worksheet:
	30	■ Total Cov		Total % Cover of: Multiply by:
50% of total cover:	20% of	total cover:	<u> </u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: /y)				FACW species x 2 =
1. Rear mothelle	30	V	FARU	FAC species x 3 =
2. Polos excitatalis	-5		-92	FACU species x 4 =
3. Sunfrey sign ver completel's	-5		PHIW	UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				- Dominance Test is >50%
v	чэ	= Total Cov		3 - Prevalence Index is ≤3.01
50% of total cover: 20	20% of	total cover:	" <i>3</i>	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5)	_			data in Remarks or on a separate sheet)
1. Alliana potentiale	lo	/	FACU	Problematic Hydrophytic Vegetation1 (Explain)
2. Jestions 40. +	15	$\overline{}$		
3. Charles relegion			F4 c	Indicators of hydric soil and wetland hydrology must
4. Chehan holecus		$\overline{}$	FACE	be present, unless disturbed or problematic.
5. Keen Canadagis		<u> </u>	FAIL	Definitions of Four Vegetation Strata:
5. Galliam apprelies			FAC	Tree Woody plants, excluding vines, 3 in. (7.5 cm) or
7. Viela gerrin			FAC	more in diameter at broast height (DBH), regardless of
-				height.
B				Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tell.
10				ing can:
11,	4.7			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover:2\f	200 0	= Total Cov	er 1/2	of size, and woody plants less than 3.28 ft talf.
	20%, 01	total cover:	10	Woody vine - All woody vines greater than 3.28 ft in
717-71 VIII Opporati (I Not Sizu.				height.
1				
2				
3				
4				Hydrophytic
5				Vagetation Present? Yes No
50% of total cover:		= Total Cov	er	Present? Yes No V
		total cover:		
Remarks: (Include photo numbers here or on a separate s				
, , ., 211,				

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DIL	Sampling Point:	wl	٤.

nches)	Matrix Color (moist)		Color (maist)	K Features %	Type ¹	Loc2	Textur	c	Remarks	
Ω•15+ -——	2.54 4/2	100					5:10		T NOTE IN THE	
,- <u>1</u> , +	2171 175	_,,,,,,					3.70			
								_		
ne: C=C	oncentration, D-Dept	etion RM-R	educed Matrix, MS	-Mackad S	and Gra	ine	7Location	r Drug I	ning, M=Matrix,	
	ndicators:	C. C	Soutou Istuilla, Ist	-11103560 0	and Gin				Problematic Hy	rdric Soils ³ -
Histosol			Dark Surface	re n					(A10) (MI RA 1	
	ipedon (AZ)		Polyvalue Bel		en du	DA 147	148		rie Redox (A15)	477
	stic (A3)		Thin Dark Su						147, 148)	
	n Sulfide (A4)		Loamy Gleye			17, 140)			-toodptain Soils	(L 10)
	Layers (A5)		Depleted Mat		,		_		135, 147)	(r i a)
	ck (A10) (LRR N)		Redox Dark S						ow Dark Surface	(11-12)
	Below Dark Surface	(A11)	Depleted Dar		71		_		lain in Remarks)	
	rk Surface (A12)		Redox Depre		.,		_			'
	lucky Mineral (S1) (L	RR N.	Iron-Mangano		(F12) (L	RR N.				
	147, 148)		MLRA 136		,, ,-					
	leved Matrix (S4)		Umbric Surfa		RA 136	. 122)		Indicators of	hydrophytic veg	etation and
Sandy R	edox (S5)		Piedmont Flor				n		rology must be p	
	Matrix (S6)		Red Parent M						rbed or problema	
strictive t	ayer (if observed):			, ,					•	
Туре:	, ,									
Depth (inc	thor).		-				(decoder a c	Soil Present	. v	No V
	1162/-		-	_			nyunc	Soil Present	? Yes	No
marks:										

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WETLAND DETERMINATION				
Project/Site: Carroll Gray Farry	City/C	ounty Gerick G	<i>t</i> .	Sampling Date: 24 4pml 2
Applicant/Owner: Alexand Parer			State: C/F	Sampling Point: W. H
westigator(s): Milk Mossagh and Calle	Village Section	on, Township, Range:	528 714W	Row
andform (hillslope, terrace, etc.):				
ubregion (LRR or MLRA): / RA A/ Lat:				
ioil Map Unit Name: Wrater lad Costante				
re climatic / hydrologic conditions on the site typical fo				
		es_x	(ir no, explain iii r	present? Yes No
re Vegetation Soit or Hydrology re Vegetation, Soit or Hydrology	significantly disturi	bed? Are Norma	1 Circumstances	present? Yes _* No
SUMMARY OF FINDINGS - Attach site m	nap showing sam	pling point location	ons, transects	s, important features, etc
Hydrophytic Vegetation Present? Yes	_ No	is the Sampled Area		,
Hydric Soil Present? Yes	_ No	within a Wetland?	Yes -	_ No
	No			
Remarks:				
abords strange				
YDROLOGY				
			Dane dan Jadia	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check				ators (minimum of two required)
		7443		
	True Aquatic Plants (i Hydrogen Suffide Odd		Sparsely ve Orainage Pa	getated Concave Surface (B8)
		s on Living Roots (C3)		
	Presence of Reduced	_		Water Table (C2)
	Recent Iron Reduction		Crayfish Bur	
	Thin Muck Surface (C			isible on Aerial Imagery (C9)
	Other (Explain in Ren			tressed Plants (D1)
Iron Deposits (85)	• •	•	Geomorphic	
Inundation Visible on Aerial Imagery (87)			Shallow Aqu	
Water-Stained Leaves (B9)				aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:		————·		
Surface Water Present? Yes No	Depth (inches):			
Water Table Present? Yes No	Depth (inches):			,
Saturation Present? Yes No		Wetland	lydrology Preser	nt? Yes No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, pre-	vious inspections), if ava	nlable:	
Remarks:				
-evillance of several pending				
•				

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VEGETATION	(Foor Strata) –	Use scientific	names of plants

Sampling Point:	v	Ł	//
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SOIL

2.2	Absolute Dominant Indicator	Dominance Test worksheet:
1ree Stratum (Plot size: 30)	% Cover Species? Status	Number of Dominant Species
	· ·	That Are OBL, FACW, or FAC:(A)
2		Total Number of Dominant
3		Species Across All Strata (H)
4	· — — — —	Percent of Dominant Species 100 f
5		That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
	= Total Cover	OBL species x1-
50% of total cover	20% or roral cover:	FACW species x ? =
1. Sambore, when were completely		FACU species x 4
		UPL species x 5 =
3		Column Totals: (A) (B)
4		Column Totals: (A) (O)
5		Prevalence index = B/A =
6		Hydrophytic Vagetation Indicators:
7		A - Rapid Test for Hydrophytic Vegetation
B		2 - Dominance Test is >50%
9		3 - Prevalence Index is \$3.0 ¹
	Total Cover	4 - Morphological Adaptations (Provide supporting
	20% of total cover:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)		Problematic Hydrophytic Vegetation ¹ (Explain)
1. fores 40. *		
2. Impetions superais		Indicators of hydric soil and wetland hydrology must
3. Chyptoin rivainies		be present, unless disturbed or problematic.
4. Contact ser.	_ 	Definitions of Four Vegetation Strata:
5. Levelle visibile		_
B. Crosien perfection		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		height.
8		Sapting/Shrub – Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11.		Herb – All herbaceous (non-woody) plants, regardless
	7 cl = Total Cover	of size, and woody plants less than 3.28 ft tall.
	20% of total cover: 15 3	110 of the All and
Woody Vine Stratum (Plot size: 33")		Woody vine - All woody vines greater than 3.28 ft in height.
1. —		
2		
3		
4		
5		Hydrophylic Vegetation
	- Total Cover	Vagetation Present? Yes No
50% of total cover:	20% of total cover:	
Remarks: [Include photo numbers here or on a separate		· · · · · · · · · · · · · · · · · · ·
	•	() ()
Revealment for serve his thinking in milked	rest of their demonstrates agricult	, to desphysic

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features % Calor (maist) % Type for Texture ¹Type: C=Concentration, <u>D=Depletion</u>, <u>RM=Reduced Matrix</u>, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: ___ 2 cm Muck (A10) (MLRA 147) __ Histosol (A1) __ Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Histic Epipedon (A2) Hlack Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplam Soils (F19) Loamy Gleyed Matrix (F7) __ Hydrogen Sulfide (A4) Depleted Matrix (F3) (MLRA 136, 147) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) ___ Depleted Dark Surface (F7) Other (Explain in Remarks) Depleted Below Dark Surface (A11) __ Thick Dark Surface (A12) Redox Depressions (FB) ___ Iron Manganese Masses (F12) (LRR N. Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MI RA 136) ___ Umbric Surface (F13) (MLRA 136, 122) _ Sandy Gleyed Matrix (S4) Indicators of hydrophytic vegetation and Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present. __ Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: _ Hydric Soil Present? Yes _____ No_ Depth (inches): Hemarks:

Sampling Point: we H

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Project/Site: County County County County County County County County County Applicant/Owner: Advant Inc. State: P// Sampling Point: W H Y Investigator(s): Milk Manuell of Chi Vilas Section, Township, Range: 521 714 m 154 Landform (hillshope, terrace, etc.): 1.11/1/2. Local relief (concave, convex, none): Eugree Slope (%): 3-7/2 Subregion (LRH or MLRA): LFF M Lat: 97 6273 Long: F1,3676 Soil Map Unit Name: Westmarted Cophert of Home 15 35% show (None) NWI classification: 686 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No ______ (If no, explain in Remarks.) Are Vegeration _____, 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? is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: HYDROLOGY Secondary Indicators (minimum of two required) Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) ___ True Aquatic Plants (B14) . _ Sparsely Vegetated Concave Surface (B8) Surface Water (A1) __ Drainage Patterns (B10) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) ____ Moss Trim Lines (B16) Saturation (A3) ___ Water Marks (B1) ___ Presence of Reduced Iron (C4) ___ Dry-Season Water Table (C2) ___ Sediment Deposits (H2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) __ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Other (Explain in Remarks) __ Stunted or Stressed Plants (D1) ___ Algal Mat or Crust (B4) ___ Iron Deposits (85) __ Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard [D3] ___ Microtopographic Relief (D4) Water-Stained Leaves (B9) __ Aquatic Fauna (H13) FAC-Neutral Test (05) Field Observations: Surface Water Present? Z Depth (inches): Water Table Present? Saturation Present? ___ No ____ Depth (inches):_ Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available: Remarks:

VEGETATION (Four Strata) – Use scientific	: names of pl	ants.	Sampling Point: W H - r	
3.1		ominant Indicator	Dominance Test worksheet:	_
1. fermes section		Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:	
2. Ulman 2.560-			Total Number of Dominant 7 Species Across All Strata: (B)	
4			Percent of Dominant Species 2 5 [AVI	D)
G				17)
7			Prevalence Index worksheet:	
	. <u>40</u> - 1	otal Cover	3 otal % Cover of: Multiply by:	
50% of total cover:		lal cover:	FACW species x2 = x2	
Sapling/Shrub Stratum (Plot size: 75) 1. For my Hiller		./	FAC species x3 =	
7. Ruby occidentalis	_ -	101	FACU species x 4 =	
3			UPL species x 5 =	
4			Column Totals: (A) (B	3)
5				
6			Prevalence Index = B/A =	_
7			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation	
B			1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%	
9			3 - Prevalence Index is \$3.0"	
		otal Cover	4 - Morphological Adaptations' (Provide supporting	nn
50% of total cover:	20% of loa	tal cover: / b	data in Remarks or on a separate sheet)	19
Herb Stratum (Plot size: 5)		_	Problematic Hydrophytic Vegetation1 (Explain)	
1. Alberia petrolit	<u></u>	FAN		
2. Glade helman. 3. For mollille.		FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
4. Allian Comman	ئ	TAIV	Definitions of Four Vegetation Strata:	_
5 Come or de Contino	<u> </u>	FAIR	T Mt	
6. Com condinals 7. Viola septemberalis		FACU UPL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) to more in diameter at breast height (DBH), regardless of height.	of
8			Sapling/Shrub - Woody plants, excluding vines, less	
9 10			than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	•
11			Herb - All herbaceous (non-woody) plants, regardles	25
50% of total cover:		fotal Cover al cover: 5. 2	of size, and woody plants less than 3.28 ft tall.	
Woody Vine Stratum (Plot size: 32)			Woody vine - All woody vines greater than 3.28 ft in height.	_
1				
2				
3 4				
5			Hydrophytic Vegetation	
v	== r	otal Cover	Present? Yes No	
50% of total cover:	20% of tot	al cover:		
Remarks: (Include photo numbers here or on a separat				

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SOIL Sampling Point: Low Hard

	cators:) don (A2) (A3)		Color (mois)				s.lo	£	Remarks
pe: C∞Conce fric Soll Indi Histosel (A); Histic Epiper Black Histic Hydrogen SI;	entration, D=Depti cators: don (A2) (A3)			S=Maskec			<u> </u>		
dric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	stion, RM=H		S=Maskec					
dric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	alion, RM=H		S=Maskec					
fric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	alion, RM=R		S=Maskeo					
ric Soll Indi Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	alion, RM=R		S=Maskec					
iric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	ation, RM=R		S=Maskeo					
dric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	ation, RM=R		S=Maskec					
fric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	ation, RM=R		S=Maskec	_	<u> </u>			
dric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	Hion, RM=H		S=Maskec	_				
dric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	Nion, RM=H		S=Maskec	_				
dric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	Hion, RM=H		S=Masked	. ——				
dric Soll India Histosol (A1) Histic Epiper Black Histic Hydrogen Si	cators:) don (A2) (A3)	uinii riw≃r		a=Masket		nine	7 _{1 comin}	a. III. December	ing, M=Mairix.
Histosol (A) Histic Epiper Black Histic Hydrogen Si) don (A2) (A3)				a Sano Gra	ans	i OCALID	ndicators for P	roblematic Hydric Soils
Histic Epiper Black Histic Hydrogen Si	don (A2) (A3)		Dark Surface	(\$7)					(A10) (MLRA 147)
Hydrogen Si			Polyvalue He		ce (SB) (N	ILRA 147,	148)	_ Coast Prairi	
	ilfide (A4)		Thin Dark Su	rface (S9)	(MLRA 1			(MLRA 1	47, 148)
Stratified La			Loamy Gleye		(F2)		-		loodplain Soils (F19)
2 cm Muck f	yers (A5) A10) (LRR N)		Depleted Ma Redox Dark :		-61			(MLRA 1: Very Shallo:	35, 147) w Dark Surface (1+12)
	low Dark Sunface	(A11)	Depleted Dail				-		ain in Remarks)
Thick Dark S	Surface (A12)		Redax Depre				_	_ ` ` '	
	y Mineral (S1) (LI	RR N,	Iron-Mangan		es (F12) (LRR N,			
MLRA 14			MLRA 13		04 D4 17	c 130)		Bear and a con-	
Sandy Redo	ed Matrix (S4)		Umbric Surfa Piedmont Flo				อ		nydrophytic vegetation and plogy must be present,
Stripped Mat			Red Parent N						bed or problematic.
	r (f observed):		_		, •				
Гуре:			_						
Depth (inches	ù:		_				Hydric	Soil Present?	Yes No
narks:	-								

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: (accell long free	City/County: :	Sampling Date: 29 April 20
Applicant/Owner: Al-1041 Page		Sampling Point: w/ J
Investigator(s): Milly Myssere Frank Codes Vilona		
Landform (hillslope, terrace, etc.): 1		
	6042 Long: -\$1,0559	
Soil Map Unit Name: 61-6.1 3.14 long 1-15-4.3	3	tion: fem (not myed)
Are climatic / hydrologic conditions on the site typical for this tim		
		,
Are Vegetation, Soil, or Hydrology signif	·	
Are Vegetation, Soil, or Hydrology natur		
SUMMARY OF FINDINGS - Attach site map sho	owing sampling point locations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes / No_		
Hydric Soil Present? Yes No.	Is the Sampled Area within a Wetland? Yes	No
Wetland Hydrology Present? Yes No		
Remarks:	•	
Alots Lith books of principal steam		
•		
HYDROLOGY	<u></u>	
Wetland Hydrology Indicators:	•	ors (minimum <u>of two required)</u>
Primary indicators (minimum of one is required; check all that a		
		stated Concave Surface (88)
High Water 1able (A2) Hydroge	en Sulfide Odor (C1) Drainage Patti	
	d Rhizospheres on Living Roots (C3) Moss Trim Lin te of Reduced from (C4) Dry-Season W	
	Iron Reduction in Tilled Soils (C6) Crayfish Burro	
<u> </u>		ible on Aerial Imagery (C9)
		essed Plants (D1)
Iron Deposits (85)	Geomorphic P	osition (D2)
Inundation Visible on Aerial Imagery (87)	Shallow Aquite	ard (D3)
Water-Stained Leaves (B9)		hic Relief (D4)
Aquatic Fauna (B13)	✓ FAC-Neutral 1	est (D5)
Field Observations: Surface Water Present? Yes No Depth (and the second	
Water Table Present? Yes No Depth (·	? Yes 🗸 No
Saturation Present? Yes No Depth ((includes capillary fringe)	(inches): 0 V Wetland Hydrology Present	? Yes No
Describe Recorded Data (stream gauge, monitoring well, aeria	al photos, previous inspections), if available:	
Remarks:		
· · · · · · · · · · · · · · · · · · ·		
- suction water to parties of mother		
	<u></u>	

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VEGETATION (For	ur Strata) — He	o reigntific :	namor of plants

	Absolute Dominant Indicato	
e <u>Stratum</u> (Plot size:)	% Cover Species? Status	Number of Dominant Species That Are OBL. FACW, or FAC:
		Total Number of Dominant Species Across All Straia: (B)
		Percent of Dominant Species /30 I hat Are OHL, FACW, or FAC: (A/B)
· •••		Prevalence Index Worksheat:
	= Fotal Cover	Total % Cover of: Multiply by:
50% of total cover: bling/Shrub Stratum (Plot size:75	20% of total cover:	OBL species x1 = FACW species x 2 =
—— (Flox size:		FAC species x 3 =
		FACU species x 4 =
		UPL species x 5 Column Totals: (A) (B)
11110		Prevalence Index = EVA =
	- 	Hydrophytic Vegetation Indicators:
		Rapid Test for Hydrophytic Vegetation
		✓ 2 - Dominance Test is >50%
	= Total Cover	 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
50% of total cover:	20% of total cover:	data in Remarks or on a separate sheet)
nb Stratum (Plot size: 5°)		Problematic Hydrophytic Vegetation ¹ (Explain)
Sampleman, fields	- <u>20 / car</u>	-
	15 <u>540</u>	I 'Indicators of hydric soil and welland hydrology must
Denotes to Constant		De k. 222.11 d. 1262 c. c. t
Gray propinsida		Definitions of Four Vegetation Strata:
		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
		_ height.
<u> </u>		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
	··· ·	m) tall.
	- Total Cover	 Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
ody Vine Stratum (Plot size:)	:-5 20% of total cover: 17	Woody vine - All woody vines greater than 3.28 ft in height.
		-
		- 1
		- i
		- Hydrophytic
		Vegetation Present? Yes No
	= Total Cover 20% of total cover:	\ \tag{\tag{\tag{\tag{\tag{\tag{\tag{
50% of total cover:		_ t

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Sampling	Point:	WI	-

epth inches)	Matrix Color (moist)	96	Color (moist)	x Features %	Type	loc'	Texture	Remarks
2.6	2.51 9/3	70	7.578 7/6			PL/m		Organic routed high
(- 12)								
6-1-1	_61 6/10Y	- - 90	1276 5/6			<u>_m</u>	Fiss	alleria)
						=		
								·
	oncentration, D~Dep	letion, RM-	Reduced Matrix, MS		Sand Gra	eins		PL-Pore Lining, M-Matrix
ydric Soil	Indicators:							cators for Problematic Hydric Soils*:
_ Histoso			Dark Surface		(nn			2 cm Muck (A10) (MLRA 147)
_ Histic F _ Hiack H	pipedon (A2) listic (A3)		Polyvalue Be Thin Dark Su				148) (Coast Prairie Redox (A16) (MLRA 147, 148)
	en Sultide (A4)		Loamy Gleye			77, 140)		Predmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mai					(MLRA 136, 147)
_ 2 cm M	uck (A10) (LRR N)		Redox Dark S	Surface (F6)				Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar				_ (Other (Explain in Remarks)
	ark Surface (A12)	DE N	Redox Depre			DD N		
	Zucky Maieral (51) (t A 147, 148)	LRM N,	Iron Mangani MLRA 138		(F 12) (LIST N.		
	Gleyed Matrix (S4)		Umbric Surfa		LRA 13	6. 122)	3 ne	dicators of hydrophytic vegetation and
	Redox (S5)		Predmont Flo					etland hydrology must be present.
	1 Matrix (S6)		Red Parent N	faterial (F 21	i) (MLR.	A 127, 147)	ı ur	iless disturbed or problematic.
estrictive	Layer (if observed):							
Type:								_
Depth (in	ches):						Hydric Sor	I Present? Yes No
emarks:								

US Army Corps of Engineers Eastern Mountains and Piedmont - Version 2.0

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Correll County Con	rall Co Sampling Date: 24 April 249
Applicant/Owner: 1940-11 Ferry Investigator(s): 1940-11 Ferry	Ranne: 521, THW. KEW
	convex, none): Convex Slope (%): 7-10
, , , , <u> </u>	Long: -\$1, 854 Datum: Wad jj
	NWI classification: 47/4
Are climatic / hydrologic conditions on the site typical for this time of year? Yes N	
Are Vegetation, Soil, or Hydrology significantly disturbed? A	re "Normal Circumstances" present? Yes No
	f needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	, ,
Hydrophytic Vegetation Present? Yes No let the Same	
is the same	
Watland Hydrology Present? Yes No within a We	itland? Yes No
Remarks:	
L HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B5)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (AZ) Hydrogen Sulfide Odor (C1)	Dramage Patterns (H10)
Saturation (A3) Oxidized Rhizospheres on Living R	
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B7) Recent Iron Reduction in Tilled Soil	
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Flants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Fest (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	ŀ
Water Table Present? Yes No Bepth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Welland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspecti	ons), if available:
Remarks:	

Luc I Ju

VEGETATION (Four Strata) – Use scientif	fic names of plants.		Sampling Point:	<u> </u>
	Absolute Dominant I		Dominance Test worksheet:	
Tree Stratum (Plot size: 3)	% Cover Species?	Status	Number of Dominant Species 7	
1. Garney rober	<u> </u>	<u> 74 (**</u>	That Are OBL, FACW, or FAC:	(A)
2. Proper Section		FAIR	Total Number of Dominant	
3. c/m/2 , . b/2.	10	FAC	Total Number of Dominant Species Across All Strata:	(B)
4			Capacias Actoss Air Suoto.	(L)
			Percent of Dominant Species 25%	
5. <u> </u>			That Are OBL, FACW, or FAC:	(A/H)
6			Prevalence Index worksheet:	
7				
	= Total Cove	r	Total % Cover of: Multiply by:	
50% of total cover: _	27. 5 20% of total cover:	<u>q</u>	OBL species x1 =	
Sapling/Shrub Stratum (Plot size: /5)		FACW species x 2 =	
1 Less multifle		FAI	FAC species x3 =	
- #156 Mari 11 1 1 1 1 1 1 1 1 1		FACY	FACU species x 4 =	
7. Enbury alleghening		17/10	UPL species x 5 =	
3. Galen benzein				
4			Column Totals: (A)	(6)
5			Braudinnen Indox - P/A	
3			Prevalence Index - B/A	
7			Hydrophytic Vegetation Indicators:	
			1 - Rapid 1est for Hydrophytic Vegetation	
3			2 - Dominance Test is >50%	
9			3 - Prevalence Index is \$3.0 ¹	
		r ,	4 - Morphological Adaptations* (Provide supp	entino
50% of total cover: _	15 20% of total cover:	<u> </u>	data in Remarks or on a separate sheet)	- n- 19
Herb Stratum (Plot size: 5)				
Pedishalam peltata	10 J	FAV	Problematic Hydrophytic Vegetation ¹ (Explain	1)
Person Accelian (See, 1 Kmg)				
			¹ Indicators of hydric soil and watland hydrology m	ust
3. Rober phopolicalists			be present, unless disturbed or problematic.	
1. Polyalistan accordists its		TAN	Definitions of Four Vegetation Strata:	
š				
i			Tree - Woody plants, excluding vines, 3 in. (7.6 c	m) or
			more in diameter at tweast height (DHH), regardle height.	122 DI
			nogn.	
· <u>····</u>			Sapling/Shrub - Woody plants, excluding vines,	
)			than 3 in. DBH and greater than or equal to 3.28	n (1
0			m) tall.	
1			Herb - All herbaceous (non-woody) plants, regard	dess
	Total Cove	r	of size, and woody plants less than 3.28 ft tall.	
50% of total cover* _	20% of total cover:			
Woody Vine Stratum (Plot size: 32)			Woody vine - All woody vines greater than 3.28 height.	πın
Tunicedenican Caditans			neigni.	
		-FAT		
l		——		
3				
l			Hydrophytic	
i			Vegetation	
	= Total Cove		Present? YesNo	
50% of total cover-	2- ነ 20% of total cover:_			
				-
Remarks: (Include photo numbers here or on a sepa	rate sneet.)			

Depth inches)	Matrix Color (moist)	96	Cotor (maist)	x Features %	Type ¹	i.gc²	Texture	Remarks
		100					31/2	
), jtr	/= 4t 4/3	100					7.10	
								
								
ne: C-C	oncentration, D-Dep	leton RM=	Reduced Matrix, MS	=Masked :	Sand Gra	nins.	*Location: PL	.=Pore Lining, MMatrix.
	Indicators:	1040012 14111-	TICOUCCO ITIONIA, ITI		30112 1311			tors for Problematic Hydric Soils*
Histosol			Dark Surface	(\$7)				om Muck (A10) (MLRA 147)
	pipedon (AZ)		Polyvalue He		a (SB) (N	I RA 147		past Prairie Redox (A16)
	slic (A3)		Thin Deck Su				,	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye				Pi	edmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma				_	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark)		Ve	ary Shallow Dark Surface (TF12)
	l Below Dark Surface	e (A11)	Depleted Dar	k Surface (F 7)		_ 0	ther (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F8)	I			
Sandy N	lucky Mineral (51) (I	RR N,	from Mangan	ese Masse:	(F12) (_RR N,		
	147, 148)		MLRA 13					
	lleyed Matrix (S4)		Umbric Surfa					cators of hydrophytic vegetation and
	tedox (S5)		Piedmont Flo					land hydrology must be present.
	Manix (S6)		Red Parent N	taterial (F2	1) (MLR	A 127, 147	') unic	ess disturbed or problematic.
strictive l	.ayer (if observed):							
Туре:	· · · · · · · · · · · · · · · · · · ·							
Depth (in-	thes):		_				Hydric Soil	Present? Yes No
marks:								

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Sempling Dailer Application Applicatio	mineralism (moneth form	1 6	City/County (Grant to	Sa.	mpling Date: <u>) 4</u>	42
Local relief (concave, convex, nona): Local relief (concave, convex, nona): Local	relicionat Al . I	Parasi:	City/county	St	ato: OH 9	Sampling Phint: W.L.	5
Local relief (concave, convex, nona): Non (if no, explain in Remarks.) Summart (Concave, convex, nona): Local relief (concave, convex, nona): Non (if no, explain in Remarks.) Non (if no, explain in Remarks.) Non (if no, explain in Remarks.) Summart (Concave, convex, nona): Non (if no, explain in Remarks.) Nona (if no, explain in Remarks.) Surface (Note (Rel)): Nona (if no, explain in Remarks.) Nona (if no, explain in Remarks.) Surface (Note (Rel)): Nona (if no, explain in Remarks.) Nona (if no, explain in Remarks.) Surface (Note (Rel)): Nona (if no, explain in Remarks.) Surface (Note (Rel)): Nona (if no, explain in Remarks.) Surface (Note (Rel)): Nona (if no, explain in Remarks.) Nona (if no, explain in Remarks.) Surface (Note (Rel)): Nona (if no, explain in Remarks.) Nona (if no, explain in Remarks.) Surface (Note (Rel)): Nona (if no, explain in Remarks.) Nona (if no, explain in Remarks.) Nona (if no, explain in Remarks.) Surface (Note (Rel)): Non	ppicanyOwner:	. J. 1 2 L. 10 L.	- Castian Tayland		Tran Acre	المالية المالي	
Lat.	vestigator(s): 131 H 1113:	Kongli end Ceste, Kitte	50Culdri, i dwrisi	ıμ, κange- <u>·</u>	. , , , , , , , , , , , , , , , , , , ,		1.7
No lift no. explain in Remarks. SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transacts, important feature Hydrophytic Vegetation Prosont? Yes No list the Sampled Area within a Wetland? Hydrophytic Vegetation Present? Yes No list the Sampled Area within a Wetland? Wetland Hydrology Indicators: Primary Indicators (mulmum of loss is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulface Orice) Saturation (A3) Doutged Rithizospheres on Living Roots (C3) Moss Trim Lines (B16) Softment Deposits (B7) Recant fron Reduction in Titled Soils (C6) Dry-Season Water Table (C2) Softment Deposits (B7) Recant fron Reduction in Titled Soils (C6) Crayfish Burrows (C8) In Muck Surface (C7) Solvation Visible on Aerial Imagery (B7) Wetland Hydrology Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Wetland Hydrology Pr	indform (hillstope, terrace, etc.):	drain-yeary	Local relief (concav	e, convex, none): _	Ce. 1/14/	Slope (%):	(-)
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 If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No	ibregion (LRR or MLRA):	. <u>R √ Lat: 40.</u>		Long: <u>87 , C</u>	55.1	Datum: 1/3 2	o Pt
Soil							peck s
Application	e climatic / hydrologic condition	s on the site typical for this li	me of year? Yes 🖊	No (If no	i, emplain in Rema	irks.)	
Application	e Vegetation, Soil	, or Hydrology sign	ificantly disturbed?	Are "Normal Circ	umstances" presi	eni? Yes 🗹 No	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature. Hydrophytic Vegetation Proson? Yes No	e Vegetation . Soil	, or Hydrology natu	rally problematic?				
Hydrophytic Vegetation Prosont? Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Surface Soil Cracks (B8) Surface Soil Cracks (B8) Surface Water (A1) Hydrogen Sulfac Odor (C1) Saturation (A3) Oxidized Phizospheres on Living Roots (C3) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B7) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B3) Tim Muck Surface (C7) Saturation Visible on Aerial Imagery Algal Mat or Crust (B4) Under (Explain in Remarks) Stunted or Stressed Plants (D1) Food Observations: Surface Water Phasent? Yes No Depth (inches): Surface Water Phasent? Yes No Depth (inches): Saturation Present? Yes No	• — —			oint locations,	transects, in	portant features	, etc.
HyDroLDGY Wetland Hydrology Present? Wetland Hydrology Indicators: Surface Soil Cracks (86) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Indicators (minimum of two research of two				 -	-	·	
Available Hydrology Present? Yes No No No					/		
Remarks: Wetland Hydrology Indicators: Wetland Hydrology Indicators: Secondary Indicators (minimum of two re Surface Soil Cracks (86) Surface Water (A1) True Aquatic Plants (814) Sparsely Vegetated Concave Surface Hydrogen Sulface Odor (C1) Seturation (A3) Water Marks (B1) Sediment Deposits (B3) Sediment Deposits (B3) Drift Deposits (B3) Algal Mat or Crust (B4) Crust (B4) Counter (Explain in Remarks) Surface (C7) Algal Mat or Crust (B4) Counter (Explain in Remarks) Surface Soil Cracks (B6) Sediment Deposits (B3) This Muck Surface (C7) Sediment Deposits (B3) This Muck Surface (C7) Sediment Orbits (B4) Other (Explain in Remarks) Surface Of Sediment Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Seditoration Present? Yes No Depth (inches): Seditoration Present? Yes No Depth (inches): Settland Table Present? Yes No	•			Welland?	Yes	No	
HYDROLDGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B7) Recent Iron Reduction in Titled Soils (C6) Thin Muck Surface (C7) Appli Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Soil Cracks (B6) Suprace Soil Cracks (B6) Supracely Vegetated Concave Surface Dynama Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Moss Trim Lines (B16) Dry Season Water Table (C2) Crayfish Burnows (C9) Saturation Titled Soils (C6) Crayfish Burnows (C9) Saturation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Passent? Yes No Depth (inches): The Wetland Hydrology Present? Yes No Depth (inches): J Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						-	
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Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface High Water Table (A2) High Water Table (A2) Water Marks (B1) Seturation (A3) Divided Rhizospheras on Living Roots (C3) Water Marks (B1) Sediment Deposits (B7) Sediment Deposits (B7) Recent fron Reduction in Titled Soils (C6) Drift Deposits (B3) Application (C4) Thin Muck Surface (C7) Seturation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Pasent? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Janual Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface Dry Inches (C1) Dry Inches (C3) Sparsely Vegetated Concave Surface Crayfas Burnows (C9) Dry Season Water Table (C2) Crayfas Burnows (C9) Saturation Visible on Aerial Imagery (B7) Settled or Stressed Plants (D1) Ceomorphic Position (D2) Shellow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Surface Water Pasent? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): J Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				Sar	ondaru Indicators	francisco of less cool	ired)
Surface Water (A1)			Lanniu)				11601
High Water Table (A2) Saturation (A3) Dividual Rhizospheras on Living Rooks (C3) Water Marks (B1) Presence of Reduced Iron (C4) Dry. Season Water Table (C7) Saturation (B3) Presence of Reduced Iron (C4) Dry. Season Water Table (C7) Saturation Present? Drift Deposits (B7) Recent Iron Reduction in Tilled Soils (C6) Trayfish Burrows (C8) Saturation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves No Depth (inches): Water Table Present? Ves No Depth (inches): Saturation Present? Yes No Saturation (Inch			•				(88)
Saturation (A3)	High Water Table (A2)						
water Marks (B1)	Saturation (A3)						
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery Appl Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Ceomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shellow Aquatic Foother (D4) Aquatic Fauna (B13) Shellow Aquatic Fauna (B13) Field Observations: Field Observations: Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Satur							
Algal Mati or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) from Deposits (B5) Geomorphic Position (D2) infundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Microtopographic Relief (D4) Aquatic Fauna (B13) HAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): No	Sediment Deposits (82)	Recent	Iron Reduction in Tilled	Soils (C6)	Crayfish Burrows	(C8)	
Iron Deposits (B5) Geomorphic Position (D2)							9)
inundation Visible on Aerial Imagery (B?) Water-Stained Leaves (69) Aquatic Fauria (B13) Priced Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Yes No Depth (inches): Wetland Hydrology Present? Yes No Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		Other (Explain in Remarks)	_			
Water-Stained Leaves (89) Microtopographic Relief (D4) Aquatic Fauna (813) FAC-Neutral Test (D5) FIGURE (D5) Mo		I (122)			•		
Aquatic Fauna (B13)		imagery (B7)		_	•		
Field Observations: Surface Water Present? Yes No Dopth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
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Water Table Present? Yes No Depth (inches):		res No 🗸 Dooth	(inches):				
Saturation Present? Yes No Depth (inchas): 3" Wetland Hydrology Present? Yes No No Depth (inchas): 3" No							
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				Wetland Hydro	ology Present?	Yes No	
	includ <u>es capillary (ringe)</u>						
Remarks:	Jescribe Hecorded Data (stream	n gauge, monkoring well, aer	iai priotos, previous irispi	actions), ii avaliaud	в.		
	Remarks:						

MECETATION I	(Cour Strota)	Hea rejontifie	names of plants.
VEGETATION	Fuui 3 auai -	USE SCIENTING	Hairies VI Dialics.

Sampling	Point:	WL	ブ

to the second se	Absolute Dominant Moleator	Dominarce reseworksneer:
Tree Stratum (Plot size: 15)	% Cover Species? Status	Number of Dominant Species
1		. That Are OBL, FACW, or FAC:(A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		Percent of Dominant Species+**
5		That Are OBL, FACW, or FAC: (A/B)
б		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
	Total Cover	OBI species x1 =
50% of total cover:	20% of total cover:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15"		'
1		FAC species x 3 =
?		FACII species x 4 =
3		UPL species x 5
4,		Column Totals: (A) (B)
5		Prevalence Index = B/A =
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8.		
9.		
	- Total Cover	3 · Prevalence Index is ≤3.0
50% of total cover:	20% of total cover:	4 - Morphological Adaptations¹ (Provide supporting
Herb Stratum (Plot size: 5		data in Remarks or on a separate sheet)
1. Pearmy as was	10 /	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Symphoson Colides	10 CAL	
3. January Cycania		Indicators of hydric soil and wetland hydrology must
		to protein, uniess distailed or problematic.
		Definitions of Four Vegetation Strate:
5		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
_		more in diameter at breast height (DBH), regardless of
		height.
8		Septing/Shrub - Woody plants, excluding vines, less
9		than 3 in DBH and greater than or equal to 3.28 ft (1
10		m) tall.
11		Herb - All herbaceous (non woody) plants, regardless
_	ic 2 _ = total Cover	of size, and woody plants less than 3.28 ft tall.
59% of total cover:	20% of total cover: 32	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: /5 ' ★)		height.
1		
2		
3		
4		Hydrophytic
5		
	- Total Cover	Vegetation Present? Yes No
50% of total cover;		
Remarks: {Include photo numbers here or on a separate s		
	·	
4. Plat size Arabl to to size . (we	16.1	
** - unitatility goess not inchill were	Little and IIII	1.1.1.
determination possible to each 1 1	The wasterness to be a fair	THE STATE OF SMITHERINATES
determination with the seits and had	"·" ²)	-
	•	

Color (moist)	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. The proof of the	Remarks			_Type ¹				Matrix	
Lype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix, lydric Soil Indicators: Indicators for Problematic Hydric Soil (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) 2 cm Muck (A10) (MLRA 147) 2 cm Muck (A10) (MLRA 147) 2 cm Muck (A10) (MLRA 147, 148) Coast Prairie Hedox (A16) 2 cm Muck (A10) (MLRA 147, 148) Coast Prairie Hedox (A16) 2 cm Muck (A10) (LRR N) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F7) Constraint Remarks) Piedmont Floodplain Soils (F12) ChRR N, MLRA 147, 148) Inorn-Manganese Masses (F12) (LRR N, MLRA 147, 148) Inorn-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136, 129) Piedmont Floodplain Soils (F13) (MLRA 136, 129) Piedmont	Surphy S	Remarks				96				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators for Problematic Hydric So: Histosol (A1) Histosol (A1) Dark Surface (S7) Polyvalue Delow Surface (S8) (MLRA 147, 148) Histosol (A2) Polyvalue Delow Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (F1) Depleted Dark Surface (F7) Thick Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N) MLRA 135, 147) Pindicators for Problematic Hydric So: Very Shallow Dark Surface (TF12) Other (Explain in Remarks) MLRA 136, 147) Sandy Mucky Mineral (S1) (LRR N) MLRA 136, 147) MLRA 136, 147) Sandy Gleyad Matrix (S4) Sandy Gleyad Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 127) Pindicators of hydrophytic vegetation. Wetland hydrology must be present. unless disturbed or problematic.	lype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soil Indicators for Problematic Hydr			<u></u>			Color (maisi)	<u>- % </u>	Color (moist)	(inches)
lype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Histosol (A2) Polyvalue Delow Surface (S8) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Straitifad Layers (A5) 2 cm Muck (A10) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Straitifad Layers (A5) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F3) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Minaral (S1) (LRR N) MLRA 136, 147) WIRA 147, 148) MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Verdom Tiloodplain Soils (F19) (MLRA 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Indicators for Problematic (F12) (MLRA 136, 147, 148) MLRA 136, 147) Indicators of hydrophytic vegetation, wetland hydrology must be present, unless disturbed or problematic.	lype: C=Concentration, D=Deplation, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soil Indicators for Problematic Hydr				_	10	1.54R 4/6	93	2.57 7/2	0.133
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Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyard Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Meterial (F21) (MLRA 127, 147) Pestrictive Layer (if observed):	Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 127) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be pre Stripped Matrix (S6) Red Parent Melerial (F21) (MLRA 127, 147) unlass disturbed or problematic testrictive Layer (if observed): Type:							o (611)		
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyad Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Indicators of hydrophytic vegetation wetland hydrology must be present. Unless disturbed or problematic.	Sandy Mucky Mineral (S1) (LRR N, MLRA 136) MIRA 147, 148) Sandy Gleyad Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Type:	na (explain in remarks)	— '					U (MIII)		
MLRA 147, 148) Sandy Gleyad Matrix (S4) Sandy Redox (S5) Sitripped Matrix (S6) Stripped Matrix (S6) Red Parent Makenal (F21) (MLRA 127, 147) Makenal (F21) (MLRA 127, 147) wetland hydrology must be present. (F21) (MLRA 127, 147) wetland hydrology must be present. (F21) (MLRA 127, 147) wetland hydrology must be present. (F21) (MLRA 127, 147)	MLRA 147, 148) Sandy Gleyad Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Westland hydrology must be pre unless disturbed or problematic Type: Type:			BBN				DDM		
Sandy Gleyad Matrix (S4) Umbric Surface (F13) (MLRA 136, 127) Indicators of hydrophytic vegetation sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present. Stripped Matrix (S6) Red Parent Makerial (F21) (MLRA 127, 147) unless disturbed or problematic.	Sandy Gleyad Matrix (S4) Umbric Surface (F13) (MLRA 136, 127) Indicators of hydrophytic vegeta Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be pre Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic testicitive Layer (if observed): Type:				20 [1 • 2] [1					
Sandy Redox (SS) Piedmont Floodplain Soils (F19) (MLRA 148) wetland flydrology must be present. Stripped Matrix (S6) Red Parent Meterial (F21) (MLRA 127, 147) unless disturbed or problematic. testrictive Layer (if observed):	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be pre Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic Restrictive Layer (If observed): Type:	cators of hydrophytic vegetation and	3 Inte	6. 122)	MI RA 13					
Stripped Matrix (S6) Red Parent Mederial (F21) (MI RA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed):	Stripped Matrix (S6) Red Parent Material (F21) (MI RA 127, 147) unless disturbed or problematic Restrictive Layer (If observed): Type:									
· ·	Type:	ass disturbed or problematic								
· ·	Type:							:	ayer (if observed):	estrictive t
									•	Type:
Depth (inches): Hydric Soil Present? Yes No_	ocpat (inclica):	Present? Yes - No	Hydric Soi				_		rhas).	
	emarks:	163 67 100	Tiyane do						alicaj.	

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region ProjecuSine: Correct County Energy City/County: Curry A for Sampling Date: 24 for 13/13 Applicant/Owner: A formal form Investigator(s): 10:14 Messenth and Collie Villens Section, Township, Range: 525, Then KSW Landform (hillslope, terrace, etc.): 1.1154. frankern | Local relief (concave, convex, none): (varvy Stope (%): 4-7 Subregion (LRR or MLRA): LEF N 1at: 12.6665 Long: 71.6957 Datum: p-se 11 Soil Map Unit Name: Charlet 5:14 form 3-57.567. (Left) NWI classification: 425 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 Romarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Spil Present? within a Wetland? Wetland Hydrology Present? Remarks: HYDROLOGY Secondary Indicators (minimum of two required) Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) ___ True Aquatic Plants (B14) ___ Sparsely Vegetated Concave Surface (88) Surface Water (A1) __ Hydrogen Sulfide Odor (C1) ___ Drainage Patterns (B10) High Water Table (A2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Moss frim Lines (B16) Saturation (A3) ___ Presence of Reduced Iron (C4) ___ Dry Season Water Table (C?) ___ Water Marks (81) ___ Recent Iron Reduction in Tilled Soils (C6) Sediment Deposits (82) ___ Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) __ Stunted or Stressed Plants (I71) ___ Algal Mat or Crust (B4) ___ Other (Explain in Remarks) __ Iron Deposits (B5) __ Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) ___ Microtopographic Relief (D4) Water-Stained Leaves (B9) Aquetic Fauna (813) ___ FAC-Neutral Test (D5) Field Observations: Yas ____ No ___ Depth (inches):_ Surface Water Present? No Depth (inches):_ No Depth (inches):_ Water Table Present? Saturation Present? Wetland Hydrology Present? Yes_ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

/EGETATION (Four Strata) – Use scientific	names of	plants.		Sampling Point: W4 3 vr
_	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 32)	% Cover	Species?	Status	Number of Dominant Species
Ulmry relice	<u></u>	_/_	Fac	That Are OBL, FACW, or FAC: (A)
1				Total Number of Dominant C7
				Species Across All Strata: (B)
·				
				Percent of Dominant Species 7.5
				That Are OBL, FACW, or FAC: (A/B)
·	_			Prevalence Index worksheet:
				Total % Cover of: Multiply by:
		 Total Cov 		OBL species x1 =
50% of total cover: /	2 20% or	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15)		1		
Rose morthstar			FAIL	FAC species x 3 =
Artes ciridadalis	10		UPL	FACU species x 4 =
				UPL species x 5 =
l.				Column Totals: (A) (B)
5				
3				Prevalence Index ~ B/A =
				Hydrophytic Vegetation Indicators:
,				1 - Rapid Test for Hydrophytic Vegetation
<u>. </u>				2 - Dominance Test is >50%
)				3 - Prevalence Index is ≤3.01
	,,,	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:	5	data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Peresan se *	_ ५১	/_		1-100emant Hydrophytic vagetation (Explain)
2. Rose multill -	15_		FALL	
6 becken helevice	5*			Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic.
J				Definitions of Four Venetation Strata:
··				Definitions of Four Vegetation Strata:
5				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
I				height.
3				Sapling/Shrub - Woody plants, excluding vines, less
L				than 3 in. DBH and greater than or equal to 3.28 ft (1
0	_			m) tall.
1				Herb - All herbaceous (non-woody) plants, regardless.
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover:57	20% of	total cover:	12	
Voody Vine Stratum (Plot size: 3.3)				Woody vine – All woody vines greater than 3.28 ft in height
				- Indigen
l				
				Hydrophytic
i				Vegetation
		- Total Cov		Present? Yes No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)			
to endately gives so not locall in ,	1.116			
To contentiate grows sp. and included in a	Called to the "O			

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rofile Desc	ription: (Describe t	to the depti	needed to docur	nent the indicato	r or confirm	n the absence of ind	icators.)	
Depth	Matrix		Redo	x Features		_		
inches)	Color (moist)	-%	Color (moist)		<u>LDE*</u>	Texture	Hemarks	
9-15+	1º48 4/3	102						
	ncentration, D=Depl	letion, RM=F	teduced Main's, MS	S=Masked Sand C	Grains.	*Location: PL=Pore		
lydric Soil I	ndicators:						or Problematic Hy	
Histosul			Dark Surface				ick (A10) (MLRA 1	147)
	ipedon (AZ)			Now Surface (S8)			rairie Redox (A16)	
Black His				rface (S9) (MLRA	147, 148)		A 147, 148)	(r.10)
	n Sulfide (A4) Layers (A5)		Loarny Cleye Depleted Mar				ıt Floodplain Soils. A 136, 147)	(F 19)
	ck (A10) (LRR N)		Redox Dark				ellow Dark Surface	(TF12)
	Helow Dark Surface	a (A11)		rk Surface (F7)			xplain in Remarks	
	rk Surface (A17)	` ′	Redox Depre					
_ Sandy M	ucky Mineral (S1) (L	.RR N,	fron-Mangan	ese Masses (F12)	(LRR N.			
	. 147, 148)		MLRA 13					
	leyed Matrix (S4)			ice (F13) (MLRA 1			of hydrophylic veg	
	edox (S5)			odplain Soils (F19 Material (F21) (ML			ydrology must be p	
	Matrix (S6) ayer (if observed):		Red Parent N	materiar (FZI) (MIL	KA (27, 147	/) unless di	sturbed or problem	ia(ic.
	ayer (ii observeu):							
1ype:	h h		_			I I I I I I I I I I I I I I I I I I I	V	No
Depth (inc	nesj:					Hydric Soil Prese	nt? Yes	. No
emarks:								

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roject/Site: { الأرديا أقاما أم المديم الم	/	na 2. 1 1
- up- 1- u- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1-	City/County: Sampling Date: -	
pplicant/Owner: Ally mult Part	State: O# Sampling Point	(WE K
overstigator(s): Mike Illers early and (1 V.	Section, Township, Range: 523, 114m RSW.	
	Local relief (concave, convex, none): have Slop	ne (%): 87 - 7
	31 Long:91, 0545 Datum	
nuoregion (LRM or MLMA): LRS 32 Lat. 30.14	-3 15.252 Story (Wm 0) NWI classification: \$55	Coulomb
ioil Map Unit Name: <u> Mrs Newer Jens Total Park New Suff L</u>	may 73 - 85 to 50 pt (10 m b) NWI classification: PD	the mysel
re climatic / hydrologic conditions on the site typical for this til re Vegetation, Soil, or Hydrologysign	e of year? Yes No (If no, explain in Remarks.) cantly disturbed? Are "Normal Circumstances" present? Yes	/ No
re Vegetation, Soil, or Hydrology nature.		
•		
SUMMARY OF FINDINGS - Attach site map sh	wing sampling point locations, transects, important fe	atures, etc.
Hydrophytic Vegetalion Present? Yos No.	Is the Sampled Area within a Wetland? Yes No	-
HYDROLOGY	·	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of	two required)
Primary Indicators (minimum of one is required; check all that	apply) Surface Soil Cracks (B6)	
Surface Water (A1) True A	atic Plants (B14) Sparsely Vegetated Concave S	Surface (B8)
	n Sulfide Odor (C1) Drainage Patterns (B10)	
	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)	
Water Marks (B1) Presen	of Reduced Iron (C4) Dry-Season Water Table (C2)	
Sediment Deposits (B2) Recent	ron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)	
	k Surface (C7) Saturation Visible on Aerial Ima	
	xplain in Remarks)Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)	
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)	
Water-Stained Leaves (B9)	Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)	
Aquatic Fauna (B13)	FAC-Nedural Test (D5)	
Field Observations: Surface Water Present? Yes No/_ Depth		
Water Table Present? Yes No ✓ Depth Saturation Present? Yes No ✓ Depth		No

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VEGETATION (Four Strate	L Hea	eciontific	names o	atneln ³
YEGELALIONI	ruur Svala	J – USE	Scientific	namez o	piants

Sampling	Point:	wi	K	

- a	AUSOIULE	Dominant		Dominance rest worksheet:
Tree Stratum (Plot size: 30)		Species?	Status	Number of Dominant Species (4)
1. Carpinia continuen	_5_	/	F.K	That Are OBL, FACW, or FAC: (A)
2		· ——		رب Fotal Number of Dominant
3	_			Species Across All Strata:/ (B)
4				
5				Percent of Dominant Species 100
				That Are ORL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7.				
	-5	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 2.5	1D0/ of	Chalal anyon	ì	OBL species x 1 =
	/0% u	total cover.		FACW species x2 -
Sapting/Shrub Stratum (Plot size: 15)		_		
1. Cocoss moreon	د (ر	/	FACU	FAC species x 3
2 Sulta rince			GAL	FACU species x 4 =
2 31 14 7 15ce				UPI species x5=
3. Sambers comment	10	. <u> </u>	FALL	
4				Column Totals: (A) (H)
5				
				Prevalence Index = D/A =
6				Hydrophytic Vegetation Indicators:
λ				
8				
				2 - Deminance Test is >50%
9				3 - Prevalence Index is ≤3.01
		= Lotal Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	2 0 % of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)				1
1. forge , so. *	6.4	/		Problematic Hydrophytic Vegetation1 (Explain)
P 11				
2. Symphemper dections			<u>esi</u>	Indicators of hydric soil and wetland hydrology must
3. Ingalina Jamesis			FARW	be present, unless disturbed or problematic.
4. Onester societies	ŕ		FAIN	Definitions of Four Vegetation Strata:
5. Allium (+1) vrm				Dennitions of Four Vegetation Strate:
	_	· ——	PHIN	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				-
				Sapting/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
9,				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				11-6 411 5-6
	1.7	Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
		- Total Covi	er	or size, and woody plants less than a.zd it tall.
50% of total cover: 415	20% 01	total cover:	16.6	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1, —				
7				
3				
4				Hydrophytic
5				
<u></u>		= Total Cov		Vegetation Present? Yes No
		= Total Cov	er	110001111
50% of total cover:		total cover:		
Remarks: (include photo numbers here or on a separate s	heet.)			
A 10 10 11				
a - unidentified gross se not included as co	100 104 100			
a sa man definancia de la		,		

SOIL Sampling Point: Va K Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redax Features
Color (moist) % Type¹ Loc′ Texture 1.542416 5 c m silo ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS-Masked Sand Grains. ²t ocation: PL=Pore Lining, M=Matrix Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: ___ 2 cm Muck (A10) (MLRA 147) __ Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MI RA 147, 148) __ Histic F pipedon (A2) __ Coast Pravio Redox (A16) ___ Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Black Histic (A3) Piadmont Floodplain Soils (F19) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) (MLRA 136, 147) Stratified Layers (A5) ___ Very Shallow Dark Surface (TF12) ___ Redox Dark Surface (F6) 2 cm Muck (A10) (LRR N) ___ Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N. ___ Iron-Manganese Masses (F12) (LRR N. MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MI RA 136, 122) Indicators of hydrophytic vegetation and Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Redox (S5) wetland hydrology must be present. Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Stripped Matrix (S6) Restrictive Layer (if observed): Type:_ Hydric Soil Present? Yes ______ No_ Depth (inches): _ Remarks:

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: (nerell leady Energy	City/C	County: <u>Currentl</u>	<u>ડ. </u>	Sampling Date: 19 Apr. 1 July
ApplicanyOwner: 11 January Person			State: UH	Sampling Point: WL K-/
Investigator(s): Mile Hassengli and C	I. Vilens Section	on, Township, Range:	528, 717N.	A5~
Landform (hillslope, terrace, etc.): Little /-	bK} I ocal rel	iel (concave, convex, no	ne): (/11789	Slope (%): 5-1
Subregion (LRR or MLRA):	Lat: 46,6079	Lang:	81.0573	Datum: 1044 (4
Soil Map Unit Name: Wright - logher	de 14 home 15.	157-slips (Wo	<i>0)</i> NWI classific	ation: V/4
Are climatic / hydrologic conditions on the site type	ical for this time of year? Y	es / No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology	naturally problem	atic? [If needed,	explain any answe	
SUMMARY OF FINDINGS - Attach si	te map showing san	pling point locati	ons, transects	, important features, etc.
Hydric Soil Present? Yes	No No No	is the Sampled Area within a Welland?	Yes	No
HYDROLOGY				
Wetland Hydrology Indicators:				stors (minimum of two required)
Primary Indicators (minimum of one is required;			Surface Soil	
Surface Water (A1)	True Aquatic Plants (getated Concave Surface (B8)
. High Water Table (A2)	Hydrogen Sulfide Od		Drainage Pa	
Saturation (A3)	Oxidized Rhizospher			
Water Marks (B1)	Presence of Reduced		Dry-Season Crayfish Bun	Water Table (C2)
Sediment Deposits (H2) Drift Deposits (B3)	Recent Iron Reduction If hin Muck Surface (6			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rer			tressed Plants (D1)
Iron Deposits (B5)	Other (Cxbrain in the	nia kay		Position (D2)
triundation Visible on Aerial Imagery (B7)			Shallow Aqui	
Water-Stained Leaves (B9)				phic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	
Field Observations:				
Surface Water Present? Yes No _	Depth (inches):			
	Depth (inches):			_
Saturation Present? Yes No _ (includes capillary fringe)			Hydrology Preser	nt? Yes No
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, pre	vious inspections), if av	ailable•	. –
Remarks:				

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: W. & W

VEGETATION (Four 34 aux) - 036 3CICHUIC	· _	Sompling Conti
2.3	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover Species? Status	Number of Dominant Species
1. ferry Smith	15 Ph	That Are OBL, FACW, or FAC: (A)
0 (1)	10 J FAC	- I
2. Clary sobre		· Total Number of Dominant
3		Species Across All Strata: (B)
4		J . m.
		Percent of Dominant Species 4/27
5		That Are OBL, FACW, or FAC: (A/B)
6		
		Prevalence Index worksheet:
7		Lotal % Cover of: Multiply by:
	75 = Total Cover	
50% of total cover:	2.5 20% of total cover: 5"	OBL species x 1 =
		FACW species x 2 =
Sapling/Shrub Stratum (Plot size /9)		
1_ lose multifle.	<u>35_</u>	- FAC species x 3
21 11:	S' F41.9	
2. Potos occidendo his		
3. Sambiers wife me sandlemis	ς* Ε4ε-ν	UPI species x 5
		Column Totals: (A) (9)
4		-
5		The unique a lades = D/A
		Prevalence Index = B/A =
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		
		2 Dominance Test is >50%
9		- 3 - Prevalence Index is ≤3.01
	나 5 - Total Cover	
nem standard	2.5 20% of total cover: 1	4 - Morphological Adaptations ¹ (Provide supporting
50% or total cover: 7	2:5 20% or total cover:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)		
1. Claylant production		Problematic Hydrophytic Vegetation¹ (Explain)
1. I de y fancio Williams		- I
2. Faga moltiklein		- 3
3. Viela surviva	2 F4c	Indicators of hydric soil and wetland hydrology must
		be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
		Taginical Strate Tagination Court
5		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
		more in diameter at breast height (DBH), regardless of
7		height.
1		- Freight
B		ContinuiSharb Woody alants evaluation rings loss
9		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
•		m) tall.
10		- I 119 talls
11		Herb – All herbaceous (non-woody) plants, regardless
		of size, and woody plants less than 3.28 ft tall.
,	= Total Cover	of Size, and woody plants less than 3.24 it tail.
50% of total cover: _4	= Total Cover 	1
Woody Vine Stratum (Plot size: 36)		Woody vine - All woody vines greater than 3.28 ft in
		height
1,		-
2		
		·
3	_ _	-
4		1
		- Hydrophytic
5		Vegetation
	 Total Cover 	Present? Yes No
soo of total anima	20% of total cover:	
		<u></u>
Remarks: (Include photo numbers here or on a separat	e sheet.)	
1		
1		
1	<u></u> _	

	Matrix			x Features	1 7	T	D-mada
ichesi	Color (maist)			%lype	Loc²		Remarks
2 4	1378 712	100				<i>5.1</i> ₂	
-11 +	loge m/3	_/e? _	_		·	5/10	
	•						
	oncentration, D-Depl	letion, RM=Ri	<u>ed</u> uced Mat <u>rix, M</u>	S-Masked Sand (Grains.		L=Pore Lining, M⊒Matrix.
	Indicators:						itors for Problematic Hydric Soils*:
Histosol			Dark Surfac				cm Muck (A10) (MLRA 147)
	oipedon (A2)			elow Surface (S8)		48) C	oast Prairie Redox (A16)
	istic (A3)			uriace (S9) (MLRA	147, 148)		(MLRA 147, 148)
	en Sulfide (A4)			ed Matrix (F2)		^	iedmont Floodplain Soils (F19) (MLRA 136, 147)
	d Layers (A5) ick (A10) (LRR N)		Depleted Ma Podou Dorla	Surface (F6)			ery Shallow Dark Surface (TF12)
	d Below Dark Surface	0 (031)		rk Surface (F7)			ther (Explain in Remarks)
	ark Surface (A12)	. (***)		essions (F8)			and (any and any
	Aucky Mineral (S1) (I	RR N.		ese Masses (F12)	(LRR N.		
	A 147, 148)		MLRA 1:		•		
Sandy G	Bleyed Matrix (S4)		Umbric Surf	ace (F13) (MLRA	136, 122)	lnd ^t	icators of hydrophytic vegetation and
Sandy F	Redox (S5)			oodplain Soils (F19			tland hydrology must be present.
	Matrix (56)		Red Parent	Material (F21) (MI	RA 127, 147)	un	ess disturbed or problematic.
trictive i	Layer (if observed):						
Гуре:			_				
D epth (ind	ches):		_			Hydric Soil	Present? Yes No
nacks:							
iarks:							
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WETLAND DETERMINATION					
Projecusite: Carrell County Enough	City/County:(arrell to		Sampling Date: 3 ។	Asell
Applicant/Owner: Advand Pare	•		State: Ulf	Sampling Point	we L
ovestigator(s): Mile Mossimiliant Colin Vilan	Section, Townst	ip. Range:	528 THN	A5 W	
andform (hillstope, terrace, etc.): d. almy / for A St.					n 1-5
	40.6014				_
Soil Map Unit Name: 6 Luck 1 5 H kmm 3 1%				ation: JEM (Ast	
					63×1
re climatic / hydrologic conditions on the site typical for the			If no, explain in H	emarks.) present? Yes	N-
re Vegetation, Soil, or Hydrology					NO
re Vegetation, Soil, or Hydrology	naturally problematic?	(II needed, e	xplain any answe	rs in Hemarks.)	
SUMMARY OF FINDINGS – Attach site map	showing sampling po	oint locatio	ns, transects	, important featu	res, etc
Hydric Soil Present?		mpled Area Wetland?	Yes/		
Remarks:					
High Water Table (A2) Hy Saturation (A3) Ox Water Marks (H1) Pre Sediment Deposits (B2) In Algal Mat or Crust (B4) OII Iron Deposits (B5)	ue Aquatic Plants (B14) drogen Sulfide Odor (C1) idired Rhizospheres on Living esence of Reduced fron (C4) esent fron Reduction in Tilled 5 in Muck Surface (C7) her (Explain in Remarks)	g Hoots (C3)	Drainage Pa Moss Trim Li Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic	nes (B16) Water Table (C2) rows (C8) sible on Aerial Imagery ressed Plants (D1) Position (D2)	
Inundation Visible on Aerial Imagery (87)			Shallow Aqui		
Water-Stained Leaves (B9) Aquetic Fauna (B13)			Microtopogra FAC-Neutral	phic Relief (D4)	
Field Observations:		1	rwc-weddal	1634 (D3)	
Surface Water Present? Yes No 🖊 Do	enth (inches):				
Water Table Present? Yes No Do					
Saturation Present? Yes No Do	epth (inches): 3	Wetland H	ydrology Presen	l? Yas <u>/</u> No	
(includes capillary fringe) Doscribe Recorded Data (stream gauge, monitoring well,	garial photos, province igens	rtions) if ever	lahla-		
	process process maps				
Remarks:					

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ee Stratum (Plot sizo: 15 **)		Dominant		Dominance Test worksheet:
	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
				That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant
				Species Across All Strata* (B)
				Percent of Dominant Species (OL)
				That Are OBL, FACW, or FAC: (A/F
· ·-				Prevalence Index worksheet:
		= Total Cove		Lotal % Cover of: Muhiply by:
50% of total cover:				OBL species x 1
pting/Shrub Stratum (Plot size: 15)		total color.		FACW species x 2 =
Anna Copyright (Flot Sires				FAC species x 3 =
				FACU species x 4 =
				UPI species x 5 =
				Column Totals: (A) [B]
				Prevalence Index = H/A = .
				Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
				✓ 2 - Ooreinance Test is >50%
		Tetal Carr		3 - Prevalence Index is ≤3.0'
50% of total cover:	20% of	 Total Cove total cover 	ir	4 - Morphological Adaptations1 (Provide supporting
rb Stratum (Plot size: 5)	2020	total cuvel.		data in Remarks or on a separate sheet)
, a parage to occurre.		1		Problematic Hydrophytic Vegetation1 (Explain)
			FAR	İ
Impediency Copenies				¹ Indicators of hydric soil and wetland hydrology must
Symplescope Sections			<u> </u>	be present, unless disturbed or problematic
Viely servin			<u> 740</u>	Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
				more in diameter at breast height (DBH), regardless of
				height.
				Sapling/Shrub - Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1
·				m) tall.
				Herb – All herbaceous (non-woody) plants, regardless
		- Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of	total cover:	12	Woody vine - All woody vines greater than 3.28 ft in
pody Vine Stratum (Plot size: 15)				height.
				Hydrophytic
		Total Cove	r	Vegetation
50% of total cover:				
marks: (Include photo numbers here or on a separate s	sheet.)			
	•			
(- plot size aljust) for to size of moth	~.*			

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Depth	Matrix			x Features						
iriches)	Color (moist)	_%_	Color (moist)		(ype	l oc'	<u>Texture</u>		Remarks	
2-12+	- 2.89 <u>4/3</u>	<u> </u>	7.57# 96	<u>_5_</u> .	(<u>m</u>	<u> </u>			-
					_					
<u> </u>						-				
						_				
Type: C=C	oncentration, D=Dept	letion, RM:	Reduced Matrix, MS	S-Masked S	and Gra	ins.	² Location: PL=F	ore Lini	ing, M-Matrix.	
Histosol Histo Fp Black Hi Hydroge Stratified 2 cm Mu Depleted Thick Da Sandy M	tipedon (A2)		Daik Suiface Polyvalue Be Pinm Dark Su Foamy Gleye Depleted Mai Redox Dark S Depleted Dai Redox Deplete Iron-Mangam MLRA 13	elow Surface Inface (S9) (Noted Matrix (F2) Inface (F3) Surface (F6) Ik Surface (F6) essions (F8) ese Masses 6)	ALRA 1. 7) (F12) (L	47, 148) .RR N,		i Muck (i st Prairie ILRA 14 mont Flo ILRA 13 Shallow ir (Expla	odplan Soils	47) (F19) (TF12)
estrictive L	edox (S5) Matrix (S6) .ayer (if observed):		Piedmont Flo Red Parent N				(8) wetlar	id hydro	logy must be p ed or problema	resent,
Type: Depth (inc emarks:	:hes):		_			_	Hydric Soil Pro	asent?	Yes	No

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: (versit for	als Europy	City/	County: <u>(4272)</u> (`J.	Sampling Date: <u>) બ Apr. 1 Ja</u> r
Applicant/Dwner: Advanz	il Porme			State: <i>O H</i> _	Sampling Point: Wt t v
Investigator(s): Milk 19	essenti and Col	1. Vilan Sect	tion, Township, Range:	524, 714N F	9~
					Stope (%): 15-30
Subregion (LRR or MLRA):		Lat: 40 60/7			
Soil Map Unit Name: 64					cation: V/*4
				(If no, explain in F	
Are climatic / hydrologic condi Are Vegetation, Soil _				ur no, explain in r d Circumstances	
Are Vegetation, Soil				explain any answe	ers in Remarks.)
				· -	s, important features, etc.
Hydrophytic Vegetation Pres	sent? Yes_	No/	is the Sampled Area		,
Hydric Soil Present?	_	No	within a Wetland?	Yes	No
Wetland Hydrology Present Remarks:	?Yes	No			
HYDROLOGY					
Wetland Hydrology Indicat	tone:		-	Sprandery India	stors (minimum of two required)
Primary Indicators (minimun		rhark off that anniu)			Cracks (B6)
Surface Water (A1)	TOTORE IS TEQUICO.	True Aquatic Plants	(814)		getated Concave Surface (H8)
High Water Table (A2)		Hydrogen Sulfide Or		Urainage Pa	
Saturation (A3)			res on Living Roots (C3)	_	
Water Marks (B1)		Presence of Reduce			Water Table (C2)
Sediment Deposits (B2)	I		on in Tilled Soils (C6)	Crayfish Bu	rows (C9)
Drift Deposits (B3)		Thin Muck Surface ((C1)	Saturation V	risible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Re	emarks)	Stunted or S	Stressed Plants (D1)
Iron Deposits (B5)					Position (D2)
Inundation Visible on As				Shallow Aqu	
Water-Stained Leaves (B9)				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutra	I Test (D5)
Field Observations:		1			
Surface Water Present?	Yes No _	Depth (inches):			
Water Table Present?	Yes No _	Depth (inches):		Hydrology Prese	NO NO
Saturation Present? (includes capillary fringe)	Yes No _	Depth (inches):			n(; res No
Describe Recorded Data (st	rearn gauge, monitor	ing well, aerial photos, pr	evious inspections), if av	ailable:	
Remarks:	-				

VEGETATION (Four Strata) - Use scientific names of plants

Sampling Point: W4 4

VEGETATION (Four Strata) - Use scienti	· · · · · · · · · · · · · · · · · · ·	Sampling Point: WZ Z
- 1	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>*3</u>)	% Cover Species? Status	Number of Dominant Species 1
1. Princy service	25 / FACY	
2. Green rates	15 / FACE	7
3. Ulmus ruga		Total Number of Dominant
		Species Across All Strata (H)
4		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: 2 5"/. (A/H)
		machie obe, rivers, or rige.
6		Prevalence Index worksheet:
λ		
	- Total Cover	
50% of total cover:	22.5 20% of total cover: 4	OBL species x 1
Sapling/Shrub Stratum (Plot size: 15	1	FACW species x 2 =
		FAC species x 3 =
1. Proces Secretion		
2. Rusa mallitar		FACU species x 4
3. toles gentleville	5. 636	UPL species x 5 =
4. Rabon allegharionsis	5- FACU	Column Totals: (A) (B)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
5 Links herring	<u> </u>	Prevalence Index = B/A =
6		Hydrophytic Vegetation Indicators:
7		1
		1 - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3.01
	3'2 = Total Cover	
50% of total cover:	20% of total cover: 6.47	4 - Morphological Adaptations ¹ (Provide supporting
	2010 01 10101 00101.	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: S)	,	Problematic Hydrophytic Vegetation1 (Explain)
1. Pelpotisha Brown tickity		
2 Rose moltifles	ST / FACE	d .
3. Clayler : victioner		¹ Indicators of hydric soil and wetland hydrology must
3- (1= p)la _{p+1} - 10-1/2>0-1/2-	— 	be present, unless disturbed or problematic.
4. Posette 21.	_	Definitions of Four Vegetation Strata:
5		
6.		Tree - Woody plants, excluding vines, 3 in. (7.5 cm) or
		more in diameter at breast height (DBH), regardless of
7		height.
8		Continued to the state of the s
9		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
		m) tall
10		III) kari
11		Herb - All herbaceous (non-woody) plants, regardless
	23 = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover-	11.5 20% of total cover: 4. 6	
		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 33)	•	height
1. Jeste de des culieres	<u> </u>	
2		
3,		
4		Hydrophytic
5.		Vegetation
	5 = Foxal Cover	Present? Yes No
	= Total Cover	1
50% of total cover: _	2.5" 20% of total cover:	
Remarks: (include photo numbers here or on a sepa	rate sheet.)	
1		
<u></u>		

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inches)	Matrix Color (moist)	- N	Redo: Color (moist)	r Features	les?	Tooture	Remarks
4 4	Color (moist)		CONOR (UIOISI)	%Type	<u> </u>		nemarks
<u>0-7</u>	1048 113	165				<u>s://</u>	
-121	10 71 4/4	100				5./2	
	oncentration, D=Dept	etion, RM=Re	duced Matrix, MS	=Masked Sand	Grains.		L=Pore Lining, M=Matrix.
	ndicators:						ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface				cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Bel Thin Dark Sur			14B) C	oast Prairie Redox (A16) (MLRA 147, 148)
Black His Hydroner	suc (A3) n Sulfide (A4)		Loamy Gleye		(147, 146)	р	iedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat			— .	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S			_ v	ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dar			_ 0	ther (Explain in Remarks)
	rk Surface (A12)		Radox Depre				
	lucky Mineral (S1) (L 147, 148)	RR N,	Iron-Mangane MLRA 136	ise Masses (F12	(LRKN,		
	leyed Matrix (S4)			v :e (F13) (MLRA	136, 122)	³ Ind	icators of hydrophytic vegetation and
Sandy Re				odplain Soils (F1			tland hydrology must be present.
	Matrix (S6)		Red Parent M	laterial (F21) (MI	RA 127, 147)	uni	ess disturbed or problematic.
istrictive L	ayer (if observed):						
Турв:			_				
-	hes):		-			Hydric Soil	Present? Yes No
marks:							

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Project/Site: (arcel 6-0) faces City/County: Court to Sampling Date: 21 Arcel 30 B Applicant/Owner: Advanced Rome/ _____ State: CH ___ Sampling Point: NA M Investigator(s): Milky Microsoft and Codin Vilian Section, Township, Range: 525, 11900 RS I ocal relief (concave, convex, none): ________ Long: -71, 05:59 Subregion (LRR or MLRA): LRI レ Lat りゃ, 606つ Soil Map Unit Name: Charles sill long 3.19 slopes (686) _____ NWI classification: <u>__PEm__(not mapper</u> (If no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ___ Are "Normal Circumstances" present? Yes _____ Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? 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? is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) _ Surface Soil Cracks (B6) Primary Indicators (minimum of one is required; check all that apply) True Aquatic Plants (B14) Surface Water (A1) Sparsely Vegetated Concave Surface (B8)
Drainage Patterns (B10) ___ Hydrogen Sulfide Odor (C1) High Water Table (A2) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) ___ Moss Trim Lines (B16) Presence of Reduced fron (C4) Dry Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (CB) Sediment Deposits (B2) ___ Onft Deposits (B3) ___ Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) . .. Other (Explain in Remarks) Geomorphic Position (D2) Iron Deposits (B5) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (89) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: No 🖊 Depth (inches):_ Surface Water Present? No 🖊 Depth (inches):_ Water Table Present? Yes / No Depth (inches): 4" Saturation Present? Welland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

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VEGETATION	(Four Strata	i _ Hse	scientific n	ames of	atasla
VEGETATION	irour Su ata	J – USE	SCIENTING H	annes or	piants.

US Army Corps of Engineers

Sampling Point: www.

3	Absolute	Dominant I		Dominance Test worksheet:	
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species 2	
1				That Are OBL, FACW, or FAC:	(A)
2				Lotal Number of Dominant	
3.				Species Across All Strata:	(B)
4.				Percent of Deminant Species /20	
5.					(A/B)
6				THE CAS COLL PACE.	(1-7)
				Prevalence index worksheet:	
1		Tested Cours	_	Total % Cover of: Multiply by:	
50% of total cover:	20% of	= Total Cove	ır	OBL species x 1 =	.
Sapimg/Shrub Stratum (Plot size: 75)	20 % DI	TOTAL COVEL.		FACW species x 2	
	r	1	FALL	FAC species x3-	
1. Sambers His var samblesis		<u> </u>	TAIL	FACU species x4 =	
2				UPL species x 5 =	
3					
4				Column Totals: (A)	- (10)
5				Prevalence Index = D/A =	.
Б				Hydrophytic Vegetation Indicators:	-
7				1 Rapid Test for Hydrophytic Vegetation	
B				2 - Dominance Yest is >50%	
9				3 - Prevalence Index is ≤J.0¹	
_		= 1otal Cove		4 - Morphological Adaptations ¹ (Provide supp	nontino
50% of total cover: _ 7	20% of	toxal cover:_		data in Remarks or on a separate sheet)	9
Herb Stratum (Plot size:)				Problematic Hydrophytic Vegetation ¹ (Explain	.,
1. Importions expenses	15		FAC W	Problematic Hydrophytic vegetation (t xpian	٠
2. Juntas 30 3	75'			The all and the second	
3. Symplemen Cation	10		F40W	Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic.	lust
4. Combo somitilis	5		FAIN	Definitions of Four Vegetation Strata:	
5.				, and the second	
6.				Tree - Woody plants, excluding vines, 3 in. (7.6 c	m) or
7.				more in diameter at breast height (DBH), regardle height.	ess or
я				, and the second	
9.				Sapting/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than or equal to 3.28	BSS B
10.				m) tall.	""
11					.
II	45	- Total Cove		Herb – All herbaceous (non-woody) plants, regar of size, and woody plants less than 3.26 ft tall.	diess
50% of total cover:	2096.00	total cover			
Woody Vine Stratum (Plot size: 30)		10101 00701		Woody vine - All woody vines greater than 3.28	ft in
1,				height.	
·					
7					
a					
4				Hydrophytic	
5				Vegetation Present? Yes No	
		= Total Cove		Present? Yes No	
50% of total cover:		total cover:_		<u> </u>	
Remarks: (include photo numbers here or on a separate					
to vaidability goes so at includity	البعيد	1			
The second of th	**** F34	ire T			

			oth needed to docum			D. CO	1 4 10 42 50-14		
epth epth	Matrix Color (moist)	96	Color (maist)	Feature:	Type	Loc'	Texture		Remarks
nches) C il i							5./4		Пенцика
g .1111	2.59 4/2	<u> </u>	7.578 5/6						
		<u> </u>		<u> </u>					
		_		_					
	oncentration, D=Dep	letion, RM	-Reduced Matrix, MS	-Masked	Sand Gr	ains.			ng, MaMatrix.
Histoso Histic E Black F Hydrog Stratifie 2 cm M Deplete Thick D	pipedon (A2) fistic (A3) en Sulfide (A4) id Layers (A5) uck (A10) (LRR N) id Below Dark Surfaci lark Surface (A12)		Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Mat Depleted Dar Redox Dark S Depleted Dar	low Surface (59) d Matrix (rix (F3) Surface (F k Surface ssions (F1)	(MLRA 1 F2) 5) (F7) 8)	147, 148)	148)	2 cm Muck (/ Coast Prairie (MLRA 14 Piedmont Fic (MLRA 13 Very Shallow	odplain Soils (F19)
MLR Sandy (Sandy (Mucky Mineral (S1) (L A 147 , 1 48) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)	.RR N,	Iron-Mangane MLRA 136 Umbric Surfa Piedmont Flo Red Parent N	6) ce (F13) (odpl am S	MLRA 13 oils (F 19)	16, 122) (MLRA 14	1 8) v	ettand hydro	ydrophytic vegetation an logy must be present. ed or problematic.
estrictive Type:	Layer (if observed):								:
Depth (in emarks:	iches):						Hydric So	il Present?	Yes No

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Project/Site (west) 6 of Energy Contre City/County: Correll Co. Sampling Date: 29 April 208 Applicant/Owner: Advance! Percet State: Off Sampling Point: W.L. m. of Investigator(s): Mr. Morrows hand Todio V. Long Section, Township, Range: 528 7790, 2500 Subregion (LRR or MLRA): 119 N Let: 10,607) Long: 31,0564 Datum: 100 Sf Soil Map Unit Name: Westmeretinh - Cush ofer with lowing 15-254 stone (Wind) NWI classification: UPL Are climatic / hydrologic conditions on the site typical for this time of year? Yos ______ No ______ (If no, explain in Remarks.) Are Vegetation ______, Soil _______ or Hydrology ______ septificantly 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? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: HYDROLDGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ True Aquatic Plants (B14) Surface Water (A1) ___ Hydrogen Sulfide Odor (C1) ___ Drainage Patterns (B10) ___ High Water Table (A2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Moss 1rim Lines (B16) ___ Saturation (A3) ___ Dry-Season Water Table (C2) ___ Presence of Reduced Iron (C4) __ Water Marks (B1) Recent Iron Reduction in Titled Soils (C6) __ Sediment Deposits (B2) ___ Crayfish Burrows (C8) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Other (Explain in Remarks) __ Stunted or Stressed Plants (D1) ___ Algal Mat or Crust (B4) ___ Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (87) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) Water-Stained Leaves (89) ___ FAC-Neutral Test (D5) _ Aguatic Fauna (B13) Field Observations: Yes _____ No ____ Depth (inches): ____ Yes ____ No ___ Depth (inches): ____ Surface Water Present? Water Table Present? Yes ____ No ___ Depth (inches):__ Saturation Present? Wetland Hydrology Present? Yes _ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring wall, aerial photos, previous inspections), if available: Remarks:

/EGETATION (Four Strata) – Use scientific h	iames or	piants.		Sampling Point: WZ 75 90
		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 32)	% Cover	Species?		Number of Dominant Species /
1. Charges roles			FALL	That Are OBL, FACW, or FAC:(A)
2. Prony greatlas	15		FAIR	Total Number of Dominant
3. Ulms, rafes	57			Species Across All Strata:(B)
4				Species Across Air Children
				Percent of Dominant Species
i.,				That Are OBL, FACW, or FAC: 16.6 7% (A/B)
				Prevalence Index worksheet:
	50	= Total Cov	81	Total % Cover of Multiply by:
50% of total cover: 25	20% of	total cover:	10	OBL species x1 =
Sapling/Shrub Stratum (Plot size: 75")				FACW species x 2 =
Rus meltifle -)	_	HATU	FAC species x 3 =
Rober all shemients			Face	FACU species x 4 =
- RANCO MILOS REMINISTRA	- 12		1-770	UPL species x 5
throng secotion				
. Ulmos rubro				Column Fotals: (A) (B)
				Gravelence Index R14
				Prevalence Index = BIA =
	-			Hydrophytic Vegetation Indicators:
				1 - Rapid Test to Hydrophytic Vegetation
·				2 - Dominance Test is >50%
<u>. </u>				3 - Prevalence Index is ≤3.0 ¹
	_43	= Total Cov	er ,	4 - Marphological Adaptations (Provide supporting
50% of total cover: 23	20% of	total cover:	{	
lerb Stratum (Plot size:)				data in Remarks or on a separate sheet)
Polasticha Gerandichilla	5	/	FACE	Problematic Hydrophytic Vegetation ¹ (Explain)
Tokies dender Fedicans			Fac	
A) I are a second	<u> </u>		Fac	Indicators of hydric soil and welland hydrology must
Chylen Viginian				be present, unless disturbed or problematic.
. Gram sunabnois			FACU	Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
				more in diameter at breast height (DBH), regardless of height.
				°
				Sapling/Shrub - Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3,28 ft (1
l				m) (all.
				Herb - All herbaceous (non-woody) plants, regardless
	10	- Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover:5	20% pl	total cover	° 3-	1
loody Vine Stratum (Plot size: 33)	20000	MICH COVER		Woody vine - All woody vines greater than 3.78 ft in
oppy nine 24 affilia (Not size: " 3)	,-	./	F4	height.
Tweetaker reliens			_ F.4 c	
				l
				Hydrophytic
				Vegetation Present? Yes No
		■ Total Cov	er	7 10007117
50% of total cover: 2.5		total cover:		
Remarks: (include photo numbers here or on a separate s	sheet.)			

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SOIL	Sampling Point: WEPT of

	cription: (Describe to	the depth				or confirm	the abse	nce of indica	(ors.)	
Depth	Matrix		Red	ox Feature:		1 (D	
(inches)	Calar (moist)	<u>%</u> _	Color (moist)		Type'	_Log'	Texture 5.1		Remarks	<u>. </u>
<u>. 7. </u>	1648 H/3	108								
7-12-	1071 4/4	رين ا					5:11	<u> </u>		
									-	
	oncentration, D-Depte	tion, RM=Re	educed Malnx, M	S=Masked	Sand Gr	ains.		: PL=Pore Li		
lydric Soil	Indicators:						je:			Hydric Soils ³ :
Histosol			Dark Surfac				_		(A10) (MLRA	
	oipedoii (A2)		Polyvalue B				148} _	_ Coast Prair		6)
	istic (A3)		Thin Dark 5			47, 148)		(MLRA 1		
	en Sulfide (A4)		Loamy Gley		F7)		_		loodplain Soil	ls (F19)
	d Layers (A5)		Depleted Ma					(MLRA 1		
	JCK (A10) (LRFI N)		Redox Dark				_		w Dark Surfa	
	d Relow Dark Surface	(A11)	Depleted Da				_	_ Other (Expl	ain in Remark	(5)
	ark Surface (A12)		Redox Dep							
	ducky Mineral (S1) (LF	RR N.	Iron-Mangar		as (F12) (LRR N,				
	A 147, 148)		MLRA 13							
	Gleyed Matrix (S4)		Umbric Surf.							egetation and
	Redox (S5)		Piedmont FI						ology must be	
	Matrix (S6)		Red Parent	Material (F	21) (MLR	A 127, 147	'}	unless distur	bed or proble	matic.
Rostrictive I	Layer (if observed):						1			
Type:			-				Ì			
Depth (in	ches):		_				Hydric	Soil Present?	Yes	No
Remarks:							<u> </u>			

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

o i i i i	3:4:136
	y/County: Cycleff Co. Sampling Date: 3-5 April 36
Applicant/Owner: Almost fort	State: VI Sampling Point: W I N
Investigator(s): Inite Missionali and Colle V box Se	
Landform (hillslope, terrace, etc.): Herrace Local	relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): () Value Value	Long: ~ 61. C 516 Datum: ### 55
Soil Map Unit Name: Iringraphy Costs for All Long 18 25	4. 5/13 (WmO) NWI classification: 10m (-1 mppel)
Are climatro / hydrologic conditions on the site typical for this time of year?	
Are Vegetation Soil, or Hydrology significantly dis	
Are Vegetation Soil or Hydrology naturally proble	
	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V. No.	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	Attill(9 Ac(19)0; 197 - 190 -
Remarks:	
whole Stomm, hough	
′	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1) True Aquatic Plant	
High Water Table (A2) Hydrogen Sulfide	= 1,1 2 2
	heres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Redu	ced Iron (C4) Dry-Season Water Table (C2)
	ction in Tilted Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface	
Algal Mat or Crust (H4) Other (Explain in F	
Iron Deposits (B5)	Geomorphic Position (122)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stamed Leaves (H9)	Microtopographic Relief (D4) FAC-Neutral Test (D5)
Aquatic Fauna (B13)	
Field Observations: Surface Water Present? Yes No Depth (inches):	r. J 11
	0.25 0.25
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	
(includes capillary (ringe)	
Describe Recorded Data (stream gauge, monitoring well, perial photos,)	previous inspections), if available:
Remarks:	

US Army Corps of Engineers Eastern Mountains and Predmont – Version 2.0

	Absolute	Dominant	Indicator	Dominance Test worksheet:
ree Stratum (Plot size:)		Species?		Number of Dominant Species 1
<u>-</u>				That Are ODL, FACW, or FAC:(A)
				Total Number of Dominant
				Total Number of Dominant Species Across All Strata: (B)
				Percent of Dominant Species /むひ That Are OBL, FACW, or FAC: (A/B)
				Prevalence Index worksheet:
		= Total Cove		1 otal % Cover of: Multiply by:
50% of total cover:				OBL species x 1
ppling/Shrub Stratum (Plot size: 💍 💍				FACW species x 2 =
-				FAC species x 3 =
•				FACB species x 4 =
				UPL species x 5 =
				Column Totals: (A) (B)
				Prevalence Index = B/A =
				Hydrophytic Vegetation indicators:
				Rapid Test for Hydrophytic Vegetation . الر
				2 · Dommance Test is >50%
				3 - Prevalence Index is ≤3.01
50% of total cover:		= Iolal Cove		4 - Morphological Adaptations1 (Provide supporting
50% of total cover:	20% or	total cover:		data in Remarks or on a separate sheet)
erb Stratum (Plot size: 5")	c-	,	Encw	Problematic Hydrophytic Vegetation1 (Explain)
Ingestions Expression				
frem p +	_ _			Indicators of hydric soil and wetland hydrology must
Lysimahis ormanlesia			FACW	be present, unless disturbed or problematic.
Charles Minima	. <u> </u>		FAC	Definitions of Four Vegetation Strata:
				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
				height.
				-
				Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
],				m) tall.
' <u> </u>				L
•	15	■ Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
	.—:	total cover:	[†] 3	· ·
50% of total cover: 40.5				
50% of total cover: 17.5	20% of	10101 20701		Woody vine - All woody vines greater than 3.28 ft in
oody Vine Stratum (Plot size: 35")		10101 00701.		Woody vine – All woody vines greater than 3.28 ft in height.
oody Vine Stratum (Plot size: 35")		10101 00701.		
oody Vine Stratum (Plot size: 33°)		10101 00701.		
ogdy Vine Stratum (Plot size: 30)		10101 00701.	<u> </u>	
(Plot size:)		10101 00701.	<u> </u>	height. Hydrophylic
(Plot size:)				height. Hydrophylic
(Plot size:)		= 1 oral Cove		height. Hydrophylic

)epth	Matrix		Redo	r Features			
inches)	Color (moist)	%	Color (moist)	%lype	Loc ²	Texture	Remarks
J 121	257 4/1	15				34	ocsanie struking 5%
	ucentration, D=Depti	ation, RM=Re	duced Matrix, MS	-Masked Sand Gr	ains. '		I =Pore I ining, M=Matrix. stors for Problematic Hydric Soifs ^a
ydric Soil I Histosol			Dark Surface	(57)			cm Muck (A10) (MLRA 147)
	ipedon (A2)	-		low Surface (S8) (N	ILRA 147, 14		Coast Prairie Redox (A16)
_ Hlack His				rface (S9) (MLRA 1	47, 148)		(MLRA 147, 148)
	n Sulfide (A4) Layers (A5)	-	Loamy Gleye Depleted Mail			— P	riedmont Floodplain Soils (F19) (MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark :			v	ery Shallow Dark Surface (TF12)
Depleted	Below Dark Surface		Depleted Dar			_ c	Wher (Explain in Remarks)
	rk Surface (A12) ucky Mineral (S1) (Ll		Redox Depre	ssions (F8) ese Masses (F12) (I DO N		
	ucky minerai (31) (Li . 147, 148)	rus ni, _	Hon-Mangari		LINI IV,		
_ Sandy G	leyed Matrix (S4)	_	Umbric Surfa	ce (F13) (MLRA 13			icators of hydrophytic vegetation and
	edox (S5)	-		odplain Soils (F19)			itland hydrology must be present. Jess disturbed or problematic.
	Matrix (S6) ayer (if observed):		Red Parent N	laterial (F21) (MLR	H 121, 147)	uii	is a statuted of problematic.
Type:	,,.		_				
Depth (inc	hes):					Hydric Soil	Present? Yes No
emarks:					- '		
att	د - انيد اسم	Al. + H	Sugarity 5	House they			
		,)			

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Applicant/Owner: About 1 Active 1 Active 1 Active 2 Acceleration, Township, Range. 521. Type 85 Action, Ra	Project/Site: (4071) (42 1/3 fuerya	City/Cou	unly: (vego) (v		_ Sampling Date: <u>オティル・オリッ</u> ク
Investigator(s):	Applicant/Owner: Alman former			State: C//	Sampling Point: الم الم الم الم الم الم
Solitory Subsection Care Subsection S	Investigator(s): 1914 Illustrate and Colle	v. Las Section.	, Township, Range:	528. 714 N.	Rs ~
Submap Unit Name: V					
Soil Map Unit Name:					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	souregion (LAR OF MERA). CRAFF	11.1	- V - / W	and know a	Datam
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 Vegatation Present? Yes No Is the Sampled Area within a Wetland? Wes No Wetland Hydrology Present? Yes No Surface Water (A1) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sauration (A3) Surface Water (A1) Sauration (A3) Oxided Rhizospheres on Living Roots (C3) Most Similar (B16) Dry Season Water Table (C2) Present? Recent fron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Algal Mat or Crust (B4) Other (Explain in Remarks) Statuation Visible on Aerial Imagery (C9) Surface (C7) Sauration Visible on Aerial Imagery (C9) Inductor Status (C6) Surface (C7) Sauration Visible on Aerial Imagery (C9) Surface (C7) Sauration Visible on Aerial Imagery (C9) Inductor Surface (C7) Sauration Visible on Aerial Imagery (C9) Surface (C7) Sauration Visible on Aerial Imagery (C9) Mater-Stained Leaves (C9) Surface (C7) Sauration Visible on Aerial Imagery (C9) Sauration Visible on Aer					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegatation Prasent? Yes	Are climatic / hydrologic conditions on the site typical	for this time of year? Yes	S NO	(ir no, explain in i	Kemarks)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegatation Prasent? Yes	Are Vegetation, Soil, or Hydrology	significantly disturbe	ed? Are 'Norma'	Circuinstances*	present? Yes No
Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Primary Indicators (minimum of two required: check all that apply) Surface Water (A1) Hydrogen Sulfida Odor (C1) Sauration (A3) Saturation (A3) Surface Soil Cracks (B6) Saturation (A3) Surface Soil Cracks (B6) Saturation (A3) Saturation (A3) Segment Deposits (B1) Presence of Reduced from (C4) Dry Season Water Table (C2) Drit Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (B7) Iron Deposits (B5) Iron Deposits (B5) Surface Soil Cracks (B6) Dry Season Water Table (C2) Drit Deposits (B5) Sediment Deposits (B5) Sed	Are Vegetation, Soil, or Hydrology	naturally problemati	c? (If needed, o	explain any answ	ers in Remarks.)
Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Primary Indicators (minimum of two required) By Surface Water (A1) High Water Table (A2) Sauration (A3) Water Table (A2) Hydrogen Sulfide Odor (C1) Sauration (A3) Water Marks (B1) Sediment Deposits (B2) Brish Odor (C2) Drift Oeposits (B3) Drift Oeposits (B3) Irin Muck Surface (C7) Algal Mat or Crus (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Statined Leaves (CB) Aquelic Fauna (B13) Field Observations: Surface Water Present? Yes No Dopth (Inches): Water Table (A2) Dryft Geostar (B4) Water Statined Leaves (B8) Aquelic Fauna (B13) Field Observations: Surface Water Present? Yes No Dopth (Inches): Water Table Present? Yes No Dopth (Inches): Wetland Hydrology Present? Yes No Depth (Inches): Inches Inche	SUMMARY OF FINDINGS - Attach site	map showing samp	oling point location	ons, transect	s, important features, etc.
Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Primary Indicators (minimum of two required) By Surface Water (A1) High Water Table (A2) Sauration (A3) Water Table (A2) Hydrogen Sulfide Odor (C1) Sauration (A3) Water Marks (B1) Sediment Deposits (B2) Brish Odor (C2) Drift Oeposits (B3) Drift Oeposits (B3) Irin Muck Surface (C7) Algal Mat or Crus (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Statined Leaves (CB) Aquelic Fauna (B13) Field Observations: Surface Water Present? Yes No Dopth (Inches): Water Table (A2) Dryft Geostar (B4) Water Statined Leaves (B8) Aquelic Fauna (B13) Field Observations: Surface Water Present? Yes No Dopth (Inches): Water Table Present? Yes No Dopth (Inches): Wetland Hydrology Present? Yes No Depth (Inches): Inches Inche	Underphysic Magazetica (Franchi? Mag	No. /			
Wetland Hydrology Present? Yes					/
Wetland Hydrology Indicators: Sacondary Indicators (minimum of two required)			within a wettano?	Yes	NO
Wetland Hydrology Indicators: Primary Indicators (minimum of two required) Surface Water (A1) High Water Table (A2) Surface Water (A3) Water Table (A2) Surface Water (A3) Water Table (A2) Surface Water (A3) Water Table (A2) Saluration (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Drift Oeposits (B3) Iron Deposits (B3) Iron Deposits (B3) Iron Deposits (B3) Mater Marks (B1) Water Mater Crus (B4) Iron Deposits (B3) Iron Deposits (B3) Mater Mater Crus (B4) Water Mater Mater (B4) Wetland Hydrology Present? Yes No Depth (Inches): Wetland Hydrology Present? Yes No Depth (Inches): Wetland Hydrology Present? Yes No Mater Mater (B4) Wetland Hydrology Present? Yes No Mater Mater (B4) Wetland Hydrology Present? Yes Mo Mater Mater (B4)	, ,,				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Surface Water (A3) Water Marks (B3) Water Marks (B3) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Primary (C4) Recent tron Reduction in Titled Soils (C5) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mater Crust (B4) Iron Deposits (B5) Inondation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquelic Fauna (B13) Field Observations: Surface Water Present? Yes No Dopth (inches): Water Mater (A1) Secondary Indicators (minimum of two requires) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Dry-Season Water Table (C2) Crayfish Burrows (C8) Crayfish Burrows (C8) Surface (C7) Saturation Visible on Aerial Imagery (C9) Shall or Crust (B4) Microtopographic Relief (D4) FAC-Neutral Lest (D5) Field Observations: Surface Water Present? Yes No Dopth (inches): Water Table Present? Yes No Dopth (inches): Wetland Hydrology Present? Yes No Dopth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if aveilable:					
Wetland Hydrology Indicators: Sacondary Indicators (minimum of two requires!)					
Wetland Hydrology Indicators: Sacondary Indicators (minimum of two requires!)					
Wetland Hydrology Indicators: Sacondary Indicators (minimum of two requires!)					
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) High Water Table (A2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Prise Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Thin Muck Surface (C7) Agal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquelic Fauna (B13) Field Observations: Surface Water Present? Yes No Dopth (inches): Saturation Yesent? Yes No Depth (inches): Surface Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available:	l <u></u>				
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidezed Philiprospheres on Living Rooks (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced from (C4) Sediment Deposits (B3) Drift Deposits (B3) Agail Mart or Crust (B4) Iron Deposits (B3) Other (Explain in Remarks) Stunded or Strossed Plants (D1) Geomorphic Position (D2) Indidation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquelic Fauna (B13) Field Observations: Water Table Present? Yes No Dopth (inches): Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Private (C1) Drantage Patterns (B10)					
Surface Water (A1)	3 07				
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 (C9) Audition Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquelic Fauria (B13) Field Observations: Field Observations: Water Table Present? Yes No Dopth (inches): Saturation Visible on Aerial Imagery (B7) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Fact Neutral Test (D5) Water Table Present? Yes No Dopth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrotogy Present? Yes No Destribe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available:					
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Surcessed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Shallow Aquitard (D3) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Water Table Present? Yes No Dopth (inches): Water Table Present? Yes No Dopth (inches): Water Table Present? Yes No Dopth (inches): Wetland Hydrotogy Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrotogy Present? Yes No Depth (inches): Includes capillary fringe)					
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Strossed Plants (D1) I ron Deposits (B5) Geomorphic Position (D2) Inendation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (D9) Microtopographic Relief (D4) Aquetic Fauna (B13) Field Observations: Surface Water Present? Yes No Dopth (inches): Saturation Present? Yes No Dopth (inches): Wetland Hydrotogy Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrotogy Present? Yes No Depth (inches): Inches Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available:					
Iron Deposits (B5) Geomorphic Position (D2)	I - I I I			_	
Inundation Visible on Aerial Imagery (87) Water-Stained Leaves (59) Aquelic Fauna (813) Field Observations: Surface Weter Present? Ves No Dopth (inches): Sauvation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available:		_ Other (Cxprant in Nema	,,,,		
Water-Stained Leaves (D9) Aquelic Fauna (B13) Aquelic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Water Table Present? Yes No Dopth (inches): Water Table Present? Yes No Dopth (inches): Water Table Present? Yes No Dopth (inches): Wetland Hydrotogy Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available:					
Aquelic Fauna (B13)	_ * * * * * * * * * * * * * * * * * * *				
Surface Water Present? Yes No Doph (inches): Water Table Present? Yes No Doph (inches): Water Table Present? Yes No Doph (inches): Wetland Hydrotogy Present? Yes No Depth (inches): Wetland Hydrotogy Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Water Table Present? Yes No Dopth (inches): Wetland Hydrotogy Present? Yes No Depth (inches): N	Field Observations:				
Water Table Present? Yes No Dopth (inches): Wetland Hydrotogy Present? Yes No Depth (inches): N	Surface Water Present? Yes No	Dopth (inches):			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Water Table Present? Yes No	Dopth (inches):			_
Describe Racorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Saturation Present? Yes No	Depth (inches):	Wetland h	tydrology Prese	nt? Yes No
	(includes capitlary fringe)	well periol phylos provid	oue inspections) if our	ilahle-	
Renarks:	Describe Recorded Data (Stream gauge, monitoring	well, dellai priotos, previ	ous inspactions), il ave	mabie.	
\	Remarks:				
					

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: We North

Tree Stratum (Plot size: 33)		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 5.3		Species?	Status	Number of Dominant Species
1. Ace seekerm	<u> </u>	. <u> /</u>	FALV	That Are OBL, FACW, or FAC:(A)
2. Avery roles	15		Edix	Total Number of Dominant
3. Cogs cons	10	_	Face	Species Across All Strata: (8)
4				(5)
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: #3 (A/H)
6				Prevalence Index worksheet:
7				
	50	- Total Cov	er	Total % Cover of:Multiply by:
50% of total cover:25		total cover:		OBL species x 1
Sapling/Shrub Stratum (Plot size: / 5"				FACW species x Z =
Sapingrando stratum (Pioc size:		./		FAC species x3 =
1. Rosa mu Hiller	′5-	<u> </u>	1-400	
2. 6/m/2 1/3/ n	_5_	·	FAC	FACU species x 4 =
3. Permen Spender	5		FACE	UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9				2 - Dominance Test is >50%
		= Total Cov		3 - Prevalence Index is \$3.0°
50% of total cover:12.1	- 200V -	= Total Cov	e _	4 - Morphological Adaptations' (Provide supporting
	20%	r total cover;		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)		,		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Polyatichum gers tehnty			FACE	Problematic Frydrophytic vegetation (Explain)
2. Com corners	7		FAIL	
3 form mothill -	- 1		FACV	Indicators of hydric soil and welland hydrology must
4. Viula servia	-		FAC	be present, unless disturbed or problematic.
				Definitions of Four Vegetation Strata:
5. buliva aprins			FAIL	T 1514:1
5. from surting (sulling)			FAIL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapting/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11,				Herb - All her vacaous (non-woody) plants, regardless.
	14	= Total Cov	er .	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 1.5	20% 0	total cover-	3.1	· ·
Woody Vine Stratum (Plot size: 32)				Woody vine - All woody vines greater than 3.28 ft in
- WOOT AIRS STRIBING (NOT SIZE: 74				height.
1				
2				
3				
4				
				Hydrophytic
5				Vegetation Present? Yes No
		= Total Cov		162 10
50% of total cover:	20% of	total cover:		
Remarks: (include photo numbers here or on a separate s	heel.)			·
· ·				

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SOIL Sampling Point: <u>\(\psi_i \nu_j \nu_j \)</u>

Dec Decemposition Decemp		Redox Features	Texture Re	
Dee: C=Concentration, D-Deptetion, HM=Reduced Matrix, MS=Masked Sand Grains Constitute				e <u>marks</u>
Dee: C=Concentration, D-Deptetion, HM=Reduced Matrix, MS=Masked Sand Grains Constitute PL=Para Lining, M=Matrix,	C-6_ 1048 4/3 100			
Iric Soil Indicators: Indicators: Indicators or Problematic Hydric Soils* Histosol (A1)	-12 10/4 4/6 100		<u> </u>	
Iric Soil Indicators: Indicators: Indicators or Problematic Hydric Soils* Histosol (A1)	·			
Indicators: Indicators: Indicators: Indicators or Problematic Hydric Soils* Histosoi (A1)				
Indicators: Indicators: Indicators: Indicators or Problematic Hydric Soils* Histosoi (A1)			·	*****
Indicators: Indicators: Indicators: Indicators or Problematic Hydric Soils* Histosoi (A1)				
Iric Soil Indicators: Indicators: Indicators of Problematic Hydric Soils* Histosol (A1)				
Iric Soil Indicators: Indicators: Indicators of Problematic Hydric Soils* Histosol (A1)				
Iric Soil Indicators: Indicators: Indicators of Problematic Hydric Soils* Histosol (A1)				
Iric Soil Indicators: Indicators: Indicators of Problematic Hydric Soils* Histosol (A1)				
Iric Soil Indicators: Indicators: Indicators of Problematic Hydric Soils* Histosol (A1)				
Iric Soil Indicators: Indicators: Indicators of Problematic Hydric Soils* Histosol (A1)	no. C. Consequium D. Dealation HM	- Dadwood Moleky MS-Macked Sand Crains	² Location: PL-Bose Linion M	-Matrix
Histosol (A1) Histo Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Histo Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Below Dark Surface (F3) Polyted Below Dark Surface (F3) Polyted Below Dark Surface (A11) Polyted Dark Surface (F7) Polyted Below Dark Surface (A11) Polyted Dark Surface (F7) Polyted Surface (A11) Polyted Dark Surface (A11) Polyted Dark Surface (F12) Polyted Multin (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soits (F19) (MLRA 126, 122) Piedmont Floodplain Soits (F19) (MLRA 127, 147) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Indicators Soil Present? Yes		=Reduced Maluix, MS=Masked Salid Grains		
Histic Epipedon (A2)		Oark Surface (S.I)		-
Black Histic (A3)				
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Deak Surface (A11) Depleted Below Deak Surface (A17) Depleted Deak Surface (F5) Cother (Explain in Remarks) A Redox Depressions (F 8) Depleted Deak Surface (A17) Depleted Deak Surface (F7) Cother (Explain in Remarks) A Redox Depressions (F 8) Depleted Deak Surface (F1) Depleted Below Deak Surface (F1) Deplete				
2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (F2) Char (Explain in Remarks) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyer Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Imbric Surface (F13) (MLRA 136, 122) Imbric Surface (F13) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Intrictive Layer (if Observed): Impric Surface (F13) (MLRA 127, 147) Intrictive Layer (if Observed): Impric Surface (F13) (MLRA 127, 147) Impric Surface (F13) (MLRA 136, 122) Impric Surface (F13) (ML	Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (Γ2)	Piedmont Floodpla	in Soils (F19)
Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Red Parent Material (F21) (MLRA 136, 122) Inicitive Layer (if observed): Supply Redox (F8) Red Parent Material (F21) (MLRA 127, 147) R				
Thick Dark Surface (A1?) Sandy Mucky Mixers (I51) (I RR N, MLRA 147, 148) MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soits (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Problematic Welland hydrology must be present, unless disturbed or problematic. Intrictive Layer (if observed): Specific (i				
Sandy Mucky Mineral (S1) (I RR N, MLRA 136)			Criner (Explain in H	remarks)
MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Dimbric Surface (F13) (MLRA 136, 122) Pledmont Floodplain Soits (F19) (MLRA 148) Rod Parent Material (F21) (MLRA 127, 147) wetland hydrology must be present. unless disturbed or problematic. trictive Layer (if observed): (ype:				
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 12?) Indicators of hydrophytic vegetation and Sandy Redox (S5) Piedmont Floodplain Soits (F19) (MLRA 148) wetland hydrology must be present. Stripped Matrix (S5) Red Parent Material (F21) (MLRA 127, 147) unlass disturbed or problematic. Irrictive Layer (if observed): [Special Control of Contro				
Sandy Redox (SS) Pledmont Floodplain Soits (F19) (MLRA 148) wetland hydrology must be present. Stripped Mattux (SS) Rod Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Intrictive Layer (if observed): Type:			¹ Indicators of hydroph	nytic vegetation and
trictive Layer (if observed): (ype:	Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA	148) wetland hydrology n	nust be present.
(ype:	Stripped Matrix (S5)	Red Parent Material (F21) (MLRA 127, 1	47) unless disturbed or	problematic
Depth (inches): Hydric Soil Present? Yes No	strictive Layer (if observed):			
	Туре:	_		,
narks:	Depth (inches):	<u> </u>	Hydric Soil Present? Yes	w <u>~</u>
	marks:			•

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Carrol Const. Courses City/County: Carrol Co. Sampling Date: 25 April 2
Applicant/Owner: About Power State: Oth Sampling Point: W. C.
Investigator(s): Milk Massacrife and Colle Vilans Section, Lownship, Range: 528, 71414 1/54
Landform (hillstope, terrace, etc.): 1 cinc serio 1500. Local relief (concave, convex, none): (20, 1000) Stope (%): 3.5
Subregion (LRR or MLRA): LFF N Lat: 40 6094 Long: -31.0616 Datum: 100 13
Soil Map Unit Name: Library Victimit 3:11 form, 3:31/ 1/2/5 NWI classification: P55
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 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
Summart of I monage Acade site hap showing sampling point locations, transacts, important returnes, the
Hydrophytic Vegetation Present? Yes No Is the Sampled Area
Hydric Soil Present? Yes No within a Wetland? Yes No
Remarks:
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86)
Surface Water (&1) True Aquatic Plants (B)4) Sparsely Verestated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Yable (C2)
Sediment Deposits (B2) Recent Iron Reduction in Titled Soifs (C6) Crayfish Витоws (С8)
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9)
Algel Mat or Crust (B4) Other (Explain in Remarks)
Iron Deposits (85) Geomorphic Position (DZ)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Reliaf (D4)
Agustic Fauna (B13) FAC Neutral Test (D5)
Field Observations:
Surface Water Present? Yes / No Depth (inches): 6.69
Water Table Present? Yes No Depth (inches):
Surface Water Present? Yes _ / No Depth (inches): Water Table Present? Yes _ / No Depth (inches): Saturation Present? Yes _ / No Depth (inches): Wetland Hydrology Present? Yes _ / No Wetland Hydrology Present?
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Describe Recorded Data (Stream gauge, Intelligentity west, dental priority), previous inspections, in available.
Remarks:
Section water in pertions of wethout
,

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VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WL C

Tree Stratum (Plot size: 30)				
,	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strate: (B)
·				Percent of Dominant Species (ci)
<u> </u>				That Are OBL, FACW, or FAC: (A/B)
i				Prevalence Index worksheet:
		= Total Cove		Total % Cover of: Multiply by:
50% of total cover:				OBL species x 1 =
apling/Shrub Stratum (Plot size: 15				FACW species x 2 =
Sambara nigra V C combensis	50	1	Facer	FAC species x 3 =
Rosa my Hilliam			FAN	FACU species x 4 =
Ulmis pulsa	5		TAC	UPI. species x 5 ×
				Column Totals: (A) (B)
				Prevalence Index = B/A =
i				Hydrophytic Vegetation Indicators:
l				2 - Dominance Test is >50%
)				3 - Prevalence Index is \$3.0'
	60	- Total Cove	ar .	3 - Providence index is \$3.0 4 - Morphological Adaptations* (Provide supporting)
50% of total cover: 33	20% of	total cover:	is.	data in Hemarks or on a separate sheet)
lerb Stratum (Plot size:S `)				1
· Imperiory commits	10	/_	FACE	Problematic Hydrophytic Vegetation ¹ (Explain)
Certify Minister	10		Him	,
1. Charles smalliks	5		FAIW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Laparter constants	5		FAC	Definitions of Four Vegetation Strata:
5				
5,				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at broast height (DBH), regardless of height.
				Sapting/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
0.				m) tall.
1.				
	30	- Total Cove	·	Herb – All herbaccous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover;	20% of	total cover:	6	l.,
		_		Woody vine – All woody vines greater than 3.28 ft in height.
Voody Vine Stratum (Plot size: 3: ")				
Pedd File Bitterii (File Sies.				- 104th
			=	- 1994.
,			<u> </u>	
				Hydrophylic
				Hydrophylic
3		= Total Cove	×	Hydrophytic Vegeration

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Depth	Matrix		Redo	x Features				
inches)	Color (maist)	<u>%</u> _	Color (maist)					
2-17 4	1.54 4/2	40	2548 5/6	10	_ < _	- 12	3.10	
Гура: С=С	Concentration, D=Dept	etion, RM=	Reduced Matrix, M	S-Masked	Sand Gra	ains.		-Pore Lining, M-Matrix.
ydrıc Soil	Indicators:						Indica	tors for Problematic Hydric Soils
_ Histoso	ol (A1)		Dark Surface	e (S7)			2	om Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148) Co	oast Prairie Redox (A16)
Black H			Thin Dark Su			47, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gley		F2)			edmont Floodplain Soils (F19)
	d Layers (A5)		Dopleted Ma		an a			(MLRA 136, 147)
	luck (A10) (LRR N) ed Below Dark Surface	(441)	Redex Dark Depleted Da					ery Shallow Dark Surface (TF12) her (Explain in Remarks)
	ou below Dark Surface Dark Surface (A12)	(ATI)	Redox Depri				_ 0	tier (exhiain in remarks)
	Mucky Mineral (S1) (L	BR N	Iron-Mangan			LRR N.		
	A 147, 148)		MLRA 13		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Gleyed Matrix (S4)		Umbric Surfa	ce (F13) (MLRA 13	6, 122)	¹ Indu	cators of hydrophytic vegetation an
	Redox (S5)		Piedmont Fle	odplain St	oils (F19)	(MLRA 14	8) wet	fand hydrology must be present.
	d Matrix (S6)		Red Parent I	Material (F	21) (MLR.	A 127, 147	') unii	ess disturbed or problematic.
estrictive	Layer (if observed):						1	
Type:								_
Depth (in	nches):						Hydric Soll	Present? Yes No
emarks:								

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Picdmont Region

Project/Site: (ents Energy	City/0	County: Correct Co	·	Sampling Date: 17 April 219
Applicant/Owner:	,			_ State: _ C//	Sampling Point: 🚧 🖒 🚋
Investigator(s): M. L. Al->5	englical Colic V	Section Section 1	on, Township, Range:	528, 714M	Row
Landform (hitIslope, terrace, et					
Subregion (LRR or MLRA):	LAR W La	1: 412.674	I ong:	11.0614	Datum: Arab 55
Soil Map Unit Name: رئيد ا					
Are climatic / hydrologic condit					
Are Vegetation, Soil			rhed? Are 'Norma	d Circumstances" r	vresent? Yes No
Are Vegetation Soil				explain any answe	
		·			, important features, etc.
Hydrophytic Vegetation Presi	ent? Yes	No. of			
Hydric Soil Present?	Yes		Is the Sampled Area within a Wetland?	Vac	_ No
Wetland Hydrology Present?			William a Medianar	103	_ ""
Remarks:					
in confirli					
LIMBBOL CON					
HYDROLOGY					tors (minimum of two required)
Wetland Hydrology Indicate		sk all that menh A		Surface Soil	
Primary Indicators (minimum		True Aquatic Plants	(D14)		getated Concave Surface (88)
Surface Water (A1) High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa	
Saturation (A3)			es on Living Roots (C3)	_	
Water Marks (B1)		Presence of Reduce			Water Table (C2)
Sediment Deposits (B2)			on in Tilled Soils (CB)	Crayfish Bun	
Drift Deposits (B3)		Thin Muck Surface (isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Re	marks)	Stunted or S	ressed Plants (D1)
Iron Deposits (B5)				Geomorphic	Position (D2)
Inundation Visible on Ael				Shellow Aqui	
Water-Stained Leaves (E	t9)				upluc Helief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:		,			
Surface Water Present?		Depth (inches): Depth (inches):			
Water Table Present?	Yes No	Depth (inches):		Udrotom. Orocon	nt? Yes No
Saturation Present? (includes capillary fringe)	Yes No	_ Debru (inches):	Metiano	нуагоюду гтезег	10 10 NO
Describe Recorded Data (str	eam gauge, monitoring	well, aerial photos, pre	evious inspections), if av	ailable:	
Remarks:					
Remarks:					
L					

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point:	1000
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r	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: 3 -)	% Cover Species? Status	
1	and appended appended and appended appended and appended appended and appended appended appended appended and appended appended appended appended ap	
		That Are OBL. FACW, or FAC: (A)
2	·	Fetal Number of Dominant
3		Species Across All Strata:(B)
I and the second		
4		Percent of Dominant Species
5		That Are DBL, FACW, or FAC: (A/B)
G		
7		Prevalence Index worksheet:
·		Total % Cover of: Multiply by:
	= Total Cover	OBL species x 1 =
50% of total cover:	20% of total cover:	
Sapling/Shrub Stratum (Plot size: 15		FACW species x 2 =
1,		FAC species x 3
		FACU species x 4 =
7		
3		UPL species x 5 =
4		Column Totals: (A) (B)
		-
5		Prevalence Index = B/A =
6		Hydrophytic Vegetation Indicators:
7		1 3 1 3
I and the second		1 - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9	- <u> </u>	3 - Prevalence Index is ≤3.01
	= Total Cover	
50% of Intal cover:	20% of total cover:	4 - Morphological Adaptations* (Provide supporting
		data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)		Problematic Hydrophytic Vegetation ¹ (Explain)
1. 1 coletion sertence		<u>-</u> -
2. Bickeren volgeris	3 EARL	. I .
3. Steller melia	3 44	I indicators or pyone son and wetrand nyorology must
3. 34 Herry mythin	<u>`</u> <i></i>	- Oc present unicos disturbes or prociemente.
4. Pourse, 20.	<u> </u>	- Definitions of Four Vegetation Strata:
5		
		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6		 more in diameter at breast height (DBH), regardless of
7		_ height.
B		
		Sapling/Shrub - Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		_ m) tall
11		Herb – All herbaceous (non-woody) plants, regardless
	= Total Cover	of size, and woody plants less than 3.28 ft tall.
SOO of total course A.A.	20% of total cover: 2.6	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0
3. · · · · · · · · · · · · · · · · · · ·	20% or total cover:	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 3:)		height.
1		
2		
		-
3		-
4		- Undrophytic
5		Hydrophytic Vegetation
		Present? Yes No
_	= Total Cover 20% of total cover:	1000
50% of total cover:	20% of total cover:	- J
Remarks: (include photo numbers here or on a separate	sheet.)	·
	•	

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SOIL Sampling Point: _______ |
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix Color (moint)	%		Features		T	D	
inches)	Color (moist)		Color (moist)	<u>* T</u>		Texture	Her	narks
3 123	1648 4/3	91	2.548 4/6		(m	5.70		
						·		
			Deduced Marks 148	March of Co		211:		saundi.
ype: C≃Co rdric Soil li		ellon, RM-	Reduced Matrix, MS	~Masxed Sa	ng Grains.		L=Pore Lining, M=1	maurx. atic Hydric Soils ³ :
_ Histosol I			Dunk Fundamen	(02)				-
	(A2) ipedori (A2)		Dark Surface		58) (MLRA 141		om Muck (A10) (M past Prairie Redox	
_ Histic c.p _ Black His					30) (MLRA 14 LRA 147, 148)	, 146) ((MI.RA 147, 148)	
	i Sulfide (A4)		Loanny Gleyer			12	iedmont Floodplain	
	Layers (A5)		Depleted Mail			— '	(MLRA 136, 147)	
	k (A10) (LRR N)		Redox Dark S			v	ery Shallow Dark S	
	Helow Dark Surface	(A11)	Depleted Dark		ń		ther (Explain in Re	
	k Surface (A12)		Redox Depres		•	_		···,
	ucky Mineral (51) (L	AR N.	Iron-Mangane		F12) (CRR N,			
	147, 148)		MI.RA 138					
_ Sandy G	eyed Matrix (S4)		Umbric Surfac	e (F13) (Ml.	RA 136, 122)	3Ind	icators of hydrophy	tic vegetation and
_ Sandy Re	edox (S5)		Predmant Flor	odplain Soils	(F19) (MLRA 1	4B) we	iland hydrology mu	ust be present,
			Red Parent M	laterial (F21)	(MLRA 127, 14	17) uni	less disturbed or pr	roblematic.
	Matrix (S6)		INDO I BI BIRLIN					
	Matrix (S6) ayer (if observed):							
			TOO F STORY					
estrictive L	ayer (if observed):					Hydric Soil	Present? Yes_	No
estrictive L Type:	ayer (if observed):		1,001 (3) (1)			Hydric Soil	Present? Yes_	No
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):					Hydric Soil	Present? Yes_	No
estrictive L Type: Depth (inc emarks:	ayer (if observed): hes):	11 7 454				Hydric Soil	Present? Yes_	No
estrictive L Type: Depth (inc emarks;	ayer (if observed):	11 ; tsl				Hydric Soil	Present? Yes_	No/
estrictive L Type: Depth (inc emarks:	ayer (if observed): hes):	11 ; 454				Hydric Soil	Present? Yes_	No/
estrictive L Type: Depth (inc emarks:	ayer (if observed): hes):	11 ; 454				Hydric Soil	Present? Yes_	No_ <u></u>
estrictive L Type: Depth (inc emarks)	ayer (if observed): hes):	11 ; 451				Hydric Soil	Present? Yes_	No
strictive L Type: Depth (inc marks;	ayer (if observed): hes):	11 ; 451				Hydric Soil	Present? Yes_	No
strictive L Type: Depth (inc marks;	ayer (if observed): hes):	11 ; 451				Hydric Soil	Present? Yes_	No <u> </u>
estrictive L Type: Depth (inc emarks)	ayer (if observed): hes):	# ; tsl				Hydric Soil	Present? Yes_	No
estrictive L Type: Depth (inc emarks;	ayer (if observed): hes):	म _े स्त्र				Hydric Soil	Present? Yes_	No <u> </u>
estrictive L Type: Depth (inc emarks;	ayer (if observed): hes):	#; ksi				Hydric Soil	Present? Yes_	<u>No</u>
estrictive L Type: Depth (inc emarks)	ayer (if observed): hes):	# ; Asl				Hydric Soil	Present? Yes_	No V
estrictive L Type: Depth (inc emarks;	ayer (if observed): hes):	H ; 454				Hydric Soil	Present? Yes_	No <u> </u>
estrictive L Type: Depth (inc emarks:	ayer (if observed): hes):	# ; ksl				Hydric Soil	Present? Yes_	<u>No</u>
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):	# ; £sl				Hydric Soil	Present? Yes_	No V
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):	# ; £ş}				Hydric Soil	Present? Yes_	No <u> </u>
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):	# ; 6 54				Hydric Soil	Present? Yes_	<u>No</u>
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):	# ; ८ ज				Hydric Soil	Present? Yes_	No <u></u>
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):	# ; 4s4				Hydric Soil	Present? Yes_	No <u> </u>
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):	# ; 4 54				Hydric Soil	Present? Yes_	<u>No</u>
estrictive L Type: Depth (inc emarks:	ayer (if observed): hes):	म _{ें} रुजे				Hydric Soil	Present? Yes_	No <u></u>
estrictive L Type: Depth (inclemarks:	ayer (if observed): hes):	# ; 4s4				Hydric Soil	Present? Yes_	No V

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Project/Site:	WETLAND DETERMINATION DAT	A FORM - Eastern Mour	tains and Piedn	ant Region
Applicant/Owner: Above 1 Province	Project/Site: Carrell Grants England	City/County: Corroll	<i>(.</i>	Sampling Date: 25 April 2015
Investigator(s): 11/2 Property Clic V Jerry Section, Township, Range: 21 True From Slope (R): 2 True Continued in the property of th	Applicant/Owner: Adv. red Per-		Stale: CH	Sampling Point: W & f
Local relief (concave, convex, none):	Investigatorist Milk Metarral cal City Vilen.	Section Township Rungs	528 714N	#'\`\
Subregion (LRR or MLRA): LRF				
Soil Map Unit Name: 12-Ks 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	t androrm (rimisope, terrace, etc.): 1122774	_ t ocal relief (concave, convex	, none):	Slope (x): x 1
Are climatic / hydrologic conditions on the site typical for this time of year? Yes		10 d 21 - 1	-17 6 765	Datum: 7040 33
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Notice of 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 No Is the Sampled Area within a Werdand? Yes No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Inve Aquakic Hants (B14) Sparsely Myestated Concave Surface (B8) Hydrogen Sulfide Odor (C1) Ixainage Patterns (B16) Saturation (A3) Oxidized Rhizosphores on Living Roots (C3) Moss Trim Lines (B16) Water Marks (H1) Presence of Reduced Iron (C4) Dry-Soason Water Table (C2) Sediment Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Water-Stained Leaves (B9) Microtopographic Relief (D4) Factoropographic Relief (D4) Factoropographic Relief (D4) FAC-Neutral Tast (D5) Water Table Present? Yes No Depth (inches): "" Wetland Hydrology Present? Yes No Depth (inches): "				
Are Vegetation Soil or Hydrology naturally problematic? (If needed, explaint any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Hydrogen Sulfide Odor (C1) Ixiainage Patierns (B10) Hydrogen Sulfide Odor (C1) Ixiainage Patierns (B10) Saturation (A3) Oxidized Rhizosphores on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Soason Water Table (C2) Sediment Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Water-Stained Leaves (B9) Microtopographic Relief (D4) Field Observations: Surface Water Present? Yes No Depth (inches): C1.2" Water Mater Present? Yes No Depth (inches): C1.2" Wetland Hydrology Present? Yes No Depth (inches): C1.2"	Are climatic / hydrologic conditions on the site typical for this time			,
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Hydric Soil Present? Westand Hydrology Present? Westand Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Present on Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Iron Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Inundation Visible on Aerial Imagery (B7) Water Saturation (B13) Present on Deposits (B3) Marker Shained I leaves (B9) Marker Shained I leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Water Table Present? Westland Hydrology Present? Ves No Depth (inches): Output (inches): Ou	Are Vegetation, Soil, or Hydrology signifi	antly disturbed? Are 'No	rmal Circumstances*	present? Yes No
Hydrocyphytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Mater Marks (B1) Water Saturation Visible on Aerial Imagery (B7) Water Saturation (B13) Depth (inches): Opeth (inches): Surface Water Present? Ves No Depth (inches): Over (Explain Inches): Ves No Depth (inches): Over	Are Vegetation, Soil, or Hydrology natura	ly problematic? (If need	ed, explain any answe	as in Remarks.)
Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Hydrogen Sulfide Odor (C1) Saturation (A3) Surface Water (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidicate Rhizosphores on Living Roots (C3) Moss Trim Lines (B16) Drift Deposits (B2) Recent Iron Reduction in Tilled Soil's (C6) Drift Deposits (B3) Tinin Muck Surface (C7) Saturation Visible on Aerial Imagery (B7) Water Mater (B4) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B6) Invianage Patterns (B10) Dry-Soason Water Table (C2) Crayfish Hurrows (C8) Saturation Visible on Aerial Imagery (C9) Surface Soil Cracks (B6) Drift Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Shained I saves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Ves No Depth (inches): 0.7. Wetland Hydrology Present? Yes No Depth (inches): 0.7.	SUMMARY OF FINDINGS - Attach site map sho	ving sampling point loc	ations, transects	s, important features, etc.
HYDROLOGY Welland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (Bis) Surface Soil Cracks (Bis) Surface Soil Cracks (Bis) Sparsely Vegetated Concave Surface (Bis) Hydrogen Sulfide Odor (C1) Saturation (A3) Saturation (A3) Water Table (A2) Hydrogen Sulfide Odor (C1) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Soason Water Table (C2) Crayfish Hurrows (C8) Drift Deposits (B3) Triin Muck Surface (C7) Algal Mater Cruck (B4) Iron Deposits (B5) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained I eaves (B9) Aquatrc Fauna (B13) Field Observations: Surface Soil Cracks (Bis) Surface Soil Cracks (B6) Dry-Soason Water Table (C2) Crayfish Hurrows (C8) Saturation Visible on Aerial Imagery (C9) Stantation (C2) Shallow Aquatrd (D3) Microtopographic Relief (D4) FAC-Neutral Tast (D5) Field Observations: Surface Water Present? Yes No Depth (inches): 2.1.2	Hydric Soil Present? Yes No	within a Wetland?	rea ? Yes <u>/</u>	
Weitland Hydrology Indicators: Secondary Indicators (minimum of two required)		_		
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizosphores on Living Roots (C3) Water Marks (H1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Drift Deposits (B3) Algal Met or Crust (B4) Iron Peposits (B3) Algal Met or Crust (B4) Iron Peposits (B3) Cher (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B3) Mater Shained I eaves (H9) Aquetro Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): C1 " Wetland Hydrology Present? Yes No Depth (inches): C2" Wetland Hydrology Present? Yes No Depth (inches): C3	HYDROLOGY			
Surface Water (A1)	Wetland Hydrology Indicators:		Secondary Indic	ators (minumum of (wo required)
High Water Table (A2)	Primary Indicators (minimum of one is required; check all that a	y)(ylqc	Surface Soil	Cracks (B6)
Saturation (A3) Oxidized Rhizosphores on Living Roots (C3) Moss Trim Lines (B16) Water Marks (H1) Sediment Deposits (B2) Presence of Reduced Iron (C4) Sediment Deposits (B3) Trin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained I alves (B9) Aquatr Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Y** Wetland Hydrology Present? Yes No Depth (inches): Y** Wetland Hydrology Present? Yes No Depth (inches): Y** Wetland Hydrology Present? Yes No Depth (inches): Y** Wetland Hydrology Present? Yes No				
Water Marks (H1)	High Water Table (A2) Hydroger			
Sediment Deposits (B2) Drift Deposits (B3) Triin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B7) Iron Deposi	✓ Saturation (A3) Oxidized			
Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Met or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquiterd (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatro Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): 7 Yes Yes No Depth (inches): 7 Yes Yes No Depth (inches): 7 Yes				
Algal Mat or Crust (84) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquiterd (D3) Microtopographic Relief (D4) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Water Table Present?	<u> </u>			
Iron Deposits (B5) Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (87) Shallow Aquitard (D3) Water-Stained I leaves (99) Microtopographic Relief (D4) Aquatic Fauna (813) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): '' Water Table Present? Yes No Depth (inches): '' Saturation Present? Yes No Depth (inches): '' (includes capitary finge)		······,	_,	
Aquatrc Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): ? ` ' Yes No Yes Yes No Yes Yes Yes No Yes _			Shallow Aqu	illard (D3)
Field Observations: Surface Water Present? Yes No Depth (inches): ? . * . *	✓ Water-Stained Leaves (B9)		Microtopogr	aphic Relief (D4)
Surface Water Present? Yes No Depth (inches):0.15" Water Table Present? Yes No Depth (inches):	Aquatrc Fauna (B13)		FAC-Neutra	Test (D5)
Water Table Present? Yes No Depth (inches):	Field Observations:			
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No [includes capitlary fringe)	Surface Water Present? Yes No Depth (iii	ches): <u>@</u>		
(includes capillary fringe)	Water Table Present? Yes No Depth (ii	ches):/ ``		/
	(includes capillary fringe)			nt? Yes No
	Remarks:			

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	Absolute	Dominant	Indicator	Sampling Point		_
ee Stratum (Plot size: 3e)	% Cover	Species?	Status	Number of Dominant Species		
				That Are OBL, FACW, or FAC: _		(A)
				Total Number of Dominant	,	
				Species Across All Strata		(B)
				Percent of Dominant Species	100	
				That Are OBL, FACW, or FAC:	100	(A/E
				Prevalence Index worksheet:		
		= Total Cov	er	Lotal % Cover of:		
50% of total cover:	20% of	total cover:		OBL species x 1		
pling/Shrub Stratum (Plot size: /5)				FACW species x 2		
-				FAC species x 3		
				FACU species x 4		
				UPL species x 5		
				Column Totals: (A)		(B
				Prevalence Index = 8/A = _		
				Hydrophytic Vegetation indicato		
				1 - Rapid Tost for Hydrophytic		
				2 - Dominance Test is >50%	vegetation	
				3 - Prevalence Index is ≤3.0		
		= Total Cov	er	4 - Morphological Adaptations	1 (Canada a	1:-
50% of total cover:	20% of	total cover:				ÇILLII
erb Stratum (Plot size:)				data in Remarks or on a se	•	
- leser- sc. *	20			Problematic Hydrophytic Vege	tation (Explain	9
Importions Copensis			FACE	1		
Viels Service			FAC	Indicators of hydric soil and wetter be present, unless disturbed or pro		us:
				Definitions of Four Vegetation St		
				Tree – Woody plants, excluding vir more in drameter at breast height (1es, 3 in. (7.6 ci	(III) q
				height.	Darij, regardie:	35 U
				Sapling/Shrub – Woody plants, ex than 3 in. DHH and greater than or		
1,				m) tall	equal to 3.20 i	٠,,
				No. 411 5 - 10 - 10 - 10 - 10 - 10 - 10 - 10	A -1	
-	95-	Total Cov		Herb – All herbaceous (non-woody of size, and woody plants less than		JIC 5:
50% of total cover: "16.						
cody Vine Stratum (Plot size: 3:)				Woody vine – All woody vines gre height.	ater than 3.28 f	t in
				neight.		_
				İ		
				Hydrophytic		
				Vegetation Present? Yes	No	
50% of total cover:		= 1otal Cov		103		
		idial cover:		<u>t</u>		
emarks: (include photo numbers here or on a separate	sheel.)					
Tomilabilist grass and included in works	. 1 . 1 1	- A. H.		I I at all out he hele	u	

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.) Redox Features Matrix Heddx Features

Color (moist) % Color (moist) % Type Loc 1exture 2.54 4/2 15 2.54x +/6 15 Cm 5/6 ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: __ Histosol (A1) __ Dark Surface (S7) ___ 2 cm Muck (A10) (MLRA 147) ___ Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) __ Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Loarny Gleyed Matrix (F2) Hydrogen Sulfide (A4) Piedmont Floodplain Soils (F19) Depleted Matrix (F3) Stratified Layers (A5) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) ___ Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) ___ Other (Explain in Remarks) __ Thick Dark Surface (A12) ___ Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, ___ Iron-Manganese Masses (F12) (LRR N, MLRA 136) MLRA 147, 148) ___ Umbric Surface (F13) (MLRA 136, 122) Sandy Gleyed Matrix (S4) Indicators of hydrophytic vegetation and __ Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) welland hydrology must be present. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Hydric Soil Present? Yes _ Depth (inches): ___ Remarks:

Sampling Point: We /

SOIL

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Project/Site: Court Conty Energy City/County: Court Co _____ Sampling Date: 18 April 1017 State: OH Sampling Point: W4 19 4 Applicant/Owner: Advantal Pour Investigatorist: Milk Mossonali and Codin Vilano Section, Lownship, Hange: 521, 1142 RSW Landform (hillslope, terrace, etc.): 1.11/2/g/ Local relief (concave, convex, none): Carry Slope (%): 5--76' Subregion (LRR or MLRA): LAA ~ Lat: 90,6046 Long: 31,0005 Datum: 1240 55 Sod Map Unit Name: B. K. shok silt him 15-25% Long (BKO) Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No _____ (If no, explain in Remarks.) Are Vegetation _____, Soit _____, 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? is the Sampled Area Hydric Soil Present? within a Welland? Wetland Hydrology Present? Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) ___ True Aquatic Plants (B14) Surface Water (A1) Sparsely Vegetated Concave Surface (88) High Water Table (AZ) Hydrogen Sulfide Odor (C1) __ Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) ____ Moss Trim Lines (B16) ___ Saturation (A3) ___ Ory-Season Water Table (02) Water Marks (B1) Presence of Reduced fron (C4) ___ Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) ___ Crayfish Burrows (C8) ___ Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Other (Explain in Remarks) ___ Algal Mat or Crust (84) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Microtopographic Relief (D4) Water-Stained Leaves (B9) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes _____ No ____ Depth (inches):___ Water Table Present? Saturation Present? Yes _____ No ____ Depth (inches):_ Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aenal photos, previous inspections), if available: Remarks:

Sampling Point: We Por VEGETATION (Four Strata) - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30 % Cover Species? Status Number of Dominant Species 1. Greens public EAN That Are OBL, FACW, or FAC: 2. (-- 15 - 16 - 17 -Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: 100 = Total Cover 20% of total cover:_ OBL species x1 = __ 50% of total cover: ___ FACW species _____ x 2 = _ Sapling/Shrub Stratum (Plot size: 15 FAC species _____ x 3 - _ 1. Post out Holling FACU species _____ x 4 = _ UPL species ______ x 5 = Column Totals: (A) ... (H) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 7 - Dominance Test is >50% _ 3 · Prevalence Index is ≤3.01 → = Total Cover 4 - Morphological Adaptations¹ (Provide supporting 20% of total cover: 3 50% of total cover: data in Remarks or on a separate sheet) Merb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) 1 Podosky/francisty.de P. Katilyon gerustabil ¹Indicators of hydric soit and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (OBH), regardless of Sapling/Shrub – Woody plants, excluding vines, less than 3 in: DBH and greater than or equal to 3.28 ft (1 Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 10 - Total Cover 20% of total cover: 3 50% of total cover: Woody vine - All woody vines greater than 3.28 ft in Woody Vine Stratum (Plot size: 30 height. Hydrophytic Végelation - Total Cover 50% of total cover: 20% of total cover: Hernarks: (Include photo numbers here or on a separate sheet.)

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SOIL	Sampling Point: we feet
P. C. P. C.	T. 3

(inches)	Matrix Color (moist)	%	Color (maist)	x Features ex.	1 smc1	Loc2	larium		Hemarke	
						- 10.			ngilidi K\$	
0-9	1042 4/3	152 -					<u> </u>			
-151	Kyx 4/M	10 1					5.73			
	-									
ype: C=C	oncentration, D-Dep	oletion, RM=Re	educed Matrix, MS	Masked :	Sand Gra	ins.	*Location: P	L=Pore Lining	r. M∍Matrix.	
	Indicators:								blematic Hydric Sc	ils ¹ :
Histoso	I (A1)		Dark Surface	(S7)			_ 2	cm Muck (A1	0) (MLRA 147)	
	pi ped on (A2)		Polyvalue Be				148) (Coast Prairie P		
Black H			Thin Dark Su			47, 14B)		(MLRA 147,		
	en Sulfide (A4)		Loamy Gleye		2)		_ F		dplain Soils (F19)	
	d Layers (A5) uck (A10) (LRR N)		Depleted Mat Redox Dark \$,	(MLRA 136,	147) Jark Surface (TF12)	
	d Helow Dark Surfac		Depleted Dar					Other (Explain		
	ark Surface (A12)		Redox Depre				_ `	A IOI (CAPICAL	1-110-1101	
	Mucky Mineral (S1) (Iron Mangan			RR N,				
MLR.	A 147, 148)		MLRA 130							
	Gleyed Matrix (S4)		Umbric Surfa						rophytic vegetation	
	Redox (S5)		Piedmont Flo						gy must be present,	
	1 Matrix (S6)		Red Parent M	taterial (F2	I) (MLRA	127, 147	') un	iess disturbed	for problematic.	
	Layer (if observed):	:								
Type:			-							
Depth (in	cnesy:		-				Hydric Soi	Present?	YesNo	_
ernarks:										

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WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Court County Formy City/County: Carnott	Sampling Date: 25 Apr. 109
Applicant/Owner: Plant Port	State: 1914 Sampling Point: 444 Q
Investigator(s): _prike //lease.orli and Cdi. Vilens Section, Township, Range:	
l andronn (hillstope, terrace, etc.): 100,74 / book Local relief (concave, convex, r	
Subregion (LRR or MLRA): (IR M Lat: 70 66 37 Long: 1	
· · · · · · · · · · · · · · · · · · ·	NWI classification: /*Em (n-/ may/)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Norm	nal Circumstances" present? Yes No
Arc Vegetation, Soil, or Hydrology naturally problematic? (If needed	l, exploin any answors in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point locat	tions, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland Hydrology Present? Yes No within a Wetland? Remarks:	Yes No
Aluto steron, affected gover how - intermittently chancel (p. from	,
HYDROLOGY	1
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetaled Concave Surface (BB)
✓ High Water Table (A2) Hydrogen Sulfide Oder (C1)	Drainage Patterns (B10)
✓ Saturation (A3) Oxidized Rhizospheres on Living Roots (C3	
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C?)
Sediment Deposits (82) Recent Iron Reduction in Titled Soils (C6)	Crayfish Burrows (CB) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) 1 hin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks)	Satisfation visible on Aerial imagery (Cs) Stunted or Stressed Plants (D1)
Iran Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Retief (D4)
Aquatic Fauna (B13)	✓ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes / No Depth (inches): 911	/
Saturation Present? Yes / No Depth (inches): / Wetland	l Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aenal photos, previous inspections), if a	vailable:
Remarks ^a	
	

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/EGETATION :	(Four Strata) -	– Use	scientific	names of	plants.

Sampling Point:	wi	Q	

l • .	Absolute	Dominant		Dominance rest worksneed:
Tree Stratum (Plot size: 3-)	% Cover	Species?	Status	Number of Dominant Species (7
1				That Are OBL, FACW, or FAC: (A)
2				
				Total Number of Dominant
3				Species Across All Strate:
4				Percent of Dominant Species / (2)
5				Percent of Dominant Species / ot That Are OBL, FACW, or FAC: (A/B)
				THE CHE COX, TACH, GITAL.
Б				Prevalence Index worksheet:
7				
		= Total Cov	er	
50% of total cover:	20% of	total cover:		OBL species x 1 =
Sopling/Shrub Stratum (Plot size: /5')				FACW species x 2 =
Sapinigranirub Stratum (Piot Sizu:	in	/		FAC species x 3 -
1. Sambour wine ver condensis	190		FAIL	
7				FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4,				Column rocas (A) (A)
5				Prevalence Index = B/A =
6				
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				I I
<u> </u>	1.2	= Total Cov		3 - Prevalence Index is ≤3.0°
manu access N	·- -			4 - Morphological Adaptations (Provide supporting
50% of total cover:	/ /U% or	total cover;		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 5)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Corre relained a	75		FACE	Problematic mydropriydd vegetarion (Explain)
	19		084	
				¹ Indicators of hydric soil and wetland hydrology must
3. Importion expensis			FAIN	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Indicators of hydric soil and wetland hydrology must
4. Greek brief	_د		282	Definitions of Four Vegetation Strata:
5. Puncone 20		-		Definitions of Four Vogetation Sousa.
				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) (all.
11,				Hach All harbaconus (ann woods) plants requidless
	- 	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
100 4 1		= TOTAL COV	er	or size, and Abbay plants less tilen 5.25 it tall.
50% of total cover: 2	20% 01	total cover:	10	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 33)				neight.
1				1 - "
2				
3,				
4				Hudronbudio
•				Hydrophytic Vegetation
·				Present? Yes No
		 Total Cove 		71030111
5D% of total cover:	_	total cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)		-	

SOIL Sampling Point: 404 &

Type: C=Concentration, D=Deptetion, HM=Reduced Matrix, MS=Masked Sand Grains. Tocation: PL=Pare Lining, M=Matrix, Mydric Soil Indicators: Indicators for Problematic Hydric Soil Findicators Indicators for Problematic Hydric Soil Histic Epipedon (A2) Polyvalue Below Surface (S7) 2 cm Muck (A10) (MLRA 147) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) MLRA 147, 148) Piedment Floodplain Soils (F19) Piedment Floodplain Soils (F19) Piedment Floodplain Soils (F19) MLRA 148, 147, 148) MLRA 147, 148, 147	Depth Matrix	Redu	x Feature	5					
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Tocation: PL=Pare Lining, M=Matrix, Indicators for Problematic Hydric Soil Indicators for Problematic Hydric Soil Indicators for Problematic Hydric Soil Histor Epipedon (A7) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Praine Redox (A16) (MLRA 147, 148) Coast Praine Redox (A16) (MLRA 147, 148) Pladmont Floodplain Soils (F19) (MLRA 147, 148) Pladmont Floodplain Soils (F19) (MLRA 147, 148) Pladmont Floodplain Soils (F19) (MLRA 146, 147) Pladmont Floodplain Soils (F19) (MLRA 147, 148) Pladmont Floodplain Soils (F19) (MLRA 147, 148) Pladmont Floodplain Soils (F19) (MLRA 147, 148) Pladmont Floodplain Soils (F19) (MLRA 147, 148) Pladmont Floodplain Soils (F19) (MLRA 147, 148) Pladm	(inches) Color (moist) %	Calar (maist)		_lype¹	l ac²			Remarks	
Type: C=Concentration, D=Deptetion, HM=Reduced Matrix, MS=Masked Sand Grains. Tocation: P1=Pore Lining, M=Matrix, Pydric Soil Indicators: Indicators for Problematic Hydric Soil Histic Pipiedon (A2) Polyvalue Below Surface (S7) 2 cm Muck (A10) (MLRA 147) 2 cm Muck (A10) (MLRA 147) 2 cm Muck (A10) (MLRA 147) 3 cm Muck (A10) (MLRA 147, 148) Coast Prairie Redox (A16) MLRA 147, 148) (MLRA 147, 148) Piadment Floodplain Soils (F19) Piadment Floodplain Soils (F19) Piadment Floodplain Soils (F19) MLRA 145, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) WILRA 145, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F7) Other (Explain in Remarks) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F7) Other (Explain in Remarks) 2 cm Muck (A17) (LRR N, MLRA 147, 148) MLRA 136, 147) 3 cm Muck (A17, 148) 3 cm Muck (C-17+ 2.54 4/3 90	13/24/6	10	ć	*2"	5.12			
Hydric Soil Indicators: Historsot (A1) Histor E pipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Polyvalue Below Surface (S9) (MLRA 147, 148) Piack Histor (A3) Hydrogen Suffade (A4) Stratified Layers (A5) Polybelded Matrix (F2) Polybelded Matrix (F2) Polybelded Matrix (F2) Polybelded Matrix (F3) Pindmont Floodplain Soils (F19) MLRA 147, 148) Pindmont Floodplain Soils (F19) MLRA 146, 147) Wery Shallow Dark Surface (F7) Polybelded Below Dark Surface (F7) Polybelded Dark Surface (F7) Polybelded Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 147) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pindmont Floodplain Soils (F19) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation are wetland hydrology must be present, unless disturbed or problematic. No Layer (if observed): 1)pge: Depth (inches): Hydric Soil Present? Yes No									
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Hydric Soil Indicators: Historsot (A1) Histor E pipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Polyvalue Below Surface (S9) (MLRA 147, 148) Piack Histor (A3) Hydrogen Suffade (A4) Stratified Layers (A5) Polybelded Matrix (F2) Polybelded Matrix (F2) Polybelded Matrix (F2) Polybelded Matrix (F3) Pindmont Floodplain Soils (F19) MLRA 147, 148) Pindmont Floodplain Soils (F19) MLRA 146, 147) Wery Shallow Dark Surface (F7) Polybelded Below Dark Surface (F7) Polybelded Dark Surface (F7) Polybelded Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 147) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pindmont Floodplain Soils (F19) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation are wetland hydrology must be present, unless disturbed or problematic. No Layer (if observed): 1)pge: Depth (inches): Hydric Soil Present? Yes No									
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Hisrosol (A1)		HM=Reduced Matrix, M	S=Masked	Sand Gr	ains.				
Histic Fpipedon (A7) Black Histric (A3) Thin Dark Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Sutratified Layers (A5) Popleted Matrix (F3) Com Muck (A10) (LRR N) Depleted Matrix (F3) Peledomort Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) MLRA 147, 148) MLRA 147, 148) MLRA 147, 148) Sandy Cleyde Matrix (S4) Sandy Redox (S5) Siripped Matrix (S6) Red Parent Material (F21) (MLRA 122, 147) Depth (inches): Depth (inches): Hydric Soil Present? Yes No	lydric Soil Indicators:					India	ators for P	roblematic Hydric :	Soils
Histic Fpipedon (A7) Black Histric (A3) Thin Dark Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Sutratified Layers (A5) Popleted Matrix (F3) Com Muck (A10) (LRR N) Depleted Matrix (F3) Peledomort Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) MLRA 147, 148) MLRA 147, 148) MLRA 147, 148) Sandy Cleyde Matrix (S4) Sandy Redox (S5) Siripped Matrix (S6) Red Parent Material (F21) (MLRA 122, 147) Depth (inches): Depth (inches): Hydric Soil Present? Yes No	Histosol (A1)	Dark Surface	e (S7)				çm Muck f	A10) (MLRA 147)	
Black Histor (A3)				ce (S8) (L	II RA 147				
Hydrogen Sulfide (A4) Suratified I ayers (A5) Popleted Matrix (F2) Priedmont Floodplain Soils (F19) (MLRA 136, 147) Popleted Matrix (F3) Popleted Below Dark Surface (A11) Popleted Derik Surface (F7) Popleted Below Dark Surface (A12) Popleted Derik Surface (F7) Popleted Derik Surface (F13)						· · · · · ·			
Stratified Layers (A5) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Matrix (F3) 2 cm Muck (A10) (LRR N) Depleted Dark Surface (F6) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 127) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 127) Sandy Redox (S5) Sandy Redox (S5) Sindy Redox (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 122, 147) Depth (inches): MLRA 136, 147) Very Shallow Dark Surface (TF12) Very Shallow Dark Surfac					41, (40)				,
2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Depth (inches): Depleted Dark Surface (F3) Redox Surface (F7) Cother (Explain in Remarks) Other (Explain in Remarks) Indicators of hydrophytic vegetation are walland hydrology must be present. Unloss of Sturbed or problematic.				, 51		— ·			,
Depleted Bellow Dark Surface (A11) Thick Dark Surface (A12) Redbox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Glayed Matrix (S4) Sandy Redox (S5) Pindmont Floodplain Soils (F19) (MLRA 148) welland hydrology must be present, Stripped Matrix (S6) Red Perent Material (F21) (MLRA 127, 147) Unpersonable Layer (If observed): I ype: Depth (inches): Hydric Soil Present? Yes No									
Thick Dark Surface (A12) Redox Depressions (F8) Redox (F12) (LRR N, MLRA 136) MLRA 136) Sandy Glayed Matrix (S4) Umbric Surface (F13) (MLRA 135, 122) Indicators of hydrophytic vegetation at wetland hydrology must be present, Stripped Matrix (S6) Red Perent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Redox Depressions (F8) Redox (F8) Indicators of hydrophytic vegetation at wetland hydrology must be present, unless disturbed or problematic. Redox Depressions (F8) Redox (F8) Indicators of hydrophytic vegetation at wetland hydrology must be present, unless disturbed or problematic.									12)
Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 122) (LRR N, MLRA 136, 122) MLRA 147, 148) MLRA 136, 122) Sandy Cleyyad Matrix (S4) Umbxis Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) watland hydrology must be present. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): 1ype: Depth (inches): Hydric Soil Present? Yes No						— '	Other (Expla	in in Remarks)	
MLRA 147, 148) Sandy Cleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Depth (inches): MLRA 136, 122) Vindicators of hydrophytic vegetation at watland hydrology must be present. Piedmont Floodplain Soils (F19) (MLRA 148) Watland hydrology must be present. Watland 179, 147) Unless disturbed or problematic.									
Sandy Glayed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Indicators of hydrophytic vegetation at Sandy Redox (S5) Picdmont Floodplain Soils (F19) (MLRA 148) watland hydrology must be present. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. I type: Depth (inches): Hydric Soil Present? Yes No				es (F12) (LRA N,				
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) watland hydrology must be present. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 122, 147) unless disturbed or problematic. Red Parent Material (F21) (MLRA 122, 147) unless disturbed or problematic. Page: Uppe: Depth (inches): Hydric Soil Present? Yes No	MLRA 147, 148)	MLRA 13	36)						
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): 1 ype: Depth (inches): Hydric Soit Present? Yes No	Sandy Gleyed Matrix (S4)	Umbric Surf	ace (F13) (MLRA 13	6, 122)	³Ine	dicators of h	ydrophytic vegetatio	on an
Stripped Matrix (S6) Red Perent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): 1 ype: Depth (inches): Hydric Soil Present? Yes No	Sandy Redox (S5)	Piedmont Fl	oodplain S	oils (F19)	(MLRA 1-	48) w	etland hydro	logy must be preser	ent,
Restrictive Layer (if observed): 1 ype: Depth (inches): Hydric Soil Present? Yes No		Red Parent	Material (F	21) (MLR	A 127, 14	7) ur	iless disturb	ed or problematic.	
1 ype:	Restrictive Laver (if observed):								
Depth (inches): Hydric Soil Present? Yes No	•								
· · · · 						1			
Remarks:	Depth (inches):					Hydric 50	i Present?	105 NO	' —
	Remarks:								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region Project/Site: Correct Control Sampling Date: 25 101 308 Applicant/Owner: Alarm, 1 Power State: OH Sampling Point: W4 4 47 Investigator(s): mik Arrange to and Colin Villand Section, Township, Range: 526 7 Mir. Asia. Landform (fillslope, terrace, etc.): 1/15/6/7 Local relief (concave, convex, none): , Coavic Slope (%): 10-12 Subregion (LRR or MLRA): LAR V Lat: 40.6655" Long: 31.0166 Soil Map Unit Name: Buks staly silt low, 15-152 staps (BRO) NWI classification: _レルム Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No______ (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes _____ No ____ Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? 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? is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) __ Surface Soil Cracks (B6) Primary Indicators (minimum of one is required; check all that apply) ___ True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (H8) _ Surface Water (A1) ___ Hydrogen Sulfide Odor (C1) __ Drainage Patterns (B10) High Water Table (A2) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) ____ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) Presence of Reduced Iron (C4) Water Marks (B1) _ Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) ___ Crayfish Hurrows (C8) Drift Deposits (B3) ___ Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) ___ Other (Explain in Remarks) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) ___ Geomorphic Position (D2) __ Iron Deposits (B5) ___ Shallow Aquitard (D3) Inundation Visible on Acrial Imagery (B7) ___ Microtopographic Relief (D4) Water-Stained Leaves (B9) ___ FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: Surface Water Present? Water Table Present? Depth (inches):_ Saturation Present? No ____ Depth (inches):_ Wetland Hydrology Present? Yes (includes capillary fringe). Describe Recorded Data (stream gauge, monitoring well, senal photos, previous inspections), if available: Remarks:

/EGETATION (Four Strata) – Use scientif	ic names of plants.	Sampling Point: Re C 4007
	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 3-)	% Cover Species? Status	Number of Dominant Species 2
1. Burry supra		That Are OBL, FACW, or FAC:(A)
2. Acres sucherm	- 10 / FAIU	Total Number of Dominant
3. Ulmva ruken		Species Across All Strate: (B)
s. a.vies 4/64		Percent of Dominant Species 25
s. Perry greation		That Are OBL, FACW, or FAC:
5.		
7.		Prevalence index worksheet:
	- 65 = Total Cover	Total % Cover of: Multiply by:
50% of total cover:	3.1. 20% of total cover: 13	OBL species x1 =
Sayling/Shruti Stratum (Plot size: /5		FACW species x ? =
Limos robra	5" \(\sim \) FAC	FAC species x 3 =
Rosa moldifle.	- 5- / FAV.	FACU species x 4
		UPL species x 5 =
		Column Jorals: (A) (B)
s		6.9
i		Prevalence Index = R/A =
i	_	Hydrophytic Vegetation Indicators:
T		1 - Rapid Test for Hydrophytic Vegetation
l		2 · Dominance Test is >50%
J	_ :	3 - Prevalence Index is ≤3.0°
	Total Cover	4 - Morphological Adaptations (Provide supporting
50% of total cover:	5 20% of total cover: 🥕	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)	,	
1. Codomine contratents	10 FATO	Problematic Hydrophytic Vegetation ¹ (Explain)
Podeshallon sellation	5 / PAC	1.
3. The hirtery of healtedraides	3 FAIN	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
L. Panesur SP		The state of the s
6		Definitions of Four Vegetation Strate:
		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
5		more in diameter at breast height (DBH), regardless of
		height
9		Sapling/Shrub - Woody plants, excluding vines, less
)		than 3 in. DBH and greater than or equal to 3.28 ft (1
0		m) tall.
1		Herb - All herbaceous (non-woody) plants, regardless
	Total Cover	of size, and woody plants less than 3.78 ft tall.
50% of total cover: _	10.5 20% of total cover: 4, 3	Woody vine - All woody vines greater than 3.28 ft in
Noody Vine Stratum (Plot size: 32)		height.
<u> </u>		
		I think a state of the state of
·		Hydrophytic Vegetation
·	= Total Cover	Present? Yes No No
50% of total cover-	20% of total cover:	
Remarks: (Include photo numbers here or on a separ		<u> </u>
Remarks: (include proto numbers here or on a separ	árs zusar.)	

SOIL Sampling Point: WL G or

Depth	Matrix			ox Features					
(inches)	Color (maist)	<u>%</u> .	Calar (maist)	%	Type1	J.RE'		ure	Remarks
<u>0-9.</u>	1042413	/e"L 3						/> —	
1-121	1071 4/4	10,7						<u>′′∪</u>	
	oncentration, D. Depl	lation DM	Dodugod klatric ki	C Mackad	Ened Cr		7Locat	on Di Cor	e Lining, M«Matrix.
	oncentration, D≖Dept Indicators:	IBTIDII, KIVIEI	невисев машх, м	12±M92K40	Sand Gr	altis.	LOCAL		e ∟mng, w≅wamx. for Problematic Hydric Soils
Histosol			Dark Surface	0.20					uck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue B		o (SB) (N	ILRA 147.	. 148)		rairie Redox (A16)
Black H			Thin Dark Si				,		RA 147, 148)
Hydroge	en Sulfide (A4)		Loarny Gley						nt Floodplain Soils (F19)
Stratifie	d Layers (A5)		Depleted Ma	Birix (F3)				(MLF	(A 136, 147)
	JCK (A10) (LRR N)		Redox Dark						nallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da					Other (i	Explain in Remarks)
Thick Di	ark Surface (A12)	DD N	Redox Depr			DO N			
	Aucky Mineral (S1) (L A 147, 148)	.HH.N.	Iron-Mangar MLRA 13		:5 (+ 12) (LKK N,			
	Gleyed Matrix (S4)		Umbric Surfa		MLRA 13	6. 122)		³ Indicators	s of hydrophytic vegetation and
	Redox (S5)		Piedmont FI				48)		hydrology must be present,
	Matrix (S6)		Red Parent						isturbed or problematic.
strictive	Layer (if observed):								
Туре									
Depth (in	ches):		_				Hydr	c Soil Prese	ent? Yes No 🗹
marks:									

US Army Corps of Engineers Eastern Mountains and Piedmont – Version 2.0

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Court lands force	. Cibrit	country Cresil to	Sampling Date: 25 Ap 3321
Applicant/Owner: Africa / Print / Investigator(s): M. W. (Wassing for any		Sia	te: 21 Sampling Point: W 2 P
Applicant/Owner. Yes At 1	111:01 000		1797 Jew
Landform (hillslope, terrace, etc.):	1 ocal rei	ief (concave, convex, none):	Slope (%): 1-1
Subregion (LRR or MLRA): LAR N	Lat: 40 6651	Long: <i>71, thi</i>	Datum: AAD IS
Soil Map Unit Name: B. 15 3 kd 5 4	11 1 mm 17 25% story .	(\$K0)	NWI classification: \$55 (not imaged)
Are climatic / hydrologic conditions on the s	site typical for this time of year? Y	'es No (If no,	explain in Remarks.)
Are Vegetation, Soil, or Hyc			ımstances* present? Yes No
Are Vegetation, Soil, or Hys	• •		a any answers in Remarks.)
·			transects, important features, etc.
JOHNIART OF THIS INC.	ch are map showing son	pinig point locations,	anisees, important vocatos, see
Hydrophytic Vegetation Present?	Yes No	is the Sampled Area	
	Yes No	within a Wetland?	Yes No
	Yes No		
Remarks:			
Aboto Stomm			
			
HYDROLOGY			
Wetland Hydrology Indicators:			ndary Indicators (minimum of two required)
Primary Indicators (minimum of one is req			Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)
High Water Table (A7)	Hydrogen Sulfide Od		Jrainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospher		Moss Trim Lines (B15)
Water Marks (B1)	Presence of Reduce		Dry-Season Water Table (C7)
Sediment Deposits (B2)	Recent from Reduction		Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Thin Muck Surface (t Other (Explain in Rea		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Iron Deposits (B5)	Ottlet (Explain in Res	· —,	Seomorphic Position (D2)
Inundation Visible on Aerial Imagery	(B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)	,		Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral Tost (D5)
Field Observations:			
Surface Water Present? Yes	No Depth (inches):		
Water Table Present? Yes	No Depth (mothes): No Depth (mothes):		
Saturation Present? Yes	No Depth (inches):	Wetland Hydrol	logy Present? Yes No
(includes capillary fringe)			
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, pre	ivious inspections), if available	:
Remarks:			
			

US Army Corps of Engineers Eastern Mountains and Piedmont -- Version 2.0

EGETATION (Four Strata) – Use scientific	: names of plants.	Sampling Point: <u>ん (</u>
3,	Absolute Dominant Indicator	Dominance Test worksheet:
Free Stratum (Plot size: 3.2.1)	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
k		Species Across All Strata:
l		Percent of Dominant Species / ,)
i		Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC:
·		
·		Prevalence Index worksheet:
	= fotal Cover	Lotal % Cover of: Muhiply by:
	20% of total cover:	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: /5		FACW species x 2 =
Acce negrali		FAC species x 3 =
<u></u>		FACU species x 4 =
J		UPI species x 5 =
		Column Totals: (A) (B)
·		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
l,		1 Rapid Test for Hydrophytic Vegetation
·		2 Dominance Test is >50%
N	· ., ———	3 - Prevalence Index is ≤3.01
	= Total Cover	4 - Morphological Adaptations¹ (Provide supporting
	20% of total cover: 3	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)	2.7 /	Problematic Hydrophytic Vegetation ¹ (Explain)
	5- VAL	
tilmes refer (soilling)		Indicators of hydric soil and wetland hydrology must
		be prosent, aniess distarbas at problemate.
·		Definitions of Four Vegetation Strata:
·		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
i		more in diameter at breast height (DBH), regardless of
L		heigh).
		Sapling/Shrub – Woody plants, excluding vines, less
0		than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
o		• •
11.	- Total Cover	 Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of total cover: /7. 6	1
Voody Vine Stratum (Plot size: 3:)		Woody vine – All woody vines greater than 3.28 ft in height.
		neight.
		I Marian de
		Hydrophytic Vegetation
	■ Total Cover	Present? Yes No
50% of total cover:	20% of total cover:	
emarks: (Include photo numbers here or on a separate	e sheet.)	
* witness and buttling		
	אין וואן נין	

Color (moist)		cription: (Describe)	io une depu				or confirm	the absence of it	idicators.j		
Type: C-Concentration, D-Depletion, RM-Reduced Metrix, MS=Masked Sand Grains. Concentration	epth				x Features	T1	1-2	T	0.	marke	
Type: C-Concentration, D-Depletion, RM-Reduced Metrix, MS=Masked Sand Grains. PL=Pore Lining, M-Matrix, Laple Construction.								KB	marks		
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Hibir Leak Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Leamy Cleyed Matrix (F3) Piedmont Floodplan Soils (F19) Leamy Cleyed Matrix (F3) Piedmont Floodplan Soils (F19) Z cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Hetrov Dark Surface (A11) Thick Dark Surface (F3) Hydrogen Sulfide (A4) Leamy Cleyed Matrix (F3) Piedmont Floodplan Soils (F19) Wery Shallow Dark Surface (T1-12) Other (Explain in Remarks) Type: Depth (inches): Hydric Soil Present? Yes No	C-111	2.59 4/2	<u> </u>	1248 5/6			<u></u>				
ydric Soil Indicators: Histosof (A1) Histo Epipedon (A2) Black Histo (A3) Histo Epipedon (A2) Black Histo (A3) Hin I bank Surface (S8) (MLRA 147, 148) Hodgen Sulfide (A4) Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Surface (A3) Hin I bank Surface (A3) Hin I bank Surface (A3) Hin I bank Surface (A3) Hydrogen Sulfide (A4) Loamy Cleyed Matrix (F2) Fieldmont Floodplain Soils (F19) Lepleted Heltow Dark Surface (A11) Depleted Heltow Dark Surface (A11) Depleted Heltow Dark Surface (A11) Depleted Heltow Dark Surface (A11) Hedox Dark Surface (F6) Depleted Heltow Dark Surface (A11) Hedox Dark Surface (F3) Depleted Heltow Dark Surface (A11) Depleted Dark Surface (F3) Depleted Heltow Dark Surface (A11) Depleted Dark Surface (F3) Urbo Expressions (F8) Sindy Gleyed Matrix (S4) Sandy Redox (S5) Urbo Surface (F13) (MLRA 136, 127) Suripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Urbo Extrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Na						_					
ydric Soil Indicators: History (A1) History (A1) Black History (A2) Black History (A3) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Surface (A3) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Surface (A4) Loamy (Leyed Matrix (F2) February (Leyed Matrix (F2) February (Leyed Matrix (F2) February (ALRA 147, 148) Hedox Dark Surface (F3) Depleted Hetow Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) MI RA 147, 148) Hedox Dark Surface (F3) Hedox Dark Surface (F3) Depleted Hetow Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) MI RA 147, 148) MI RA 147, 148) MI RA 147, 148) Surface (A12) Sandy Redox (S1) Surface (A12) Sandy Redox (S1) Hedox Dark Surface (F3) Hedox Dark Surface (F3) Uvery Shallow Dark Surface (T1-12) Other (Explain in Remarks) Front-Manganese Masses (F12) (LRR N) MI RA 147, 148) MI RA 147, 148) Surface (F3) Hiedmont Floodplain Soils (F19) (MLRA 148) Surface (F3) Wethan 148, Wethan 149, Wethan 147, 147) Wethan 149, Wethan 149, Wethan 149, Wethan 149, Wethan 149, Wethan 149, Wethan 149, Wethan 147, 147) Wethan 149, Wethan 149, Wethan 147, 148) Wethan 149, Wethan 149, Wethan 149, Wethan 147, 148) Wethan 147, 148) Wethan 147, 148) Wethan 147, 148, Wethan 147, 147, Wethan 147, Wethan 147, 148, Wethan 147,					<u> </u>	_	<u> </u>			_	
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Histic Epipedon (A2) Histic Epipedon (A2) Hibir Leak Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Leamy Cleyed Matrix (F3) Piedmont Floodplan Soils (F19) Leamy Cleyed Matrix (F3) Piedmont Floodplan Soils (F19) Z cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Hetrov Dark Surface (A11) Thick Dark Surface (F3) Hydrogen Sulfide (A4) Leamy Cleyed Matrix (F3) Piedmont Floodplan Soils (F19) Wery Shallow Dark Surface (T1-12) Other (Explain in Remarks) Type: Depth (inches): Hydric Soil Present? Yes No											_
Histosol (A1)			etion, RM-I	Reduced Matrix, M	S=Masked	Sand Gra	ins.				Sails ³
	Histoso Histoso Histoso Histoso Black H Hydrog Stratifie 2 cm M Deplete Thick C Sandy I MIR Sandy I Suripper Siripper Sirictive Type:	i (A1) pipedon (A2) pipedon (A2) pipedon (A2) en Sulfide (A4) d Layers (A5) uck (A10) (LRR N) d Heltuw Dark Surface terk Surface (A12) Wucky Mineral (S1) (I A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Layer (if observed):		Polyvalue B Thin Dauk Si Loamy Gley Depleted Ma Redox Dark Depleted Da Redox Depri Iron-Mangar MLRA 13 Umbric Surf	elow Surface urface (S9) ed Matrix (F atrix (F3) Surface (F6 rk Surface (F8 ress Masse (F8) ace (F13) (N codplain So	(MLRA 1 2) (F7)) s (F12) (I ALRA 13 ils (F19)	47, 148) _RR N, 6, 12 7) (MLRA 14	2 cm 2 cm 148 Cosst (Mt Piedr (Mt Cosst Coss	Muck (A10) (M Prairie Redo RA 147, 148 Iont Floodplat RA 136, 147 Shellow Dark (Explain in Rairie irs of hydroph disturbed or p	ALRA 147) x (A16)) r soils (F19)) Surface (TF1) emarks) ytic vegetatio ust be presen	7) n and n,

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site Correct County Facility City/County: Com	11 Co Sampling Date: 25 Apr. 1 2 mg
	State: 27/ Sampling Point: 4 4
Investigator(s): 17 1 Markengli and Calie Vilens Section, Township,	
Landform (hills/ope, terrace, etc.): 4.1/3/2/ Local relief (concave, o	
Subregion (LRR or MLRA): (RR A Lat: 10.653	21 0696 Detum and 17
Soil Map Unit Name: Broks shell sill from 15-257-5/-/ (BKO)	NWI classification: V/L
· ,	(If no, explain in Remarks.)
	re "Normal Circumstances" present? Yes No
3	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No In the Same	
Hydric Soil Present? Yes No within a Wei	
Wetland Hydrology Present? Yes No	land/ Yes No
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (CT)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living Re	oots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (02) Recent Iron Reduction in Tilled Soit	s (C6) Crayfish Burrows (C8)
Drift Deposits (83) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Ceomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (03)
Water Stained Leaves (89)	Microtopographic Relief (D4)
Aqualic Fauna (B13)	FAC-Neutral Test (D5)
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 Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ins], if available:
Remarks:	

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point:	ن ړ	2-1

	Absolute Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 3.7)	% Cover Species? Status	Number of Dominant Species /
1. Pronv. sorotion	40 FAIL	That Are OBL, FACW, or FAC:(A)
		Total Number of Dominant
3		. Species Across All Strata:(B)
4		Percent of Dominant Species
5	· —— —— ——	That Are OBL, FACW, or FAC: (A/B)
6		
7.		Prevalence index worksheet:
	ر Total Cover	Total % Cover of: Multiply by:
50% of total cover: 2-	2007 - Carrel	OBL species x 1 =
	20% oi total cover:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 75)		
1. Acre correla		FAC species x 3
7. Russ moldifling	5 / PM	FACU species x 4 =
3		UPL species x 5 =
		Column Totals: (A) (B)
4		.
5		Prevalence Index = B/A =
6		Hydrophytic Vegetation Indicators:
7		1 3 , 3 %
8		1 - Rapid Test for Hydrophytic Vegetation
		7 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3.0°
Hech Straum (Playsize: 50% of total cover: 20.5	Total Cover	4 - Morphological Adaptations (Provide supporting
50% of total cover:	20% of total cover:	data in Remarks or on a separate sheet)
Train County (Free Street		
1. Allineis polishik	5 ✓ FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Stellaris media		
	·	Indicators of hydric soil and wetland hydrology must
3. brain propertion	<u> ۱۹۷۰</u>	be present, unless disturbed or problematic.
4. Imposition expression	. 1 FAIN	Definitions of Four Vegetation Strata:
5 Codraine consistent	FAIV	
		Tree - Woody plants, excluding vines, 3 in. (7.5 cm) or
7		more in diameter at breast height (DBH), regardless of height.
		neigra.
8		Sapling/Shrub - Woody plants, excluding vines, less
9		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		m) (all.
11		Hash All hasharans is form wooded plants according
	= Total Cover	Herb – Atl herbaccous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: _ 7 /	200 of local course	th are, the root, plants lead with all the
	2 20% of tolar cover. 2	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:3t_ ')		height.
1		
2		
3		
4		Hydrophytic
5		Vegetation Present? Yes No
	Total Cover	Present? Yes No
50% of total cover:	20% of total cover:	1
Remarks: (Include photo numbers here or on a separate :	sheet.)	•
	•	

SC	IL	Sampling Point: 404 / -/
		Sampling Funt /

		to the depth	noeded to docum	ent the i	ndicator o	or confirm	the atisence	e of indicators.)
Depth	Matrix Color (moist)	 -	Redox Calar (moist)	Feature:	<u> </u>	1 2 2 7	T	Para de
0-1	1044 4/3	160	- Corcui (IIIOISLI		Type	Lac	<u>Texture</u>	Remarks
7-12>							5.10	-
- / 12 / -	10484/11	_, ·					5.70	
								·
l								. <u> </u>
i								
			-					-
						. —		· — · — · — —
		— ·						
12				 -				
Hydric Soil Ind	enuation, D=Depl licators:	ellon, RM=F	teduced Matrix, MS	=Masked	Sand Gra	ins.		Pierore Linning, Ma-Matrix,
Histosol (A			Dank Surface	(S.7)				ators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histic Epipe			Polyvalue Bel		e (SB) (M	LRA 147	148) — 6	com Muck (ATU) (MERA 147) Boast Prairie Redox (A16)
Black Histic	(A3)		Thin Dark Sur					(MLRA 147, 148)
Hydrogen S			Loamy Gleyed		2)		F	Piedmont Floodplain Soils (F19)
Stratified La	iyers (A5) (A10) (LRR N)		Depleted Matr					(MLRA 135, 147)
	(ATO) (ERK N) Plow Dark Surface	(A11)	Redox Dark S Depleted Dark					/ery Shallow Dark Surface (TF12) Other (Explain in Remarks)
	Surface (A12)	,,,,,	Redox Depres				_ `	oner (explain in nemarks)
	ky Mineral (S1) (LI	RRN,	Iron Mangane	se Masse		RR N,		
MLRA 14			MLRA 136				_	
Sandy Glay Sandy Redo	ed Marrix (S4)		Umbric Surfac				°ind	ficators of hydrophytic vegetation and
Stripped Ma			Piedmont FlooRed Parent Ma					eland hydrology must be present, dess disturbed or problematic.
	er (if observed):			oto-ioi (i z	ij (MLIII)	127, 147	i — —	ness distarbed of proplematic.
Туре:			_					
Depth (inche:	s):						Hydric Soil	Present? Yas No
Remarks:				_				
1								
								i

APPENDIX B

ORAM FORMS

Background Information

Milly Massentli							
Date: 23 April 3013	Date: 23 April 2013						
Attiliation: Telin tech Inc		_					
Address: 06/ Andrew //	12 13416 h 14 15220						
Phone Number: 412 - 930	7007						
	metho Artentel. com						
Name of Wetland: A	_	_					
Vagetation Communit(los):	· <u> </u>						
HGM Class(es):	Riverial						
Location of Wetland: Include map, ad	dress, north arrow, landmarks, distances, roads, etc	-					
sec Harbel map							
Lat/Long or UTM Courdinate	46.6073, -81, 0541						
USGS Quad Name	Carcollian	<u></u>					
County	Carroll Co.						
Township	TIME						
Section and Subsection	226, RSW						
Hydrologic Unit Code	05010001						
Site Visit	23 401 2013						
National Wetland Inventory Map	Fig. 3p						
Ohio Welland Inventory Map	Fis 38						
Soil Survey	Fig. 4						
Delineation report/map							
<u> </u>							

Name of Wetland:	<u>-</u>
Wetland Size (acres, hectares): U.O.L.ac	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Figl.	
Ishir with A series at	
Fiell	
Comments, Narrative Discussion, Justification of Category Changes: Exercised without abottong strains. Place from spices supports hadred	-23,
Final score : 52 Category:	2

Scoring Boundary Worksheet

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

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

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

3

Narrative Rating

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

#	Question	Circle one	C'>
1	Critical Habitat. Is the welland in a township, section, or subsection of	YES	No.
	a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical	Welland should be	Go to Question 2
	habitat* for any threatened or endangered plant or animal species?	evatuated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES	NO.
	threatened or endangered plant or enimal species?	Welland is a Calegory 3 welland.	Go to Question 3
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in	YES	NO
	Natural Heritage Database as a high quality wetlend?	Wetland is a Category 3 wetland	Ga la Questian 4
	!	Go to Question 4	<u></u>
4	Significant Breeding or Concentration Area. Does the wetland	YES	(NO)
	contain documented regionally significant breeding or numbraeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	$\langle \gamma \rangle$
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 scre)	YE\$	NO
	in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighly per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 welland	
	an acidic pond created or excavated on mined lands that has little or		_
_	no vegetation?	Go to Question 6	NO)
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses,	YES	NO
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover. 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	10
7	Fens, is the wetland a carbon accumulating (peat, muck) wetland that	YES	(NO)
	is saturated during most of the year, primarily by a discharge of free	Wetland is a Category	Go to Question 82
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	3 wetland	Go to Question az
	invasive species listed in Table 1 is <25%?	5 Heliario	
		Go to Question 8a	<u> </u>
₿a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	(NO)
	forest characterized by, but not limited to, the following characteristics:	Molland in a Cata	Go to Question 84
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category 3 wetland.	Go to Question 80
	projected maximum attainable age for a species); little or no evidence or human-caused understory disturbance during the past 80 to 100	S ridialiu.	
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

			\mathcal{C}
8b_	Mature forestad wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest compty consisting of deciduous treas with large diameters at foreast height (dbh), generally diameters greater than 45cm (17 7in) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9s YES	(NO
9a	Lake Erie coastal and tributary wetlands. Is the welland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 95	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from take Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 90
90	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sambar deposition wellands, estuerine wetlands, river mouth wetlends, or those dominated by submersed aquettic vegletation.	YES Ga to Question 9d	NO Go to Question 10
96	Does the wetland have a predominance of native spaces within its vagetation communities, although non-native or disturbance tolerant native species can elso be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
90	Does the wettand have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wettend should be evaluated for possible Category 3 status Go to Question 10	NO Ga to Question 10
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in Lucas, Fullon, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with Interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the granineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this two of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	(NO) Go to Question 11
11	Relict Wat Prairies. Is the welland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Countles), Sandusky Plains (Wyandol, Crawford, and Marion Countles), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Countles), and portions of western Ohio Countles (e.g. Darke, Mercar, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rafing

E.

Table 1. Characteristic plant species.

6

invasive/exotic spp	fen apecies	bog species	Dak Opening species	wet prairie species
Lythrum saticaria	Zygodenus elegans var. glawus	Calla palustris	Carex cryptolepis	Culumagrostis canadensis
Myriophyllum spicatum	Cacalia pluntaginea	Carex atlantico var. capillacea	Carex lasiocurpa	Calamogrostis stricta
Najas minor	Carex flava	Cares echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex huxbaumii
Phragmites austrulus	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogetan crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calumagrastis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus pulustris	Cientiana andrewsii
Rhammus frangula	Friophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha zglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria polustris		i.ythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Khamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospara capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium axycoceas		Spurtina pectinata
	Salex myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis	• *		
	Tofieldia glatinosa			
	Triplochin maritimum			
	Triglochin palustre			

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

			uantitative Rating		ates	(8): mik Mu.		f ·	Date: 23 30017
Site:	(urril	(0	. Enry		ate	(B). proc pro-	130174	1	Cato. 33 m
O	0	Me	tric 1. Wet	tland Are	ea (s	siz e).			
may 6 pts.	subtolal	Sele	ct one size class and >50 acres (>20	d assign score.					
			25 to <50 acre	s (10.1 to <20.2 s (4 to <10.1ha)					
			3 to <10 acres	(1.2 to <4ha) (3	3 pts)				
		-	D 1 to s0 3 acr	s (0.12 to <1.2h es (0.04 to <0.1					
] 	<0.1 acres (0.0	14ha) (0 pts)	r		ali:		land use
14	14	Me	etric 2. Upi	and bun	ers	and surrou	ınaı	ny	idilu use.
max 14 pls	subtotal	2a.	Calculate average b	ufferwidth. Se	lect on	iy one and assign so or more around weti	ore. Do	o not d	louble check.
			MEDIUM BIR	fers average 25	5m to <	50m (82 to <164ft) a	tround t	wellan	d perimeter (4)
			NARROW, BU	.ffersaverage 1 ∖W Buffersav	10m to eraoe 1	<25m (32ft to <82ft) 10m (<32ft) around	around wetland	d wetta d perin	ind perimeter (1) neter (0)
		2b	Intensity of surround	ling land use.	Select	one or double check est, prairie, savanna	and av	rerage	
			LOW. Old fiel	d (>10 years), s	shrub la	ind, young second g	rowth fo	orest. I	(5)
			MODERATEL HIGH, Urban,	YHiGH Resid i⊓dustrial, oper	iential, n pastu	fenced pasture, par- ire, row cropping, mi	ning, co	ervatioi enstruc	n tillage, new fallow field. (3) zion. (1)
19	210	Me	etric 3. Hyd						
[']	28	J _.					26	Canno	edivity. Score all that apply.
max 30 pts	Lubiotal	3a.	Sources of Water. \$	idwater (5)	эріү.		JU.	\Box	100 year floodplain (1)
			Other grounds Precipitation (\Box	Between stream/lake and other human use (1 Part of wetland/upland (e.g. forest), complex (
			Seasonal/Inte	rmittent surface ace water (lake			3d	Durati	Part of riparian or upland corridor (1) on inundation/saturation. Score one or dbl ch
		3c.	Maximum water der	th Select only	one a	nd essign score.		<u>ٔ</u>	Semi- to permanently inundated/saturated (4) Regularly Inundated/saturated (3)
			>0.7 (27.6in) (0.4 to 0.7m (1	5.7 to 27 frin) (2	2)				Seasonally inundated (2)
		30	<0.4m (<15.7i	n) (1) ural hydrologic i	regime	Score one or doub	ile chec		Seasonally saturated in upper 30cm (12in) (1) average.
					Check	all disturbances ob			1
			Recovered (7)			ditch tile			point source (nonstormwater) filling/grading
			Recent or no			dike weir			road bed/RR track dredging
				i		stormwater input			other pic./spring
13	46	M	etric 4. Ha	bitat Alt	erat	ion and De	velo	pm	ent.
max 20 pla		ا 48.			or dou	ble check and avere	ge.		
			None or none Recovered (3						
			Recovering (2 Recent or no						
		4b	Habitat developme		one an	d assign score.			
			Excellent (7) Very good (6)						
			Good (5) Moderately gr	ood (4)					
			Fair (3) Poor to fair (2						
			Poor (1)			hank and appropri			
		4 ¢.	Habitat alteration.		_	k all disturbances ob	served	-	
			Recovered (6)		mowing grazing		F	shrub/sapling removal herbaceous/aquatic bed removal
		_	Recovering (3			clearcutting			şedimentation
	76		_		\vdash	selective cutting woody debris remov	rali		dredging farming
	1 14	⅃				toxic pollutants			nutrient enrichment

Prippoping this badda

last revised 1 February 2001 jim

	_	orm Quantitative Rating	er(s): mik	Plasmeli Date: 22 Apr 10
Site: (Secoli	Confrage Rat	ertal. min	pressure Date: Strype 12
B.	96	lige		
0	46	Metric 5. Special Wetle	ands.	
rua 10 pis	s ubiotal	Check all that apply and score as indicated	1.	
		Bog (10)		
		Fen (10)		
		 Old growth forest (10) Mature forested wetland (5) 		
		Lake Erie coastet/tributary wetlar	nd-unrestricted hyd	Irology (10)
		- Lake Erie coastsi/tributary wetlan		
		I ake Plain Sand Prairies (Oak C		
		- Relict Wet Prairies (10)		
		Known occurrence state/federal	threatened or enda	ingered species (10)
		Significant migratory songbird/w	ater fowl habitat or	usage (10)
		Category 1 Wetland. See Quest		
i	57	Metric 6. Plant commu	ınities, int	erspersion, microtopography.
max 20 pts	ELICIOISI	6a. Wetland Vegetation Communities.	Vegetation	Community Cover Scale
		Score all present using 0 to 3 scale.	a	Absent or comprises <0.1ha (0.2471 acres) contiguous area
		@ Aquatic bed	1	Present and either comprises small part of welland's
		3. Emergent		vegetation and is of moderate quality, or comprises a significant part but is of low quality
		C Shrub		Present and either comprises significant part of waitand's
		Profest Mudilats	2	vegetation and is of moderate quality or comprises a small
		Open water		part and is of high quality
		Other	3	Present and comprises significant part, or more, of wetland's
		6b. horizontal (plan view) Interspersion.		vegetation and is of high quality
		Select only one.		
		High (5)		escription of Vegetation Quality
		Moderately high(4)	lovy	Low spp diversity and/or predominance of nonnative or
		Moderate (3)		disturbance tolerant native species Native spp are dominant component of the vegetation,
		Moderately low (2)	mod	although nonnative and/or disturbance tolerant native spp
		Low (1) None (0)		can also be present, and species diversity moderate to
		6c. Coverage of invasive plants. Refer		moderately high, but generally w/o presence of rare
		to Table 1 ORAM long form for list. Add		threatened or endangered spp
		or deduct points for coverage	high	A predominance of native species, with nonnative spp
		Extensive >75% cover (-5)	_	and/or disturbance tolerant native spp absent or virtually
		Moderate 25-75% cover (-3)		absent, and high spo diversity and often, but not always,
		Sparse 5-25% cover (-1)		the presence of rare, threatened, or endangered spp
		Nearly absent <5% cover (0) Absent (1)	Budfist so	d Open Water Class Quality
		6d. Microtopography.	C C	Absent <0.1ha (0.247 acres)
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
		Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88 acres)
		Coarse woody debris >15om (6)		High 4ha (9.88 acres) or more
		Standing dead >25cm (10in) db	h	
		 Amphibian breeding pools 		graphy Cover Scale
		<u> </u>	0	Absent
			1	Present very small amounts or if more common of marginal quality
			2	Present in moderate amounts, but not of highest
			2	quality or in small amounts of highest quality
				Present in moderate or greater amounts
			•	

TA

8

End of Quantitative Rating. Complete Categorization Worksheets.

and of highest quality

ORAM Summary Worksheet

		circle	
		answer or insert	Result
		Score,	
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Calegory 3.
	Question 2. Threatened or Endangered Species	YES (NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habital	YES NØ	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO	If yes, Category 1.
	Questian 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO	If yes, Category 3.
	Question 8b. Mature Forested Welland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Eriz Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wellands – Unrestricted with native plants	YES NÖ	If yes, Category 3
	Question 9e. Lake Erie Wellands - Unrestricted with invasive plants	YES (NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	O	
	Metric 2. Buffers and surrounding land use	14	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	13	
	Metric 5. Special Wetland Communities	Ö	
	Metric 6. Plant communities, interspersion, microlopography	6	
	TOTAL SCORE	T	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

•

Wetland Categorization Worksheet

Chaices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions. Namative Rating Nos 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score less than the Category 2 scorin threshold (excluding gray zone)? If yes, reevaluate the category of the wettland using the narrative cateria in OAC Rute 3745-1-54(C) and biological and/or functional assessments to determine if the wettland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Namative Rating Nos. 1, 8b, 9b. 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO C	Evaluate the welland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score if the welland is determined to be a Category 3 welland usine either of these, it should be categorized as a Category 3 welland. Detailed biological endorf functional essessment may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Welland is categorized as a Category 1 welland	(NO)	Is quantitative rating score greeter than the Category 2 scoring Inveshold finctiating any gray zone? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the CIRAM
Does the quantitative score fall within the scoring range of a Cetegory 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the welland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "grap zone" for Cetegory 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative oriteria	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate hunctions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Welland is assigned to category as determined by the ORAM	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland blotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrotogic functions because of its type, landscape position, size, loc or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-154(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons of information for this determination should be provided.

Final Category			
Chopse one	Category 1	/ Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Michael Mossame	J·	
23 Ap. 1 2713		
Affiliation: 7 th 1 1 /n.		
Address: 661 Anders V	1.415h.14 15220	
Phone Number:	,	
	eletatch com	
Name of Wetland: R	Contract Contract	
Vegetation Communit(les): PEm	<u>-</u>	
HGM Class(es):		
Location of Wetland: Include map, addre	ss, north arrow, landmarks, distances, roads, etc.	
see attibul rape. T		
		ı
Lat/Long or UTM Coordinate	Nu (cc) at an	
Lat/Long or UTM Coordinate USGS Quad Name	40.6053-81,0064	
_	Carcollion	
USGS Quad Name		
USGS Quad Name	Carrollton Carroll Co.	
USGS Quad Name County Township	Correll Co. TMN	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code Site Visit	Carrollian Carroll Co. TMN 526,85W	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code Site Visit National Wetland Inventory Map	Carrollon Carroll Co. TMN 528,850 05040001 23 April 2013 Fig. 3A	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code Site Visit National Wetland Inventory Map Ohio Wetland Inventory Map	ChristNon Christle Co. TMN 526,85W 05040001 23 April 2013	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code Site Visit National Wetland Inventory Map	Carrollon Carroll Co. TMN 528,850 05040001 23 April 2013 Fig. 3A	

Name of Wetland: Wetland Size (acres, hectares): O.c.(e.c., Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Comments, Narrative Discussion, Justification of Category Changes: Aluto strong southern portion of worked contains olderhoop, morthern portion omigent. Located at the of stage. Category: Final score : 60

Scoring Boundary Worksheet

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

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

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

3

Narrative Rating

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

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

Вb	Mature forested wetlands Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	(NO)
	deciduous frees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible Category 3 status.	
		Calegory S ataxes.	
		Go to Question 9s	6
9a	Lake Erie coastal and tributary wetlands its the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to take Ena that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
50	prevent erosion and the loss of aquatic plants, i.e. the welland is	1.20	
	partially hydrologically restricted from Lake Erie due to lakeward or	Welland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible Category 3 status	
		Category 5 status	
		Go to Question 10	
9c	Are Lake Eric water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no takeward or upland	Ga to Question 9d	Go to Question 10
	border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These	Go to desiron so	GO IO QUESTIDITI ID
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wellands, or those dominated by submersed aquatic vegetation.		
94	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Welland is a Category	Go to Question 9e
		3 welland	
		Go to Question 10	
9в	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	Go to Question to
		Category 3 status	
		l 1.	
	A CONTRACTOR OF THE PROPERTY O	Go to Question 10 YES	(NO)
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	TES	
	characterized by the following description: the wetland has a sendy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wefland.	
	several inches of the surface, and often with a dominance of the gramineous vegetation tisted in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of	GD ID QUESTION 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	Type of wetland and its quality.		(412)
11	Relict Wat Pzalries. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies	YE\$	(NO)
	were formerly located in the Derby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erle, Huron, Lucas, Wood Counties).	Calegory 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Mlaml, Montgomery, Van Wert etc.).	Complete Quantitative	
	monganiary, rain front cito.,	Rating	

5

invasive/exotic spp	fen species	bog species	Cak Opening species	we <u>t prairie species</u>
Lythrum salicaria	Zygadenus elegans var glaucus	Culla palustris	Carex cryptolepis	Culumugrastis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var capillacea	Carex tosiocorpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricto	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex huxbaumii
Phragmies australis	Carex stricta	Carex trisperma	Calamagrastis stricta	Curex pellita
Potamogeton crispus	Deschampsia caespitasa	Chamaedaphne colyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficuria	Eleveharis rostetlata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhammus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lohelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
77	Parmassia glanca	Schech:eria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spy		Pyvnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocurpon		Silphium terebirthinaceum
	Rhynchospora capillacea	Vaccinium carymbasum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidayo riddellii
	Salix serissima	Xyris difformis		-
	Solidago ohiocasis			
	Foficidia glutinosa			
	Triglochin maritimum			
	Triplachin palustre			

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

ORAM v. 5.0 Field Form Quantitative Rating

Metric 1. Wetland Area (size). Site: Care Florary Calculation Care	Site: Currell Conty from Rater(s): mike Messerel Date: 23 April 2013	ORAM v. 5.0 Field Form Quantitative Rating	
Section of the property of the color prope	Motric 1 Wotland Area (cito)	Site: Carrell Gardy Coursey Rater	s): mik M-someli Date: 23 A
Metric 5. Special Wetlands. Metric 2. Update of 15 miles (appeared to 15 miles (appeared to 15 miles) (appeared	O O O Metric 1. Wetland Area (Size).		
Metric 5. Special Wetlands. Part	max6 pts. sublotel Select one size class and assign soore.	52	
Comparison Com		nublefal draf page	
The control of the		Metric 5 Special Wetlan	ds.
## A Contract Contrac		O O Interior 3. Special fredam	
Wetrice 2. Upland buffers and surrounding land use. Per 1/19 Wetrice 2. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 4. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 3. Upland buffers and surrounding land use. Per 1/19 Wetrice 4. Hydrology of the surrounding land use. Per 1/19 Wetrice 4. Hydrology of the surrounding land use. Per 1/19 Wetrice 5. Plant communities, interespection, microtopography. Wetrice 6. Plant com	0 3 to <3 acres (0 12 to <1.2ha) (2pts)	my 10 ch	
Metric 2. Upland buffers and surrounding land use. Section Proceeding Process	0. fro < 0.3 acres (0.04 to < 0.12ha) (1 pt)		
Metric 4. Optation butters and surjectives (Control on the sariety) service to the control of	The states (closing) (p pix)		
The second control of the second control of			
Modern Communities Supplies of the community of the c	<u> </u>		
Medical State where swings are the common plant of the common pl			
Metric 3. Hydrocology Security was present of the Cologo and every present of the Cologo a			
Compared of summaring that use. Sheet one of collab check and a everage. Section of the goods of the product of the produc			ings) (10)
Supplement regulatory compressed to characteristic content (2) Company Vertical Security (2) Vertical Security (2) Vertical Security (2) Company Vertical Security (2) Company Vertical Security (2) Company Vertical Security (2) Company Vertical Security (2) Vertical Secur			atened or endangered species (10)
Metric 6. Plant communities, interspersion, microtopography. Wetting 3. Hydrology. No Hydrolog		 Significant migratory songbird/water 	fowl habitation usage (10)
Metric 3. Plant communities, interesting communities, some all that apply. Park Myrology. Park Myrology. Some all first apply. Some a			
Metric 3. Hydrology. No. William Service and Water Score all that apoly Procedure (1) Second information and processing of the second (Metric 6 Plant commun	ities, interspersion, microtopography.
Source of Valuer Score all that apply. Per station (S)		3 60 mound of 7 min	,
Asked of complete (5) Abstent of complete (5) December (6) December (7)	1 3.9 Metric 3. Hydrology.	max 20 pts. sublotal 6a Welland Vegetation Communities.	Vegetation Community Cover Scale
Some process of Years Score of Vertices. Score of V			
Briver of private water (3) Proposed and action where (3)			
Period devilation (1) Section Principles and the principle of the figure of the principle o	Other groundwater (3) Between streamflisk and other human use (1)	<u>)</u> Emergent	
## Open where an assign some or of things. Section in unation/stativation. Socie one or of things. Section in unation/stativation. Socie one or of things.	✓ Precipitation (1)Part of wetland/upland (e.g. forest), complex (1)		
Semitor permanently invadeded/salvanted (4)			
Society of the property of the property of the property of the present of the property of the present of the			
Second price Seco	>0.7 (27.6in) (3) Regularly Inundated/saturated (3)		
Modifications to natural hydrologic regime. Score one or double check and average Note of the content of the	0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2)		
Note or note apparent (17) Recovered (7) Recovered (8) Recovered (7) Recovered (7) Recovered (8) Recovered (7) Recovered (8) Recovered (7) Recovered (7) Recovered (8) Recovered (7) Recovered (8) Recovered (8) Recovered (8) Recovered (8) Recovered (8) Recovered (8) Recovered (9) Recovered (8) Recovered (9) Recovered (8) Recovered (9) Recovered (9) Recovered (9) Recovered (8) Recovered (9) Rec		Select only one.	_
Recovered (7) Recovering (3) Recent or no recovery (1) Recent or no re			
Recovering (3) Recent or no recovery (1) If the word bedfirst back deeplang and bedfirst back deeplang back deeplang and bedfirst back deeplang back			
Metric 4. Habitat Alteration and Development. Substance disturbance. Score one or double check and average. Substance of the passence of			
Metric 4. Habitat Alteration and Development. 4s. Substrate disturbance. Score one or double check and average. Annual Preserve and Select only one and assign score. Excellent (7) Good (5) Poor to fair (2) Poor to fair (2) Poor to fair (2) Recent or none apparent (9)			although nonnative and/or disturbance tolerant nativ
Metric 4. Habitat Alteration and Development. Sec. Coverage of invasive plants. Relar to Table 1 OPAM long from for lists. Add or deduct points for coverage and/or deduct points for coverage. None or none apparent (4) Recovered (3) Recovering (2) Recovering (2) Recover or recovery (1) Abbett development. Select only one and assign score. Habitat development. Select only one and assign score. Sec. Coverage of invasive plants. Relar to ToPAM long from for lists. Add or deduct points for coverage and/or disturbance observed in ship and/or disturbance observed in			
rex 20 pt. subtest 4s. Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. Extensive 77% cover (-5) Mone or none apparent (4) Recover(-6) Mone or none apparent (4) Recover(-6) Mone or none apparent (4) Recover(-6) Recover(-6) Mone or none apparent (4) Recover(-6) Re	Partie a Making Alexandra and Boundary		
## As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance. Score one or double check and average. As Substrate disturbance is absent and or an absent or	18 5) Metric 4. Habitat Alteration and Development.		
None or none apparent (4) Recovering (3) Recovering (3) Recovering (2) Recovering (2) Recovering (3) Recovering (2) Recovering (3) Recovering (4) Recovering (5) Recovering (6) Recovering (7) Recovering (8) Recovering (9) Recovering			
Recovered (3) Recovered (3) Recovered (3) Recovered (3) Recovered (6) Recovered (7) Recovered (7) Recovered (7) Recovered (7) Recovered (7) Recovered (8) Recovered (9) Re			
Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Vory good (6) Good (5) Moderately good (4) Fair (3) Poor (1) 4c. Habitat alfaration. Score one or double check and average. None or none apparent (9) Recovered (6) Recent or no recovery (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Absent (1) Coarse woody debits > 15cm (6in) Amphiblan breeding pools Microtopography Cover Scale Microtopography Cover Scale Microtopography Cover Scale Amphiblan breeding pools Apsent (1) Absent (1) Absent (1) Absent (1) Absent (2/47 to 2/47 acres) 1	Recovered (3)		
## Absent (1) Absent (2) ## Absent (2) ## Absent (3) ## Absent (4) ## Absent (4) ## Absent (5) ## Absent (6) ## Absent (7) ## Absent (7) ## Absent (7) ## Absent (8) ## Absent (9) ## Absent (1) ## Absent (2) ## Ab	Recovering (2)		
Excellent (7) Very good (6) Very good (7) Very good (8) Very good (9) Ve		Absent (1)	
Good (5) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) Annihilat attention. Score one or double check and average. Check all disturbances observed Recovering (3) Recent or no recovery (1) Recent or no recent (1) Recent or no recent (1) Recent or no recent (1) Recent or no recent (1) Recent or no recent (1) Recent or no recent (1) Recent or no recent (1) Recent or no recent (1) Recent or	Excellent (7)		
Moderately good (4) Febr (3) Poor to fair (2) Poor to fair (2) Poor (1) Recovered (6) Recovered (6) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovered (5) Recovered (6) Re			
Feir (3) Poor to fair (2) Poor to fair (2) Poor to fair (2) Poor (1) Amphiblan breeding pools 4c. Habitat alteration. Score one or double check and average. Vince or none apparent (9) Recovered (6)			
Poor to fair (2) Poor (1)	Fair (3)		V
4c. Habitat alteration. Score one or double check and average. V None or none apparent (9) Recovered (6) Recovered (3) Recovering (3) Recent or no recovery (1) Sedimentation Recent or no recovery (1) Under the page of t			Microtopography Cover Scale
None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) Security or no recovery (1) Recovered (5) Recovered (6) Recovered (6) Recovered (6) Recovered (6) Recovered (7) Recovered (7) Recovered (8) Recovered (8) Recovered (8) Recovered (8) Recovered (9) Rec			
Recovered (6) Recovering (3) Recent or no recovery (1) Selective cutting woody debris removal toxic pollutants Toxic pollutants Recovered (6) Recovering (3) Recent or no recovery (1) Selective cutting woody debris removal toxic pollutants To			
Recovering (3) Recent or no recovery (1) Subtrat Praises Recovering (3) Recent or no recovery (1) Subtrat Praises Recovering (3) Recent or no recovery (1) Sedimentation S			
Selective cutting selective cu	Recovering (3) grazing herbaceous/aquatic bed removal		
S J woody debta grant of thighest quality and of highest quality and of highest quality and of highest quality			
#United that the page	5- A woody debris removal farming		
***************************************	toxic pollutantsnutnerit enrichment	6a	
	subtrat tra peope		Camplete Categorization Workshoots

8

Date: 23 Apr 1 2013

Absent or comprises <0.1ha (0.2471 acres) contiguous area Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a

Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small

Present and comprises significant part, or more, of wetland's

Low spp diversity and/or predominance of nonnative or disturbance tolerant native species Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare

A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always. the presence of rare, threatened, or endangered spp

7

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (6)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (10)	If yes, Category 3.
	Question 4. Significant bird habitet	YES (10)	If yes, Category 3.
	Question 5. Calegory 1 Wellands	YES (NO	If yes, Category 1.
	Question 6. Bogs	YES (G)	If yes, Category 3.
	Question 7. Fens	YES (6)	If yes, Calegory 3.
	Question 8a. Old Growth Forest	YES (NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (vg)	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wellands - Restricted	YES NO	If yes, evaluate for Calegory 3; may also b 1 or 2.
	Question 9d. Lake Erie Wellands - Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES (NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	Γ΄
	Metric 2. Buffers and surrounding land use	19	
	Metric 3. Hydrology	20	
	Metric 4. Habitat	18	
	Metric 5. Special Wetland Communities	Ö	
	Metric 6. Plant communities, interspersion, microtopography	8	
	TOTAL SCORE	60	Category based on sco breakpoints

Complete Wetland Categorization Worksheet.

9

Wetland Categorization Worksheet

Choices	Circle one	<u></u>	Evaluation of Categorization Result of ORAM
Did you enswer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland		Is quentitetive rating score less than the Category 2 scorin thrashold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Namatuve Rating Nos. 1, 8b, 9b, 9e, 11	YES Welland should be evaluated for possible Category 3 status	(NO)	Evaluate the wettand using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland usin either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or (unctional assessment may also be used to datermine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES (Wetland is categorized as a Category 1 wetland	,	Is quantitative rating score greater than the Category 2 sconing threshold (including any gray zone)? If yes, reevaluate the category of the welland using the narrative criteria in CAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the sopring range	ZO)	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 12 or Category 2 or 3 wetlands?	Welland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc. and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the welland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 welland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, bu still exhibit one or more superior functions, a.g. a wetland biotic communities may be degraded by human scivides, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loc or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons of information for this determination should be provided.

	Fin	al Category	
Choose one	Category 1	/Category 2 /	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

filike Mussoms h	
23 April 3013	
Affiliation: Telen Tech Inc	
Address: 661 Anhoun Dr. P.H.	1) #A
Phone Number: 412.932 7007	56vrgh, 71/
e-mall address: richael, morning liet	extertish own
Name of Wetland: (401 D)	
HGM Class(88):	
Location of Wetland: include map, address, north	arrow, landmarks, distances, roads, etc.
see attackl report	
Let/Long or UTM Coordinate 4.6. 6	6043, -81, 0603
LIDGE Aund Name	rollion
	cell
	A W
Section and Subsection	26, RSW
Hwdrolonic Unil Code	040001
Oh- 16-2	3 April 2013
National Welland Inventory Map	F2 34
Ohio Wetland Inventory Map	F1, 35
Soil Survey	23 April 2013
Delineation report/map	914,4
2-7-1-1-1-1-1	4 () ()

Name of Wetland:	Cond	0		
Wetland Size (acres,				-
		ionship with other surface waters, vegeti	ation zones etc	
6		Cascindan	ation zonos, etc.	ļ
		All		
Comments, Narrative	. Discussion	ı, Justification of Category Changes:		
Depressions	nrp-5	the highest divusion distri-		
Final score :	2/1		Category:	4.

Scoring Boundary Worksheet

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

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

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

3

Narrative Rating

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

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

			\sim
8b	Mature forested wetlands. Is the welland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally	YES Welland should be	Go to Question 98
	diameters greater then 45cm (17.7/n) dbh?	evaluated for possible Category 3 status.	30 10 20251011 30
		Go to Question 9a	<i>f</i>
92	Lake Eric coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	100
	elevation, or along a Inbutary to Lake Ene that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquetic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Watland should be evaluated for possible Category 3 status	NO Go to Question 9c
	<u></u>	Go to Question 10	
₽c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an	YES Ga to Question 9d	NO Go to Question 10
	"estuarine" welland with take and river influenced hydrology. These include sandbar deposition wetlands, estuarine wellands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
_		Go to Question 10 YES	NO -
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vagetation communities?	Welland should be evaluated for possible	Go to Question 10
		Category 3 status	~
		Go to Question 10	(_{NO}) —
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in Lucas, Futon, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	Wetland is a Calegory 3 wetland.	Ga to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohlo Department of Natural Resources Division of Natural Arees and Preserves can provide assistance in confirming this type of wetland and its quality.	Go to Question 11	Ω
11	Reflet Wat Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies	YES	NO Complete
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crewford, and Marion	Wetland should be evaluated for possible	Quantilative
	Counties), northwest Ohlo (e.g. Erie, Huron, Luces, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Mismi.	Category 3 status	Rating
	Montgomery, Van Wert etc.)	Complete Quantitative Rating	_

5

invasive/exotic spp	fen species	bog species	Oak Opening species	
Table 1. Characterist invasive/acoxite spp Lythrum solicuria Myrioph/llum spiculum Najas mima Phaluris urundinacea Phaluris urundinacea Phaluris urundinacea Pragmites australis Potamogelon crispus Raumaculus ficanzia Rhummus frangulu Typha angustifolia Typha sydauca		bog species Culla palastris Carex allantica vur capillacea Carex echinata Carex oligaperma Carex risperma Channeclaphine calyculous Decodon verticiliatus Eriophorum virginicum Larix larixim Nemopanthius nucronutus Schechenis Sphagnum spp. Auctinium macrocarpon	Oak Opening species Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides Cladium mariscoides Calamagrastis critica Calamagrastis canadensis Quercus palustris	wat prairie species Calamagrostis cumukensis Calamagrostis cumukensis Calamagrostis stricta Cares athernales Cares athernales Cares petituli Cares petituli Gontiana anabewsii Heliamihus grosss eerratus Liaris spicata Lysimachia quadriflera Lysimachia quadriflera Fyenatihenum virginianum Sijokium terebimihinaceum
	Rhumms einfidia Rhynchospora capillacen Saitx candida Saitx myricoides Saitx serissima Solidago ahioensis Tofietina glutinosa Triglochin maritimum Triglochin maritimum	Vaccinium racercerpoi Vaccinium coryinbosum Vaccinium usycoccas Woodwardia virginica Xyris difformis		Sorghastrum nutaus Spariina pectinala Solidago riddellii

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

Site: Carrel	(dealy foreign	Rater(s): mile Messineli	Date: 23 4p. 1 2013
00	Metric 1. Wetland	Area (size).	
max 6 pis sublotal	Select one size class and assign so >50 acres (>20.2ha) (6 pt		
	25 to <50 acres (10.1 to <	20.2ha) (5 pts)	
	10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h		
	0.3 to <3 scres (0.12 to <1 0.1 to <0.3 acres (0.04 to	l.2ha) (2pls) <0.12ha) (1 pt)	
	<0.1 acres (0.04ha) (0 pts)	
5 5	Metric 2. Upland bu	uffers and surrounding land	use.
mex 14 pts. subjets!	2a. Calculate average buffer width.	Select only one and assign score. Do not double cho	eck.
		0m (164ft) or more around wetland perimeter (7) e 25m to <50m (82 to <164ft) around wetland perimet	er (4)
		ge 10m to <25m (32ft to <82ft) around wetland perim everage <10m (<32ft) around wetland perimeter (0)	eter (1)
	2b. Intensity of surrounding land us	Select one or double check and average.	
	LOW. Old field (>10 years	or older forest, preirie, savannah, wildlife area, atc. (?) s), shrub land, young second growth forest. (5)	
		esidential, fericed pasture, park, conservation tillage, r open pasture, row cropping, mining, construction (1)	new fallow field. (3)
13 13	Metric 3. Hydrolog		
max 30 pls. subtotal] 3a. <u>Sour</u> ces of Water. Score all tha		
	High pH groundwater (5) Other groundwater (3)		floodplain (1) stream/leke and other human use (1)
	Precipitation (1) Seasonal/Intermittent surf	Part of w	etland/upland (e.g. forest), complex (1) parian or upland corridor (1)
	Perennial surface water (I.	ake or streem) (5) 3d. Duration Inunda	tion/saturation. Score one or dbl check
	3c. Maximum water depth. Select c >0.7 (27.6in) (3)	only one and assign score. Semi- to Regularly	permanently inundated/saturaled (4) inundated/saturated (3)
	0.4 to 0.7m (15.7 to 27.6ir <0.4m (<15.7in) (1)	n) (2) Seasonal	ly inundaled (2) ly saturated in upper 30cm (12in) (1)
		gic regime. Score one or double check and average.	ry settrated in apper secon (12m) (1)
	None or none apparent (1 Recovered (7)		rce (nonstormwaler)
	Recovering (3)	tiefilling/gra	ding
	Recent or no recovery (1)	dike road bedi	RR track
		stormwater input other	
11 23	Metric 4. Habitat A	Iteration and Development.	
max 20 phs. eutiloial	4a. Substrate disturbance. Score o		
	Recovered (3)	,	
	Recovering (2) Recent or no recovery (1)		
	4b. Habitat development. Select on Excellent (7)	lly one and assign score.	
	Very good (6)		
	Good (5) Moderately good (4)		
	Fair (3) Poor to fair (2)		
	Poor (1)		
	4c. Habital alteration. Score one or None or none apparent (9		
	Recovered (6)	mowing shrub/sag	lavomen gnik
	Recovering (3) Recent or no recovery (1)		us/aquatic bed removal ation
· ·		selective cutting dredging woody debris removal farming	
43			nrichment
last revised 1 Februa	•		

Site: (meral	County Cours	Rater(s): M.k	Mrssameli	Date: 23 April 201
•	23 Solotal Brei pe	98			
C	2 3	Metric 5. Special V	Vetlands.		
max 10 pts	subtotal	Check all that apply and score as in	diçəled.		
		- Bog (10)			
		Fen (10) Old growth forest (10)			
		Mature forested wetland	(5)		
		Lake Erie coastal/tributar			
		Lake Erie coastal/fributar		ology (5)	
		 Lake Plain Sand Prairies Relict Wet Prairies (10) 	(Oak Openings) (10)		
		Known occurrence state/	ederal threatened or end	langered species (10)	
		Significant migratory song			
		Category 1 Wetland. See	Question 1 Qualitative :	Rating (-10)	
н	11	Metric 6. Plant cor	nmunities, in	terspersion, micr	otopography.
- 1	1 4		ŕ	•	
max 20 pla	subfotal	6a. Wetland Vegetation Communiti		Community Cover Scale	
		Score all present using 0 to 3 scale	0	Absent or comprises <0.1ha Present and either comprise:	(0.2471 acres) contiguous area
		Aquatic bed Trinergent	'	vegetation and is of moder	
		7 Emergent Shrub		significant part but is of low	
		O Forest	2		s significant part of wetland's
		<u>Ø</u> Mudflats			ate quality or comprises a small
		Open water Other	3	part and is of high quality	ficant part, or more, of wetland's
		6b. horizontal (plan view) Intersper	_	vegetation and is of high qu	
		Select only one.			
		High (5)		Description of Vegetation Qua	
		Moderately high(4)	low	Low spp diversity and/or pre- disturbance tolerant native	
		Moderate (3) Moderately low (2)	mod	Native spp are dominant con	
		Low (1)	1		disturbance tolerant native spp
		None (0)			pecies diversity moderate to
		6c. Coverage of invasive plants. R		moderately high, but gener	
		to Table 1 ORAM long form for list or deduct points for coverage	high	A predominance of native sp	
		Extensive >75% cover (-			native spe absent or virtually
		Moderate 25-75% cover		absent, and high spp diver	sity and often, but not always,
		Sparse 5-25% cover (-1)		the presence of rare, threa	tened, or endangered spp
		Nearly absent <5% cover		d Open Water Class Quality	
		Absent (1) 6d. Microtopography.	O C	Absent <0.1ha (0.247 acres	1
		Score all present using 0 to 3 scale		Low 0.1 to <1ha (0.247 to 2.	
		 Vegetated hummucks/tus 		Moderate 1 to <4ha (2.47 to	
		O Coarse woody debris >15		High 4ha (9.88 acres) or mor	re
		 ♦ Standing deed >25cm (10 ♦ Amphibian breeding pool 		graphy Cover Scale	
		relipinion orecong pour	0	Absent	
			1	Present very small amounts	or if more common
				of marginal quality	
			2	Present in moderate amount quality or in small amounts	
				Present in moderate or great	
	1		•	and of highest quality	
21	1				

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (Ô)	If yes, Category 3.
	Question 3. High Quality Natural Welland	YES HO	If yes, Category 3.
	Question 4. Significant bird habitat	YES (0)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (vo)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Calegory 3
	Guestion 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (10)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO	If yes, Calegory 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
•	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	7	<u> </u>
	Metric 4, Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	4	
	TOTAL SCORE	27	Category based on scor breakpoints

Complete Wetland Categorization Worksheet.

a a

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wellend is categorized as a Category 3 welland	(NO)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetard using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the welland has been over-categorized by the ORAM.	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos 1, 8b, 9b, 9e, 11 Did you answer "Yes" to	YES Welland should be evaluated for possible Category 3 status YES	(NO)	Evaluate the wettand using the 1) narrative criteria in DAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wettand is determined to be a Category 3 wettand using either of these, it should be categorized as a Category 3 wettend. Detailed biological and/or funcional assessments may also be used to determine the wettand's category. Is quantitative rating score greater than the Category 2	
Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland		scoring threshold <i>linchuding</i> any gray zone?? If yes, reevaluate the category of the wettland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wettland has been under-categorized by the ORAM.	
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all Instances however, the nerrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.	
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative oriteria	NO C	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nontrapid wetland assessment method, e.g. functional assessment, biological assessment, etc. and a consideration of the narrative criteria in CAC rule 3745-1-54(C).	
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wedland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Welland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biolic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 374-51-54(C)(7) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.	

	-	Final Category	
Choose one	Category 1	Calegory 2	Category 3
		/	

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Mike Mussomeli		
Date: 23 April 2013		<u></u>
Affiliation: Tela Tech	<u>.</u>	-
Address: 661 Anteron	Pr. Pittsbush, PA 15220	
Phone Number: 4/2 - 920 - 1		
	sendice totalah. com	
Name of Wetland: E a		<u>.</u>
Vegetation Communit(les):		
HGM Class(es):	<u>. </u>	
Location of Wetland: include map, add	iress, north arrow, landmarks, distances, road	s, etc.
ور ایلیاری دری		
Sur ettribul reg	5-7 ·	
LaVI ong or UTM Coordinate	40.6030, -81.0646	
USGS Quad Name	Carrollian	
County	Currell	
Township	714N	
Section and Subsection	528, R5W	_
Hydrologic Unit Cade	05040001	
Site Visit	23 April 2013	
National Wetland Inventory Map	Fits 34	
Ohio Wetland Inventory Mep	Fin 3g	
	3 - 2 15	
Sail Survey	Rs. 2	
Soil Survey Delineation report/map		

Name of Wetland: E and F
Wetland Size (acres, hectares): 0, c.l. ac. (combine)
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.
Field/Assiculture Fair Sy Fairly plants WET SS WITE
Comments, Narrative Discussion, Justification of Catagory Changes: Without scored testible front on size, preximity, and change is instance.
Final score: 53 Category:)

Scoring Boundary Worksheet

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

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

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

3

Narrative Rating

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

+	Question	Circle one	6
1	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	(NO)
	a United States Geological Survey 7.5 minute Quadrangle that has	l	Go to Question 2
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	TGO to Question 2
	habitat for any threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	
	threatened species which can be found in Ohio, the Indiana Bat has		
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	60
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		(NO)
2	Threatened or Endangered Species. Is the wetland known to contain	YE\$	[(NO/
	an individual of, or documented occurrences of federal or state-listed		Go to Question 3
	Ihreatened or endangered plant or animal species?	Wetland is a Calegory	GD to Guestion 3
		3 wetland.	Į.
		Go to Question 3	0.5
_			(NO) —
3	Documented High Quality Wetland. Is the wetland on record in	YEŞ	(19)
	Natural Heritage Database as a high quality wetland?	M-4-4 6	Go to Question 4
		Wetland is a Category 3 wetland	Go to Chestion 4
		3 Welland	
		Go to Question 4	
	The second secon	YES:	(NO)
•	Significant Breeding or Concentration Area. Does the welland	765	
	contain documented regionally significant breeding or nonbreeding	Wetland is a Category	Go to Question 5
	waterfowl, neotropical songbird, or shorebird concentration areas?	3 wettand	GD to Question 5
		2 Metrano	_
		Go to Question 5	
	Category 1 Wetlands, is the wetland less than 0.5 hectares (1 acre)	YES	/NO/
5	in size and hydrologically isolated and either 1) comprised of		\sim
	vegetation that is dominated (greater than eighty per cent areal cover)	Wellend is a Calegory	Go to Question 5
	by Phalaris erundinaces, Lythrum salicaris, or Phragmites eustralis, or	1 wetland	1
	2) an acidic pond created or excavated on mined lands that has little or		
	no vegetation?	Go to Question 6	/^ ~
_	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	(NO)
6	significant inflows or outflows, 2) supports acidophilic mosses,	I ·	\sim
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of Invasive species (see Table 1) is <25%?		
	and a manage about the control of the control	Go to Question 7	
,	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	/NO /
7	is saturated during most of the year, primarily by a discharge of free		1. /
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question &
	and with one or more plant species listed in Table 1 and the cover of	3 welland	1
	invasive species tisted in Table 1 is <25%?		
		Go to Question 8a	$\angle $
6a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	(NO)
	forest characterized by, but not limited to, the following characteristics:	l	L /
	overstory canopy trees of great age (exceeding at least 50% of a	Welfand is a Calegory	Ga la Question 8
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 60 to 100	I	
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers	1	
	of standing dead snags and downed logs?	I	1

			\sim
8b	Meture forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally	YES Welland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible Category 3 status Go to Question 9a	
	to the terminal and the second of	YES	(NO)
9 a	Lake Erie coastal and tributary watlands — is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this allevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
~~	prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 90
		Ga la Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological Influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland	YES	NO
	border alterations), or the welland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include san of the second wellands, estuarine wetlands, river mouth wetlands, or those doministed by submersed aquatic vegetation.	Ga to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YF\$	NO
	vegetation communities, although non-native or disturbance tolerant		1
	native species can elso be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Welland should be	NO Go to Question 10
		evaluated for possible Category 3 status	Go to Question to
		Go to Question 10	(NO)
10	Lake Plain Sand Prairies (Oak Openings) is the welland located in Lucas, Fulton, Henry, or Wood Counties and can the welland be	169	\mathbb{C}
	characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	-
	Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES	NO
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formeny located in the Darby Plains (Madison and Union	: Welland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Merion	evaluated for possible	Quantitative
	Counties), Sandusky Praints (vyganuol, Crawrott, and winds.) Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

Invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Culamagrostis canadensis
Myriaphyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacca	Carex lasiocarpa	Calamogrostis stricta
Naias minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Curex sterilis	Carex oligosperma	Cladium mariscoides	Carex huxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Culumagrastis stricta	Carex pellita
Patamageton crispus	Deschampsia caespitasa	Chamaedaphne catyculata	Calamagrostis canadensis	Carex sartwellii
Hanunculus ficaria	Elencharis rostellata	Decadon verticillatus	Quercus palustris	Gentiana andrewsii
Khamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Cientianopsis spp.	Lurix taricina		Liatres spicate
Typhu zglaucu	Lohelia kulmii	Nemopanthus muctonatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vex cinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum mutans
	Salix cambda	Vaccinium охусоссов		Spartina pectinata
	Salix myricoides	Wnodwardia virginica		Solidago riddellii
	Salix serissima	Xyrıs difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglichin palustre			

Table 1. Characteristic plant species.

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

-	- 1	Quarkitative Rating (Oval. Communication Rater(s): Milk Massacral: Date: 23 4 mills	017
Site:	Carrell	County (no sy Rater(s): Mile Mossowill Date: 23 4pm/	***
0	0	letric 1. Wetland Area (size).	
max 6 pts.	subjoint	elections size class and assign score. >50 acrss (>20 Zha) (5 pts) 25 to <50 acrss (>10 1 to <20 Zha) (5 pts) 10 to <25 acrss (4 to <10 ,1ha) (4 pts) 3 to <10 acrss (1.2 to <4ha) (3 pts) 0.3 to <3 acrss (0.2 to <4ha) (3 pts) 0.3 to <3 acrss (0.2 to <1.2 ha) (2 pts)	
3],_	Netric 2. Upland buffers and surrounding land use.	
may 14 pls	sublotal	Calculate average buffer width. Select only one and assign score. Do not double check. WIDE. Buffers average 50m (1648) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <1648) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32f to <82f) around wetland perimeter (1) VERY NARROW. Buffers average 10m to <25m (32f to <82f) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32f) around wetland perimeter (1) Intensity of surrounding land use. Select one or double check and average. VERY LOW 2nd growth or older forest, prairie, avavannath, wildtife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation sitiege, new fallow field. (3) HIGH. Ufban, industrial, open pasture, row cropping, mining, construction. (1) Text of the control of	
23	3}	Metric 3. Hydrology.	
max 30 pts	aubtolai	a. Sources of Water. Score all that apply. High pH groundwater (3) Other groundwater (3) Precipitation (1) Seasonal/Internittent surface water (3) Perennial surface water (lake or stream) (5) Maximum water depth. Select only one and assign score. > 0.4 to 0.7m (15.7 to 27.6in) (2) - 0.4m (15.7 in) (1) Modifications to natural hydrologic regime. Score one or double check and average.	(1) neck.)
		None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recovering (4) Recovering (4) Recovering (4) Recovering (5) Recovering (6) Reco	
17	49	Metric 4. Habitat Alteration and Development.	
max 20 pla	gujitotal	B. Subprate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recovering (2) Recovering (2)	
		b. Habitat development. Select only one and assign score. Excellent (7) Very good (5) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) C. Habitat alteration. Score one or doubts check and giverage.	
	ं प <i>ई</i>	None or none apparent (9) Recovered (5) Recovering (3) Recent or no recovery (1) Recent or no recovery (1)	
	ectotoles this p	LOSS policiality	

last revised 1 February 2001 jjm

ORAM v.	5.0 Field Fo	orm Quantitative Rating			
Site:	Carrell	County Energy	Rater(s): m.k.	Massemble	Date: 23 April 2013
	7 / audototal firet pe	, ,			
O	47	Metric 5. Special V	Vetlands.		
mex 10-ph	subletal	Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/f	5) welland-unrestricted hydrolo welland-restricted hydrolo	gy (5) gered species (10)	
6	52	Category 1 Welland. See	Question 1 Qualitative Ra	ling (-10)	pography.
ırısız 20 pli] 6a. Wetland Vegetation Communiti	os Vanetation C	ommunity Cover Scale	
in Edit Edit pri		Score all present using 0 to 3 scale	0	Absent or comprises <0.1ha (0.24	171 acres) contiguous area
		Aquatic bed	_	Present and either comprises small	
		3 Emergent		vegetation and is of moderate of	
		Shrub		significant part but is of low qua	
		7 Forest	2	Present and either comprises sign	
		€ Mudflats		vegetation and is of moderate of	uality or comprises a small
		Ø Open water		part and is of high quality	
		∂ Other		Present and comprises significan	pert, or more, of wetland's
		6b. horizontal (plan view) Intersper:	sion.	vegetation and is of high quality	<u> </u>
		Salect only one.			
		High (5)		scription of Vegetation Quality	name of passation of
		Moderately high(4)	low	Low spp diversity and/or predomit disturbance tolerant native spec	
		Moderate (3) Moderately low (2)	mod	Native spp ere dominant compon	
		Low (1)	niod	although nonnetive and/or distu	
		None (0)		can also be present, and specie	
		6c. Coverage of investive plants. R	efer	moderately high, but generally s	
		to Table 1 ORAM long form for list.		threatened or endangered app	·
		or deduct points for coverage	high	A predominance of native species	s, with nonnative spp
		Extensive >75% cover (-5	-	and/or disturbance tolerant nati	ve app absent or virtually
		Moderate 25-75% cover (-3)	absent, and high spp diversity a	nd often, but not always,
		Sparse 5-25% cover (-1)		the presence of rare, threatener	d, or endangered spp
		Nearly absent <5% cover			
		Absent (1)		Open Water Class Quality	_
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	

0 Absent <0.1ha (0.247 acres)
1 Low D.1 to <1ha (0.247 to 2.47 acres)
2 Moderate 1 to <4ha (2.47 to 9.88 acres)
3 High 4ha (9.68 acres) or more

Microtopagraphy Cover Scale

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

29

End of Quantitative Rating. Complete Categorization Worksheets.

63. Microtopography.

Soore all present using 0 to 3 scale.

Vegetated hummucka?ussucks

C Coarse woody debris >15cm (6in)

V Standing dead >25cm (10in) dbh

Amphibian breeding pools

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Raling	Question 1 Critical Habitat	YES (NØ	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES GO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Calegory 3.
	Question 4. Significant bird habitat	YES (NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO	if yes, Category 1.
	Question 6. Bogs	YES (NO	If yes, Category 3
	Question 7. Fens	YES (NO)	If yes, Calegory 3.
	Question 8a. Old Growth Forest	YES (NG)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erle Wetlands - Restricted	YES (NO	If yes, evaluate for Cetegory 3; may also be 1 or 2.
	Question 9d. Lake Erie Wellands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Calegory 3; may also b 1 or 2.
Quantitative Rating	Melric 1. Size	0	
Rating	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	23	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	4	
	TOTAL SCORE	52	Calegory based on sco breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Welland is categorized as a Category 3 welland	(e)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM.
Did you enswer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed belogical and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Namative Rating No 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score greater than the Category 2 scoring threshold finctutring any gray zone)? If yes reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	29	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to danify or change a categorization based on a quantitative score.
Does the quantitative score latt with the "gray zone" for Cetegory 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the nametive criteria	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrepid wetland assessment method, e.g. functional assessment, biological essessment, etc. and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the welland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the welland was not categorized as a Category 2 welland (in the case of moderate functions) or a Category 3 welland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's blotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrotogic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the namative criteria in OAC Rule 3745-1.54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

	Fin	al Category	
Choose one	Category 1	Category 2	Category 3
			•

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Mike Mussemeli		
Date: 24 April 2013		
Affiliation: Tele Tel	,	
Address: 661 Anderson	D _c	
Phone Number: 4/2 - 930 - 1		
e-mail address: michael, vn.	12	
Name of Wetland:	350 mg 1.	
Vegetation Communit(les): PEm	<u> </u>	
HGM Class(es): Lipissian		·
	iress, north arrow, landmarks, distances, roads, et	G.
see official re	.A	
200 3,000 30		
Let/Long or UTM Coordinate	40.6053 -01 01 1	
USGS Quad Name	40.6053 -81.0629 Correllton	
County	Carroll	
Township	THN	
Section and Subsection	528, Rsw	_
Hydrologic Unit Code	0405000)	
Site Visit	24 April 2013	
National Wetland Inventory Map	Fig. 34	
Ohio Wetland Inventory Map	Fin 31	
Soil Survey	Fig. 3	
Defineation report/map	614.1.1	_

Name of Wedand: G		
Watland Size (acres, hectares): O, 15 u.c.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zon Shape of the state of th	As. Firll	
Emagent without ; pention (busylan) within across rout.		
Final score: 54	Category:	ر ـ

Scoring Boundary Worksheet

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

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

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

3

Narrative Rating

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

ŧ	Question	Circle one	
	Critical Habitat. Is the wetland in a lownship, section, or subsection of	YES	(NO)
	a United States Geological Survey 7.5 minute Quadrangle that has	Wetland should be	Go to Question 2
	been designated by the U.S. Fish and Wildlife Service as "critical	evaluated for possible	Gu tu Queston z
	habitat" for any threatened or endangered plant or animal species?	Category 3 status	
	Note: as of January 1, 2001, of the federally listed endangered or	Category 5 status	
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habital proposed (65 FR 41812 July 6, 2000).	Go to Question 2	
	Threatened or Endangered Species. Is the wetland known to contain	YES	(NO)
	an individual of, or documented occurrences of federal or state-listed	1 120	
	threatened or endangered plant or animal species?	Welland is a Category	Go to Question 3
	(Meaderied of Citoarigered plant of animal species)	3 wetland.	
		O FREMERICA	
		Go to Question 3	
	Documented High Quality Wetland. Is the wetland on record in	YF\$	NO/
	Natural Heritage Database as a high quality wetland?	l	<u> </u>
		Welland is a Calegory	Go to Question 4
		3 wetland	
		Go to Question 4	
	Significant Breeding or Concentration Area. Does the wetland	YES	(NO/
	contain documented regionally significant breeding or nonbreeding	1	\smile
	waterfowl, negtropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
	3	3 welland	_
		Go to Question 5	11-1
	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	[№/
	in size and hydrologically isolated and either 1) comprised of	l	
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	1
	an acidic pond created or excavated on mined lands that has little or		C
	no vegetation?	Go to Question 6 YES	1(10)
•	Bogs. Is the welland a peat-accumulating welland that 1) has no	TES	
	significant inflows or outflows, 2) supports acidophilic mosses,	Wetland is a Category	Go to Question 7
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	3 welland	GO (O GUBSION I
	cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	2 Melitriu	_
	cover of divisions shoulds (see fame 1) is -75%.	Go to Question 7	$1 \frown$
	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO.
	Is saturated during most of the year, primarily by a discharge of free	'''' '	
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Calegory	Go to Question 6
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	,
	invasive species listed in Table 1 is <25%?	1 '	
	MITAGORA PERSONAL PROPERTY OF THE PROPERTY OF THE PERSONAL PROPERTY OF	Go to Question Ba	1 <u> </u>
a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO /
_	forest characterized by, but not limited to, the following characteristics:	I	\sim
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8
	projected maximum attainable age for a species); little or no evidence	3 wetland	į.
	of human-caused understory disturbance during the past 80 to 100	I	
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers	1	1
	of standing dead snags and downed logs?	I	•

		10
Mature forested wetlands. Is the welland a forested wetland with 50% or more of the cover of upper forest camppy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7m) dbh?	YES Wetland should be evaluated for possible Calegory 3 status.	Go to Question 9a
	Go to Question 9a	<i>(</i> 2)
Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, edjacent to this	YES	(NØ
		Go to Question 10
Does the wetland's hydrology result from measures designed to prevent eroslon and the loss of aquetic plants, i.e. the wetland is partially hydrologically destricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	NO Go to Question 9c
		NO -
i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and fiver influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth	Go to Question 9d	Go to Question 10
	YES	NO
vegetation communities, although non-native or disturbance tolerant native species can also be present?	Welland is a Category 3 welland Go to Cuestion 10	Go to Question 9e
Dies the welland have a gredominance of non-native or disturbance	YES	NO
tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
Lake Plain Sand Prairies (Oak Openings) is the welland located in	YES	(NO)
Lucas, Fulton, Henry, or Wood Counties and can the welland be characterized by the following description: the wetland has a sandy substrate with Interspersed organic matter, a water table often within	Wetland is a Category 3 wetland	Go to Questian 11
gramineous vegetation listed in Table 1 (woody species may also be present). The Ohlo Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of welland and its quality.	Ga to Questian 11	\bigcirc
Relict Wat Prairies. Is the welfand a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Myendot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of weatern Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Werl etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative	Complete Quantitative Rating
	Rating	
	50% or more of the cover of upper forest carnopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7n) dbh? Lake Eria coastal and tributary wetlands. Is the wetland focated at an elevation less than 675 feet on the USCS map, adjacent to this elevation, or along a linburary to Lake Erie that is soccessible to fish? Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquetic plants, i.e. the wetland is partially hydrologically estificated from Lake Erie due to lakeward or landward dikes or other hydrological controls? Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an estudiant extensive wetland with take and fiver influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those doministed by submersed aquatic vegetation. Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species and also be present? Lake Plain Sand Prairies (Dak Openings) is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland have as sandy substrate with interspersed organic matter, a water table often the prairies, letted in Teble 1 (woody species may also be present). The Ohlo Department of Natural Resources Division of Natural Areas and Freserves can provide assistance in confirming this type of wetland and its quality. Relict Wat Prairies, Is the wetland a relict wet prairis community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darky Plains (Maison and Unicas), and portions of western Ohlo Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohlo Counties (e	50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7m) dbh? Like Erie coastal and tributary wetlands. Is the wetland tocated at an elevation less than 675 feet on the USGS map, edjacent to this elevation, or along a tributary to Lake Erie that is sociestile to fish? Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically esticted from Lake Erie due to takeward or landward dikes or other hydrological controls? Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no takeward or upland border alterations), or the wetland as he characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, nor most because the second of the wetlands, nor mouth wetlands, nor most because the second of non-native or disturbance tolerant native spacies within its vegetation communities. although non-native or disturbance tolerant native plant species within its vegetation communities. Blhough non-native or disturbance tolerant native plant species within its vegetation communities. Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities? Wetland should be evaluated for possible Category 3 status. Go to Question 10 YES Wetland is a Category 3 wetland Go to Question 10 YES Wetland should be evaluated for possible Category 3 status. Go to Question 10 YES Wetland should be evaluated for possible Category 3 status. Go to Question 10 YES Wetland should be evaluated for possible Category 3 status. Go to Question 10 YES Wetland should be evaluated for possible Category 3 status of the possible Category 3 status of the possible Category 3 status of the possible Category 3 status of the possible

Table 1. Characteristic plant species

6

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
Lythrum salicaria	Zvgadenus elegans var. glaucus	Calla palustris	Carex cryptotepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Nagas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Pholoris arundinocea	Carex sterilis	Carex aligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Palamogeton crispus	Deschampsia cae spitusa	Champedaphne catyculata	Calumagrostis canadensis	Carex surtwellii
Ranunculus ficaria	Eleocharis rostellata	Decedon verticillatus	Quereus palustris	Gentiana andrewsii
Rhomaus frangula	Eriophorum viridicarinatum	Eriopkorum virginicum		Heliamhus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Luatris spicata
Typha zglauco	Lohelia kalmli	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glanca	Schecheeras palastris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnonthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpan		Silphum terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbasium		Sorghastrum nutans
	Solix candidu	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardio virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis	, · -		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: (here)	1 County Course	Rater(s): mik Mis	someli	Date: 24 April 2013
\ \ \ \ \	Metric 1. Wetland	Area (size).		
Area de la Reen	Selectione size class and assign so	s) (20,2 ha) (5 pts) (1ha) (4 pts) (a) (3 pts) (1,2 ha) (2pts) (-) (1,2 ha) (1 pt)		
11/12	Metric 2. Upland b	uffers and surroun	iding land use	-
max 14 pts. xubiokal	MEDIUM. Buffers averag NARROW. Buffers avera VERY NARROW. Buffers 2b. Intensity of surrounding land us VERY LOW. 2nd growth LOW. Old field (>10 year MODERATELY HIGH. R	0m (164fi) or more around welland e 25m to <50m (82 to <164ft) arou ge 10m to <25m (32ft to <82ft) ar s average <10m (<32ft) around we	d perimeter (7) und weifland perimeter (4) ound wetland perimeter (1 tland perimeter (0) d average, wildlife area, etc. (7) Ath forest (5) onservation tillage, new fal	(4)
14)6	Metric 3. Hydrolog		21	
max 30 pts aubtold	3a Sources of Water. Score all the High pH groundwater (3)	ace water (3) ake or stream) (5) mily one and assign score 1) (2)	Part of wetland/ Pert of riperian of Duration inundation/sa Semi- to perman Regularly inund Seasonally inun Seasonally satu	ain (1) Make and other human use (1) Upland (e.g. forest), complex (1) or upland comidor (1) furation. Score one or dbl check. nently inundated/saturated (4) ated/saturated (3)
	None or none apparent (1) Recovering (3) Recent or no recovery (1)	2) Check all disturbances observed disch lile dike weir stormwater input	páint source (no filling/grading road bed/RR tra dredging	·
18 44	Metric 4. Habitat A	Iteration and Deve	lopment.	
maa 20 pts subketal	4a. Substrate disturbance. Score of None or none apparent (4 Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habital development. Select or Excellent (7) Yory good (6) Good (5) Moderately good (4) Fair (3) Poor (5) Poor (7)) ily one and assign score.		
	4c. Habitat alteration. Score one or None or none apparent (9		ed	
પૂપ ક્રાહ્મણના ઉપક્ર p last revised 1 Februa	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing grazing clearcuting selective cuting woody debris removal toxic pollutants	shrub/sapling re	atic bed removel

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Carrel	Genty Energy	Rater(s): mik	Mussemel	Date: 29 April 20
		_: 			
	44				
L	iblut al first pe	ð. 1			
ں	44	Metric 5. Special W	/etlands.		
max 10 pts	aubiolai) Check all that apply and score as inc	dicated.		
		Bog (10)			
		Fen (10)			
		 Old growth forest (10) Mature forested wetland (5)		
		_ Lake Erie coastal/tributary		Irology (10)	
		Lake Erie coastal/tributary		logy (5)	
		Lake Plain Sand Prairies (10)	Oak Openings) (10)		
		 Relict Wet Prairies (10) Known occurrence state/forms 	aderal threatened or enda	ingered species (10)	
		- Significant migratory song			
		Calegory 1 Wetland. See	Question 1 Qualitative R	ating (-10)	
3	52	Metric 6. Plant con	nmunities, int	erspersion, microto	pography.
, ,				•	
max 20 pts	subfotal	6a. Wetland Vegetation Communitie		Community Cover Scale	
		Score all present using 0 to 3 scale. O Aquatic bed	0	Absent or comprises <0.1ha (0.24 Present and either comprises small	
		a Emergent	'	vegetation and is of moderate q	
		Shrub		significant part but is of low qual	
		7 Forest	2	Present and either comprises sign	
				vegetation and is of moderate q part and is of high quality	dainty of comprises a small
		- Other		Present and comprises significant	part, or more, of wetland's
		5b. horizontal (plan view) Interspers	ion.	vegetation and is of high quality	
		Select only one.	N-v-ative O	escription of Vegetation Quality	
		High (5) Moderately high(4)	low	Low spp diversity and/or predomin	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant component	
		Low (1) None (0)		although nonnative and/or distu- can also be present, and specie	
		6c. Coverage of invasive plants. Re	efer	moderately high, but generally v	
		to Table 1 ORAM long form for list.	Add	threatened or endangered spp	<u> </u>
		or deduct points for coverage	high	A predominance of native species	
		Extensive >75% cover (-5 Moderate 25-75% cover (-5		and/or disturbance loterant native absent, and high app diversity a	
		Sparse 5-25% cover (-1)	٠,	the presence of rare, threatened	
		✓ Nearly absent <5% cover			-
		Absent (1)		Open Water Class Quality Absent <0.1ha (0.247 acres)	
		6d. Microtopography. Score all present using 0 to 3 scale.	0	Low 0.1 to <1ha (0.247 to 2.47 ac	res)
		Vegetated hummucks/tust		Moderate 1 to <4ha (2.47 to 9 88	
		Coarse woody debris >15		High 4ha (9.88 acres) or more	
		O Standing dead >25cm (10		raphy Cover Scale	
		Amphibian breeding pools	0 microtopog	Absent	
			1	Present very small amounts or if r	поге сопттол
				of marginal quality	
			2	Present in moderate amounts, but quality or in small amounts of hi	
			3	Present in moderate or greater an	
	l			and of highest quality	
57				· ·	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (10)	if yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (10)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (19)	If yes, Calegory 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Calegory 3.
	Question 5. Category 1 Wellands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (Ñ)	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9b. Lake Erie Wellands - Restricted	YES (10)	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wellands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e, Lake Erie Wellands - Unrestricted with invasive plants	YES (Ng	If yes, evaluate for Category 3; may also t 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (O)	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	1	
•	Metric 2. Buffers and surrounding land use	11	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	18	
	Metric 5. Special Wetland Communities	Ö	
	Metric 6. Plant communities, Interspersion, microtopography	8	
	TOTAL SCORE	52	Category based on sco breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category				
Choose one	Category 1	Category 2	Category 3	
		$\overline{}$		

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Mame: Mike Mussome		
Date: 24 April 2013		
Affiliation: Tetr. Tech Inc	•	
	Or. P. Hibarit PA 15270	
Phone Number: (12-9)3 700	, .	
	alio totatah com	
Name of Wetland: µ	ALLE LALLS RENT ANDRE	
Vegetation Communit(iss):		
HGM Class(es):	Riverine	
	ess, north arrow, landmarks, distances, roads, et	ç.
so attacked copiet		
,		
7- "	·	
Lat/Long or UTM Coordinate	40.6072, -81.0615	
USGS Quad Name	Carealton	
County	Carroll	
Township	TIY	
Section and Subsection	525, R5W	
Hydrologic Unit Cade	03040001	
Site Visit	24 April 2013	
National Welland Inventory Map	Fis 35	
Ohio Wetland Inventory Map	Fig. 38	
Sail Survey	Fig. 2	
Delineation report/map	9 Hick	

	·
Name of Wetland:	
Wetland Size (acres, hectares): Ø, Ø2 4 f.	
As Field: As Field: First half and ha	ZONRS, etc.
Adds stram, or coloury Charges:	
Final score: 53	Category: 1

Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	dona? /	not applicable
Step 1	Identify the wetland area of Interest. This may be the site of a proposed impact, a reference site, conservation site, etc.		
Step 2	Identify the locations where there is physical evidence that hydrotogy changes repidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflow occur at the confluence of metrs, or other factors that may restrict hydrologic interaction between the wettands or parts of a single wetland.	1	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	1	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	1	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wellands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		7

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

3

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6433 (phone), 614-265-3096 (fax), https://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

	Question	Çircle one	_
	Critical Habitat. Is the welland in a township, section, or subsection of	YES	(NO)
	a United States Geological Survey 7.5 minute Quadrangle that has	. 20	
	been designated by the U.S. Fish and Wildlife Service as "critical	Welland should be	Go to Question 2
	habitat" for any inrealened or endangered plant or animal species?	evaluated for possible	1
	Note: as of January 1, 2001, of the federally listed and angered or	Category 3 status	
	Inneatened species which can be found in Ohlo, the Indiana Bat has		
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitet proposed (65 FR 41812 July 6, 2000).		6-
!	Threatened or Endangered Species. Is the welland known to contain	YÉS	M9
	an individual of, or documented occurrences of federal or state-listed		Go to Question 3
	threatened or endangered plant or animal species?	Welland is a Category	Go to Question a
		3 welland.	1
		Go to Question 3	r
_	- It is a second in	YES	\u0
	Documented High Quality Watland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	123	
	Matural Hentage Dalabase as a night quality wedger.	Wetland is a Celecory	Go to Questian 4
		3 wetland	
			1,
		Ga to Question 4	/
$\overline{}$	Significant Breeding or Concentration Area. Does the wetland	YE5	(NO)
•	contain documented regionally significant breeding or numbreeding		<u> </u>
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		3 wetland	
		Go to Question 5	
	A Company (1 company)	YES	ที่จิ
5	Category 1 Wetlands. Is the wetland less than 0.5 hecteres (1 acre)	TES	1.7
	in size and hydrologically isolated and either 1) comprised of vagetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phataris arundinacea, Lythrum salicaria, or Phragmites australis, or	i welland	
	2) an acidic pond created or excavated on mined lands that has little or		,
	no vegetation?	Go to Question 5	I/~
5	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	(NO)
•	significant inflows or outflows, 2) supports acidophilic mosses.	''-	
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Welland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	1
	cover of Invasive species (see Table 1) is <25%?		1_
	_	Go to Question 7	<i>(</i>
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	(NO)
-	is saturated during most of the year, primarily by a discharge of free		$1 \mathcal{Q}_{\perp} = 1$
	flowing mineral rich ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Ga to Questian 82
	and with one or more plant species listed in Table 1 and the cover of	3 welland	
	invasive species listed in Table 1 is <25%?	1	
		Go to Question 8a	1
8a	"Old Growth Forest." Is the welland a forested wetland and is the	YES	(NO)
ča	forest characterized by, but not limited to, the following characteristics:	I I I I I I I I I I I I I I I I I I I	Ga to Question 8b
		Wetland is a Category	GO IO CIDESTION OF
	overstory canopy trees of great age (exceeding at least 50% of a	2 malload	
	projected maximum attainable age for a species); little or no evidence	3 welland.	
	projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	* ··	
	projected maximum attainable age for a species); little or no evidence	3 wetland. Go to Question 8b	

			C
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous breas with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7n) dbh?	YES Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
	<u></u>	Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation lass than 575 feet on the USGS map, edjecent to this	YES Go to Question 9b	NO Go to Question 10
9b	elevation, or along a tributary to Lake Erie that is accessible to fish? Does the wetland's hydrology result from measures designed to	YES	NO NO
30	prevent erosion and the loss of squadte plants, i.e. the wettand is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Calegory 3 status	Go to Question 9c
		Go to Question 10	
9c	Are Lake Erie water levels the wettand's primary hydrological influence, i.e. the wettand is hydrologically unrestricted (no takeward or upland border alterations), or the wettand can be characterized as an	YES Go to Question 9d	NO Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquistic vegetation.		
\$ď	Does the welland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Ga to Question 98
		Go to Question 10	
Se	Does the welland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES	NO
		Wetland should be evaluated for possible Category 3 status	Go to Question 10
		Go to Question 10	-
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland located in	YF\$	№)
	characterized by the following description: the welland has a sandy substrate with Interspersed organic marter, a water table often within several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Go to Question 11	
11	Relict Wet Prairies Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union	YES Welland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Countles), northwest Ohio (e.g. Erie, Huron, Luces, Wood Counties), and portions of western Ohio Countles (e.g. Darke, Mercer, Miami,	evaluated for possible Category 3 status	Quantitative Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

invasive/exotic spp	fen species	bog species	Dak Opening species	wet prairie species
Lythrum salicaria	Zygademis elegans var glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Caralia plantaginea	Carez atlantica var. capitiacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscaides	Carex buxhqumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaeduphne calyculata	Calamagrostis canadensis	Carex sartwelli
Ranunculus ficaria	Eleochuris rostellara	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriapharum virginicum	٠.	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha zglauca	Lobelia kalmit	Nemopanthus mucronalus		Lysimachia quadriflora
Oh. III LEMENT	Parnassia glauca	Schechceria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginiamum
	Rhammus alnifolia	Vaccinum тастосатион		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sory hastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellu
	Salix serissima	Syris difformis		
	Solidago ohmensis			
	Tofieldia glutinoso			
	Triglochin maritimum			
	Triglochin polustre			

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

ORAM v. S	5.0 Field Fo	un Qu	antilaliv	e Raling			_	. —		
Site:	Carrel	T Ca	~ \ \	Energy		Rater(s): MK	Musseine	.l,	Date: 24 Ap. 7	2013
O	o o					ea (size).				
max & pts	aublois!	Selec	>5	ze class and 0 acres (>20.1	2ha) (6 pls)					
		F		to <50 acres to <25 acres						
		F	3 t	o <10 acres (to <3 acres	1.2 to <4ha)	(3 pts)				
		ţ	0.1	to < 0.3 acre .1 acres (0.04	s (0.04 to <0					
8	1		tric	2. Upla	nd buf	fers and su			•	
max 14 pts	eu b lotal	້2a. ໘	alculati	e average bu	ffer width. Si	electionly one and ass (164ft) or more arour	alga score Do Mwetland peri	nat double check. imeler (7)		
		ŀ	ME NA	DIUM. Buffe	ers average 2 fors average	25m to <50m (82 to <1 10m to <25m (32ft to verage <10m (<32ft) a	64ff) around w <82ft) around	ætland periméter (4) wetland perimeter (1)	I	
		2b. ji	ntensity	of surroundly	no land use.	Select one or double older forest, praide, sa	check and av	erage.	_	
		-		NATIONAL TANK	(s1f) upper)	should land yourse see	ol diworn bno:	rest. (5)	low field (3)	
		_		ODERATELY GH. Umban, i	MIGH. Resi ndustrial, opt	dential, fenced pasture en pasture, row croppi	e, park, consei ng, mining, co	nstruction. (1)	OW (Ield: (5)	
21	29			3. Hyd						
max 30 pta	. subtotal	ี 3a. §	Gaurces His	of Water. Segh pH ground	core all that a Iwater (5)	abilit	3ab. 0	Connectivity. Score at 100 year floodo	lain (1)	
		ļ	. Ot	her groundwa ecipitation (1	ater (3)			Between stream Part of wetland/	Make and other human u upland (e.g. forest), com	use (1) iplex (1)
			√ S€	asonaVinterr	nittent surfac		24 [Part of riparian	or upland corridor (1) aturation. Score one or d	
		3c. M	Aaximu	m water dept	h. Selection	e or stream) (5) ly one and assign sou		Semi- to perma	nently inundated/saturate ated/saturated (3)	ed (4)
		ŀ	→ <u></u> 20.4).7 (27.6in) (3 4 to 0.7m (15) .7 to 27.6in) :	(2)		Seasonally inur	idated (2)	:> ##\
		3e l	√ <0 vlodifica	l.4m (<15.7in dions to natu) (1) ral hydrologic	regime. Score one o	r dou <u>ble che</u> d		rated in upper 30cm (12	(יי) ניזו
		[Z∫N(one or none a		Check all disturbanc		point source (no	netamuster)	
		}		ecovered (7) ecovering (3)		ditch		filling/grading	l l	
		[R	ecent or no re	covery (1)	dike		road bed/RR tra dredging	ıck	
		_				stormwatering		other		
17	46	1				teration and		pment.		
max 20 pts	subtolas		Substra	te disturband one or none a	e. Score one inparent (4)	e or double check and	average			
		ļ	R	ecovered (3) ecovering (2)	.,,					
			R	ecent or no re	ecovery (1)		_			
		4b. [E	cellent (7)	. Selectionly	one and assign score	.			
		-		ery good (6) aod (5)						
				loderataly god air (3)	od (4)					
			P	oor to fair (2)						
		4c. i		oor (1) alteration. S	core one or o	touble check and aver				
				one or none a	apparent (9)	Check all disturban	ces observed	shrub/sapling r	emoval	
			R	ecovering (3)		grazing			uatic bed removal	
	Γ	٦ '	L ⊢ R	ecent or no r	ecovery (1)	selective cutti		dredging	ı	
	40					woody debris toxic polluter		farming nutrient enricht	nent	

last revised 1 February 2001 jm

	416			
61,	bkolel wat pa	Ī		
	46	Metric 5. Special Wetland	OS.	
max 10 pts.	subtotel	f Check all that apply and score as indicated.		
		Bog (10)		
		Fen (10)		
		Old growth forest (10)		
		 Mature forested welland (5) Lake Eric coastal/tributary watland-ur 	reachided bud	rolom (10)
		Lake Plain Sand Prairies (Oak Openii		-83 (-7
		Relict Wet Prairies (10)		
		Known occurrence state/federal threa		
		Significant migratory songbird/water f		
		Category 1 Walland, See Question 1		
	53	Metric 6. Plant communi	ties, inte	erspersion, microtopography.
' l	7)		-	•
max 20 pts	aubiotsi	6a. Wetland Vegetation Communities.	Vegetation (Community Cover Scale
		Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 acres) contiguous area
		Aquatic bed	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a
		Emergent Shrub		significant part but is of low quality
		7) Forest		Present and either comprises significant part of wetland's
		O Mudflats	_	vegetation and is of moderate quality or comprises a small
		O Open water		part and is of high quality
		Other	3	Present and comprises significant part, or more, of wetland's
		6b. horizontal (plan view) Interspersion.		vegetation and is of high quality
		Select only one.	BIBlood Da	escription of Vegetation Quality
		High (5) Moderately high(4)	low low	Low spp diversity and/or predominance of nonnative or
		Moderate (3)	1011	disturbance tolerant native species
		Moderately low (2)	mod	Native spp are dominant component of the vegetation,
		Low (1)		although nonnative and/or disturbance telerant native spp
		None (0)		can also be present, and species diversity moderate to
		6c. Coverage of Invasive plants. Refer		moderately high, but generally w/o presence of rare
		to Table 1 ORAM long form for list. Add	high	threatened or andangered spp A predominance of native species, with nonnative spp
		or deduct points for coverage Extensive >75% cover (-5)	nign	and/or disturbance tolerant native spp absent or virtually
		Moderate 25-75% cover (-3)		absent, and high spp diversity and often, but not always,
		Sparse 5-25% cover (-1)		the presence of rare, threatened, or endangered spp
		Nearly absent <5% cover (0)		<u> </u>
		Absent (1)		Open Water Class Quality
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)
		Score all present using 0 to 3 scale.	- 1 2	Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.68 acres)
		Vegetated hummucks/fussucks Coarse woody debris >15cm (6in)	- 2	High 4ha (9 88 acres) or more
		6 Standing dead >25cm (10in) dbh		juight the (4 00 man) at the control of the control
		Amphiblan breeding pools	Microtopog	raphy Cover Scale
			O.	Absent
			1	Present very small amounts or if more common
				of marginal quality Present in moderate amounts, but not of highest
			2	Present in moderate amounts, but not or nignest quality or in small amounts of highest quality
			- 3	Present in moderate or greater amounts
	1		•	and of highest quality
57				
1)]			

Rater(s): Mike Message

Date: 24 April 2013

End of Quantitative Rating. Complete Categorization Worksheets.

8

ORAM v. 5.0 Field Form Quantitative Rating

Site: Correll County Course

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES 100	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Calegory 3.
	Question 5. Category 1 Wetlands	YES (0)	If yes, Calegory 1.
	Question 6. Bogs	YES (NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (G)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wellands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wellands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2
Quantitative Rating	Metric 1. Size	0	
, idaii g	Metric 2. Buffers and surrounding land use	-8	
	Metric 3. Hydrology	21	
	Melric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	53	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category						
Choose one	Category 1	Çalegory 2	Category 3			

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Mike Mussonal,		
Date: 24 April 201		
Affiliation: Tate Tech	T _n ,	
Address: 661 Ander	son Dr. Pitts brish, PA	15220
Phone Number: 4/2- 920-	•	
e-mail address: michael,	missenelie tetratah. com	
Name of Wetland:		
Vegetation Communit(les): 9Ex	<u> </u>	
HGM Class(es):	RIVERING	
Location of Wetland: Include map,	address, north arrow, landmarks, distances, re	pads, etc.
son attackly report		
Lat/Long or UTM Coordinate	144 4 21 444	
	40.6062, -81.0559	
USGS Qued Name	Correllton	
County	Curroll	
Township	TIYN	
Section and Subsection	SZB, RSW	_
Hydralogic Unit Code	osonoee/	
Site Visit	24 April 2013	
National Welland Inventory Map	F15 3A	
Ohio Wetland Inventory Map	Fig. 38	
Spil Survey	Fig. d	
Delineation report/map	47.47	

Name of Wetland:	<u>-</u>			•
Wetland Size (acres, hectar	es): 0, 27 ac -			
Sketch: Include north arrow	Fory	SIO FILL VA	mobile Ri	
	usaion, Justification of Cates to of Stape of the			
Final score :	76	<u></u>	Category:	3

Scoring Boundary Worksheet

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

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

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

3

Narrative Rating

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

#	Question	Circle one	()
_	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	69/
	a United States Geological Survey 7.5 minute Quadrangle that has	Wetland should be	Go to Question 2
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?	evaluated for possible	3 2 12 22 11 11 11 11 11 11 11 11 11 11 11
	Note: as of January 1, 2001, of the federally listed endangered or	Calegory 3 status	
	threatened species which can be found in Ohio, the Indiana Bat has		
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Ga to Question 2	
	has had critical habitat proposed (65 FR 41812 July 5, 2000).		/vo) -
2	Threatened or Endangered Species. Is the wetland known to contain	YES	(~~
	an individual of, or documented occurrences of federal or state-listed	Wetland is a Category	Go to Question 3
	threatened or endangered plant or animal species?	3 wetland.	
		3 173114	
		Ga to Question 3	() _
<u>-</u>	Documented High Quality Wetland. Is the welland on record in	YES	(NO
	Natural Heritage Database as a high quality wetland?	talestand in a Catagoni	Go to Question 4
		Wetland is a Category 3 wetland	GO ID QUESTOTI 4
		5 Hetiana	0
		Go to Question 4	⊥ <i>f</i> ′ }
4	Significant Breeding or Concentration Area. Does the wetland	YES	(NO)
-	contain documented regionally significant breading or nonbreading		Go to Question 5
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	GD to QUESTION 9
		3 wetiano	
		Go to Question 5	r)
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO/
0	in size and hydrologically isolated and either 1) comprised of	1	
	constation that is dominated (greater than eighly per cent areal cover)	Welland is a Category	Go to Question 6
	by Phalaris anundinacea I vibrum salicaria, or Phragmites australis, or	1 wetland	I _
	 an acidic pond created or excavated on mined lands that has unle or 	Go to Question 6	
	no vegetation? Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO -
6	=:as:legat infloret or outflows 2) supports scidooblic mosses.	1.20	1 V I
	particularly Sphaggum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover 4) at least one species from Table 1 is present, and b) the	3 wetland	
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	
	Tri di di serita serita serita di bot	YES YES	(NO)
<u>z</u>	Fens. Is the wetland a carbon accumulating (peet, muck) wetland that	150	
	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	
	Invasive species listed in Table 1 is <25%?		
		Go to Question Ba	 (io)
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YFS	*
	forest characterized by, but not limited to, the following characteristics:	Wetland is a Category	Go to Question 8b
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		l
	wears: an all-aned structure and multilayered canopies; aggregations of	Go to Question 8b	ĺ
	canopy trees interspersed with canopy gaps; and significant numbers		1
	of standing dead snags and downed logs?	I .	1

Вb	Mature forested wetlands. Is the welland a forested welland with 50% or more of the cover of upper forest canopy consisting of deciduous frees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Calegory 3 status.	Go to Question 9a
		Go to Question 9a	ــما
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO).
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Ga to Question 95	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YFS Wettand should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
90	Are Lake Erie water levels the wetland's primary hydrological influence.	YFS YFS	NO
¥C.	Let the well and is hydrologically unestricted (no lakeward or upland border attentions), or the welland can be characterized as an observation of the welland can be characterized as an estuarine welland with lake and niver influenced hydrology. These include sandbar deposition wellands, estuarine wellands, fiver mouth wellands, or those dominated by submersed aquatitic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vagetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9s
		Go to Question 10	
9e	Does the wetland have a predominence of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Ptain Sand Prairies (Oak Openings) is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy	YES Wellend is a Category 3 welland.	NO Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of weltand and its quality.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict well prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Uniton Counties), Sandusky Plains (Myandot, Crawford, and Manon Counties), northweat Ohio (e.g. Frie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Mismi, Montgomery, Van Wert etc.).	YES Wedand should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating

Invesive/exotic spp	fen species	bog species	Cak Opening species	wet prairie apecies
l.) thrum salicaria	Zygademis elegans var. glaucus	Callo palustris	Carex cryptolepis	Calumagrostis canadensis
Myriophyllum spicutum	Cuculia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis strictu
Najas minor	Cares flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladum mariscaides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitusa	Chamaedanhne calyculata	Calamagrostis canadensis	Carex sartwelln
Ranunculus ficaria	Eleocharis rostellata	Decodon verticidatus	Quercus palustris	Gentiana androwsii
Rhammis frangula	Erionhorum viridwarinatum	Eriophorum virginicum	. ,	Helianthus grosseserratus
Typha angustifolia	Gentiumopsis spp.	Larix taricina		Liutris spicata
Typha zglanca	Lobeka kalmu	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia plauca	Schechteria palustris		Lythrum alatum
	Potentilla fruticasa	Sphaemim spp.		Psynanthemum virginianum
	Rhummus alnifolia	Vaccinium тасгосогрон		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccenium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium axycoceos		Spartina pectinala
	Salix myricoides	Wondwardia virginica		Solidago riddellii
	Sulix serissima	Xyris difformis		•
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triylex hin maritimum			
	Triglochin palustre			

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

Site:	Carroll	(brok Energy	Rater(s):	m:K	M-55	<u>wti'</u>	Date: 24 April 2013
2	- 2	Metric 1. Wetlan	d Area (size	r).			
max 5 pts	subtotal	Selectione size class and assigned to see (>20,2he) >50 acres (>20,2he) 25 to <50 acres (10.1 10 to <25 acres (4 to 3 to <10 acres (1.2 to 0.3 to <3 acres (0.1 to <0.3 to <3 acres (0.1 to <0.3 acres (0.1 to <0.3 acres (0.1 to .0.3 acres (0.1 to .0.3 acres (0.1 to .0.1 acres (0.1 to .0.4 to .0.	(6 pts) to <20.2ha) (5 pts) <10.1ha) (4 pts) <4ha) (3 pts) to <1.2ha) (2pts) 4 to <0.12ha) (1 pt)				
11	13	Metric 2. Upland	buffers and	d sur	oundi	ng land use.	
max 14 pis	subtotad	2b. Interprity of surrounding lar VERY LOW. 2nd gre LOW. Old fleid (=10 MODERATELY HIGH	ge 50m (164ft) or mo erage 25m to <50m (verage 10m to <25m iffers average <10m i d use. Select one of who or older forest, p years), shrub land, ye 4. Residential, fenca rial, open pasture, rov	re around 82 to <16 (32ft to < (<32ft) arouble o rairie, savoung seco d pasture,	welland per lift) around v 82ft) around und wetland neck and av annah, wildl nd growth fo park, conse	rimeter (7) wetland perimeter (4) i wetland perimeter (1) i perimeter (0) erage, ife area, etc. (7) prest. (5) prest. (5) prest. (5)	(4)
35	45	Metric 3. Hydrol	ogy.				
тах 30 рб	evblola	3a. Sources of Weter. Score : High pH groundwalar (Precipitation (1) Seasonal/Intermitten Perennial surface we 3c. Maximum water depth. Se -0.7. (27, Sin) (3) -0.4 to 0.7m (15, 7 to 2) -0.4 to 0.7m (15, 7 to 2) -0.4 m (<15, 7 in) (1) None or none appare Recovered (7) Recovering (3) Recont or no recove	(5) (surface water (3) (surface water (3) (ter (lake or streem) (4) lect only one and ass (27.6in) (2) drologic regime. Soo ont (12) Check all di title	ign score. re one or o	3d. I	Bart of wellandA Part of riparian o Duration Inundation/sal Semi- to perman Regularly inunds Seasonally inund Seasonally satur	ain (1) Alake and other human use (1) upland (e.g., forast), complex (1) ir upland comidor (1) urustion. Score one or obt checkently loundated/saturated (4) sted/saturated (3) dated (2) ated in upper 30cm (12in) (1)
_		1	storm	vater inpu		other	
19	64	Metric 4. Habita				pment.	
max 20 pts	antipopal	4a. Substrate disturbance. Sc None or none appar. Recovered (3) Recovering (2) Recent or no recove 4b. Habitat development. Sel Excellert (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	ent (4) ry (1)		егаде.		
		4c. Habital alteration. Score of None or none appar					
		Recovered (6) Recovering (3)	mowir	ng		shrub/sapling re herbaceous/aqu	moval latic bed removal

clearcutting

selective cutting

toxic pollutants

woody debris removal

Recent or no recovery (1)

sedimentation

nutrient enrichment

dredging

faming

64 Metric 5. Special Wetlands. 0 Check all that apply and score as indicated. Bog (10) Fen (10) Clid growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-unrestricted hydrology (10) Lake Frie coastal/tributary wetland-restricted hydrology (5) Lake Plain Sand Prairies (Oak Openings) (10) Relict Wel Prairies (10) Known occurrence state/federal threatened or endangered species (10) Significant migratory songbird/water fowl habitat or usage (10) Category 1 Wetland See Question 1 Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. 12 6a. Welland Vegetation Communities. Vegetation Community Cover Scale max 20 pts Absent or comprises <0.1ha (0.2471 acres) contiguous area Score all present using 0 to 3 scale. Present and either comprises small part of welland's O Aquatic bed vegetation and is of moderate quality, or comprises a 3 Emergent Shrub
O Forest
O Mudflets
O Open water significant part but is of low quality Present and either comprises significant part of welland's vegetation and is of moderate quality or comprises a small part and is of high quality Present and comprises significant part, or more, of wetland's - Other vegetation and is of high quality 6b. horizontal (plan view) interspersion. Select only one. Narrative Description of Vegetation Quality High (5) Low spp diversity and/or predominance of nonnative or Moderately high (4) Moderate (3) disturbance tolerant native species Native spp are dominant component of the vegetation, Moderately low (2) mod although normative and/or disturbance tolerant native spp Low (1) can also be present, and species diversity moderate to None (0) moderately high, but generally w/o presence of rare 6c. Coverage of invasive plants. Refer threatened or endangered spp to Table 1 ORAM long form for list. Add A predominance of native species, with nonnative spp. or deduct points for coverage and/or disturbance tolerant native spp absent or virtually Extensive >75% cover (-5) absent, and high spp diversity and often, but not always, Moderate 25-75% cover (-3) the presence of rare, threatened, or endangered spp Sparse 5-25% cover (-1) Nearly absent <5% cover (0) Mudflet and Open Water Class Quality Absent (1) Absent < 0.1ha (0.247 acres) 6d. Microtopography. Low 0.1 to <1ha (0.247 to 2.47 acres) Score all present using 0 to 3 scale. Moderate 1 to <4ha (2.47 to 9.88 acres) 2 Vegetated hummucks/tussucks High 4ha (9.88 acres) or more 2 Coarse woody debris >15cm (5ln) E Stending dead >25cm (10in) dbh Microtopography Cover Scale Amphibian breeding pools Absent Present very small amounts or if more commo of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality Present in moderate or greater amounts

Rater(s): mik, Mussempli

Date: 17 April July

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ORAM v. 5.0 Field Form Quantitative Rating

Site: Carrell County Energy

End of Quantitative Rating. Complete Categorization Worksheets.

and of highest quality

7

last revised 1 February 2001 jjm

ORAM Summary Worksheet

		circle answer or insert score	Result
Namalive Rating	Question 1 Critical Habitat	YES (NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (10)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant blrd habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wellands	YES NO	If yes, Calegory 1,
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (IO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (10)	If yes, Category 3.
	Question 8b. Malure Forested Welland	YES (NG)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erle Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES WO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
Raung	Metric 2. Buffers and surrounding land use	11	
	Metric 3. Hydrology	32	
	Metric 4. Habitat	19	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	12	
	TOTAL SCORE	16	Category based on scor breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Cholces	Circle one	$\overline{}$	Evaluation of Categorization Result of ORAM
Did you enswer "Yes" to eny of the following questions: Narrative Railing Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Welland is categorized as a Category 3 welland	(NO)	Is quantitetive reting score less than the Category 2 scoring threshold (excluding gray zone?) If yes, reevaluate the category of the wetland using the nerafleve criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM.
Did you answer "Yes" to any of the following questions: Namative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	6	Evaluate the welfand using the 1) namelive orieria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these. It should be categorized as a Category 3 wetland. Detailed biological and/or functional assessment may also be used to determine the welfand's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	(6)	Is quantitative rating score greater than the Category 2 scoring threshold <i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in DAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "pray some" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a cutegory based on detailed assessments and the narralive criteria	(Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the namative criteria in OAC rule 3745-1-54(C).
Does the welland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the welland was not categorized as a Category 2 welland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetjand was undercategorized by this method. A written justification for recategorizetion should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland' blotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of list type, landscape position, size, boz or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-34(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons of information for this determination should be provided.

	Fin		
Choose one	Category 1	Category 2	Category 2

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Marine: MIK Massoneli		
Date: 24 April 2013		
Affillation: Tetre Tech In		_
	A. P. Hishirgh, PA 15220	·
Phone Number: 4/2 - 920	•	
	sumalie tetentuh rom	
Name of Wetland:		<u>-</u>
Vegetation Communit(les): PEN		
HGM Class(es):		
	ddress, north arrow, landmarks, distances, roads, etc	3.
see attentilizza	J	
.,		
LauLong or UTM Coordinate	40. 6004, -81. 0557	
USGS Quad Name	Coccotton	
County	Carroll Co.	
Township	TIYN	
Section and Subsection		
Hydrologic Unit Code	528, 85W	
Sile Visit	528, 85W	_
Site Visit National Wetland Inventory Map	521, 15W Esoyacel	
	526, 15w esoyacet 24 Aril 2013	
National Wetland Inventory Map	526, fsw esogoal 24 Amil 2013 Fis 32	
National Wetland Inventory Map Ohlo Wetland Inventory Map	528, 15W Esoyocal 24 Anil 2013 Fis 32 Fis 3a	

Name of Wetland: Wetland Size (acres, hecteres): < 8.01 a c.

Sketch: Include north errow, relationship with other surface waters, vegetation zones, etc. 3 Comments, Narrative Discussion, Justification of Category Changes: PEM without, musical divinising convening realists durings to steem. Category: Final score : 33

Scoring Boundary Worksheet

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

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

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

3

Narrative Rating

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

	Question	Circle one	
_	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	/NO)
	a United States Geological Survey 7.5 minute Quadrangle that has		
	heen designated by the U.S. Fish and Wildlife Service as "critical"	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or	Calegory 3 status	
	I threatened species which can be found in Ohio, the Indiana Bat has	Go to Question 2	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	CD to Question 2	$\langle C \rangle$
	has had critical habitat proposed (65 FR 41812 July 6, 2000). Threatened or Endangered Species. Is the wetland known to contain	YES	NO/
	an individual of, or documented occurrences of federal or state-listed	120	
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	thieatelied of endangered plant of diminar species.	3 welland.	
			~~~
		Go to Question 3	<del>/// -</del>
_	Documented High Quality Wetland. Is the wetland on record in	YES	(Disc)
	Natural Heritage Database as a high quality wetland?	L	Go to Question 4
		Wedand is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
_	Significant Breeding or Concentration Area. Does the wetland	YES	/No /
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	wetland is a Celegory	Go to Question 5
	HALLISTIC, INDUSTRIAL STATE OF THE STATE OF	3 wetland	
		Go to Question 5	100
	Category 1 Wetlands. Is the welland less than 0.5 hectares (1 acre)	YES TO QUESTION 5	V _{NO}
•	in size and hydrologically isolated and either 1) comprised of		<u> </u>
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Ga to Question 6
	by Phalaris arundinecea, Lythrum selicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
	no vegetation?	Go to Question 6	
_	Book Is the wetland a peat-accumulating wetland that 1) has no	YES	NO
	significant inflows or outflows, 2) supports addophilic mosses,	l	Go to Question 7
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Watland is a Category	Go to Question /
	cover. 4) at least one species from Table 1 is present, and 5) the	3 welland	
	cover of invasive species (see Table 1) is <25%?	Ga to Question 7	
_	Fens. Is the wetland a cartion accumulating (peat, muck) wetland that	YES	(NO)
	is saturated during most of the year, primarily by a discharge of free	120	
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wedand is a Category	Go to Question 8s
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	
	invasive species listed in Table 1 is <25%?	1	
	<u> </u>	Go to Question 8a	<del></del>
la	"Old Growth Forest." Is the wetland a forested wetland and is the	YE\$	(NG)
-	forest characterized by, but not limited to, the following characteristics:		Go to Question Bb
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question Bi
	projected maximum attainable age for a species); little or no evidence	3 wetland	l
	of human-caused understory disturbance during the past 60 to 100	Go to Question 8b	1
	years; an ell-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers	Co to Creation on	

			6
85	Nature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous frees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES  Wetland should be evaluated for possible Category 3 status	Go to Question 9a
		Go to Question 9a	0-
9а	Lake Eric coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Eric that is accessible to fish?	YES Go to Question 9b	Go to Question 10
9b	Does the welland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the welland is partially hydrologically restricted from Lake Frie due to lakeward or landward dikes or other hydrological controls?	YES  Welland should be evaluated for possible Category 3 stetus	NO Go to Question 9c
		Go to Question 10	
90	Are Lake Erle water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or uptand border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sentbar deposition wetlands, estuarine wetlands, fiver mouth wetlands, or those dominated by submersed aquatic vegetation.	YFS Ga to Question 9d	NO Ga to Question 10
94	Does the wetland have a predominance of native species within its	YES	NO
-	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question %
		Go to Question 10	_
90	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 10	NO Ga to Question 10
10	Lake Plain Sand Prairies (Cak Openings) is the wetland located in	YES	NO/
,,,	Lices, Fullon, Henry, or Wood Counties and can the welland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	Welland is a Category 3 welland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Go to Question 11	2-
11	Relief Wet Prairies. Is the wetland a relict wet prairie community	YES	(40)
	dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Medison and Union Counties), Sandusky Plains (Mysnadt, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Calegory 3 status Complete Quantitative	Complete Quantitative Rating
	Montgomery, van vven etc.).	Rating	1

.

invasive/exotic spp	fen species	bog species	Dak Opening species	wet prairie species
Lythrum solicaria Myriaphyllum solicaria Myriaphyllum spicatum Majas minor Phalaris orundinucca Phalaris orundinucca Phalaris orundinucca Potamogeton crispus Ramunculus fecuru Ramunculus fecuru Rimunculus fecuru Typha angla	Zygadems elegans var. gluwus Cacalu plantaginea Cares flava Cares steribs Cures steribs Elecoharis rostellata Erupharum viridicarinatum Gentianogeis spp. Lobelia kalimi Parnassia glauca Potentille fruitosa Rhamus alnifalia Rhyachasport capillacea Salix enricoldes Salix errissima Solidago ohiocratis Toffeldia gitutnosa Friglochia manihmum Friglochia manihmum	Calla palustris Carea collentica var. capillocca Carea collentica var. capillocca Carea coligosperma Chamaelaphine coloculota Decoadon vertetilotas Friaphorum virginicum Laris tericina Nemographismucronatus Schechzeria pulustris Spelaguam spr. Vaccinium macro carpon Vaccinium macro carpon Vaccinium cory ortosum Vaccinium oty occos Woodwardia virginica Xyris difformis	Carex cryptologis Carex lasiocarpa Carex stricts Cladium marixe vides Cladium postis stricts Calamage ostis conadensis Quercus pulustris	Calamagrastis canadersis Calamagrastis stricta Carex alterodes Cares buchammi Carex pellita Carex asravelli Gentiana anderesu Helianthus grosse serratus Licaris spicata Listris spicata Listris spicata Listris spicata Listris spicata Listris pricata Superina muricinamm Supplitum terebinhinac eum Supplitum terebinhinac eum Suprima poclinata Sulvitago riddellii

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

Site: Correll (early Energy Rater(s): mile Message! Date: 27 /	gol Jan
Metric 1. Wetland Area (size).	
0 0 0	
াল্যাং চ চাৰ আটানাটা Selections size class and assign score. >50 acres (>20.2ha) (6 pts)	
25 to <50 acres (10.1 to <20.2 ha) (5 pts) 10 to <25 acres (4 to <10.1 ha) (4 pts)	
3 to <10 acres (1.2 to <4ha) (3 pts)	
0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	
Metric 2. Upland buffers and surrounding land use.	
This 14 pts NUMBER 2a. Calculate average buffer width. Select only one and assign score. Do not doubte check,  WIDE. Buffers average 50m (184ft) or more around wetland perimeter (7)	
MEDIUM. Buffers average 25m to <50m (82 to <164it) 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, savennah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5)	)
MODERATELY HIGH Residential, fenced pasture, park, conservation tillage, new fallow field. (3)	,
HIGH. Urban, industrial, open pasture, row cropping, mining, construction (1)  Metric 3. Hydrology.	
0 10	
max 30 pts subtotal 3a. Sources of Water Score all that apply.  [High pH groundwater (5)]  [100 year floodplain (1)]	
Cither groundwater (3) Between stream/lake and other hu	
Precipitation (1) Seasonal/intermittent surface water (3) Part of riparian or upland corridor (	1)
Perennial surface water (take or stream) (5)  3d. Duration inundation/saturation. Score on 3c, Maximum water depth. Select only one and assign score.  Semi- to permanently inundated/saturation.	
>0.7 (27.6in) (3) Regularly Inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2)	
✓ <0.4m (<15.7in) (1) Seasonally saturated in upper 30c	m (12in) (1)
Modifications to natural hydrologic regime. Score one or double check and average.      None or none apparent (12) Check all disturbances observed.	7
Recovered (7)ditchpoint source (nonstormwater)	
Recovering (3) tile !filling/grading Recent or no recovery (1) dike !road bed/RR track	
weir dradging stormwater input other	
Metric 4 Habitat Alteration and Development	4
None or none apparent (4)	
Recovered (3) Recovering (2)	
Recent or no recovery (1)	
Excellent (7)	
Very good (8) Good (5)	
Moderately good (4) Fair (3)	
Poor to fair (2)	
Poor (1) 4c. Habitat atteration. Score one or double check and average.	_
None or none apparent (9) Check all disturbances observed	1
Recovered (6) moving shoub/saping removal perbaseous/aquatic bed removal	1
Recovered (6) mowing shrub/sapling removal	

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 coastel/tribulary wetland-unrestricted hydrology (10) Lake Erie coastal/iribulary wetland-restricted hydrology (5) Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Prairies (10) Known occurrence state/federal threatened or endangered species (10) Significant migratory songbird/water fowl habitat or usage (10)
 Category 1 Wetland. See Question 1 Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. 2 Vegetation Community Cover Scale 6a. Wetland Vegetation Communities. niex 20 ets Absent or comprises <0.1ha (0.2471 acres) contiguous area Score all present using 0 to 3 scale. Present and either comprises small part of wetland's O Aquatic bed vegetation and is of moderate quality, or comprises a | Emergent O Shrub
Forest
O Mudflats significant part but is of low quality Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small () Open water part and is of high quality Present and comprises significant part, or more, of wetland's - Other vegetation and is of high quality 6b. horizontal (plan view) Interspersion Select only one. High (5) Narrative Description of Vegetation Quality Low spp diversity and/or predominance of nonnative or Moderately high(4) disturbance tolerant native species Moderate (3) Native spp are dominant component of the vegetation, Moderately low (2) although normative and/or disturbance tolerant native spp Low (1) None (0) can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare 6c. Coverage of invasive plants, Refer threatened or endangered spp to Table 1 ORAM long form for list. Add or deduct points for coverage A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually Extensive >75% cover (-5) absent, and high spp diversity and often, but not always. Moderate 25-75% cover (-3) the presence of rare, threatened, or endangered spp Sparse 5-25% cover (-1) Nearly absent <5% cover (0) Absent (1) Mudflat and Open Water Class Quality Absent <0.1ha (0.247 acres) 6d Microtopography. Ω Low 0.1 to <1ha (0.247 to 2.47 acres) Score all present using 0 to 3 scale. O Vegelated hummucks/tussucks
 O Coarse woody debris >15 cm (6in) Moderate 1 to <4na (2.47 to 9.88 acres) High 4he (9.88 acres) or more o Standing dead >25cm (1Din) dbh Microtopography Cover Scale Amphibian breeding pools Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality Present in moderate or greater amounts

Rater(s): Mike Messurel.

Date: 24 Ap. 1 2013

End of Quantitative Rating. Complete Categorization Worksheets.

and of highest quality

last revised 1 February 2001 jjm

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ORAM v. 5.0 Field Form Quantitative Rating

Site: Carrell Grants

## **ORAM Summary Worksheet**

· -		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (O)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Calegory 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Calegory 1 Wellands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES KO	If yes, Category 3.
	Question 7. Fens	YES (1)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO -	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	if yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wellands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wellands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
· · · · · · · · · · · · · · · · · · ·	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	8	
	Metric 4. Habilat	15-	
	Metric 5. Special Welland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	a	
	TOTAL SCORE	33	Category based on scor breakpoints

Complete Wetland Categorization Worksheet.

•

## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Namative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YE\$ Wetland is categorized as a Category 3 wetland	(C)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the cetegory of the wettand using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM.
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 1, 8b, 9b, 9e, 11  Did you answer "Yes" to	YES Welland should be evaluated for possible Category 3 stetus YES	(NO)	Eveluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological endror functional assessments may also be used to determine the wetland's category. Is quantitative rating score greater than the Category 2
Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland		scoring threshold <i>lindusting</i> any gray zone)? If yes, reevaluate the category of the wellend using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES  Wetland is assigned to the appropriate category based on the second range.	(NO)	If the score of the wetland is located within the scoring range for a penticular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in DAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantifative score fall with the "gray zone" for Category a 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the namative criteria	NO	Rater has the option of assigning the welland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (In the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES  Welland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Welland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g., a wetland's blote communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, focar or regional significance, etc. In this circumstance, the narretive criteria in OAC Rule 3745-1-34(O)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

# **Background Information**

Name: M:14 Musso.	neli	
24 Ap. 1.	2013	
	Inr.	
Address: GG / A /	Usen Dr. Pittship PA 15270	
	1 - 520 - 7007	
	al morning to totalish com	
Name of Wetland:	k	<del>-</del>
Vegetation Communit(ies):	Accept ps 5	
HGM Class(es):		
	Burine	<u> </u>
	map, address, north arrow, landmarks, distances, roads, stc.	
see attack		
	<u></u>	
	<u> </u>	
Lat/Long or UTM Coordinate	40.6081, -81.0545	
USGS Quad Name	Carcollion	<del>-</del>
County	Carroll Co	
Township	TIYN	<del>-</del>
Section and Subsection	521. Row	
Hydrologic Unit Code	D5340K)	
Site Visit	27 April 2013	
National Wetland Inventory Ma		
Ohio Wetland Inventory Map	F13, 3g	
Soil Survey	F-5 2	
Delineation report/map		

Name of Wetland:		
Wetland Size (acres, hectares): >0. +3  Sketch: Include north arrow, relationship with other surface waters, vegetation	<u> </u>	
Sketch: Include north arrow, relationship with other surface waters, vegetation	zones, atc.	
5191	k X	
mestile as		
î		
Comments, Narrative Discussion, Justification of Category Changes:  Ass without continues north board (1-250) boarders	"	
Final score: 58	Category:	<u>}</u>

#### Scoring Boundary Worksheet

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

*	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.		
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constitictions caused by beams or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland	/	
Step 3	Delineste the boundary of the wetland to be rated such that all areas of interest that are configuous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary	1	
Step 4	Determine if artificial boundaries, such as properly lines, state lines, roads, reilroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	/	
Step 5	In all instances, the Raler may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		7
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring bounderies for wellands that form a patchwork on the landscape, divided by artificial boundaries, configuous to streams, takes or rivers, or for dual classifications.	/	

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

3

### **Narrative Rating**

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

#	Question	Circle one	(~) _
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical	YES Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or	evaluated for possible Category 3 status	
	Inreatened species which can be found in Ohlo, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Go to Question 2	0
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category	Go to Question 3
		3 wetland.  Go to Question 3	$\sim$
3	Documented High Quality Watland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	(NO)
	Natural memaga Databasa as a mgi i quanty wasanto:	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	(-) _
4	Significant Breeding or Concentration Area. Does the welland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical sangbird, or shorebird concentration areas?	YES  Wetland is a Category	Go to Question 5
		3 wetland Go to Question 5	0
5	Category 1 Wallands. Is the welland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than elighty per cent areal cover) by Phalans arundinacea, Lythrum sadicaria, or Phragmites australis, or	YES Wetland is a Category 1 wetland	Go to Question 6
	an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	6
6	Bogs. Is the wetland a peat-accumulating wetland (hat 1) has no significent inflows or outflows, 2) supports acidophilic mosses,	YES	(N9/
	particularly Sphegnum spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Welland is a Category 3 welland	Go to Question 7
		Go to Question 7	(-)
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES Wetland is a Category	Go to Question 8a
	flowing, mineral fich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	3 wetland	OU (D COMMINION OF
Ba	"Old Growth Forest." Is the welland a forested welland and is the	Go to Question 8a YES	<del>(No)</del> —
02	forest characterized by, but not limited to, the following characteristics: overstory canopy frees of great age (exceeding at least 50% of a projected maximum attainable age for a species; little or no evidence	Welland is a Category 3 wetland.	Go to Question 8t
	of human-caused understory disfurbance during the past 80 to 100 years; an ell-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significent numbers of standling dead snags and downed logs?	Go to Question 8b	

			1
₿b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large dismeters at breast height (dbh), generally diameters greater than 45cm (17 7in) dbh?	YES  Welland should be evaluated for possible Category 3 status.	(NO Go to Question 9a
		Go to Question 9a	(-)
9#	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	(NO)
	elevation, or along a tributary to t ake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the welland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the watland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 10	NO Ga to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO T
-	le : the wetdand is hydrologically unrestricted (no lakeward or upland border etterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquattic vegetation.	Ga to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	<u></u>
90	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status	NO Go to Question 10
	The state of the s	Go to Question 10	(NO )
10	Lake Piain Sand Prairies (Oak Openings) is the wetland located in lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sendy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
	present). The Unio Department or Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of welland and its quality.		$\cap$
11	Reflet Wat Prairies. Is the wetland a relict wet prairie community dominated by some or all of the spacies in Table 1. Extensive prairies were formerly located in the Darby Plans (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES  Welland should be evaluated for possible Category 3 status  Complete Quantitative Rating	Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Culla palustris	Cures cryptalepis	Calamagrastis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillucea	Carex lusiocarpa	Calamogrossis stricta
Nayas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Pholaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia conspitosa	Chamaedaphne culyculata	Calamagrostis canadensis	Carex sartwellii
Renuncidus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Cientiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix lariema		Liatris spicata
Typha xglanca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
•	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticusa	Sphagnum spp.		Pycnanthemum virginianum
	Rhammus atnifolia	Vaccinum macrocarpon		Silphium terebinthinaceum
	Rhynchospara capillacea	Vaccinium corymbosum		Sorghastrum nutura
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Sulix myricaides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difforms		
	Solidago ahioensis			
	Tofieldia glutinosa			
	Triglochin muritimum			
	Triple-him polyetes			

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

ORAM v.	5.0 Field F	ormi C	uantitative Rating				
Site:	Carre	ıl d	bear fores	Rate	er(s): mik m.	sound.	Date: 24 Apr. 1 Jul3
1	Т,	Me	etric 1. Wetl	and Area	(size).		
max 6 pls	subtotal	] Sele	ct one size class and	assign score			
			>50 acres (>20.		(5 nts)		
			10 to <25 acres	(4 to <10.1ha) (4	pts)		
				1.2 to <4ha) (3 pts [0.12 to <1.2ha) (2			
				s (0.04 to <0.12ha			
ð	9		etric 2. Upla	ind buffer		ınding land use	·-
max 14 pts	s subtotal	2a.	Calculate average but	ffer width. Select average 50m (164	only one and assign so (ft) or more around well	ore. Do not double check. and perimater (7)	
			MEDIUM BUTA	rs average 25m t	o <50m (82 to <164ft) a	round wetland perimeter (4)	
			I VERY NARROV	<ol> <li>Buffers everage</li> </ol>	je <b>&lt;10m</b> (<32ft) aroundi	around welland perimeter (1 wetland perimeter (0)	,
		2b.	Intensity of surroundir	ng land use. Sele	ect one ar dauble check	and everage. h, wildlife area, etc. (7)	(4)
			h_OW. Old field	(>10 years), shrui	b land, young second g	rowth forest. (5)	( 17
			HIGH. Urban, i	HIGH Residenti Industrial, open pa	ai, ienced pasture, park sture, row cropping, mi	, conservation tillage, new fa ning, construction. (1)	now neid (5)
21	30	M	etric 3. Hyd	rology.			
mais 30 pt	s. aubtolal	3a.	Sources of Water. So			3b. Connectivity. Score a 100 year floods	ill that apply. plain (1)
			Other groundwa	iter (3)		Between street	m/lake and other human use (1)
			Precipitation (1)	rittent surface wat	ler (3)	Part of riparien	/upland (e.g. forest), complex (1) or upland comidor (1)
			Perennial surfa	ce water (lake or s	stream) (5)		aturation. Score one or dbl check. anently inundated/saturated (4)
		3с	Maximum water depti >0.7 (27.6in) (3		and assign score.	Regularly inuni	dated/saturated (3)
			0.4 to 0.7m (15 <0.4m (<15.7in)	7 to 27.6(n) (2)		Seasonally inu Seasonally sat	ndated (2) urated in upper 30cm (12in) (1)
		3e.	Modifications to natur	al hydrologic regi	me Scare one or doub	le check and average.	
			None or none a Recovered (7)	pparent (12) Ch	eck all disturbances obt ⊟ditch	served	onstormwater)
			Recovering (3)		tile	filling/grading	
			Recent or no re	covery (1)	dike weir	road bed/RR tr dredging	ack
					stomwater input	other	
18	41	1			ation and De	-	
max 20 pl	s subtotal	4a.	Substrate disturbance None or none a	e. Score one or d	ouble check and averag	ge.	
			Recovered (3)	pper circ (-r)			
			Recovering (2) Recent or no re	covery (1)			
		4b	Habitat development		and assign score.		
			Excellent (7) Very good (6)				
			Good (5)  Moderately goo	ed (41)			
			Fair (3)				
			Poor to fair (2)				
		<b>4</b> c.	Habitat alteration. So				<del></del>
			None or none a	ipparent (9) 1 <u>Ch</u>	eck all disturbances ob mowing	servedshrub/sapling	removal
			Recovering (3)		grazing	herbaceous/ar sedimentation	quatic bed removal
	1	٦ .	Recent or no re	icovery (1)	dearcutting selective cutting	dredging	
	118			. I⊏	woody debris remov	al ferming	ment

last revised 1 February 2001 jim

Site:	Carroll	County Energy	Rater(s): MA	Mrssamel.	Date: 29 Apr. 7 2013
		, 1			
	48				
,	subtodal #st pa	J 90			
	Ι.	Metric 5. Special V	Vetlands.		
$\mathcal{O}$	418	Mounto or opening			
max 10 pts.	sublots!	Check all that apply and score as in	dicaled.		
		Bog (10) Fen (10)			
		Old growth forest (10)			
		Mature forested welland (	(5)		
		- I ake Erie coastal/fributan	y wetland-unrestricted hydi		
			wetland-restricted hydroli	ogy (5)	
		<ul> <li>Lake Plain Sand Prairies</li> <li>Relict Wet Prairies (10)</li> </ul>	(Oak Obsumās) (In)		
			ederal threatened or enda-	ngered species (10)	
		Significant migratory sons	pbird/water fowl habitat or s	usage (10)	
			e Question 1 Qualitative Ra		
10	58	Metric 6. Plant con	nmunities, inte	erspersion, microte	opography.
10	1 '0				
max 20 pts	sublolal	6a. Welland Vegetation Communiti		Community Cover Scale	474 } eachleusus near
		Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2 Present and either comprises sm	
		Aquatic bed  Emergent	'	vegetation and is of moderate	
		2 Shrub		significant part but is of low qui	ality
		O Forest	2	Present and either comprises sig	
		⊘ Mudflats		vegetation and is of moderate	quality or comprises a small
		Open water	3	part and is of high quality  Present and comprises significan	nt part or more, of wetland's
		6b. horizontal (plan view) interspen		vegetation and is of high qualit	
		Select only one.	<del></del>		
		High (5)		escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predom disturbance tolerant native spe	
		Moderate (3) Moderately low (2)	mod	Native spp are dominant compo	
		Low (1)		although nonnative and/or dist	
		None (0)		can also be present, and speci	
		6c. Coverage of invasive plants. R		moderately high, but generally threatened or endangered spp	
		to Table 1 ORAM long form for list.	high	A predominance of native specie	
		or deduct points for coverage  Extensive >75% cover (-6		and/or disturbance tolerant na	
		Moderate 25-75% cover		absent, and high spp diversity	
		Sparse 5-25% cover (-1)		the presence of rare, threaten	ed, or endangered spp
		Nearly absent <5% cover	· (0)	Open Water Class Quality	
		Absent (1) 6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale		Low 0.1 to <1ha (0 247 to 2.47 a	
		Yegetated hummucks/tus		Moderate 1 to <4ha (2.47 to 9.6	B acres)
		Coarse woody debris >15		High 4ha (9.88 acres) or more	
		Standing dead >25cm (19 (2) Amphibian breeding pool		raphy Cover Scale	
		C Ampinolari biccomg poor	0	Absent	
			<del>- 1</del>	Present very small amounts or it	тоге соптол
				of marginal quality	ud and of biologet
			2	Present in moderate amounts, be quality or in small amounts of	
			3	Present in moderate or greater	
	7		_	and of highest quality	
50	1		<del></del>		

End of Quantitative Rating. Complete Categorization Worksheets.

8

ORAM v 5 0 Field Form Quantitative Rating

### **ORAM Summary Worksheet**

_		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitet	YES (10)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NS)	If yes, Calegory 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Calegory 3.
	Question 4. Significant bird habital	YES MO	If yes, Calegory 3.
	Question 5. Category 1 Wetlands	YES (SO	If yes, Category 1,
	Question 6. Bogs	YES (SO	If yes, Category 3.
	Question 7. Fens	YES (Q)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES 6	If yes, Category 3.
	Question 8b. Malure Forested Welland	YES (Q)	If yes, evaluate for Category 3; may also be 1 or 2.
	Ouestion 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wellands – Unrestricted with native plants	YES (NØ	If yes, Category 3
	Question 9e. Lake Erie Wellands - Unrestricted with invasive plants	YES (IO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	21	
	Metric 4. Habitat	18	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microlopography	10	
	TOTAL SCORE	58	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

### Wetland Categorization Worksheet

Choices	Circle one	100	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes reevaluate the category of the wetland using the narrigitive criteria in QAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the CRAM.
Oid you answer "Yes" to any of the following questions: Nemative Rating Nos. 1, Bb, 9b, 9e, 11	YES  Wetland should be evaluated for possible Category 3 status	6	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES  Welland is categorized as a Gategory 1 welland	<b>1</b>	is quantitative rating score greater than the Category 2 scoring threshold (Including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM.
Does the quantitative score fall within the scoring range of a Cafegory 1, 2, or 3 welland?	Vetland is assigned to the appropriate category based on the scoring range	ÑQ	If the score of the welland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES  Welland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(0)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a colegory based on the results of a nonrapid wetland assessment method, e.g. flunctional assessment, biological essessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C)
Does the welland otherwise bothlish moderate OR superior hydrologic OR habitat, OR recreational functions AND the welland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 welland (in the case of superior functions) by this method?	YES  Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wedand is assigned to category as determined by the ORAM.	A welland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the nerrative criteria in OAC Rule 3745-1.54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

	Fin	al Category	_
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

## Background Information

Name: M:14 M-55cm41	<u>-</u>		
Date: 24 April 201	3		
Affiliation:	,	<del></del>	
Affiliation: Tela Tech		<u> </u>	
GGI Ambers	" Dr. P. Hstrick PA 150	<u> </u>	
Phone Number: 412- 930-			
e-mail address:	essomelia totatethe com	<u></u>	
Name of Wetland: (			
Vegetation Communit(ies):	<u></u>		
HGM Class(es):	]		
	p, address, north arrow, landmarks, distar	nces, roads, atc.	
		_	
Latt ong or UTM Coordinale	40, 6074 -81 0040		
	40.6074, -81.0549		
USGS Quad Name	Carrollton		
USGS Quad Name County	Carroll Co.		
USGS Quad Name County Township	Carroll Co. Tign		
USGS Quad Name County Township Saction and Subsection	Carroll Co.		
USGS Quad Name County Township Section and Subsection Hydrotogic Unif Code	Carroll Co. Tign 528, RSW OSOGOOOL		
USGS Quad Name County Township Saction and Subsection Hydrotogic Unit Code	Correll Co. Tign 528, RSW 050yoocl 34 April 2013		
USGS Quad Name County Township Saction and Subsection Hydrotogic Unit Code	Carroll Co. Tign 528, RSW 05040001 34 April 2013 Fis 3A		_
USGS Quad Name County Township Saction and Subsection Hydrotogic Unit Code Site Visit National Welland Inventory Map	Carroll Co. Tyn 528, Rsw 05040001 34 April 2013 Fr 3A		
Saction and Subsection  Hydrotogic Unit Code  Site Visit  National Welland Inventory Map  Ohio Welland Inventory Map	Carroll Co. Tign 528, RSW 05040001 34 April 2013 Fis 3A		

Name of Wetland:			
Wetland Size (acres, hectare)			
Sketch: Include north arrow,	relationship with other surface waters, vegetati	on zones, etc.	
É	Port / Sio	30 Z.U. 185 , W.C.	
Comments, Nerretive Discus Emergent wetland	sion, Justification of Category Changes:		
Final score :	50	Category:	

### Scoring Boundary Worksheet

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

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

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

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### Narrative Rating

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

*	Question	Circle one	(A) -
1	Critical Habitat. Is the welland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	(NO
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohlo, the Indiana Bat has	Category 3 status	
	had critical habitet designated (50 CFR 17.95(a)) and the piping plover has had critical habitet proposed (65 FR 41812 July 6, 2000).	Go to Question 2	$\sim$
2	Threatened or Endangered Species. Is the wetland known to contain an Individual of, or documented occurrences of federal or state-listed	YES	NO
	an individual of, or documented occurrences or retarial or state-usited threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	$\sim$
1	Documented High Quality Wetland. Is the welland on record in	YF\$	(NO
	Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	0
ı	Significant Breeding or Concentration Area. Does the wetland	YES	(No
	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland	Go to Question 5
		Go to Question 5	()_
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	(NO
	vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris erundinacee. Lythrum salicaria, or Phregmites australis, or	Wetland is a Category 1 wetland	Go to Question 6
	an acidic pond created or excavated on mined lands that has little or no vegetation?	Ga to Question 6	(2)
5	Boos. Is the welland a peat-accumulating welland (hat 1) has no	YES	(No
	significant inflows or outlows, 2) supports acidophilic mosses, perficularly Sphagnum spin, 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Go to Question 7	12
7	Fens. Is the wetland a carbon accumulating (peal, muck) wetland that	YES	(NO)
-	is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a discumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	
	invasive species listed in Table 1 is <25%?	Gg to Question 8a	z 5
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	(NO)
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Ga ta Question 8
	projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100	3 wetland.	
	pears; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with caropy gaps; and significant numbers of standing dead snegs and downed logs?	Go to Question 8b	

			~~\
8b	Malure forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous (rees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7/n) dbh?	Wetland should be evaluated for possible	Ga to Question 9a
		Category 3 status.	
		Go to Question 9a	G-1 -
9a	Lake Erle coastal and tributary wetlands. Is the wetland located at	YES .	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	- 4- 2 Ob	Go to Question 10
	elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b YES	NO.
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is	765	NO.
	prevent erosion and the loss of aquatic plants, i.e. the welland is partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	•
	Initiated area of Cities Hydrological compose	Category 3 status	
	<u> </u>	Go to Question 10	NO .
8¢	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	ile the wettand is hydrologically unrestricted (no lakeward or upland border afterations), or the wetland can be characterized as an	Go to Question 9d	Go to Question 10
	"estuarine" welland with lake and river influenced hydrology. These	i da la gadollori de	
	include sandbar deposition wellands, estuarine wellands, river mouth		
	wellands, or those dominated by submersed aquatic vegetation		
94	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant	L	G - 1 - 0
	native species can also be present?	Wetland is a Category 3 wetland	Go to Questian 99
		3 wetland	
		Go to Question 10	<u> </u>
9e	Does the welland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	LELU d a -1 d b-a	Go to Question 10
		Wetland should be evaluated for possible	Go to Question In
		Category 3 status	
		Category o status	
		Gp to Question 10	<del>  (0)</del>
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be	1 153	
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland	
	several inches of the surface, and often with a dominance of the		
	pramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		1
	Natural Areas and Preserves can provide assistance in confirming this		C 5
	Type of wetland and its quality.	YES	Huo ) -
11	Reliet Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies	TEO	
	were (ormerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huran, Lucas, Wood Counties).	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami.		1
	Montgomery, Van Werf etc.).	Complete Quantitative	
		Rating	

invasive/exotic spp	fen species	bog species	Cak Opening species	wet prairie species
Lythrum salicaria	Zygudenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calumagrustis canadensis
Myriophyllum spicatum	Cacalia plantagineu	Carex atlantica var capillacea	Carex lastocarpa	Calamograstis stricta
Navas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cleplium mariscoides	Carex buxbanmii
Phrugmites australis	Carex stricta	Cares trisperma	Calamagrostis stricta	Cares pellita
Potamogeton crispus	Deschampsia caexpitosa	Chamaedaphne calyculata	Calamayr ostis canadensis	Carex sartwellii
Ranunculus favoria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhammus frangula	Eriophorum viridicarinatum	Eriophorum virginicum	- ·	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Lariz larivina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
, its were after a co	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagman spp		Pvenanthemum virginionum
	Rhamma alnifolia	Vaccinium macrocarpon		Silphium terebinthinoceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium exycoccos		Spartina pretinata
	Salix myricinides	Woodwardia virginica		Solidago risklellii
	Saltx serissima	Xyris difformis		
	Solidago ohioensis	A JO IS MILLONIA		
	Tofieldių glutinosa			
	Triglochin mantimum			
	Triglochin palustre			

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

ORAM v. 5.0 Field Form Quantilative Rating

Site: Corcell	County Energy	Rater(s): mik Messo	l:	Date: 24 April 2013
00	Metric 1. Wetland A	rea (size).		
e.iq 8 xam	Select one size class and assign scor >50 acres (>20 2n) (5 pis) 25 to <50 acres (>20 2n) (5 pis) 10 to <55 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.21 to <1. 0.1 acres (0.04 ho) (0.04 to <1. 0.1 acres (0.04 ho) (0.04 to <1.	0.2ha) (5 pts) ha) (4 pts) i (3 pts) 2ha) (2pts)		
1/ 1/	Metric 2. Upland bu	ffers and surroundi	ng land use.	
max 14 pts subtolat	WIDE. Buffers average 5th MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2  Intensity of surrounding stand usa. VERY LOW. 2nd growth of LOW. Oid field (>10 years) MODERATELY HIGH Res	elect only one and assign score. D (154ft) or more sround wetland pe 25m to <50m (82 to <164ft) around: 10m to <25m (32ft to <82ft) around: 10m to <25m (32ft to <82ft) around: (\$2ft) around: (\$2ft) around: wetland: \$8elect one or double check end a colder forest, praine, savannah, wild strub land, young second growth fidential, fenced pasture, park, conserp pasture, row cropping, mining, or en pasture, row cropping, mining, or	rimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) erage. lier area, etc (7) prest. (5) ervation tillage, new falle	( ) ow Reld. (3)
17 28	Metric 3. Hydrology	•		
mex 30 ple. * subfolal	3a. Sources of Water Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Se usonal/intermittent surfa- Pernonial surface water (bal saximum water depth. Select or > 0.0 / (27.6 in) 3.0 / (4.6 in) (-15.7 in) (1) 3e. Modifipations to natural hydrologic Money or none appearent (12 Recovered (7) Recovering (3)	oo water (3) te or stream) (5) 3d. ily one and assign score (2) c regime. Score one or double chec	Pert of welland/u Part of riparian of Duretion inundation/sat Semi- to perman Regulerly inunda Seasonally inunda Seasonally satur	in (1) Itake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3) sted (2) ated in upper 30cm (12in) (1)
	Recent or no recovery (1)	dike welr stormwater input	road bed/RR tree dredging other	·k
16 44	Metric 4. Habitat Al	teration and Develo	pment.	
may 20 pts subtotal	49. Substrate disturbance. Score on  None or none apparent (4) Recovering (3) Recent or no recovery (1) 4b. Habilst development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4)  Fair (3) Poor to fair (2)			
	4c Habitat alteration. Score one or o	double check and average.  Check all disturbances observed		<del></del>
ЧЧ aubtolati bris pri last revised 1 Februa	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing clearcuting selective cuting woody debris removal toxic pollutants	shrub/sapling rer herbaceous/aqui sedimentation dredging farming nutrient enrichme	atic bed removal

Site: Carroll County Energy Metric 5. Special Wetlands. Check all that apply and score as indicated. size at that apply and score as indicated.

Bog (10)
Fen (10)
Old growth forest (10)
Mature forestad welland (5)
Lake Eric coastal/inbutary welland-unrestricted hydrology (10)
I ake Eric coastal/inbutary wetland-restricted hydrology (5)
Like Eliab Cond Existing (10) - Lake Plain Sand Preiries (Oak Openings) (10) Known occurrence state/federal Ihreatened or endangered species (10)

Significant migratory sprahindholder (end better) Significant migratory songbird/water fowl habitat or usage (10) Category 1 Wetland. See Question 1 Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. Vegelation Community Cover Scale 6a. Wetland Vagetation Communities. Absent or comprises <0.1ha (0.2471 acres) contiguous area Score all present using 0 to 3 scale Present and either comprises small part of welland's O Aquatic bed vegetation and is of moderate quality, or comprises a ⊋ Emergent ⊘ Shrub ⊘ Forest significant part but is of low quality Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small D Mudflats part and is of high qualify Open water Present and comprises significant part, or more, of wetland's () Other_ vegetation and is of high quality 6b. horizontal (plan view) Intersperatori. Select only one Narrative Description of Vagetation Quality High (5) Low spp diversity and/or predominance of nonnative or Moderately high (4) disturbance tolerant native species Moderate (3) Native spp are dominant component of the vegetation. Moderately low (2) although nonnative and/or disturbance tolerant native spp Low (1) can also be present, and species diversity moderate to None (0) moderately high, but generally w/o presence of rare 6c. Coverage of invasive plants. Refer threatened or endangered spp to Table 1 ORAM long form for list. Add A predominance of native species, with nonnative spp or deduct points for coverage and/or disturbance tolerant native spp absent or virtually Extensive >75% cover (-5) absent, and high spp diversity and often, but not always. Moderate 25-75% cover (-3) the presence of rare, threatened, or endangered spp Sparse 5-25% cover (-1) Nearly absent <5% cover (0) Mudflet and Open Water Class Quality Absent (1) Absent <0.1ha (0.247 acres) 6d. Microtopography. Low 0.1 to <1ha (0.247 to 2.47 scres) Score all present using 0 to 3 scale. Moderate 1 to <4ha (2.47 to 9.88 acres) Vegetated hummucks/fussucks Coarse woody debris >15cm (6in)
Standing dead >25cm (10in) dbh High 4ha (9.88 acres) or more Amphibian breeding pools Microtopography Cover Scale Absent Present very small amounts or if more commor of merginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality Present in moderate or greater amounts

Rater(s): M. M. M. sound

Date: 24 Av 1 2017

50

ORAM v. 5 0 Field Form Quantitative Rating

End of Quantitative Rating. Complete Categorization Worksheets.

and of highest quality

## **ORAM Summary Worksheet**

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (1)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	if yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wellands - Restricted	YES (G)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO	If yes, Category 3
	Question 9e. Lake Erle Wetlands - Unrestricted with invasive plants	YES (NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
rraming.	Metric 2. Buffers and surrounding land use	//	
	Metric 3. Hydrology	17	
	Metric 4. Habitat	16	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	6	
	TOTAL SCORE	50	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

### Wetland Categorization Worksheet

Choices	Circle ons	<u></u>	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Nametive Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO) -	Is quantitative rating score /ess than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wettand using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM.
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	6	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3/45-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessmenta may also be used to determine the wetland's category.
Did you answer "Yes" lo Narretive Rating No. 5	YES  Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score greater than the Category 2 scoring threshold (ancluding any gray zone)? If yes, recvaluate the category of the wetland using the narrative criteria in OAC Rule 3745-154(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM.
Does the quentitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Welland is assigned to the appropriate calegory based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the welland should be assigned to that category. In all instances however, the narrative ortheria described in OAC Rula 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative orteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc. and a consideration of the narrative criteris in OAC rule 3745-1-54(C)
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat. OR recreational functions AND the wetland was not categorized as a Calegory 2 wetland (in the case of moderate functions) or a Calegory 3 wetlend (in the case of superior functions) by this method?	YES  Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Welland is assigned to category as determined by the ORAM.	A welland may be undercategorized using this method, but attill exhibit one or more superfor functions, e.g., a welland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1.54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

	Fin	al Categoty~	
Choose one	Category 1	Cátegory ≱	Category 3
		<del></del>	

End of Ohio Rapid Assessment Method for Wetlands.

# Background Information

A		
Hame: M. K. Mussing	<u></u>	
Tota:	<u>-</u>	
Affiliation: Trintech In		
	Dr. Pittshoot, PA 15777	<del></del> ,
Phone Number: 412-920-740	•	
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Name of Wetland:	-16 th -til. 10 m	
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Vep 155.00	idress, north arrow, landmarks, distances, roads, etc.	
see adducted repa	<i>τ</i> Τ	
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		Т
	40.6064, -81.0884	
Lav/Long or UTM Coordinate USGS Quad Name	40.6064, -81.0959 Correllor	
	40.6064, -81.0954 Corpultion Correll	
USGS Quad Name	Carpultun	
USGS Quad Name	Carpullian Carroll	
USGS Quad Name County Township	Corpultion Co-coll TIMN 528 RSW	
USGS Quad Name County Township Section and Subsection	Correllian Correll TIMM 528 RSW OSOGORI	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code	Correllian Correll Tight 528 RSW 050yone1 74 Ap.:1 2013	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code	Correllian Correll TIMM 528 RSW OSOGORI	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code Site Visit National Wetland Inventory Map	Corpultion Correll 714N 528 RSW 05040001 24 April 2013 Fig 3A	

Name of Wetland:	
Wetland Size (acres, hectares): 0,03 +0.	
Sketch: Include north arrow, relationship with other surface waters, vegeta	stion zonés, étc.
Firld For S10	
Comments, Narrative Discussion, Justification of Category Changes:  Differential trainings of the Light	
Final score: 5 (	Category: 人

#### Scoring Boundary Worksheet

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

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

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

3

### Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat. Is the welland in a township, section, of subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endengered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohlo, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES  Wetland should be evaluated for possible Calegary 3 status  Ga to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the welland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES  Welland is a Category 3 welland.  Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Hentage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wedland contain documented regionally significant breeding or nonbreeding waterfowl, neutropical songbird, or shorebird concentration areas?	YES Wetland Is a Category 3 wetland Go to Question 5	NO Ga to Question 5
5	Category 1 Westlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is doministed (greater than eighty per cent areal cover) by Phalains aunodinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YFS Welland is a Category 1 welland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a pest-secumulating wetland that 1) has no significant inflows or outflows, 23 supports acidophilic mosses, particularly Sphagnum spp., 3) the acidophilic mosses have >30% cover. 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wettand is a Category 3 wetland Go to Question 7	Go to Question 7
Z	Fens. Is the wetland a carbon accumulating (peat, muck) watland that is seturated during most of the year, primarily by a discharge of free flowing, mineral nch, glound water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
Ва	"Old Growth Forest." Is the welland a forested welland and is the forest characterized by, but not limited to, the following characteristics: overstory campy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered caropies; aggregations of corropy trees interspersed with caropy gaps; and significant numbers of standing dead snags and downed logs?	YES Welland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

			<u> </u>
8b	Mature forested wotlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest camppy consisting of	YES (	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Welland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	<u></u>
9a	Lake Erie coastal and tributary wetlands. Is the wellend located at	YES	No )
	an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie (hat is accessible to fish?	Go to Questian 9b	Ga la Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
9c	Are I ake Erie water levels the wetland's primary hydrotogical influence, i.e. the wetland is hydrotogically unrestricted (no takeward or upland	YES	NO
	border alterations), or the wetland can be characterized as an "estuarline" wetland with lake and river influenced hydrology. These include san of the most mellands, estuarline watlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YF\$	NO
,,,	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Ga to Question 9e
		Go to Question 10	
90	Does the wetland have a predominance of non-native or disturbance	YE\$	NO
	tolerant native plant species within its vegetation communities?	Welland should be evaluated for possible	Go to Question 10
		Category 3 status	•
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in	YES	/NO/
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a deminence of the	Wetland is a Cetegory 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality	1	12)
11	Relict Wet Prairies. Is the welland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies	YES	(NO
	were formerly located in the Darby Plains (Madison and Union	Wettand should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative Rating
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Derke, Mercer, Miami,	Category 3 status	rauly
	Montgomery, Van Werl etc.)	Complete Quantitative Rating	

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Zvgudemis elegans var. glaucus Cacalia plantaginea	Calla palustris	Carex cryptolopis	Calamagrastis canadensis
	Cores attention were consillation	Capra Insiacama	
cacan promagnet Cares Hava Cares Retilis Cares Steilis Cares Steilis Deschampsia conspitusa Etrophorum vitidicarinatum Gentianopsis spp. Lobeliu kalmi Parnassia glauco Potentilla fraticusa Rhammus alnifotu Rhynchospara capillaccu Solis candida Solis candida Solis candida Solis candida Solis candida Solis candida	Cares calantica var, capithorea Cares colinate Cares to flipapperma Cares trisperma Chamaedaphne colyvulata Decodon verticilitatus reignicum Laris tarkina Aremopantius mucronatus Schocharia palustris Schocharia palustris Schocharia palustris Schocharia palustris Paccinium macrocorpon Paccinium corymbasum Vaccinium corymbasum Vaccinium corymbasum Vaccinium vyopoccos Piacohardas virginica Xyvis difformis	Carex Topicocrps Carex stricta Cutalium mariscoides Culatium mariscoides Calamagr ustis stricta Calamagr ustis canadensis Quereus palustris	Calamogrossis stricta Carex atherouses Carex buxbaumid Carex politic Carex surivedli Gentiana andrev si Helianina grossis aeriatus Liximachia quadrifora Lyximachia quadrifora Lyximachia quadrifora Lyximachia quadrifora Sightium terebinthinoceum Socyhistrium nutuus Spanina pectinata Solidogu riddellii Solidogu riddellii
CCDEEGLPPRRSSSS	ares Stevilis ares strictu eschampsia coespitosa leocharis rostellota teocharis rostellota entianopsis spp. obelia kalmii armassia glauca otentilla fraticosa homus almiplua hynchospora capillaccu slix conduka altx myrenodes	ara sterilis Carex uligosperma arex strictu eschampsia coespitosu leocharis rostellata ropoporum vidilaciriatum rentianopsis sapo beliu kalmii Nemoporum vidilicum ernianopsis sapo beliu kalmii Nemoporum viginicum tarassia giaseca otentilia fraticosu stranssia giaseca otentilia fraticosu stringinium macrocarpum kwelnapara capillacea dix myracudes dix myracudes Woodwardia virginivu siks centalia sulti sandidosu Woodwardia virginivu siks centalia	aras steriita Cares viljostperma Cladium mori koolides arex stricia arex stricia Cares viljostperma Calamaggostus viriota Calomaggostus viriota Prevoden verticillatus Frequencia virginicum ferticongesti spp. obeliu kalmii Nenopantinus mucromunas otentila fruitecus Speagemen spp. Vaccinium macrocarpon formula praceditum macrocarpon formula Vaccinium macrocarpon formula viriota virginicu vita candida Vaccinium voyeoecos vita candida Vaccinium voyeoecos vita varies virginicu vita virginicu vitagos

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

	5.0 Field F	опп Quantilative Rating	Rater(s):	m'k.	Mar l	_	Date: 24 Ac	1.1 2017
SILU.	Caecali	idealy (noise	reaction.	<i>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>	*********			
0	О	Metric 1. Wetland A	\rea (size)	).				
max 6 pts	. subtolat	Select one size class and assign sec >50 acres (>20.2ha) (6 pts						
		25 to <50 acres (10.1 to <	20.2ha) (5 pts)					
		3 to <10 acres (1.2 to <4h	a) (3 pts)					
		0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to	<0.12ha) (1 pl)					
	Τ.	✓ <0.1 acres (0.04ha) (0 pts Metric 2. Upland bu		CUPPO	undina	land use		
	// s sublotal							
max 14 pt:	s subional	2a. Calculate average buffer width. WIDE. Buffers average 5	Bm (164fi) or more	around w	etland perimet	er (7)		
		MEDIUM. Buffers average NARROW. Buffers average	ge 10m to <25m (	(32R to ≺82	ft) around wet	and penmeter (1)		
		VERY NARROW. Buffers 2b. Intensity of surrounding land us	average <10m (< s. Selections or (	:32ft) aroun double che	id wetland peri ck and averag	meter (0) e.		
		✓ VERY LOW. 2nd growth	or older forest, pra	ilne, savani	nah, wildlife ar	ea, etc. (7)	6.1	
		LOW. Old field (>10 year MODFRATELY HIGH. Ro HIGH. Urban, industrial, o	esidential, fenced	pasture, pa	ırk, conservati	on tillage, new falk	ow field. (3) (タノ	
21	733	Metric 3. Hydrolog	pen pastore, ron	старрінід, г	mining, constru	ididii. (1)		
21	37	motric of Tryanolog	,.					
rnax 30 µl	s. Bublotel	3a. Sources of Water. Score all the High pH groundwater (5)	t epply.		3b. Conr	ectivity Score all ] 100 year floodpla	iln (1)	
		Other groundwater (3) Precipitation (1)					lake and other hum pland (e.g. (orest),	
		✓ Seasonal/Intermittent surf	ace water (3)			Part of riparian o	upland comdor (1) uration. Score one	)
		Perennial surface water (I 3c, Maximum water depth, Select (	ake or stream) (b) only one and assig	ın scofe.	Sa. Dura	Semi- to perman	ently inundated/sati	urated (4)
		>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6ii	n) (2)			Seasonally inund	led/saturated (3) leted (2)	
		<0.4m (<15.7ln) (1) 3e. Modifications to natural hydrological		ane or da			ated in upper 30cm	(12in) (1)
		None or none apparent (1	2) Check all dist	urbances o	bserved	_		
		Recovered (7) Recovering (3)	dilch tile			point source (nor filling/grading		
		Recent or no recovery (1)	dike weir			road bed/RR trac dredging	;k	
			stormwe	ater input		other		
11	44	Metric 4. Habitat A	Iteration :	and D	evelopn	ient.		
ma× 20 pt	s subtofat	4a. Substrate disturbance. Score of	ne or double ched	k and aver	age			
		None or none apparent (4 Recovered (3)	+}					
		Recovering (2)  Recent or no recovery (1)						
		4b. Habitat development. Select of Excellent (7)		FCOIB.				
		Very good (6) Good (5)						
		Moderately good (4)						
		Fair (3) Poor to fair (2)						
		Poor (1) 4c. Habitat alteration   Score one o	r dou <u>ble check an</u>	d average.	_			<b>3</b>
		None or none apparent (8	) Check all dist	urbances o	bserved	shrub/sapling re	moval	l
		Recovered (6) Recovering (3)	mowing grazing			herbaceous/aqu	novai atic bed removal	1
		Recent or no recovery (1)	selectiv	e cutting	<u> </u>	sedimentation dredging		
	119		toxic po	debris remo	oya1	farming nutrient enrichm	ent	
	subtotal this							_

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last revised 1 February 2001 jim

Site:	Currell	G.A.	Enrish	Rater(	s): 🙉	4	Mussimeli		Date:	24 1	11 2013
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	subtotal first pa										
		ř	ic 5. Speci	al Watlan	de						
Ο	49	Men	ic a. Speci	al Wetlair	us.						
may 10 pts	Eublicial	]   Check al	that apply and scor	e as indicated.							
		· [	Bog (10)								
			Fen (10)								
		H=	Old growth forest ( Mature forested wi								
			Lake Erie coastelft		nrestricted	hyc	iralogy (1D)				
		=	Lake Erie coastal/t			dro	logy (5)				
		-	Lake Plain Sand P Relict Wet Prairies		ngs) (10)						
		<u> </u>	Known occurrence	state/federal threa	stened or e	enda	angered species (1	10)			
		-	Significant migrato	ry songbird/water i	fowl habita	t or	usage (1D)				
		, Œ	Category 1 Wetlan							_	
_	z,	Metr	ic 6. Plant	communi	ties, i	nt	erspersio	n, microto	pogra	ıpny.	
-1_	56	J									
max 20 pts	subfotal		and Vegetation Con		Vegetat	ion	Community Cove	er Scale vises <0.1ha (0.24	71 arres)	continue	ie ataa
			present using 0 to 3 Aquatic bed	scale.	- 1	_		har comprises sma			ua 415u
		7	Emergent					d is of moderate q			a
			Shrub					rt but is of low qual		of conta	adla
		U			2			her comprises sign d is of moderate q			
		0	Open water				part and is of		,	,	
		-	Other		3			mprises significant		ore, of w	elland's
			ontal (plan view) int	erspersion.			vegetation an	d is of high quality			
		Select or	ity one. THigh (5)		Narrativ	o D	escription of Veg	etation Quality			
			Moderately high(4)		lov			ity and/or predomin	tance of no	nnative	or
		$\Box$	Moderate (3)			_		plerant native spec			
		_	Moderately low (2) Low (1)		mo	d		dominant componi native and/or distu			
		$\vdash$	None (0)					resent, and specie			
		Sc. Cov	erage of invasive pla	ints. Refer			moderately hi	igh, but generally v			
			1 ORAM long form I		E-12	_		endangered spp e of native species	with none	andino eo	n
		or deduc	t points for coverage ]Extensive >75% □		ħig	n		e of native species sance tolerant nativ			
			Moderate 25-75%				absent, and h	iigh spp diversity a	nd often, b	out not all	ways,
			Sparse 5-25% cov				the presence	of rare, threatened	i, or endan	gered sp	<b>ж</b> р
		<u> </u>	Nearly absent <5% Absent (1)	cover (0)	Modelat	20.	d Open Water Cla	ree Ouslity			
		6d. Micr	JADSent (1) otopography.		0	ani	Absent < 0.1ha				
		Score at	present using 0 to 3		1			a (0.247 to 2.47 ac			
			Vegetaled hummu		2	_	Moderate 1 to High 4ha (9 88	<4ha (2.47 to 9 88	acres)		
		10				_	riigh Hila (9 00	acres) or more			
		8			Microto	pop	raphy Cover Sca	ı l <del>ə</del>			_
		<u> </u>	٠.	• •	_ 0		Absent				
					1		Present very sr of marginal q	mali amounts or if i	nore comn	100	
								erate amounts, bu	I not of hig	hest	•
							quality or in s	mall amounts of hi	ghest qual		
	_				3			erate or greater an	apunts		
						_	and of highes	it quality			•
36											

End of Quantitative Rating. Complete Categorization Worksheets.

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ORAM v. 5.0 Field Form Quantitative Rating

## **ORAM Summary Worksheet**

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YEŞ NÖ	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Calegory 1,
	Question 6. Bogs	YES NO	If yes, Calegory 3.
	Question 7. Fens	YES NO	If yes, Calegory 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wellands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erle Wellands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wellands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
ruung	Metric 2. Buffers and surrounding land use	11	
	Metric 3. Hydrology	21	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Matric 6. Plant communities, interspersion, microtopography	7	·
	TOTAL SCORE	56	Category based on scor breakpoints

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

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

	Fin	al Category	
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

mame: Mil4 Hlossearl	<u></u>	
Date: 25 April de	əi}	
Affiliation: Teles Inch	357.	
Address: 661 Anta,	on Diver, P. H. Lish PA 15220	
Phone Number: 412-420	7-7007	
e-mail address:	mosninglip detalock com	
Name of Wetland: /	·	
Vegetation Communit(ies):	Em	
HGM Class(es):	RNITTE	
Location of Wetland: include ma	ap, address, north arrow, landmarks, distances, roads, etc.	
ser alterlet	ript	
Law and the continue		
Lat/Long or UTM Coordinate	40.6027, -81.0586	
USGS Quad Name (9xes	allton	
County (urr	:11 Co.	
	7140	
Section and Subsection	528	
Hydrologic Unit Code	RTW	
Site Visit	25 No. 1 2013	
National Wellend Inventory Map	Fig. 3A	_
Ohio Wetland Inventory Map	F:53g	
Soil Survey	Find	
L — — —		
Delineation report/map	a the fil	

Name of Wetland:				_
Wetland Size (acres, hectares):	C.01 ne			
Sketch: Include north arrow, relat	lonship with other sur	face waters, vegetation zon	es, etc.	
<b>€</b>				
C.				
		/		
		) (		
		1 /		
A		/ muhik RI		
/ ^l 5 ⇔1	For wilds	\ \frac{\Pi_{00}}{2P} \  \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
4.44.4	Sleer	المواجع (		
,	4	1 well-only	m.	
-	1	J-T-Valori	,-	
		$\times$ /.		
Comments, Narrative Discussion				
New texture and	) 24amm v.1	400.1.2.00		
Final score :	59	<u> </u>	Category:	7

#### Scoring Boundary Worksheet

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

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

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

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#### **Narrative Rating**

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

#	Question	Circle one	
1	Critical Habitat. Is the welland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES	00
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be evaluated for possible	Go to Question 2
	habitat" for any threatened or endangered plant or enimal species?  Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	ļ
	threatened species which can be found in Ohio, the Indiana Bat has		
	had critical habitet designated (50 CFR 17.95(a)) and the piping plover has had critical habitet proposed (65 FR 41812 July 6, 2000).	Ga to Question 2	
	Threatened or Endangered Species. Is the welland known to contain	YES	(40) <u> </u>
-	an individual of, or documented occurrences of federal or state-listed		<u></u>
	(hreatened or endangered plant or animal species?	Wellend is a Category 3 wetland	Ga ta Question 3
		Go to Question 3	<del>                                     </del>
3	Documented High Quality Wetland. Is the wetland on record in	YES	MO
	Natural Heritage Database as a high quality wetland?	Wetland is a Category	Go to Question 4
		3 wetland	
		Ga to Question 4	1/
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO /
•	contain documented regionally significant breeding or nonbreeding	Welland is a Category	Go to Question 5
	waterfowl, neotropical songbird, or shorebird concentration areas?	3 welland is a Category	Ga ta caesnon 5
			/_
		Go to Question 5	NO
Б	Catagory 1 Warlands, is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	
	venetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicana, or Phragmiles australis, or	1 wetland	
	an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	/ · · ·
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	(NO
	significant inflows or outflows, 2) supports acidophilic mosses, particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover. 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of Invasive species (sea Table 1) is <25%?		()
_	Fens, is the wetland a carbon accumulating (peat, muck) wetland that	Go to Question 7 YES	No.
Z	is saturated during most of the year, primarily by a discharge of free	'	
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	and with one or more plant species listed in Table 1 and the cover of	3 wetland	Ι.
	invasive species listed in Table 1 is <25%?	Go to Question 8a	1/ <
84	"Old Growth Forest." Is the welland a forested wetland and is the	YES	100
	forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum ettainable age (or a species); little or no evidence	3 wetland.	5519 24455511 00
	of human caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?		1

Вb	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO)
	50% or more of the cover of upper forest canopy consisting of decicuous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Welland should be evaluated for possible Category 3 status	Go to Question 98
		Go to Question 9a	~
9a	Lake Erie coastal and tribulary wetlands. Is the wetland located at	YES	(NO /
98	an elevation less than 575 feet on the USGS map, adjacent to this elevation or atong a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES  Wetland should be evaluated for possible Category 3 status	NO Ga to Question 9c
	and the second s	Go to Question 10	NO.
9c	Are Lake Erie water levels the wetland's primary hydrotogical influence, i.e. the wetland is hydrotogically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with take and river influenced hydrotogy. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed squalic wegetation.	Go to Question 9d	Ga to Question 1D
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerand native species can also be present?	Wetland is a Category 3 wetland	Go to Question 96
		Ga la Question 10	NO -
9-0	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in	YES	NO /
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and other with a dominance of the	Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this	Go to Question 11	
-11	type of wetland and its quality.  Rollet Wet Prairies to the wetland a relict wet prairie community.	YES	(NO
11	dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Maidson and Unit) Counties), Sandusky Plains (Wyandol, Crawford, and Merion Counties), northwest Ohio (e.g. Erle, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Mismi, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating

5

invasive/exotic spp	fen species	bog species	Dak Opening species	wat prairia specias
lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolopis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var copillaceo	Carex lasincarpa	Calamograstis stricta
Najas minor	Carex flava	Carex echinata	Cares stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscaides	Carex buxbaumii
Phragnutes australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Columagrastis canadensis	Carex sartwellii
Rammeulus ficaria	Eleocharis rostellata	Decodon verticifiatus	Quercus pulustris	Gentiana andrewsi
Rhammas frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserralus
Typha angustifolia	Gentianopsis spy.	Lariz laricina		Liairis spicata
Typha xglaucu	Lohelia kalmii	Nemopanthus mucronatus		Lyximizhia quadriflora
· )/	Pamassia glauca	Schechzeria palustris		Lithrum alatum
	Potentilla fruticosa	Sphagnum грр		Pyenanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terehinthinaceun
	Rhynchospora capillacea	Vaccinium corymbosum		Sorylustrum nutans
	Satix candida	Faccinum oxyerces		Spartina pectinata
	Salix mericoldes	Woodwardia virginica		Sotidago ridukellii
	Salix serissima	Xyris difformis		
	Solidago ukioensis			
	Tofieldia glutinasu			
	Triglochin martimum			
	Triglochin palustre			

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

ORAM v. 5.0 Field Form Quantitative Rating Date: 35 Apr 12013 Rater(s): ml/ M-53.ml Site: Currell Loundy Energy Metric 1. Wetland Area (size). 0 0 Select one size class and assign score. >50 acres (>20.2ha) (6 pls) 25 to <50 acres (10 1 to <20.2ha) (5 pts) 10 to <25 scres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 ecres (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 pls) Metric 2. Upland buffers and surrounding land use. Calculate average buffer Width. Select only one and assign score. Do not double check.

WHDE. Buffers average 50m (164ft) or more around wetland perimater (7)

MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <62ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ff) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average.
VERY I OW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5)

MODERATELY HIGH. Residential, fenced pasture, park, conservation littage, new fallow field. (3)

HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) Metric 3. Hydrology. 3b. Connectivity. Score all that apply. 3a. Sources of Water. Score all that apply High pH groundwater (5) Other groundwater (3) Between stream/lake and other human use (1) Pert of wetland/upland (e.g. forest), complex (1) Precipitation (1) Seasonal/Intermittent surface water (3)

Perennial surface water (lake or stream) (5) Part of riparian or upland comdor (1) 3d. Duration inundation/saturation. Score one or dbl check. Semi- to permanently inundated/saturated (4) 3c. Maximum water depth. Select only one and assign score. Regularly inundated/saturated (3) >0.7 (27.6in) (3) Seasonally inundated (2) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances observed point source (nonstormwater) Recovered (7) ditch filling/grading Recovering (3) road bed/RR track Recent or no recovery (1) dike dredging 1stomwater ignut other Metric 4. Habitat Alteration and Development. 53 Substrate disturbance. Score one or double check and average max 20 pts 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 Check all disturbances observed None or none apparent (9) shrub/sapling removat moving Recovered (6) herbaceous/equatic bed removal Recovering (3) grazing Recent or no recovery (1) clearcutting sedimentation. selective cutting dredging

toxic pollutaris

woody debris removal

farming nutrient enrichment

53

last revised 1 February 2001 jim

Site:	Currel	(and (many Rater)	s): m.#	M-55cine li	Date: 25 April 2017
	53	] ,			
-	ublotal first pa	<u></u>			
9	53	Metric 5. Special Wetlan	ds.		
max 10 pis.	3 ub kotal	Lighter all that apply and score as indicated.			
Nua V pla		Bog (10) Fan (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/fiributary wetland-u Lake Erie coastal/fiributary wetland-u Lake Frie coastal/fiributary wetland-u Lake Plain Sand Prairies (Oak Openi Relid Wet Prairies (10) Known occurrence state/federal three	estricted hydrol ings) (10) atened or ends fowl habitat or	ogy (5) Ingered species (10) Usage (10)	
		Category 1 Wetland. See Question			_
6	59	Metric 6. Plant communi	ities, int	erspersion, micro	topography.
_	Ĺ.,				
rney 20 pts.	sublotal	6a Wetland Vegetation Communities.		Community Cover Scale Absent or comprises <0.1ha (0	2674 name) configurate 2002
		Score all present using 0 to 3 scale.  • Aquatic bed	0	Present and either comprises	
		⊋ Emergent		vegetation and is of moderate	
		© Shrub		significant part but is of low q	
		υ Forest	2	Present and either comprises s	
		C Mudflats			e quality or comprises a small
		Open weter		part and is of high quality	
		Other	3	Present and comprises signific	
		6b horizontal (plan view) interspersion		vegetation and is of high qua	uty
		Select only one. High (5)	Narrative D	escription of Vegetation Quality	•
		Moderately high(4)	low	Low spp diversity and/or predo	
		Moderate (3)		disturbance tolerant native si	
		Moderately low (2)	mad	Native spp are dominant comp	
		Low (1)			sturbance tolerant native spp
		None (0)		can also be present, and spe	
		6c. Coverage of invasive plants. Refer		moderately high, but general	
		to Table 1 ORAM long form for hist. Add	high	A predominance of native spec	
		or deduct points for coverage  Extensive >75% cover (-5)	ngn	and/or disturbence tolerant of	
		Moderate 25-75% cover (-3)		absent, and high spp diversit	
		Sparse 5-25% cover (-1)		the presence of rare, threate	
		Nearly absent <5% cover (0)		·	
		Absent (1)		Open Water Class Quality	
		6d. Microlopography.	D	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale	1	Low 0.1 to <1ha (0.247 to 2.47	
		<ul> <li>         ⟨ Vegetated hummucksAussucks</li></ul>	3	Moderate 1 to <4hs (2.47 to 9 High 4ha (9.88 acres) or more	(do actes)
		Standing dead >25cm (10in) dbh		riigir ana (a.c.a acias) or more	<u> </u>
		C Amphibian breeding pools	Microtopou	raphy Cover Scale	
		- I antennam standard brank	0	Absent	
			1	Present very small amounts or of marginal quality	
			2	Present in moderate amounts, quality or in small amounts of	í highest quality
Γ	1		3	Present in moderate or greater and of highest quality	amounts
59				<del></del>	

End of Quantitative Rating. Complete Categorization Worksheets.

## **ORAM Summary Worksheet**

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES GO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (10)	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES 10	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Calegory 3.
	Question 8a. Old Growth Forest	YES (O)	If yes, Calegory 3.
	Question 8b. Malure Forested Wetland	YES (G)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (VO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erle Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (10)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO	If yes, Calegory 3
	Question 11. Relict Wet Prairies	YES (O)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	28	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, micratopography	6	
	TOTAL SCORE	51	Category based on sco breakpoints

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one	2-	Evaluation of Categorization Result of ORAM
Did you anawer "Yes" to any of the following questions: Nerrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES  Wetland is categorized as a Category 3 wetland	(6)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rute 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM.
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 85, 95, 9e, 11	YES  Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantilative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Deteiled biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES  Wetland Is categorized as a Category 1 wetland	<b>№</b>	Is quantitative rating score greater than the Category 2 scoring threshold (including any jary zona)? If yes, revailuate the category of the wetland using the narrative critera in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM.
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO NO	If the score of the welland is located within the scoring range for a particular cetegory, the welland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 for 2 or Category 2 or 3 wetlands?	VES  Wetland is assigned to the higher of the IMD categories or assigned to a category based on detailed assessments and the narrative criteria	(T)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a norrapid wetland assessment method, e.g. functional assessment, biological assessment, etc., and a consideration of the narrative cateria in OAC rule 3745-1-54(C)
Does the Wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not calegorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES  Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more suparior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape posation, size, local or regional significance, etc. In this circumstance, the nerrative criteria in OAC Rule 3745-1-34(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons of information for this determination should be provided.

Final Category					
Choose one	Category 1	Category/2	Category 3		
· · · · · ·		$\overline{}$			

End of Ohio Rapid Assessment Method for Wetlands.

## Background Information

Name: Milk Massisselli		
Date: 25 April 3013		<del>_</del>
Affiliation: John Joch Inc.		
	r, P. Hshod, PA 15270	· <u>-</u>
412-920 70		
e-mail address: michel muss	same to @ Atantech, com	
Name of Wetland:		
Vegetation Communit(les):	_	
HGM Class(09): Slope/handund		
Location of Wetland: include map, ad	dress, north arrow, landmarks, distances, roads, et	ic.
see attack ru	01-1	
 LavLong or UTM Coordinate		
LavLong or UTM Coordinate USGS Quad Name	40.6099, -31.0616	
<u></u>	40.6099, -81.06/6 (n1/bn (nol) (o.	
USGS Quad Name	Correllion	
USGS Quad Name	Curroll Co.	
USGS Quad Name  County  Township	Curroll Co. 714 av	
USGS Quad Name County Township Section and Subsection	Curroll Co. 714 N 528, RSW 05040001	
USGS Quad Name County Township Section and Subsection Hydrologic Unit Code	Curroll Co. 714 N 528, RSW 05040001 24 April 2013	
USGS Quad Name  County  Township  Section and Subsection  Hydrotogic Unit Code	Curroll Co. 714 N 528, R5W 05040001 24 April 2013	
USGS Quad Name County Township Section and Subsection Hydrotogic Unit Code Site Visit National Welfand Inventory Map	Curroll Co. 714 N 528, RSW 05040001 24 April 2013	

Name of Wetland:	
Wetland Size (acres, hectares): C, C 7	
Sketch: Include north arrow, relationship with other surface waters, vegetat	ion zones, stc.
For polarity of the polarity o	
Comments, Nametive Discussion, Justification of Category Chainges:  P35 w. Hank Frains to ophemical Chainel	
Final score : 56	Category: 2

#### Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.		
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of divers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.		
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	/	
Step 4	Determine if artificial boundaries, such as properly lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.		
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		1
Step 8	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, configuous to streams, lakes or rivers, or for dual classifications.	/	

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

3

#### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6433 (phone), 614-265-3096 (fax), <a href="http://www.dnr.state.oh.us/dnap.">http://www.dnr.state.oh.us/dnap.</a>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

	Question	Circle one	
Ī	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.8 minute Quadrangle that has been designated by the U.S. Fish and Whidlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17,95(a)) and the piping plower has had critical habitat designated (50 CFR 17,95(a)) and the piping plower has had critical habitat proposed (65 FR 41812 July 6, 2000).	YFS  Wetland should be evaluated for possible Category 3 status  Go to Question 2	Go to Question 2
2	Threatened of Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES  Welland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Detabase as a high quality wetland?	YES Welland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland	Go to Question 5
5	Category 1 Wettends. Is the wetland less than 0.5 hactares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalais srundineses. Lythrum salicane, or Phagnibas austraks, or 2) an aclide pond created or excavated on mined lands that has little or	Go to Question 5 YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	no vegetation?  Bogs. Is the wettand a pest-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly Sphagnum spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES  Welland is a Category 3 welland Go to Question 7	Go to Question 7
7	Fens. Is the welland a cerbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plent species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wattand is a Celegory 3 wetland Go to Question 8a	Go to Question 8
6a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species). Ittle or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees intenspressed with enoppy gaps, and significant numbers of standing dead snags and downed logs?	YES  Welland is a Category 3 welland. Go to Question 8b	Go to Question 8

8b	Mature forested wetlands. Is the welland a forested welland with 55% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7m) dbh?	YES Welfand should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	_
9a	Lake Eric coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Eric that is accessible to fish?	YFS Go to Question 9b	(NO ) Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of equatio plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence.	YES YES	NO -
	The the welland is hydrologically unestricted (no lakeward or upland border alterations), or the welland can be characterized as in-studence restanting welland with lake and niver influenced hydrology. These include sandbar deposition wellands, estuarine wellands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 96	Go to Question 10
\$d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the welland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES  Wetland should be evaluated for possible	NO Go to Question 10
		Calegory 3 status  Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) is the wetland located in lucas, Fution, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	YES Wetland is a Category 3 wetland.	Go to Question 11
	gramineous vegetation listed in Table 1 (woody species may also be present). The Ohlo Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Ga la Question 11	<i>C</i> -
11	Ratict Wat Prairies Is the wetland a relict wat prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Myandol, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Mrami, Montgomery, Van Wert etc.).	YES  Welland should be evaluated for possible Category 3 status  Complete Quantitative Rating	Complete Quantitative Rating

Invasive/exotic spp	fen species	bog species	Oak Opening species	wet praide species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantico var. capillorea	Carex lasiocarpu	Calamograstis stricta
Natas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phylaris arandinacea	Carex sterilis	Curex oligosperma	Cladam mariseoides	Carex buxbaumii
Phraymites australis	Curex stricta	Carex trisperma	Calamagrostis stricta	Cares pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyeulata	Calamagrastis canadensis	Carex sartwells
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus patustris	Gentiana andrewsii
Rhummus frangula	Eriophorum viridicarinatum	Errophorum virginicum	•	Helianthus grosseserratus
Typha angustifolia	Gentumopsis spp.	Larix laricina		Liatris spicuta
Typha xylauca	Lobelia kalmu	Nemopanthus mucronatus		Lysimachia quadriflora
A PART AND AND AND AND AND AND AND AND AND AND	Purnossia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnonthemum virginianum
	Rhamnus alnifedia	Гасейнит тасговатов		Silphium terebinthinoceum
	Rhmehaspora capillacea	Гассіпіит согутвовит		Sorghaserum nutans
	Salvi candida	Vescenium axyences		Spartina pectinata
	Salix myricoides	Waadwardia virginica		Solidayo raddettii
	Salix serussima	Xyris difformis		
	Solidago obiocusis	.13713 ugravina		
	Tofieldia glutinosa			
	Triglochen maritimum			
	Triglochin palustre			

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

ORAM v.	5.D Field F	orm Quantifative Rating			
Site:	Great	County (may)	Rater(s): から	Mussomeli.	Date: 25 Apr / 201)
		, ] , , , , , , , , , , , , , , , , , ,			
Ó	0	Metric 1. We	tland Area (size).		
max & pis	subtalal	Sele <u>ct on</u> e size class an			
		>50 acres (>2)	0.2ha) (6 pls) s (10.1 to <20.2ha) (5 pls)		
		10 to <25 acre	s (4 to <10 1ha) (4 pts) (1.2 to <4ha) (3 pts)		
		0.3 to <3 acres	(0 12 to <1.2ha) (2pts)		
		0 1 to <0.3 acr <0.1 acres (0.1	es (0.04 to <0.12hs) (1 pt) )4ha) (0 pts)		
š	5	,	and buffers and surre		e.
max 14 pts	subtotal	29. Calculate average b	uffer width - Select only one and assign average 50m (164ft) or more around w	score. Do not double check. etland perimeter (7)	
		MEDIUM But	fers average 25m to <50m (82 to <164fi affers average 10m to <25m (32ft to <85	) around wetland perimeter (4	)
		VERY NARRO	W Buffers average <10m (<32ft) arour	nd wetland penmeter (0)	1,
		2b. Intensity of surround VERY LOW 1	ling land use. Select one or double che 2nd growth or older forest, prairie, savan	ck and average nah, wildlife area, etc. (7)	1
		LOW, Old field	d (>10 years), shrub land, young second Y HIGH. Residential, fenced pasture, p.	growth forest. (5)	allow field. (3)
		_ ✓ HIGH. Urban,	Industrial, open pasture, row cropping.	mining, construction. (1)	
21	26	Metric 3. Hyd	irology.		
max 30 pt:	. subtola-	3a. Sources of Water. S		3b. Connectivity. Score 100 year flood	
		High pH groundy Other groundy	vater (3)	✓ Between strea	m/lake and other human use (1)
		✓ Precipitation ( Seasonal/Intel	l) mittent surface water (3)		d/upland (e.g. forest), complex (1) n or upland corridor (1)
		Perennial surf	ace water (take or stream) (5) th. Select only one and assign score.		saturation. Score one or dbl check anently inundated/saturated (4)
		>0.7 (27.6in) (	3)	Regularly inur	idaled/saturated (3)
		<0.4m (<15.7i	5.7 to 27.6in) (2) n) (1)	Seasonally in Seasonally sa	undated (2) tureled in upper 30cm (12in) (1)
			aral hydrologic regime. Score one or do		
		None or none Recovered (7)	ditch	point source (	nonstormwaler)
		Recovering (3		filling/grading road bed/RR t	irack
		ITEGER OF THE A	weir	dredging	
		7	stormwater input		
19	45	Metric 4. Ha	bitat Alteration and D	evelopment.	
max 20 pb	s sobjetal	4a. Substrate disturban	ce. Score one or double check and ave	rage.	
		None or none Recovered (3)	ı		
		Recovering (2 Recent or no			
		4b. Habital developmen Excellent (7)	Select only one and essign score.		
		Very good (6)			
		Good (5)  Moderately go	od (4)		
		Fair (3) Poor to fair (2)			
		Poor (1)			
		4c. Habitat alteration. S	core one or double check and average.  apparent (9) Check all disturbances	observed	
		Recovered (6)	moving	shrub/sapling	removal quatic bed removal
		Recovering (3	ecovery (1) clearcutting	sedimentation	
	45		selective cutting woody debris rem	dredging pval farming	
	L',		loxic pollutants	nutrient enrich	ment

		1		
	45			
*1	brolai fest pa		_	
0	45	Metric 5. Special Wetland	1S.	
max 10 pts	n/tilo1si	Check all that apply and score as indicated.		
		Bog (10)		
		— Fen (10)		
		Old growth forest (10)		
		Mature forested wetland (5)  Lake Frie coastal/tributary wetland-ur	enstricted buds	cology (10)
		Lake Erie coastal/tobulary wetland-re		
		- Lake Plain Sand Prairies (Oak Operar		-3, (-)
		- Relict Wet Prairies (10)		
		- Known occurrence state/federal threa	tened or endar	ngered species (10)
		<ul> <li>Significant migratory songbird/water for</li> </ul>	owi habital or u	rsage (10)
		Category 1 Welland. See Question 1	Qualitative Ra	ling (-10)
		Metric 6. Plant communit	ties, inte	erspersion, microtopography.
11	5E	Inchis of the community	,	noperous, more topograph.
max 20 pts	subtotal	6a. Wetland Vegetalion Communities.	Vegetation 0	Community Cover Scale
•		Score all present using 0 to 3 scale	D	Absent or comprises <0.1ha (0.2471 acres) contiguous area
		Aquatic bed	1	Present and either comprises small part of wetland's
		2 Emergent		vegetation and is of moderate quality, or comprises a
		3 Shrub		significant part but is of low quality
		Forest	2	Present and either comprises significant part of welland's
		Mudflats		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
		6b. horizontal (plan view) Interspersion.	•	vegetation and is of high quality
		Select only one.	_	
		High (5)	Narrative De	scription of Vegetation Quality
		Moderalely high(4)	low	I ow spp diversity and/or predominance of nonnative or
		Moderate (3)		disturbance tolerant native species
		Moderately low (2)	mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp
		Low (1) None (0)		can also be present, and species diversity moderate to
		6c. Coverage of invasive plants. Refer		moderately high, but generally w/o presence of rare
		to Table 1 ORAM long form for list. Add		threatened or endangered spp
		or deduct points for coverage	high	A predominance of native species, with nonnative spp
		Extensive >75% cover (-5)		and/or disturbance tolerant native spp absent or virtually
		Moderate 25-75% cover (-3)		absent, and high spp diversity and often, but not always.
		Sparse 5-25% cover (-1)		the presence of rare, threatened, or endangered spp
		Nearly absent <5% cover (0) Absent (1)	Mudflet and	Open Water Class Quality
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
		Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9 88 acres)
		ঐ Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more
		Standing dead >25cm (10in) dbh     Amphibian breeding pools	Microtopogr	aphy 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
	1		3	Present in moderate or greater amounts and of highest quality
	1			and a right down

Rater(s): Inik In-ssoul.

Date: 25 April 2013

End of Quantitative Rating. Complete Categorization Worksheets.

.

last revised 1 February 2001 jjm

8

56

ORAM v. 5.0 Field Form Quantitative Rating

Site: Ogual lounty Energy

## **ORAM Summary Worksheet**

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (O)	If yes, Catagory 3.
	Question 4. Significant bird habitat	YES PO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES KO	If yes, Category 1.
	Question 6. Bogs	YES MO)	If yes, Calegory 3.
	Question 7. Fens	YES (O)	If yes, Calegory 3.
	Question 8a. Old Growth Forest	YES (0)	If yes, Category 3.
	Question 8b. Malure Forested Wetland	YES NO	If yes, evaluate for Calegory 3; may also b 1 or 2.
	Question 9b. Lake Erle Wetlands - Restricted	YES (NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Eris Wetlands – Unrestricted with native plants	YES NO	If yes, Calegory 3
	Question 9s. Lake Erie Wetlands - Unrestricted with Invasive plants	YES (NO)	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	
(Saurig	Metric 2. Buffers and surrounding land use	5-	-
	Metric 3. Hydrology	2.1	
	Metric 4. Habitat	19	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, Interspersion, microtopography	(I	
	TOTAL SCORE	56	Category based on sco breakpoints

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Chaices	Circle one	_	Evaluation of Categorization Result of ORAM
Did you enswer "Yes" to any of the following questions: Namative Rating Nos 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the welfand using the nerality criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the welland has been over- categorized by the ORAM
Did you enswer "Yes" to any of the following questions: Namative Rating Nos. 1, 8b, 9b, 9e, 11	YES  Welland should be evaluated for possible Category 3 status	(b)	Evaluate the wetland using the 1) narrative criteria in QAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narralive Rating No 5	YES Wetland is categorized as a Category 1 wetland	100	Is quantitative rating score greater than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Calegory 1, 2, or 3 welland?	Wetland is essigned to the appropriate category based on the sconng range	NO	If the score of the welland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative orderia described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "grey zone" for Gelegory 1 or 2 or Category 2 or 3 wellands?	YES  Wetland is assigned to the higher of the two categories or essigned to a category based on detailed essessments and the narrative criteria	(i)	Rater has the option of assigning the well and to the higher of the two categories or to assign a category based on the results of a nonrapid welland assessment method, e.g. functional assessment, biological assessment, etc., and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this methad?	YES  Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Welland is assigned to category as determined by the ORAM.	A wettand may be undercategorized using this method, but still exhibit one or more superfor functions, e.g., a wetland's blotic communities may be degreded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons of information for this determination should be provided.

	Fin	al Category	
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Name:		
mile Mussemeli		<u></u>
Date: 25 April Jols		
Affiliation: Jets Tech Inc.		
Address: 661 Anline	Dr. P. Historyh, 1B	
Phone Number: 411-930 76	งา	
e-mail address:	meli e tetatuh com	· <del>-</del>
Name of Wetland: $\rho_{\text{tight}}$	١٩	
Vegetation Communit(ies):		
HGM Class(es):		
Location of Wetland: include map, add	ress, north arrow, landmarks, distances, roads, etc	
see attackle expe-	<del>ļ</del>	
	<u> </u>	
Lat/Long or UTM Coordinate	40.6041, -81, 0705	
USGS Quad Name	Carrollton	
County	Carrell Co.	
Township		
	7142	
Section and Subsection	528, RSW	
Section and Subsection  Hydrologic Unit Gode		
Hydrologic Unit Code Site Visit	526, R5W	
Hydrologic Unit Gode Site Visit National Wetland Inventory Map	528, RSW 05040001 27 April 2013 Fis.3n	
Hydrologic Unit Code Site Visit	528, R5W 05040001 25 April 2013 Fiz.3n Fiz.3s	
Hydrologic Unit Gode Site Visit National Wetland Inventory Map	528, RSW 05040001 27 April 2013 Fis.3n	
Hydrologic Unit Code Site Visit National Welland Inventory Map Ohio Welland Inventory Map	528, R5W 05040001 25 April 2013 Fiz.3n Fiz.3s	

Name of Welland: Pan Q	_
Wetland Size (acres, hectares): 0 12 ac.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, atc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, atc.	
Comments, Narrative Discussion, Justification of Category Changes:  PErn wellands a builting stream a worthand Rescrete Separately due to bistance and resolutional community (PSS) Secrity cause excludit for counting wellands.	
Final score : 6 Category:	٦

#### Scoring Boundary Worksheet

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

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

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

2

#### **Narrative Rating**

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

#	Question	Circle one	1.
1	Critical Habitat. Is the wetland in a township, section, or subsection of	YES	(NO )
	a United States Geological Survey 7.5 minute Quadrangle that has	Wetland should be	Go to Question 2
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?	evaluated for possible	GO (D QUESTION 2
	Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	i
	Ihreatened species which can be found in Ohio, the Indiana Bat has	05.000.70	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		<u></u>
2	Threatened or Endangered Species, is the watland known to contain	YES	(NO )
	an individual of, or documented occurrences of federal or state-listed		<u> </u>
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Questian 3
		3 wetland.	1
		Go to Question 3	$\wedge$
3 -	Documented High Quality Wetland. Is the wetland on record in	YES	No)
	Natural Heritage Database as a high quality welland?		
		Wetland is a Calegory	Go to Questian 4
		3 welland	
		Go to Question 4	$\triangle$
4	Significant Breeding or Concentration Area. Does the wetland	YES	NQ'
	contain documented regionally significant breeding or nonbreeding		$\smile$
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		3 wetland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectores (1 acre)	YES COURSION 5	100)
•	in size and hydrologically isolated and either 1) comprised of	l ''3	1(")
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phaleris erundinacea, Lythrum salicaria, or Phragmites eustralis, or	1 wetland	1
	2) an acidic pond created or excavated on mined lands that has little or		1/~
	no vegetation?	Go to Question 6	<u> </u>
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	ATO.
	significant inflows or outflows, 2) supports addophilic mosses,	l <b>.</b>	Go to Question 7
	particularly Sphegnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category 3 wetland	Go to Question /
	cover. 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	3 Weband	
	cover of invasive species (see Table 1) is 125%?	Ga la Question 7	
7	Fens. Is the welland a carbon accumulating (peat, muck) welland that	YES	(NO)
_	is saturated during most of the year, primarily by a discharge of free		$\sim$
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	and with one or more plant species listed in Table 1 and the cover of	3 welland	
	invasive species listed in Table 1 is <25%?		_
_		Go to Question 8a	160
84	"Old Growth Forest." Is the wetland a forested wetland and is the	YF\$	(MO)
	forest characterized by, but not limited to, the following characteristics:	Welland is a Category	Go to Question 8b
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence	3 wetland.	55 to @BE30011 00
	of human-caused understory disturbance during the past 80 to 100	J Walland.	l
	vears; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	I
	canopy trees interspersed with canopy gaps; and significant numbers		I
	of standing dead snags and downed logs?	I	ı

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			4
6b	Mature forested welfands. Is the welland a forested welland with 50% or more of the cover of upper forest canppy consisting of deciduous frees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7/in) dbh?	YES  Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	_
9a	Lake Eric coastal and tributary wetlands — Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	(NO) —
	elevation, or along a tributary to Lake Fria that is accessible to fish?	Go to Question 9b	Gosto Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from 1 sake Erie due to lakeward or landward dikes or other hydrological controls?	YES  Wedland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
9c	Are Lake Erie waler levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or uptand border atterations), or the wetland can be characterized as an "esturaine" wetland with lake and river influenced hydrology. These Include sandbar deposition wetlands, extuarine wetlands, river mouth	YES Go to Question 9d	Ga to Question 10
	wetlands, or those dominated by submersed aquatic vegetation.		1
<b>9</b> d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Welland is a Category 3 weltand	Go to Question 94
		Go to Question 10	
96	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES  Wedand should be evaluated for possible Category 3 status  Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Öpenings) is the wetland located in tuces, Futton, Henry, or Wood Counties and can the welland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within	YES Wetland is a Category 3 wetland	Go to Question 11
	substrate with intersperseo organic hatter, a water faule offer waiting several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves cen provide assistance in confirming this type of welland and its quality.	Go to Question 11	(s _
11	Raflet Wot Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandol, Crawford, and Manon	YES  Wetland should be evaluated for possible	Complete Quantitalive
	Counties), northwest Ohio (e.g. Erle, Huron, Luces, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Category 3 status  Complete Quantitative Rating	Rating

invasive/exotic spp	føn species	bog species	Oak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Culla palustris	Carex cryptolepis	Calamagrostis canadensis
Myrjophyllum spigatum	Cacalia plantaginea	Carex attantica var capillocea	Carex tasiocarpa	Calamograstis stricta
Najas minor	Carex flava	Carex echinata	Carez stricta	Carex atheredes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladaum mariscoides	Carex burbaumii
Phragmites australis	Curex stricta	Carex trisperma	Calamagrastis stricta	Carex pellita
Palamageton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Culumagrostis canadensis	Carex sartwellii
Rammeulus ficaria	Eleacharis rostellata	Decodon verticillatus	Querous pulustris	Cientiana andrewsii
Rhammus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grossescrratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglanca	Lobelia kalmit	Nemopanthus mucronatus		Lysimachia quadriffora
	Parnassia glauco	Schechzeria pulustris		Lythrum alatum
	Potentilla fruticosa	Solwignum spp.		Pycaanthemum virginiamum
	Rhamnus ainifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbasum		Sorghastrum nutans
	Salix candida	Vaccinium axyeaceas		Spartina pectinata
	Solix myricoides	Wandwardia virginica		Solidago riddellii
	Salix serissima	Xxxis difformis		
	Solidago objevnsts			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

CIRAM v	5 D Field	Form Ous	india atiwa	Ratio

Site: Grad	Conty (any Rater(s): Mit Mussourt Date: 25 April 2013		
}	Metric 1. Wetland Area (size).		
max 6 pts subjected	Sefectione size class and assign score.    >50 acres (>20,2hs) (6 pts)     25 to <50 acres (10,1 to <20,2hs) (5 pts)     10 to <55 acres (4 to <10 ths) (4 pts)     3 to <10 acres (12 to <4hs) (5 pts)     0.3 to <3 acres (0.12 to <1,2hs) (2 pts)     0.3 to <3 acres (0.12 to <1,2hs) (2 pts)     0.1 to <0.3 acres (0.04 to <0.12hs) (1 pt)     <0.7 acres (0.04hs) (0 pts)		
12 3	Metric 2. Upland buffers and surrounding land use.		
rupx 14 pt 3 subfotal	2a. Calgulate average buffer width. Select only one and assign score. Do not double check  VIDE: Buffers average 50m (164ft) or more around wetland perimeter (7)  MEDIJUM. Buffers average 50m (164ft) or more around wetland perimeter (4)  NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)  VERY NARROW. Buffers average <10m to <25m (32ft to <82ft) around wetland perimeter (0)  2b. Interestly of surrounding land use. Select one or double check and average.  VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)  LOW. Old field (>10 years), shrub land, young second growth forest. (5)  MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)  HIGH. Urban, industrial, open pasture, row cropping, mining, construction, (1)		
26 39	Metric 3. Hydrology.		
max 30 phs subtotal	3a. Sources of Water. Score all that apply.    High pH groundwater (5)   100 year floodplain (1)		Recovering (3)  Recent or no recovery (1)  Wile fliling/grading road bed/RR track dike weir dredgling other other.
17 56	Metric 4. Habitat Alteration and Development.		
niáx 20 pta subtotal	4e. Substrate disturbance. Score one or double check and average  Vone 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) Venderately good (4) Fair (3) Poor to fair (2)		
	Poor (1) 4c. Habitat elleration. Score one or double check and average.		
5 b subtolet this pi last revised 1 Februa			

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating Rater(s): mile Messurel. Date: 25 April 2013 Site: Correll looks from 5Ė 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 Ene coastal/inbutary wetland-unrestricted hydrology (10)
Lake Erie coastal/irlbutary wetland-restricted hydrology (5) Lake Plain Send Prairies (Oak Openings) (10) ~ Relict Wet Prairies (10) Known occurrence state/federal threatened or endangered species (10) Significant migratory songbird/water fowl habitat or usage (10) - Category 1 Wetland. See Question 1 Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. 5 6a. Wetland Vegetation Communities. Vegetation Community Cover Scale Absent or comprises <0 tha (0.2471 acres) contiguous area Score all present using 0 to 3 scale. Present and either composes small part of wetland's O Aqualic bed 3. Emergent vegetation and is of moderate quality, or comprises a 6 Shrub significant part but is of low quality o Forest Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small ∴ Mudflats ∂ Open water part and is of high quality Present and comprises significant part, or more, of welland's ~ Other_ 6b. horizontal (plan view) Interspersion vegetation and is of high quality Select only one. Narrative Description of Vegetation Quality High (5) Moderately high(4) Low spp diversity and/or predominance of nonnative or ✓ Moderate (3) disturbance tolerant native species Native spp are dominant component of the vegetation, mad Moderately low (2) although normalive and/or disturbance tolerant native spp Low (1) can also be present, and species diversity moderate to None (0) moderately high, but generally w/o presence of rare 6c. Coverage of invasive plants. Refer threatened or endangered spp to Table 1 ORAM long form for list. Add A predominance of native species, with nonnative spp or deduct points for coverage Extensive >75% cover (-5) end/or disturbance tolerant native spp absent or virtually Moderate 25-75% cover (-3) absent, and high spp diversity and often, but not always. √ Sparse 5-25% cover (-1) the presence of rare, threatened, or endangered spp Nearly absent <5% cover (0) Mudflet and Open Water Class Quality Absent (1) Absent <0.1ha (0.247 acres) 6d. Microtopography. Low 0.1 to <1ha (0.247 to 2.47 acres) Score all present using 0 to 3 scale. Moderate 1 to <4ha (2.47 to 9.88 acres) Vegetated hummucks/tussucks High 4ha (9.88 acres) or more Coarse woody debris >15cm (6in) C Standing dead >25cm (10in) doh
C Amphibian breeding pools Microtopography Cover Scale Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quelity or in small amounts of highest quality Present in moderate or greater amounts and of highest quality

7

8

## **ORAM Summary Worksheet**

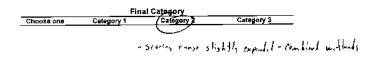
<u> </u>		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habital	YES (10)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (O)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Calegory 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Calegory 3.
	Question 5. Category 1 Wetlands	YES (0)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YÉS (S)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Welland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b, Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (10)	If yes, Category 3
	Question 9e. Lake Eric Wetlands - Unrestricted with invasive plants	YES (10)	If yes, avaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (Q)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	1	
· · · · · · · · · · · · · · · · · · ·	Metric 2. Buffers and surrounding land use	12	
	Metric 3. Hydrology	26	
	Metric 4. Habitat	17	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communifies, interspersion, microtopography	- 5	
	TOTAL SCORE	61	Category based on sco breakpoints 2 · 3 · 9 /

Complete Wetland Categorization Worksheet.

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## Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(i)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, revaluate the category of the wellend using the narratev calical in OAC Rule 3745-1-54(C) and biological end/or functional assessments to determine if the wetland has been overcategorized by the ORAM.
Did you answer "Yes" to any of the following questions: Narrative Raling Nos. 1, 85, 96, 96, 11	Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quentitative rating socre! If the wetland is determined to be a Category 3 wetland using sither of these, if should be categorized as a Category 3 wetland. Datailed biological and/or functional assessments may also be used to determine the wetland's category. Is quantitative rating score greater than the Category 2
Did you answer "Yes" to Narrallve Rating No. 5	YES  Wetland is categorized as a Category 1 wetland	(10)	scoring threshold <i>linciuding</i> any gray zone? If yes, reevaluate the category of the welland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the welland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 welland?	YES  Wetland is assigned to the appropriete category based on the skyling range	60,	If the score of the wetland is located within line scofing range for a particular category, the welfand should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "grey zone" for Category 10 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the welland to the higher of the two categories or to assign a category based on the results of a nonrapid welland essessment method, e.g. functional assessment, biological assessment, etc., and a consideration of the narrative oriteria in OAC rule 3745-1-54(C).
Does the wetland of therwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES  Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Welland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still earbitist one or more superior functions, e.g. a wetland's billotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, loss or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-134(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons of information for this determination should be provided.



End of Ohio Rapid Assessment Method for Wetlands.

## **Background Information**

Date:		
25 April 2013		
Affiliation: Teter Tack, Inc		
	Dr. J. Historich, JA 15220	<u></u> .
Phone Number: 412 - 920 - 700	<del></del>	
	melip dedatich, com	_
Name of Wetland: R	white the miner	
Vegetation Communit(les): P55		
HGM Class(es):		
) ocation of Wetland: Include map, addres	s, north arrow, landmarks, distances, roads, atc.	
ser alluited		
255 41741144		
Lat/Long or UTM Coordinate		
USGS Quad Name	40.6051 -81.8698	
	Carrollton	
County	Correll Co.	
Township	7142	
Section and Subsection	528 R5W	
Hydrologic Unit Code	05040001	
Site Visit	25 April 2013	
National Welland Inventory Map	Fig. 3A	
Onio Welland Inventory Map	Fis 3g	
\$oil Survey	Fig. 3	
Delineation report/map	4470144	_ <del></del> _

Name of Wetland: Welling! R		
Wetland Size (scres, hectares): ヴ. の}		
Sketch: Include north arrow, relationship with other surface waters, vegetation zone	s, etc.	
Field Field		
Comments, Narrative Discussion, Justification of Category Changes:		_
Final score : 5°4	Category:	ಎ

#### Scoring Boundary Worksheet

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

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

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

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#### Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has	YES Wetland should be	(Ng) Ga ta Question 2
	been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or	evaluated for possible Category 3 status	Go to Question 2
	threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the plping plover	Go to Question 2	(
	has had critical habital proposed (85 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain	YES	NO)
2	an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	VVetland is a Category 3 wetland.	Go to Question 3
		Ga la Question 3	6
3	Documented High Quality Wetland. Is the wetland on record in	YES	NO)
-	Natural Heritage Database as a high quality welland?	Welland is a Category 3 wetland	Go to Question 4
		Go to Question 4	15
4	Significant Breeding or Concentration Area. Does the wetland	YES	(NO)
- 1	contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Welland is a Category 3 welland	Ga la Question 5
		Go to Question 5	1./
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	(NO)
	in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalans arundinacea, Lythrum salicaria, or Phragmites australis, or	Wetland is a Category 1 welland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	16
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	(NO)
	significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Spinggrum</i> sp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the	Wetland is a Category 3 wetland	Go to Question 7
	cover of invasive species (see Table 1) is <25%?	Co to Constine 7	(3
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	Go to Question 7 YES	(NO)
<u>.</u>	is saturated during most of the year, primarily by a discharge of free		Μ.
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of	Wetland is a Category 3 wetland	Go to Question 8a
	invasive species listed in Table 1 is <25%?	Go to Question 8a	1
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics:	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species), little or no evidence	Wetland is a Category 3 wetland.	Go to Question 8b
	of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Go to Question 8b	

			/-
8b	Mature forested wotlands. Is the welland a forested welland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES  Welland should be evaluated for possible Category 3 status.	NO Go to Question 9a
		Go to Question 9a	( ) <u> </u>
92	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a Inbutary to Lake Erie that is accessible to fish?	YES Go to Question 9b	Ao to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	/NO:
ae	Does the welfarm's hydrology statum form feathers, i.e. the welfarm's prevent erosion and the loss of equatic plants, i.e. the welfarm's partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status	Go to Question 9c
		Go to Question 10	
90	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border altersions), or the wetland can be cheracterized as an "estuarine" wetland with lake and rivor influenced hydrology. These include sandbar deposition vertlands, estuarins wetlands, river mouth wetlands, or those dominated by submersed aqualic vegetation.	YES Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	1275
98	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 stetus Go to Question 10	(NO) Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) is the welland located in Lucas, Fulton, Henry, or Wood Counties and can the welland be characterized by the following description, the welland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of welland and its quality.	YES Welland is a Category 3 welland. Go to Question 11	NO Go to Question 11
11	Relict Wet Praintes. Is the wetland a relict wet prainte community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Medison and Union Counties), Sandusky Plains (Myandot, Crawford, and Marion Counties), onthwest Ohlo (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercar, Miami, Montgomery, Van Wert etc.).	YES  Wetland should be evaluated for possible Category 3 status  Complete Quantitative Rating	Complete Quantitative Rating

5

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
Lythrum salicuria Myriophythum spicatum Myriophythum spicatum Rodas minor Phalaris arnochmacea Phalaris arnochmacea Phalaris arnochmacea Phalamogeton crispus Rummu dus, ficuria Rommus frangula Typha angusifolia Typha nglauco	Tygadenis clegara var glaucus Cacalin plantaginea Cares flova Cares sterilis Cares sterilis Eleochoris rostetlata Eriophorum viridicarimatum Centiamopist spp. Lobeliu kalmii Parnassia glauca Potentilla friticosa Rhammes abiljolia Rhonchospora capitlacea Salix candida Salix candida Salix serssima Solidago obiocusis Trifieldia glutinosa Yriglocha moritimum Trifochia rapitusre	Colla palvatris Cures chinala Cares chinala Cares oligusperma Canes visperma Chamaedaphine calyulala Erecolom virginicum Luris laricina Kemponibus mueronatus Schecherus palustris Sphayama spp. Vaccinium enarocarpon Vaccinium caly nihasum Vaccinium caly	Carex cryptolepis Carex stricture Curex stricture Cudum marixodides Culamagrastis strictu Calamagrastis canadensis Quercus palustris	Calumagositis canademis Calumagositis stricta Carex atherode: Carex buxhuumi Carex pollita Garex sartwelli Gioritama andrewsi Holiumitus grosscoerriini Liatris spicata Lysimus hia quadri fiori Ly-lirum datua Pycnanthemum virginianua Silphium terebinthivaceum Sorghastrum nuteus Sparina pecunate Sotidago riddelli

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

ORAM v. 5.0 Field	Form (	Quantitative Rating	<u> </u>		
Site: (and	(	to Energy	Rater(s): m.K	Mussing li	Date: 25 / 15 / 2013
0	М	etric 1. Wetland	Area (size).		
may 6 pts. subtal	Sel	ectione size class and assign so 50 acres (>20.2ha) (6 p	(s)		
		25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10	).1ha) (4 pts)		
		3 to <10 acres (1.2 to <4) 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to	<1.2ha) (2pts)		
	<b>–</b>	<0.1 acres (0.04ha) (0.pt	<b>z</b> }		
9 9	M	etric 2. Upland b			
rna x 14 pts subject	ы 2a	WIDE. Buffers average !	50m (164ft) ar mare aroun	d wetland perimeter (7)	
		NARROW, Buffers avera	age 10m to <25m (32ft to	64ft) around wetland perimet <82ft) around wetland perim	er (4) ster (1)
	2b.	Intensity of surrounding land us	se. Selectione or double :	round wetland perimeter (0) check and average.	
		I OW Did field (>10 year	rs), shrub land, young sec	vannah, wildlife area, etc. (7) ond growth forest. (5) , park, conservation lillage, r	( ) )
		HIGH. Urban, Industrial,	open pasture, row croppin	ng, mining, construction. (1)	
25 30	1  M	etric 3. Hydrolog	jy.		
max 30 pla vubtu	tal 3a.	Sources of Water. Score all th High pH groundwater (5)		3b. Connectivity, S	floodplain (1)
		Other groundwater (3) Precipitation (1)		Part of w	stream/lake and other human use (1) etland/upland (e.g. forest), complex (1)
		Seasonal/Intermittent sur Perennial surface water i	(lake or stream) (5)	3d. Duration inunda	parian or upland comdor (1) dion/saturation. Score one or dbl check permanently inundated/saturated (4)
	3c.	Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6		Regularly	rinundated/saturated (3)
	30	<0.4m (<15.7m) (1)  Modifications to natural hydrok		Seasonal	lly saturated in upper 30cm (12in) (1)
	50.		(12) Check all disturbance	es observed	rce (nonstamwater)
		Recovering (3) Recent or no recovery (1	tile	filling/gra	
		Traceir of the receipt (1	weir stoomwater inpi	dredging	
11 5	, IN	letric 4. Habitat A			
max 20 pts subto	´	Substrate disturbance. Score			
		None or none apparent ( Recovered (3)			
		Recovering (2) Recent or no recovery (1			
	4b.	Excellent (7)	only one and assign score.		
		Very good (6) Good (5) Moderately good (4)			
		Fair (3) Poor to fair (2)			
	4c.	Poor (1) Habital alteration. Score one	or double check and avera	ge.	
		None or none apparent ( Recovered (6)		es observed	pling removal
		Recovering (3) Recent or no recovery (1	grazing		sus/aquatic bed removal
53			selective cutting woody debris n	emovalfarming	
subjetel th			toxic pollutants	nutrient e	enrichment

last revised 1 February 2001 jjm

Site:	(need)	(dent) Energy	Rater(s):	m:4	المستجدال	Date: 25 April 2013
	5.) biolal fest pa	Metric 5. Special V	Vetlands.			
$\mathcal{C}$	52					
max 10 pts	s v to lot let	Check all that apply and score as in  Bog (10)  Fen (10)  Old growth forest (10)  Meture forested wetland  Lake Erie coastal/inbutar  Lake Erie coastal/inbutar  Lake Plain Sand Prairies  Relict Wat Prairies (10)  Known occurrence statel  Significant migratory son  Category 1 Wetland. Sec	(5) y wetland-unrestri y wetland-restrict (Oak Openings) ( federal threatenet gbird/water fowl h	ed hydrold (10) I or endar abitat or u	gy (5) ngered species (10) isage (10)	
7	59	Metric 6. Plant cor	nmunities	s, inte	erspersion, mid	crotopography.
max 20 pts.	subletal	<ul> <li>6a. Wetland Vegetation Communit</li> </ul>	ies Var	etation C	ommunity Cover Scale	
p.a.		Score all present using 0 to 3 scale		D		ha (0.2471 acres) contiguous erea
		Aquatic bed		1		ises small part of wetland's
		† Emergent				derale quality, or comprises a
		.)L Shrub			significant part but is of	
		€ Forest		2		ises significant part of wetland's
					part and is of high quali	derate quality or comprises a small
		Other Other	_	3		gnificent part, or more, of wetland's
		6b. horizontal (plan view) Intersper	mint.	•	vegetation and is of high	
		Select only one.	_			
		High (5)	Nar	rative De	scription of Vegetation C	
		Moderately high(4)		low		predominance of normative or
		Moderate (3)	_		disturbance tolerant nat	
		Moderately low (2)		mod		component of the vegetation. For disturbance tolerant native spp
		Low (1) None (0)				d species diversity moderate to
		6c. Coverage of invasive plants. R	lafer			snerally w/o presence of rare
		to Table 1 ORAM long form for list			threatened or endanger	
		or deduct points for coverage		high		species, with nonnative spp
		Extensive >75% cover (-	5)			rant native spp absent or virtually
		Moderate 25-75% cover				versity and often, but not always,
		Sparse 5-25% cover (-1)			the presence of rare, th	reatened, or endangered spp
		Nearly absent <5% cover Absent (1)		dflat an <u>d</u>	Open Water Class Qualit	
		6d. Microtopography	_	0·	Absent <0.1ha (0.247 ac	
		Score all present using 0 to 3 scale		1	Low 0.1 to <1ha (0.247 to	
		C Vegetated hummucks/tus		3	Moderate 1 to <4ha (2.4	
		Coarse woody debris >1:		3	High 4ha (9.88 acres) or	more
		C Standing dead >25cm (1 C Amphibian breeding pool		rotopopr	aphy Cover Scale	
		Peripheren expeding poor		D D	Absent	<del>-</del>
				1	Present very small amount of marginal quality	nts or if more common
			_	2	Present in moderate amo	
			_	3	Present in moderate or g	
	1				and of highest quality	
59			_			<del></del>

End of Quantitative Rating. Complete Categorization Worksheets.

## **ORAM Summary Worksheet**

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (Q)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Calegory 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Calegory 3.
	Question 4. Significant bird habitat	YES (G)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (O)	If yes, Category 1,
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES 🔞	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (N)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES 10	If yes, evaluate for Category 3; may also be 1 or 2.
	Ouestlon 9b. Lake Erie Wellands - Restricted	YES (G)	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 9d. Lake Erie Wellands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO	If yes, evaluate for Category 3; may also b 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also b 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	9	
	Metric 3 Hydrology	25	
	Metric 4. Habitat	18	
	Metric 5. Special Watland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	7	<u> </u>
	TOTAL SCORE	59	Category based on sco breakpoints

Complete Wetland Categorization Worksheet.

## Wetland Categorization Worksheet

Choices	Circle one	100	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland		is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM.
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 6b, 9b, 9e, 11	YES  Wetland should be evaluated for possible Calegory 3 status	(NO/	Evaluate the wetland using the 1) namative chleria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological endror functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES  Wetland is categorized as a Category 1 wetland	•	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, resealuate the category of the welland using the narrative criteria in OAC Rule 3745-1-54(D) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wettand is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative critena described in OAC Rule 3745-1-54(C) can be used to Lanfy or change a categorization based on a quantitative score.
Does the quantitative score fall with the 'gray zone' for Category 1 or 2 or Category 2 or 3 wetlands?	YES  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative orderia.	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, a.g. functional assessment, biological assessment, etc, and a consideration of the namative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A welland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetfand's biotic communities may be degraded by human activities, but the welland may still exhibit superior hydrologic functions because of its type, landscape position, size, loss or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons o information for this determination should be provided.

	Fin	al Category )	_
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

**APPENDIX C** 

**HHEI FORMS** 

ChieFPA Primary F	Headwater Habitat Eva HHEI Sco	Aluation Form te (sum of metrics 1, 2, 3):	<u> </u>
DATE 23 April 2-13 SCORER (II) Photosis NOTE: Complete All Items On This Form	SI RIVER BASIN METAL P. LAT. YOU WE'TE LONG YOU'VE L COMMENTS exhause Land n - Refer to "Field Evaluation Manual	M FIRE ST DRAINAGE AREA (MI) C / M RIVER CODE RIVER MILE THE TOTAL (14 LICEN 14.1	tions
(Max of 46). Add total number of significal type	FINE DETRITUS  CLAY or HARDP  MUCK to pea)  ARTIFICIAL 13 pt  C 40  TOTAL NUM  Extract Types:  TOTAL NUM  TOTAL NUM  Southerts or slorm water pipes) (Check Of  > 5 cm - 10 cm  - 5 cm - 10 cm  - 6 cm (5 phs)  MO WATER OR  MAXIMUM  Everage of 3-4 measur enterers) (C	MERCOF SUBSTRATE TYPES:  OCH evaluation reach at the time of tity and posts.  MOST CHANNEL (0 pts)  IN MOIST CHANNEL (0 pts)  IN POOL DEPTH (continuitors):  (**3**-4***9**   15***prs)	HHEEI Hetric Points Substrat  A * B  Cool Depi
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH  L/R (Per Bank)  G White > 10th  Moderate \$-10th  None COMMENTS  FLOW REGIME (At Yire of Even Stream Plowing Substrate flow with isotated post COMMENTS  BINDOSTY (Number of bends p	FLOODPLAIN QU'ALITY  I. R. / [Most Press, Welstand Immature Forest, Welstand Immature Forest, Shrap or Old Reled    O	and Right (R) as kooking downstream@r  R Conservation Triage Utben or industrial Open Pasture, Row Crop Mining or Construction  hennel, scalated pools, no flow (infarmittent) nnel, no water (Ephemeral)	

Moderate to Severe

Severe (10 6/100 4)

ADDITIONAL STREAM INFORMATION (T	,	o <u>be Completed):</u> (if Yes, Attach Completed OHEI Form)	
		(If Yes, Attach Completed OHEI Form)	
DOMNSTREAM DESIGNATED I		Distance from Evaluated Stream	:
CWH Name:		Distance from Evaluated Stream	
DEWH Name:		Distance from Evaluated Stream	
	_	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATI	
USGS Quadrangle Name; (~+r-114v	<u> </u>	NRCS Soft Map Page: NRCS Soil Map Stream Ord	er
County: Carroll	Town	eniprolite Currellyon	
MISCELLANEOUS			
		() 10-1 2-13 Quantity 0.21"	
		· · · · ·	
Elevated Turbidity? (YAN)P 0	Сапору (% open); <u>60</u>	<del></del>	
Were samples collected for water chemistry	/? (Y/N): (Note let	b sample no. or id. and attach results) Lab Number	
		DH (S.U.) ALL Conductivity (µmhas/cm) 1-14	
is the sampAng reach representative of the	stream (YAN) If not.	please explain:	
Additional comments/description of pollution	n impacts: desirate for	on accessed agricultual field	
BIOTIC EVALUATION			
Performed? (Y/N): (If Yes, Recu ID number.	ord all observations. Vouche Include appropriate field dat	er collections optional. NOTE: all voucher samples must be labeled a sheets from the Primary Headwater Habitat Assessment Manuall	with the
Fish Observed? (YAN) FV Voucher? (Y Frogs or Tadpoles Observed? (YAN) FV V	Y/N) <u>f*</u> Salamanders C Voucher? (Y/N) <u>*</u> Aqua	Diserved? (Y/N)   W   Voucher? (Y/N)   W   St Mecrainvertebrates Observed? (Y/N)   W   Voucher? (Y/N)	سر
Comments Regarding Biology:			
DRAWING AND HARRA	ATIVE DESCRIPTION	OF STREAM REACH (This must be completed	):
<b>A</b> /		r elte avaluation and a paprative description of the stream's i	local kar
elm-bls	அம் வி		
66.3.53	r ₋ -		
4/2	1		
<del>2</del>	<del></del>		
FLOW -			

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June 26, 2008 Revision

June 20, 2008 Revision

ChieEPA Primar	y Headv	vater Habitat Evalu HHEI Score		orm etrics 1, 2, 3) :	26.5
LENGTH OF STREAM REACH (R) 250 DATE 23 April 348 SCORER 10-10-10-10-10-10-10-10-10-10-10-10-10-1	LAT. <u>90. (</u> 599-1). CC Form - Refer (	SZ DAT PIPES FOR RIVER BASIN PIPES FOR SHI 6070 LONG SI 6590 RA DIMBENTS TOOLS FOR PIPE	FAR CODE_	RAINAGE AREA (mi ² ) RIVER MILE WH Streams" for Instr	ruedons
(Max of 40). Add total number of significant of the second	PERCENT  15 (A	ool depth within the 61 mater (200 n r storm water pipes) (Check ONLY > 5 cm - 10 cm (15	DEBRIS [3]  [D pt]  R OF GUEST  () systuation is one box):	PERCENT  J  J  J  J  J  J  J  J  J  J  J  J  J	HHEI Metric Points Substrat Max = 40 /6.5 A + B
> 22.5 - 30 cm [30 pts]   > 10 - 22.5 cm [25 pts]		☐ NO WATER OF M		EL [0 pte] 2.5	5
3. BANK FULL WIDTH (Massured as > 4.0 meters (> 17) [Po pixe]   > 3.0 m - 4.0 m (> 6° 7" - 13") [Po pixe]   > 1.5 m - 3.0 m (> 4° 6" - 5" 7") [20 pixe]   COMMENTS	_	73-4 measurements) (Chec	k CHALYone 5" - 4" B") [15 sie]	box):	Bankfull Width Max=30
RIPARIAN ZONE AND FLO	TINS ODPLANN QUA	Information <u>must</u> also be complete	ıd		<u> </u>
L R (Per Bank) Wide >10m  Moderate 5-10m		(Most Predominant per Bank) Mature Forest, Welland Immeture Forest, Shrub or Clid Field	00	Conservation Tillege Urben or Industrial Open Pasture, Row	
□	00	Rankdential, Park, New Field Fenced Pasture	00	Crop Mining or Construction	_

FLOW REGISTE (At Time of Evaluation) (Check DALY one box:

Stream Rowing
Subsurface flow with isolated pools (Interstital)

COMMEDITS

Moist Channel, isolated pools, no flow (Intermittent)
Dry channel, no water (Ephemoral)

☐ Moderate to Severe

3.0

☐ Severe (10 N/100 N)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Complete	ed):
QHEI PERFORMED? - 1 Yes YNO QHEI Score (If Yes	, Atlach Completed OHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
GWMH Name:	Distance from Evaluated Stream 👲 🕬 🚈
J CWH Nume:	Distance from Evaluated Stream
T EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPE, INCLUDING THE ENTIRE WATERS	
USGS Quadrangle Name: Correlling RRCS Soil N	Map Page: NRCS Soil Map Stream Order
County: Concest! (d Township/Oky.	Cherullton
MISCELLAKEGUŞ	
Base Flow Conditions? (Y/N): Date of last precipitation:/ 1/ =	
Photograph Information: 5 // 441-L1 / 141-3  Elevated Turnidity? (VA): N Canopy (Ni open): 70	
Elevated Turnidity7 (Y/N). // Canopy (N open): 70	
Were samples collected for water chemistry? (Y/N):(Note tab sample no. or	rkl. and attach results) Lab Number:
Field Measures: Temp (*C) Dissolved Oxygen (mg/l) pH (8.0	J.)Conductfulty (jumbos/cm)
is the sampling reach representative of the stream (YA) If not, please explain	N:
Additional comments the acription of pollution impacts: training Com (it)	
BIOTIC EVALUATION	
Performed? (Y/N):	Nonel. NOTE: all voucher samples must be labeled with the site re Primary Headwaler Habitat Assessment Manual)
Fish Observed? (Y/N) Vouchar? (Y/N) Salamenders Observed? (Y/N) Galamenders Observed? (Y/N) Vouchar? (Y/N) Aquatic Macroinvert	I) Voucher? (Y/H) Voucher? (Y/H)
Comments Regarding Biology.	
-	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	M REACH (This must be completed):
include important landmarks and other features of interest for alle evaluation	· — · ·
/ ^{re}	
سهوا بكيسه فحكم كم للمسالين	
willing 52 from	
Flow = 51 -> -/	

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June 20 2003 Revision

Moderate (2 t/100 t)

STREAM GRACIENT ESTIMATE

| Flat (0 ± 0/100 t) | | Flat to Moderate

ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	П
SITE NAMELOCATION	irry Ions
TYPE	HHEI Metric Points Ubstrat Iax = 40 / 7 A + B
Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part   Part	iol Depliax = 30 / 5 Senkfull Wildlin Lax=30
This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY \$NOTE River Left (L) and Right (R) as looking downstream. \$\text{Graphana Might (R) as looking downs	
SINUOSITY (Number of bends per 61 m (200 lt) of channel) (Check OAL Y one box):    None	

June 23, 2008, Perisson

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - ☐ Yes ☐ No QHEI Score(If Yes, Alboth Co	omolslad CHEI Form)
DOWNSTREAM DESIGNATED USE(S)	1.00.0
☐ www. Hame: Pipes t. K □	istance from Evaluated Stream 1. 37 Ph
☐ CWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ ☐ EWH Name: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	
L) EWH Name: Dis	stance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>entire</u> watershed are	
USGS Quadrangle Name: ( Let . [ ] Haz NRCS Soil Map Page;	NRCS Soll Map Stream Order
County: Carroll (3 Township / City. Carroll	Jr
MISCELLANEOUS	_
Base Flow Conditions? (Y/N). N Date of last precipitation 27 Apr. 1 3/13	Quantity: Ø.57
Photograph Information:	
Photograph Information: SN-16	
Were samples collected for water chemistry? (Y/N): (Note lab sample no lor id. and all	ttach results) Lab Number:
Field Measures: Temp (*C) NM Dissolved Oxygen (mg/l) PP DISSOLVED DISSOLVED OXYGEN (mg/l)	Conductivity (µmhos/cm)^* (**/
is the sampling reach representative of the stream (Y/R) If not, please explain:	
Additional comments/description of pollution impacts:	PTE: all voucher samples must be labeted with the site Headwater Habitat Assessment Manual) Vourdat? (Y/M) Voucher? (Y/M) Userwed? (Y/M) Voucher? (Y/M)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REA	· — · ·
include important landmarks and other features of interest for site evaluation and a r ್ಲ್ಲ್	narrative description of the stream's location
FLOW - Sto Story	l - tipert drive y

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June 73, William Mexicon

PHWH Form Page - 1

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•	Ĺ		

June 20, 2006 Revision

## Primary Headwater Habitat Evaluation Form

<b>—</b>		HHEI Score (se	ım of metr	krs 1, 2, 3):	18
SITE NAMELOCATION	بماي قميم	a shuf			
	S Y RIMER BAS				
LENGTH OF STREAM REACH (t) 240	LAT. <u>YP. LO 30</u> LONG	E - SI, DUYS RIVER	CODE	RIVER MILE _	
DATE 23 April 2013 SCORER M. MYSSIG					
NOTE: Complete All Items On This Form					
STREAM CHANNEL THONE/NAT	URAL CHANNEL 🗍 RE	COVERED CEREVOO	ERING DE	ECENT OR NO REC	OVERY
MODIFICATIONS:					
1. SUBSTRATE (Extinuate percent of eve	a tena of substrate reaso	of Chart ON Yteons	riominani sub	strate TVFF hoves	
(Max of 40). Add total number of significa	int substrate types found (N			baxes A & B.	HHE
TYPE P  BLDR SLASS [10 pte]	ERCENT TYPE	SJLT (3 p <b>(</b> )		PERCENT 43	Point
☐ ☐ BOULDER (>256 mm) [16 pts] _		LEAF PACKAWOODY D			Bubetral
□□ BEDROCK [18 pt] □□ COBBLE (65-256 mm) [12 pts)		FINE DETRITUS [3 pla	-		Max = 4
☐ ☐ GRAVEL (65-256 mm) [12 pts]	==	CLAY OF HARDPAN (D. MUCK (D.pls)	PC)		10
□ □ 6AHD (<2 mm) [9 pxs] _		ARTIFICIAL (3 pin)			8
Total of Percentages of	0 40			(a)	A+B
Bidr Stabs, Boulder, Cobble, Bedrock BCORE OF TWO MOST PREDOMINATE SUBS*	<u> </u>	TOTAL NUMBER O		J 4	""
<ol> <li>Maximum Pool Depth (Measure the mi systemics: Avoid plungs pools from road</li> </ol>				h at the time of	Pool Dep
> 30 certimeters [20 pts]	<b></b>	> 5 cm - 10 cm [15 pts			
> 22.5 - 30 cm [30 pte] > 10 - 22.5 cm [25 pts]	ď	< 5 cm [5 pts] NO WATER OR MOIS	T CHANNEL I	O p(s)	5
Pr		MAXIMUM POO		2.5	_
COMM ENTS					
3. BANK FULL WIDTH (Neasured as the > 4.0 meters (> 13) [D0 pte]		ents) (Check 6 > 1.0 m - 1.6 m (> 3° 3°	MEY one box		Bankful Width
→ 3.0 m - 4.0 m (> \$*7" - 13*) [25 pain)	<b>.</b>	≤ 1.0 m (≤ 3° 3°) (5 ptm)			May-34
> 1.5 m - 3.0 m (> 4°6° - 9°7°) [20 pts]				0.61	115
COMMENTS	<del></del>	AVERAGE BAN	KFULL WIDT	H (meters)	ــــــــــــــــــــــــــــــــــــــ
	This left modice as				
RIPARIAN ZONE AND FLOODP	LAIN QUALITY ★NOT	ng mise be completed (E: River Left (L) and Riq	phi (R) as look	ing downstream år	
RIPARIAN WIOTH  L. R. / (Per Bank)	FLOODPLAIN QUALITY  R (Most Predom		L R		
L/R/ (PerBenti) ☑ ∰ Wikte≻10m	Meture Forest	inani per Bank) , Wetland		anservation Tillege	
☐ ☐ Moderate 5-10m	☐☐ Immeture Fore	est, Shrub or Olid		irban or industrial	
□□ Nerrow <5m		prk, New Fjeld		pen Pasture, Row	
O O None	O D Fenced Pastu	•		ing: Aning or Construction	
COMMENTS		· <del>-</del>			-
FLOW REGIME (At Time of Evel	ustan) (Check DNLY one	box):			
Stream Flowing  Subsurface flow with isolated pool	e (interettini)	<ul> <li>Moist Channel,</li> <li>Dry channel, no</li> </ul>		i, no flow (Intermittent) maret)	)
COMMENTS	e famoi soneil	_ w, c-e, ne	(upint		_
SINUOSITY (Number of bends p	w 61 m (200 ft) of channel)	(Check ONLY one box	O:		
□/ Hone □	1.0	☐ 2.0	· 2	3.0	
<b>2</b> 0.5 □	1.5	2.5	J	~	
STREAM GRADIENT ESTIMATE	☐ Modernie is sugran	Moderate to 5		☐ Severe (10.8/I	on to

PHWH	Form	Page -
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ADDITIONAL STREAM INFORMATION (This information Mud Also be Completed):
GHEI PERFORMED? - Yes Find QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)  Distance from Evaluated Stream  Distance from Evaluated Stream  Distance from Evaluated Stream  Distance from Evaluated Stream
MAPPING: ATTACK COPIES OF MAPS, INCLUDING THE <u>Entire</u> watershed area. Clearly mark the site location
USGS Quadrangle Name: Carroll for NRCS Soil Map Page: NRCS Soil Map Stream Order  County: Carroll for Township / Caty Carroll for
MISCELLANEOUS
Base Flow Conditions? (YM): Y Date of less precipitation. 19 April 3313 Quantity: 0.71°  Photograph Information: q 4 1, L 1
·
Elevated Turbidity7 (YAN). P Canopy (N open): 10
Were samples collected for water chamistry? (YAN): (Note leb sample no. or ld. and ettech results) Lab Number:
Flord Measures: Temp (*C), N I/A Dissolved Oxygon (mg/l) N I/A pH (S.U.) N I/A Conductivity (umhos/cm) N I/A
is the sampling reach representative of the stream (Y/N)Y If not, please explain:
Additional comments/description of pollution impacts: $L_{color-2d}=\{c_{col}\}$
BIOTIC EVALUATION
PerformedT (YAN):
Fish Observed? (YAI) Voucher? (YAI) Selamenders Observed? (YAI) Voucher? (YAI) Frogs or Tedpoles Observed? (YAI) Voucher? (YAI) Aguatic Mecroinverletrates Observed? (YAI) Voucher? (YAI) Comments Regarding Biology.
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Inducted important landmarks and other features of interest for eithe evaluation and a state at the discription of the stream's location
1 BRIT
(g)
Entrack A forth to
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of inferrest for ellie evaluation and a matrative dissorbition of the stream's location  Fig. 1  Fig. 1  Fig. 24  FLOW
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June 20 2005 Revision

ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of motics 1, 2, 3):	24
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This information <u>Injury</u> also be completed    NIPARIAN ZONE AND FLOODPLAIN QUALITY	-
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June 23, 2008. Revision

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PRWH Form Page - 2

June 20, 7008 Revision

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June 23, 2808 Revision

# Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

28

DATE 21 400124 SCORER M. 600		
	NATURAL CHANNEL	
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> 4.0 meters (> 15') (30 pts) > 3.0 m - 4.0 m (> 6' 7' - 13') (25 pts) > 1.5 m - 3.0 m (> 4' 8' - 6' 7') (20 pts)	□	Sank Nah Wildth Lore 30
RIPARIAN ZONE AND FLO RIPARIAN WIOTH	This information <u>must</u> also be completed  DDPLAIN QUALITY	
R	L R (Most Produminant per Bank) L R   Conservation Tillage   Immediate Forest, Welland   Conservation Tillage   Immediate Forest, Shrub or Clid   Uurban or industriel   Paid   Open Pasture, Row Crop   Fenced Pesture   Mining or Construction	
Screen Flowing Subsurface flow with isolated COMMENTS		
STREAM GRADIENT ESTIMATE    Flat to Moderate		

PHMH	Form	Page -
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ADDITIONAL STREAM INFORMATION (Th	s Information Must Also be	Completed):	
QHEI PERFORMED7 - 🗆 Yes 🤄	Mo QHEI Sears	(If Yes, Atlach Completed	QHEI Form)
DOWNSTREAM DESIGNATED US	• •	Distance to	om Evaluated Stream 1.65 m.
CWH Name:		Dustance in	om Evaluated Stream
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MAPPING: ATTACH COPIES OF M		-	
USGS Quadrangle Name: Carrellian	NI	RCS Soil Map Page:	NRCS Soil Map Streem Order
County: Carrell (J	Township	104x Greettton	
MIRCELLANEOUS			
Base Flow Conditions? (Y/N): 3/ Oale	of last precipitation:	Oceanlity ناز المطار و ( Cuantity	050
Photograph information:			
Elevated Turbidity? (Y/N):// Ca		-	
Were samples collected for water chemistry?	(YAN): (Note tab see	npie no, or id, and attach resi	iks) Leb Number:
Field Measures: Temp (*C) <u>ML*</u> Disso	Aved Oxygen (mg/l)///	pH (S.U.) <i>n-/_/</i> _ Cond	uch-ity (µmhas/am) <u>#4//</u>
is the sampling reach representative of the st	eam (YN) <u>Y</u> If not, plea	se explain:	
BIOTIC EVALUATION		<u>.    .                               </u>	
Performed7 (YAI):Y (If Yes, Record ID number. In	l all observations. Voucher soll clude appropriate field data also	ections options). NOTE: all vo lets from the Primary Headwai	ucher samples must be isbeled with the site ir Habital Assassamani Manual)
Fish Observed? (Y/N) / Voucher? (Y/N Frags or Telapoles Observed? (Y/N) / Vo			
Commons Regarding Biology.			
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±ne 70, 2008 Revision

Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):						
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DATE 14 April 303 SCORER m. Mass NOTE: Complete All tiems On This For	_LAT. <u>40. 1</u> contlicc	<u>w71 tong 35,059 }</u> RME HAMENTS <u>Samply paint }</u>	R CODE_	RIVER MILE	_	
STREAM CHANNEL INONE/HU MODIFICATIONS:	KTURAL CH	NNNEL RECOVERED RECO	VERING (	Экесентоя но кесс	XERY	
SUBSTRATE (Estimate percent of every first than the control of th			core is sum	of boxes A & B.  PERCENT  20	HHEI Metric Points	
	10	Fine Detritus (1) p  CLAY O' HARDPAN (1)  MUCK (1) (24)  ARTIFICIAL (2) (24)	[9]		Substrate Max = 40	
Total of Percentages of Bid Seleth, Boulder, Cobble, Bedrock 15 (B) 4 Score of two most predominate substrate types: 4 Total number of substrate types:					A+ B	
Maximum Pool Depth (Measure the sevaluation. Avoid plunge pools from rol > 30 centimeters [20 pts]     > 22.5 - 30 on [36 pts]     > 10 - 22.5 on [25 pts]			ne box); ts]		Pool Depth Max = 30	
COMM BITO		малици Ро	OL DEPTH	continuing):		
3. BANK FULL WIDTH (Bleasured as the >4.0 motors (> 15) [20 pxg]    > 3.0 m -4.0 m (>9 7 - 13) [25 pxg]    > 1.5 m -3.0 m (>4.8 f -9 7) [20 pxg]	average of	3-4 measurements) (Check □ > 1.0 m - 1.5 m (> 2.3 □ ≤ 1.0 m (≤ 3.3) 路 pc			Berkfull Width Max=30 よう	
COMMENTS		AVERAGE BA	KKFULL W	DTH (meters)		
RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH	PLAIN QUA	information <u>musi</u> also be completed LITYANOTE: River Left (L) and 6 PLAIN QUALITY		colong downstream in		
Process to the second s		(Most Predominant per Benk) Mature Forest, Wetland Immature Forest, Shrab or Old Finid	0 0 0	Conservation Titlage Urban or industrial		
☐ Nerrow <5m ☐ None COMMENTS	00	Residential, Park, New Fletd Fenced Pasture	00	Open Pesture, Row Crop Mining or Construction		

| SINUOETY (Number of bends pier 61 m (200 ft) of channel) | (Check ONLY one box): | 1.0 | | 2.0 | | 2.5 | | 2.5 | |

ETREAM GRADIENT ESTIMATE

Fig. (0.5 M/100 IL) Fig. to Moderate

June 20, 2008, Revision

FLOW REGIME (At Time of Evaluation) (Check ONLY one bot):
Stream Flowing
Subsurface flow with fedeted pools (interettial)
COMMENTS

Moist Channel, isolated pools, no flow (intermittent)
Dry channel, no water (Ephameral)

☐ Moderate (2 ±/100 t) ☐ Moderate to Severe

3.0

☐ Severe (10 N/100 t)

ADDITIONAL STREAM INFORMATION (This information Musi Also	be Completed):
GHEI PERFORMED? - 🗆 Yes 3 No GHEI Score	(If Yes, Attach Completed CHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream 1.15 m.
J CWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION  NRCS Soil Map Page. NRCS Soil Map Stream Order
County: ( Green ( ) Towns	NHCS Soil Map Page. — NHCS Soil Map Stream Order —
MISCELLANEOUS	np/caytorys/190x
Base Flow Conditions? (Y/N): Y Date of last precipitation: 2	1 April 3013 Quantity 6.57
hotograph Information:	
Sevated Turtidity? (Y/N): Canopy (% open)50	<u> </u>
Were samples collected for water chemistry? (Y/N): _/V _ (Note lab	sample no, or kil and attach results) Lab Number:
(eld Messures: Temp (°C) <u>NJA</u> Dissolved Oxygen (mg/l) <u>PL</u>	pH (S.U.) <u>PM-</u> Conduct <del>-Ny</del> (junhos/cm) <u>PL</u> +
s the sampling reach representative of the stream (Y/N). Y	dease explain:
Additional convinents/description of pollution impacts: Ironings (	on Cell/poters
BIOTIC EVALUATION	
Performed? (Y/N):/ (If Yee, Record all observations. Youcher ID number. Include appropriate field data	collections optional. NOTE: all youther samples must be labeled with the si sheets from the Primary Headwater Habitet Assessment Manual)
ish Observed? (YN) N Voucher? (YN) Salamanders Observed? (YN) Voucher? (YN) Aquatic	oservet? (YN) N Voucher? (YA) Voucher? (YA) Voucher? (YA) Voucher? (YA) Voucher? (YA)
Comments Regarding Biology. Places for 38.	
	OF STREAM REACH (This must be completed):
include important landmarks and other features of interest for $A \subseteq First$	sile evaluation and a parrative description of the stream's location
.12	) <b>E</b>
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James 20, 2038 Revision

LENGTH OF STREAM REACH (f) 300 DATE 1- Apr. 1343 SCORER M. PL33 NOTE: Complete All Items On This Fo	LAT. 10, pc 7; COMMENT	HHEI Score  I Pier, 12 K  R BASIN Pier Fore 5  LONG TLUXY 7 RN  S Samela grant	(Sum of mer	ANAGE AREA(mi')	uctions
1. SUBSTRATE (Estimate percent of e (Max of 40), Add total number of signify the control of the	toant substrate types in Percent 17 17 17 17 17 17 17 17 17 17 17 17 17	SILT [3 pt]  SILT [3 pt]  LEAF PACKMOOD  FINE DETRITUS [3  CLAY or HARDPAN  MUCK [0 pts]  ARTIFICIAL D pts]  TOTAL NUMBER  Within the 61 meter (200 f  alter pipes) Check ONLY  > 5 cm [5 pts]  NO WATER OR M	c score is sum of the price of	(B)  ATE TYPES:  (CD19)	HHEI Metric Points  Substrate Max = 40  JC  A+B  Pool Depth Max = 30
3. BANK FULL WIDTH (Measured as the state of	he average of 3-4 maa	> 1.0 m - 1.5 m (> 3   s 1.0 m (s \$737) [5		2 3	Sankfull Width Max-30
RIPARIAN ZONE AND FLOOR RIPARIAN WIDTH  (Per Bank)  (P	PPLAIN OUALITY  FLOODPLAIN O  L	Predominent per Benk) Forest, Wetlend Froest, Wetlend Froest, Shrub or Old Initial, Park, New Field Id Pasture  (LY one box)  Moist Chan Dry channe	L R	Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction	

Moderate to Severe

☐ Severe (10 6/100 ft)

Moderate (2 t/106 fr)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - [] Yes I No QHEI Score(If Yes, Attach Con	ripleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)  DISSEMBLY Name: 1-1-1-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	lance from Evipluified Stream _ 1.50
□ CWH Name:         Dist           □ EWH Name:         Dist	ance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA.	CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRC\$ Soil Map Page:	NRCS Soil Map Stream Order
County Carrell (a. Township/Oity Carrell	·
MISCELLANEOUS	. •
Base Flow Conditions? (YAN) V Date of last precipitation. 3rd. April 3913 C	ouenbey: 0,57
Photograph Information: a 11-11-1	<del></del>
Elevated Turbidity ² (YM): Canopy (% open): <u>45</u>	-
Were samples collected for water chamistry? (Y/N)(Note lab sample no lor id. and attr	
Field Measures: Temp (*C) <u>M/A</u> Dissolved Oxygen (mg/l) <u>M/A</u> pH (S.U.) <u>M/A</u>	
(s the sampling reach representative of the stream (YRN) If not, please explain:	
Additional comments/description of pollution impacts:	·   -
September 64 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10	·
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOT ID number. Include appropriate field data sheets from the Primary F.	E: all voucher sumples must be labeled with the site leadwater Habitat Assessment Manual)
Fish Observed? (Y.N) Voucher? (Y.N) Selamanders Observed? (Y.N) Voucher? (Y.N) Aquetic Macroinvertebrates Observed? (Y.N) Voucher? (Y.N) Aquetic Macroinvertebrates Observed?	oucher? (YM) served? (YM) Voucher? (YM) _ ^
Comments Regarding Biology, Know 50 - 3 indepring History 50.	<del></del>
	·
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REAC	. —
include important tandmarks and other features of interest for site evaluation and a ne	arrative description of the stream's location
4) E/H	
Posher for formality	£İ
FLOW FOR FOR FOR PARTY.	••
/ yo Wil / Le	
Sample of 3	
(7-1) (7-2)	

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STREAM GRADIENT ESTIMATE

| Flet (0.5 M/(0.5) | | Flat to Moderate

SITE NAMEA COATRON  SITE NUMBER  SITE NUMBER  SITE NUMBER  ROVER BASIN SUBSTIFE FOR PARKET OF THE SITE
(Mex of 40). Add total number of significant substrate types Roand (Max of 6). Final metric score is sum of boxes A & B.    TYPE
evaluation. Avoid planage pools from road culverts or storm water pipes) (Check ORI/Y one box):    > 3 cm = 10 cm [15 pts]
This information reset also be completed
RIPARIAN ZONE AND FLOODPLAIN CUALITY 2:NOTE River Left (L) and Right (R) as looking downstream to replace (N) and Right (R) as looking downstream to replace (R) as looking downstream to replace (R) as looking downstream to replace (R) as looking downstream to replace (R) as looking downstream to replace (R) and R).    Vide > 10m
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS ACCUPATE STREAM GRADIENT ESTIMATE  Flist poserious   Plat to Moderate   Moderate   Moderate   Moderate   Moderate   Moderate   Severe   Sev

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County Correll (0 Township/City Correll for
MISCELLANEOUS
Base Flow Conditions? (Y/N) V Date of last precipitation: 21 April 3013 Quantity: 057
Photograph Information. 4 1 1 1 L
Elevated Turbicity? (YRV): Cenopy (% open): U =
Were samples collected for water chemistry? (Y/N): (Note tab sample no. or id. and attach results) Lab Number
Field Measures. Temp (°C) <u>Fit</u> Dissolved Oxygen (mg/l) <u>NV</u> pH (S.U.) <u>NV</u> Conductivity (µmhos/em) <u>NV</u>
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y.N):
Fish Observed? (YN) M Voucher? (YN) M Salamanders Observed? (YN) M Voucher? (Y
Comments Regarding Biology.
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
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Provi
FLOW \$ 33
FLOW 3
510
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ADDITIONAL STREAM (NFORMATION (This Information Must Also be Completed):

DOWNSTREAM DESIGNATED USE(S)

CWH Name:

CWH Name: _____

QHEI PERFORMED? - Tyes TNo QHEI Score ______(ITYes, Atlach Completed QHEI Form)

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name. Carrally and Communication of the

DATE (2) (L. V.)	S9 - V. S9 - RMER B LAT. <u>YE Jac S</u> 7 LC COMMENTS TH - Refer to "Field Ex	HHEI SCORE (S  T. P. P. S. P. J.  ASIN FIG. P. J. S. S. S. S. S. S. S. S. S. S. S. S. S.	R CODE	AINAGE AREA (mi')	etions
1. SUBSTRATE (Estimate percent of ex (Max of 40). Add total number of signification (Max of 40). Add total number of signification (Max of 40). Add total number of signification (Max of 40). Add total number of signification (Max of 40). BECROCK [16 pt] SECRET (16 pt] COBBLE (65-256 mm) [17 pts] GRAVEL (2-64 mm) [5 pts]  Total of Percentages of Bid's Slabs, Boulder, Cabble, Bedrock, SCORE OF TWO MOST PREDOMINATE SUB-explanation. Avoid olvinge pods from to > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	cant substrate types footing percent TYPE PERCENT TYPE	I (Mex of 8). Final metric is SILT [3 pt] LEAF PACKWOODY: FINE DETRITUS [3 pt CLAY Or HARDPAN [1] MUCK [0 pt 5] ARTIFICIAL [3 pt 5] TOTAL NUMBER TOTAL NUMBER TOTAL NUMBER (No the 61 meter (200 ft) pipes) (Check ONLY o 5 cm - 10 cm [45 pt 5]	DEBRIS [3 p [5] [5] [6] [7] [7] [7] [8] [8] [8] [9] [9] [9] [9] [9] [9] [9] [9] [9] [9	(B)  (B)  (C)  (C)  (C)  (C)  (C)  (C)	HHEI Metric Points Substrate Max = 40  A + B  Poul Oepth Max = 30
3. BANK FULL WIDTH (Measured as th > 4.0 medistric   17) [20 pts]   > 3.0 m - 4.0 m (> 9 7 - 12) [25 pts]   > 1.5 m - 3.0 m (> 4 8 - 9 7 ) [20 pts]   COMMENTS	e average of 3-4 measur	V > 1.0 m - 15 m (> 3°3	<b>3</b>	ptal (0.4)	Bankfull Width Max-30
RIPARIAN ZONE AND FLOOR RIPARIAN WIDTH  L R (Per Bank) WAde >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (Af Time of E) Stream Flowing Subwarface flow with isolated go COMMENTS   4-a-y (-2-4)	PIPLAIN QUALITY AT PLOODPLAIN QUALITY AND A PLOODPLAIN QUA	icentinant per Bank) rest, Wetland rest, Wetland I. Perit, New Field subure  Moist Channe Dry chennel.	Right (R) as f	Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction cots, no flow (Intermittent)	-
SINUOSITY (Number of bends	] 1.0	nel) (Check ONLY one b	<b>ன</b> ):	] 3.0 ] >3	

☐ Moderate (2 t/100 t) ☐ Moderate to Severe

Severe (10/4/1001)

STREAM GRADIENT ESTIMATE
Flat (0.0 for the companies)

June 23, 2005 Pecision

ADDITIONAL STREAM INFORMATION (This Information Must Also be Complete the Complete Complete the Complete Comple	(ml ed);
GHEI PERFORMED? - 1 Yes ( No OHE) Score(IFY	res. Attach Completed OHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream
OWH Name.	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>ENTIRE</u> WATE	
USGS Quadrangle Name: Carroll 1/2 NRCS Sc	il Mep Page: NRCS Soil Map Streem Order
County. Chees II (3 Township / City_	Guest 6.
MISCELLANEOUS	
Base Flow Conditions? (Y/N): N Date of last precipitation: 2n April 4	9613 Quantity. 1.59
Photograph Information: 9+1. ( l. 4	
Elevated Turbidity? (Y/N) Canopy (% open):	
Were samples collected for water chamistry? (Y/N): (Note lab sample no	or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (	S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N) = \frac{V}{V}$ . If not, please exp	lein.
Additional comments/description of pollution Impacts:	
BIOTIC EVALUATION	•
Performed? (Y/N):	optional. NOTE: all youther samples must be labeled with the sa n the Primary Headwater Habitat Assessment Manual)
Fish Observed? (YM_MVoucher? (YM\)Salamanders Observed? (Frogs or Yadpoles Observed? (YM\)_M_Voucher? (YM\)Aqualle Mecroinv Comments Regarding Biology	Y/N) / Voucher? (Y/N) / Voucher? (Y/N) / Voucher? (Y/N)
·	
	<del></del>
	ν -
DRAWING AND NARRATIVE DESCRIPTION OF STR	
Include important landmarks and other features of interest for site evalu	ation and a narrative description of the stream's location
FLOW - 510 59 mb;1, 81	
1	

PHWH Form Page - 2

June 20, 2003 Newson

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## Primary Headwater Habitat Evaluation Form

3.0

Severe (10 to 100 t)

Moderate to Severa

		HUE! 200	re (sum or m	etrics 1, 2, 3) :	
SITE NAMEA OCATION ( 1/2 / / 1/2 /	ty liere	17 - War Pipo Ford			_
SITE NUMBER 5/D RIVER BASIN ( b) 1-1/4 St. ( C) DRAINAGE AREA (m²) 0.7			'. <del>'}</del>		
LENGTH OF STREAM REACH (8) 100 LAT. 40.0056 LONG. 121, 0562 RIVER CODE RIVER MILE -					
DATE JATE ) JUS SCORER MY MAN	· /: cc	MMENTS			
NOTE: Complete All Rems On This For	m - Refer t	z "Field Evaluation Manua	l for Ohlo's PHV	VH Streams" for instr	uctions
	TURAL CH	WINEL   RECOVERED	RECOVERING L	J RECENT OR NO RECO	DYERY
MODIFICATIONS:					
<ol> <li>SUBSTRATE (Estimate percent of ex (Max of 40), Add total number of significant.</li> </ol>					HHEI
	PERCENT	TYPE		PERCENT	Metric
PLOR SLABS [16 pts]		🔲 🖸 🖰 ՏեՐ[Ֆգգ]		<u> </u>	Points
☐ ☐ BOULDER (>256 mm) [16 pis]			CODY DESRIS D p	<b>4)</b>	Substrate
☐ BEDROCK (18 pt]  [7] ☐ COBBLE (85-256 mm) [1.2 pts]	23	☐☐ FINE DETRITUS	- ' '	10	#2x = 40
☑ ☐ GRAVEL (2-64 mm) [8 pts]	35		Art loved		ایراا
☐ ☐ SAND (<2 mm) (8 pis)	15	DO ARTIFICIAL D.	×1]	<u> </u>	ا عا له
Total of Percentages of		·		(8)	
Bidr Slabe, Boulder, Cobble, Bedrock	50	<b>"</b>  }\		"" 5 I	A+B
SCORE OF TWO WOST PREDOMINATE BUB	STRATE TY	ES: TOTAL NU	MBER OF CUBST	RATE TYPES:	
2. Maximum Pool Septh (Weesure the s	naximum pa	of depth within the 61 meter 5	190 fti evaluetion n	each at the time of	Pool Septi
evaluation. Avoid plunge pools from ro		storm water pipes) (Chack O	NLY one box):		Max = 30
[,] > 30 centimeters [20 pts] > 22.5 - 30 cm (30 pts]		∑9 > 5 cm - 10 cm □ < 5 cm [5 pts]	[15 <b>pts</b> ]		ا ہے اا
□ > 10 - 22.5 cm [25 pts]			R MOIST CHANNE	EL [0 pts]	15
			MI POOL DEPTH (	10	
COMMENTS		MAXIMU	ME POOL DEP 1/1	EBRUCHIPGEVS):	
3. BANK FULL WIDTH Measured as th	average of		Check ONLY one I		Bankfull
> 4.0 meters (> 13') [30 ptn] > 3.0 m - 4.0 m (> 0') - 13') [26 pte]		☐ > 1.0 m - 1.5 m ☐ ≤ 1.0 m (≤ 373)	(> 3' 3" - 4" 6") [15  ]	PE N	Max=30
3 > 1.5m - 30m (> 4 F - 9 7) [20 ple]					II . 1
соммента		AVERA	SE BANKFULL W	0794 American   2.5	J b
COMMENTO_		ATEION	2 BANK OLC 191		_
	This	Information must also be com	nieled		
RIPARIAN ZONE AND FLOOD				ooking downstresmy'r	
RIPARIAN WIDTH		PLAIN QUALITY			
L,R, (PerBenk) □□ □ Wide>10m	ឆ្នាំច	(Most Predominant per Bank) Mature Forest, Wetland	ក់កំ	Conservation Tillage	
☐ ☐ Moderate 5-10m	ก๊ก	Immature Forest, Shrub or Ok		Urban or Industrial	
22		Fleid		Open Pasture, Row	
□ D Narrow <5m	00	Residential, Park, New Field	00	Орел извыте, ном Стор	
☐ ☐ None	OO	Fenced Parture		Minking or Construction	
COMMENTS					-
FLOW REGIME (At Time of Ex	etration) (C				
Stream Flowing  Subsurface flow with isolated po	والمرام والمراد		hannel, isolated po innel, no water (E)	pois, no flow (informitient) Themeral)	
COMMENTS	- Constitution of Child	., ., ., .,		en m reel my	_

PHWH Form Page - 1

Moderale (2 t/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - O Yes 12 No QHEI Score(If Yes, Albach Completed CHEI Form)
DOWNSTREAM DESIGNATED USE(S)    WAYN Name:   Distance from Evaluated Stream
MAPPING: ATTACH COMES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: (************************************
County: Carriller Township/City: (Greatler)
MISCELLANEOUS
Base Flow Conditions? (YRI): P Date of last precipitation: 27 Apr. 13 Squantity. 0.57
Photograph Information: 4 Hackel
Elevated Turbidity7 (Y/N). Canopy (% open). 252
Were samples collected for water chemistry? (Y/N): (Note leb sample no. or ld. and attach results) Lab Number.
Field Measures: Temp ("C) //A Dissolved Oxygen (mpl) ///I pH (S.U.) //A Conductivity (µmhos/cm) ///
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional commenta/description of pollution impacts:    Online   Commenta/description of pollution impacts:   Online   Comments   Commenta/description   Commen
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of interest for alle evaluation and a narrative description of the stream's location
FLOW - CITIZE CONTROL SIN

Jime 29, 2039 Pengan

BTREAM GRADIENT ESTIMATE
Flat (0.5 ± 100 t) Flat to Moderate

ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	
SITE NUMBER STEE REVER BASIN Prof. E.K. STEEN DRAINAGE AREA (mil) 2/2.	- -
LENGTH OF STREAM REACH (B) 50 LAT 40.4040 LONG 11.504 RIVER CODE RIVER MILE	_
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction:	F
STREAM CHANNEL ONNE / NATURAL CHANNEL RECOVERED RECOVERING RECEIT OR NO RECOVERY MODIFICATIONS:	
SUBBITIATE (Estimate percent of every type of substrate present, Check OWLY <u>two</u> predominant substrate TYPE boxes (Max of 40). Add lotal number of significant substrate types found (Max of 6). Final metric score is sum of boxes A & B.  HH	E
TYPE PERCENT TYPE PERCENT Mel	
O BOULDER (>256 mm) (46 pts)	trat
□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□	
□	9
SAME (ATTIMITY DE SAME PARTIE DE SAM	_
Yotal of Percentages of (8)  Bior Stabs, Boulder, Cobble, Bedrock 30 (8)	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES:	
2. Maximum Pool Depth (Measure the maximum pool depth within the 51 mater (200 ft) evaluation reach at the time of Pool D	
evaluation. Avoid plunge pools from road ru/verts or storm water pipes) (Chach CH/LY one box):    So centimeters [20 ptm]	- 34
> 22.5 - 30 cm (30 pts)   √ < 5 cm (5 pts)   5   > 10 - 22.5 cm (25 pts)   10 - 22.5 cm (25 pts)   7	
COMMENTS MAXIMUM POOL DEPTH (continues):	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check CMLY one box): Bank	
₩ >1.5m -3.0m (>4'#-9'7) [20 pin]	
COMMENTS AVERAGE BANKFULL WIDTH (mikers)	
	_
This information <u>muni</u> tales be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY #MOTE: River Left (L) and Right (R) as looking downstream &	
RIPARIAN WI <u>OTH</u> FLOODPLAIN QUALITY LR (New Bank) LR (Model Predominanal per Bank) LR	
□□ Water >10m □□ Mature Forest, Westend □□ Conservation Yillage	
2 3 Hodorate 5-10m 3 5 Immature Forest, Shrub or Old 0 D Urban or Industrial	
☐☐ Narrow <5m ☐☐ Residential, Park, New Field ☐☐☐ Open Pasture, Row	
□ None □ □ Ferrord Pesture □ □ Mining or Construction COMMENTS	
FLOW REGIME (A! Time of Evaluation) (Check ONLY one box):   Seream Flowing	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check OWLY one box):	
☐ None ☐ 1.0 ☐ 20 ☐ 3.0 ☐ 3.0 ☐ 9.5 ☐ 1.5 ☐ 2.5 ☐ >3	
STREAM GRADIENT ESTIMATE  [Black and a stream of the tri Moderate Charles and the stream of the tri Moderate Charles and the stream of the str	

PHWH Form Page - 1	
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June 20, 2006 Revision

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
CHEI PERFORMEO? - 🗖 Yes 🗹 No OHEI Scare (If Yes, Atlach Completed OHEI Form)
DOMINISTREAM DESIGNATED USE(S)
□ WW/H Name: fifts R-n Distance from Evaluated Stream #53
Cistance from Evaluated Stream
Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Hame: (427-11)4/4 NRCS Soil Map Page: NRCS Soil Map Stream Order
Country Country Country
MIRCELLANEOUS
Base Flow Conditions? (YRH): Y Date of last precipitation: P1 Mgr. 1 July Quantity. (9.21)
Photograph Information:
Sevaled Turbidity? (YN): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number
Field Measures: Temp (*C) <u>A-V^+</u> Dissolved Oxygen (mg/l) <u>A-V (f)</u> pH (S.U.) <u>A-V</u> Conductivity (prinos/cm) <u>A-V</u>
Is the sampling reach representative of the stream (Y/M) Y If not, please captain.
Additional commems/description of pollution impacts: finding language
BIOTIC EVALUATION
Performed? (Y/N):
Fish Observed? (YA): Woucher? (YA): Salemanders Observed? (YA): Voucher? (YA): Frogs or Tadpoles Observed? (YA): Woucher? (YA): Aquable Macrohivertebrates Observed? (YA): Woucher? (YA): —
Comments Regarding Biology:
DRAWING AND HARRATTVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
include important landmarks and other features of injerest for alla evaluation and a narrative description of the stream's location
7
FLOW SIL SIL Correction
19-1944

PKWH Form Page - 2

June 20, 2008, Revision

CrisePA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	
SITE NAME LOCATION GUAR CLASS SALES SIZE   LINT PINE FOR SIXE DRAINAGE AREA (mir) Clm. 2	- -
LENGTH OF STREAM REACH (N) 360 LAT. 40, 405 LONG - VIOLAD RIVER CODE - RIVER MILE	-
DATE 25 April 313 SCORER MINISSER COMMENTS Lesson for William O	_
NOTE: Complete All terms On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions	•
STREAM CHANNEL   NONE / NATURAL CHANNEL   RECOVERED   RECOVERING   RECENT OF NO RECOVERY MODIFICATIONS:	
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8) Final metric score is sum of boxes A & B.  HH  TYPE  PERCENT  TYPE  PERCENT  TYPE  PERCENT  TYPE  PERCENT  TYPE  PERCENT  PERCENT  TYPE  PERC	tric
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	= 40
☑ ☐ GRAVEL (2-64 mm) [9 pts] 1⊆ ☐ ☐ MUCK (0 pts)	K.
☐ Ø SAND (<2 mm) [6 phs]	
Yotal of Percentages of (A) Bid Sales, Boulder, Cabble, Bedrock SCORE OF TWO MOST PREDOMINANTE SUBSTRATE TYPES:  TOTAL NUMBER OF SUBSTRATE TYPES:	В
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box).	- 30
☐ > 22.5 - 30 cm [30 bis] ☐ <5 cm [5 pis] [5	٠ ا
> 10 - 22.5 cm [25 pis] NO WATER OR MOIST CHANNEL [0 pis]	_
COMMENTS MAXIMUM POOL DEPTH (continuolors):	
3. BANK FULL WIDTH (Measured as the average of 3-4 measuredwarts) (Check ONLY one box): Bare > 4.0 meters (> 15) (30 pts)   > 3.0 m - 4.0 m (> 6 pts - 13) (25 pts)   > 4.0 m - 4.0 m (> 6 pts - 13) (25 pts)   Measuredwarts   3.10 m (> 3.0 m (> 4.0 m (> 6 pts - 13) (25 pts)   Measuredwarts   Measuredwar	<b>i</b> h
> 3.0 m - 4.0 m (> 67 - 13) [25 pms)	-"
COMMENTSAVERAGE BANKFULL WIDTH (markers) / 1 / 1	
This takes where story be completed	_
This (niomation <u>must</u> also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\fonc{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}\text{TNOTE: River Left (L) and Right (R) as looking downstream\$\footnote{A}TNOTE: River R	
RIPARIAN WIDTH  I. R. (Per Bank)  I. R. (Most Predominant per Bank)  I. R. (Most Predominant per Bank)	
☐ 📆 Wide>10m ☐ 🗗 Mature Forest, Wetland ☐ ☐ Conservation Tillage	
☐	
Narrow <5m	
OMMENTS OF CONSTRUCTION	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing   Moist Chennel, isolated poots, no flow (intermittent)  Subsurface flow with isolated poots (intersizinal)   Dry channel, no water (Ephemeral)  COMMENTS   Many Cein 24 90:   Jets	
SINUPOSITY (Number of bends per 61 m (290 it) of channel)   (Check DALY one box):     3.0     3.0     3.0     3.0     3.5     2.5     >3	
STREAM GRADIENT ESTIMATE  Flat to Serior 4) Flat to Moderate	_

June 20: 2008 Revision

ADDITIONAL STREAM INFORMATION (This information Must Also be Completed):
QHEI PERFORMED? - 🗌 Yes 🚽 No. QHEI Score(If Yes, Allach Compiled QHEI Form)
/ DOWNSTREAM DESIGNATED USE(S)
WWH Name: 1945 19-18 Distance from Evaluated Stream 1.65 mi
T CWH Name: Distance from Evaluated Stream
Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>Entire</u> watershed area. Clearcy mark the site Location
USGS Ouadrengte Name: NRCS Soil Map Page NRCS Soil Map Stream Order
county Benvis Goods township cory Carrellian
MISCELLANEOUS
Base Flow Conditions? (YAN): M Date of last precipitation. シュムローション Ouantity: 3.57
Photograph Information: 474,141
Elevated Turbidity? (Y/N): Canopy (% open)35
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (*C) 1/2 Dissolved Oxygen (mg/l) 1/2 pH (S.U.) 1/2 Conductivity (umhos/cm) 1/2
Is the sampling reach representative of the stream (Y/M) 1 If not, please explain:
Additional comments/description of pollution impacts: Atmanda a great Hamiltonia Circle
BIOTIC EVALUATION
Performed? (YM): ([f.Yes, Record all observations, Voucher collections optional. NOTE, all voucher samples must be labeled with the situation of the samples of the sample of the samples of the sample of the samples of the sample
ID number. Include appropriate field data sheets from the Primary Headwater Habital Assessment Manual)
Fish Observed? (Y/N) / Voucher? (Y/N) Salemanders Observed? (Y/N) / Voucher? (Y/N) / Voucher? (Y/N) / Frogs or Tadpoles Observed? (Y/N) / Voucher? (Y/N) / Aquetic Macroinvertatirates Observed? (Y/N) / Voucher? (Y/N) /
Comments Regarding Biology.
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
include important landmarks and other features of interest for site evaluation and a namelive description of the stream's location
the milkel 0
Constitution of the Confirm
المائي من المعلق المائي المعلق المائي المعلق المائي المائي المائي المائي المائي المائي المائي المائي
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June 70, 3608 Revision

PHWH Form Page - 2

ChieFA Primary Headwater Habitat Evaluation Form  HHEI Score (sum of metrics 1, 2, 3):	4
SITE NAMELOCATION CALL (No. 1) FORTH STATE OF THE SALE	tions
TYPE  BLOR SLARS [16 pls]  GROUNDER (>26 mm) [16 pls]  GROUNDER (>26 mm) [16 pls]  GROUNDER (>26 mm) [16 pls]  GROUNDER (>26 mm) [17 pls]  GROUNDER (>25 mm) [17 pls]  GROUNDER (>25 mm) [17 pls]  GROUNDER (>25 mm) [17 pls]  GROUNDER (>26 mm) [17 pls]  GROUNDER (>26 mm) [17 pls]  GROUNDER (>26 mm) [17 pls]  GROUNDER (>26 mm) [17 pls]  GROUNDER (>26 mm) [17 pls]  Total of Percentages of Bid' Slabs, Boulder, Cottole, Bedock 3C  ARTIFICIAL [3 pls]  TOTAL NUMBER OF SUBSTRAYE TYPES:  TOTAL NUMBER OF SUBSTRAYE TYPES:  ARTIFICIAL [3 pls]  TOTAL NUMBER OF SUBSTRAYE TYPES:  TOTAL NUMBER OF SUBSTRAYE TYPES:  AND (<2 pls)  So centification, Avoid plunge pools from road culverts or storm water pipes) (Check Offict Y one box);  So come of the Most of the Number (Substray of the	HHE Metrin Substruction Max = O Double Max = O Doub
This information <u>must</u> also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY 3*NOTE River Left (L) and Right (R) as looking downstream or RIPARIAN WIDTH FLOODPLAIN QUALITY 3*NOTE River Left (L) and Right (R) as looking downstream or RIPARIAN WIDTH FLOODPLAIN QUALITY  L R (Per Bank) L R (Most Predominant per Bank) L R  Wides 10m	
☐ Flat to : max 2 ☐ Flat to Moderate ☐ Moderate (2 0:00 n) ☐ Moderate to Severe ☐ Severe (4 0:000 n)	9

PHWH Form Page - 1

ADDITIONAL STREAM INFORMATION (This information Must Also be Completed):
QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed OHEI Form)
☐ DOWNSTREAM DESIGNATED USE(S)
Distance from Evaluated Stream 1. 65 m.
I.J CWH Name: Distance from Evaluated Stream
Distance from Evaluated Stream.
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>Entire</u> watershed area. Clearly mark the site location
USGS Quadrangle Name: ( NRCS Soit Map Stream Order NRCS Soit Map Stream Order
County: County township rolly Cherol Non
MISCELLANEOUS
Base Flow Conditions? (YAN): N Date of last precipitation: 19 Apr. 1 3/113 Quantity: 0.31
Photograph Information:
Elevated Turbidey? (YAN). A Canopy (% open). 5 J
Were samples collected for water chemistry? (Y/N): (Note fab sample no or id. and attach results) Lab Number:
Field Measures: Temp (*C) N [A Dissolved Oxygen (mg/l) N [A DH (S.U.) N ] Conductivity (umbos/cm) N [A Dissolved Oxygen (mg/l) N [A DH (S.U.) N ] Conductivity (umbos/cm)
is the sampling reach representative of the streem (YN) If not, please explain:
Additional comments/description of pollution impacts: Prolongy Com Colly Agriculture
BIOTIC EVALUATION
Performed? (YAN): 4 (If Yes, Record all observations: Voucher collections updonal. NOTE, all voucher samples must be lebeled with the six ID number. Include appropriate field date sheets from the Primary Headwaler Habital Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpofes Observed? (Y/N) V Voucher? (Y/N) V V Voucher? (Y/N) V V Voucher? (Y/N) V V Voucher? (Y/N) V V V V V V V V V V V V V V V V V V V
Comments Regarding Biology
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
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PHWH Form Page - 2

June 20, 200s Revision

June 20, 2006, Revision

ChieEPA Primary He	eadwater Habitat Evaluat HHEI Score (si	tion Form In of metrics 1, 2, 3):			
LENGTH OF STREAM REACH (4) <u>200</u> LA DATE <u>25 みご 273</u> SCORER <u>M. ロッカー</u> LA NOTE: Complete All Items On This Form -	RIVER BASIN TITE RIVER	CODERIVER MILE No's PHWH Streams" for Instructions			
(Max of 40). Add total number of significant	ARTIFICIAL (3 pts)	percent Percent Percent Point: Substrate Max = 4  (B) 3  HHE Percent Point: Substrate Max = 4  /2  A+B			
Maximum Pool Depth (Reseaure the max/evaluation. Avoid plunge pools from road ox > 30 centimeters (20 pts) > 22.5 - 30 cm (30 pts) > 10 - 22.5 cm (25 pts)      COMMENTS  BANK FULL WIDTH (Measured as the avoid > 4.0 meters (-13) [26 pts] > 3.0 m - 4.0 m (-9 7" - 13) [25 pts] > 1.5 m - 3.0 m (-4 4" 6" - 9" 7") [20 pts] COMMENTS	erage of 3-4 measurements) (Chack i > 1.0 m - 1.5 m (~ 3.3") - 1.0 m (< 3.3") [5 pts	box).  1 CHANNEL [0 pts]  L DEPTH (continueters):  DML Y one box):  4 87 [15 pts]  Width			
R (Per Benk)   Wide > 10m     Moderate 5-10m     Moderate 5-10m     Namow <5m     None     COMMENTS     Stream Flowing     Subsurface flow with isolated pools (COMMENTS   1/2/2/(-1/2/2/-)     SINUOSITY (Number of bends per None     0.5	FLOCOPLAIN OUALITY  R (Most Predominant per Bank)  R (Most Predominant per Bank)  R (Most Predominant per Bank)  R (Most Predominant per Bank)  R (Most Predominant per Bank)  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field  Residential, Park, New Field	Conservation Tillage   Urban or Industrial	STREAM GRADIENT ESTIMATE  Flet (0.5 to 100 to )   Flet to Moderate	Moderate 12 6/100 to D Moderate Io	Severe (16 A) (0 A)

PHWH Form Page - 1

June 20, 2008 Reus to

ADDITIONAL STREAM INFORMATION (This Information Must Also be Com	pleted):
QHEI PERFORMED? - Tyes TO No OHEI Score(II	Yes, Altach Completed CHE! Form)
DOWNSTREAM DESIGNATED USE(S)  WHO! Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WAY	
USGS Quadrangle Name: Car. (1114 - NRCS S	Soil Mep Pege: NRCS Soil Mep Stream Order
Country Country (O) Township / City	Correllion
MISCELLANEOUS	
Base Flow Conditions? (V/N): V Date of last precipitation: 3M Apr.:  Photograph Information: (1 + 3-1): 1	1 3013 Quantity: 0, 57
Photograph Information:	_
Elevated Turbidity? (Y/N): Canopy (% open):	
Were samples collected for water chemistry? (Y/N): (Note lab sample r	no. or id. and attach results) Lab Number.
Field Measures: Temp (*C) <u>F I/A</u> Dissolved Oxygen (mg/l) <u>F/A</u> pt	(S.U.) <i>rr_[</i> ] Conductivity (µmhos/cm) <i>rr_[</i> ]
is the sampling reach representative of the streem (YM__\y If not, please ex	splain:
Additional comments/description of pollution impacts:	as s, fields
BIOTIC EVALUATION	
Performed? (Y/N)	ns opbonal. NOTE: all voucher samples must be labeled with the site om the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) <u>M</u> Voucher? (Y/N) — Salamanders Observed? Frogs or Tadpoles Observed? (Y/N) <u>Y</u> Voucher? (Y/N) Aquatic Macroli Comments Regarding Biology.	(Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF ST Include Important landmarks and other features of Interest for site eva	iuation and a narrative description of the stream's location
Field Born Freiliting - RIA	. <b>Ö</b>
FLOW SIGNAL FILLS	
• '	

June 70, 7008 Per son

PHWH Form Page - 2

ChicEPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	3}
SITE NUMBER 513 RIVER BASIN FIRE DRAINAGE AREA (mi)	<u> </u>
LENGTH OF STREAM REACH (N) 120 LAT. YU. LAY 1, LONG 1 Y. LONY RIVER CODE RIVER MILE DATE 15 A. 1011 SCORER 1. RIVER MILE COMMENTS 1. LONG 1 Y. LON	
STREAM CHANNEL DINONE/NATURAL CHANNEL DIRECOVERED DIRECOVERING DIRECENT OR NO RECEIVED MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Chack ONLY two predominant substrate TYPE boxes (Max of 4). Add total number of significant substrate types found (Max of 6). Final metric score is sum of boxes A & 6  TYPE  BLDR SLARS (16 bits)  PERCENT  SLT (3 bit)  PERCENT	HHEI Metric Points
CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis]   CEAF PACKWOODY DEBRIS [3 pis	Substrate Max = 40
□ COBBLE (65-256 mm) [12 pis]	/3
SAND (<2 mm) [6 phs]	A+B
Bidd Slabs, Boulder, Catable, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES:	<b> </b>
<ol> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culvedts or storm water pipes) (Check ONLY one box):</li> </ol>	Pool Dept
→ 30 centimeters [20 pts]	5
COMMENTS MAXIMUM POOL DEPTH (contimulars):	
3. BANK FULL WIDTH (Bleasured as the average of 3-4 measured fents) (Check CWLY one box):    > 4.0 meters (> 13) [80 pts]	Banktul Width Maxe30
□ > 1.5m - 3.0m (> 4 5 - 9.7) [20 pts]	15
COMMINATO	
This Information <u>must</u> also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY	
L_R_/ [Per Bank) L_R_/ (Most Predominant per Bank) L_R 	
☐ ☐ Moderate 5-10m ☐ Immature Forest, Shrub or Old ☐ ☐ Urban or Industrial Field	
□□ Nerrow <5m □□ Residential, Park, New Field □□ Open Pasture. Row Grop	
☐ None ☐ ☐ Fenced Pasture ☐ ☐ Mining or Construction  COMMENTS	<b>-</b>
FLOW REGIME (At 74ms of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitiet) COMMENTS  How stream flow in the indicated pools (Interstitiet)  Moist Channel, indicated pools, no flow (Intermitted Dry channel, no water (Ephemeral))	nt)
SINUOSITY (Number of bends yet 61 m (200 ft) of channel) (Check ONLY one box):  □ None □ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE    Flet (0.5 proc.)	V199 <b>f</b> )

PHWH Form Page - 1

"¢ne 70, 2305 Revisio

ADDITIONAL STREAM INFORMATION (This Information Must Also be Com	pleted):
QHEI PERFORMED? - 17 Yes (S'No QHEI Score(II	Yes, Atlach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream
_I CWR Name:	Distance from Evaluated Stream
D EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WAT	
USGS Quadrangle Name: Correll for NRCS S	Soil Map Page: NRCS Soil Map Stream Order
County. Com/1 Com/2 Township/Orly	. (ur. alliva
MISCELLANEOUS	
Base Flow Conditions? (Y/N) <u>Y</u> Date of last precipitation: <u>J. 2 Apr. 1</u>	3013 Quantity. 0.57
Photograph Information:	
Elevated Turbidity? (Y/N): _ /* Canopy (% open): _ 60	
Were samples collected for water chemistry? (Y/N):tV(Note lab sample r	no. or id. and attach results) Lab Number
Field Measures: Temp (*C) $= rac{\sqrt{d}}{2}$ Dissolved Oxygen (mg/l) $= rac{\sqrt{d}}{2}$ pH	(S.U.) yV//// Conductivity (µmhos/cm) ////
is the sampling reach representative of the stream (YAV) If not, please ex	cole in:
,	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations, Voucher collection ID number, include appropriate field date sheets fr	ns optional. NOTE: all voucher samples must be labeled with the sign the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) / Voucher? (Y/N) - Salamenders Observed? Frogs or Tadpoles Observed? (Y/N) / Voucher? (Y/N) - Aquatic Macroir	(Y/N)
Comments Regarding Biology Plans I - 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1	•
DRAWING AND NARRATIVE DESCRIPTION OF ST	REAM REACH (This must be completed):
include important landmarks and other features of interest for site eva	
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FLOW - Front Day 19 January 19 Ja	_
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June 20, 2003 Remarks

PHWH Form Page - 2

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June 20, 2008 Perison

### Primary Headwater Habitat Evaluation Form HHE! Score (sum of metrics 1, 2, 3):

|--|

SITE NAME LOCATION	74 RIVER BASIN PIPE IO	
SITE NUMBER_5	RIVER BASIN THE	DRAINAGE AREA (mi*)
LENGTH OF STREAM REACH (II) 10.1 L	AT. 40.00 34 LONG. * \$1.6 64\$ RIVER	CODE RIVER MILE
DATE 25 April 21 SCORER C. V. Iray		
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation Manual for Oh	nio's PHWH Streams" for Instructions
STREAM CHANNEL STONE / NATU	JRAL CHANNEL STRECOVERED STRECOV	ERING TRECENT OR NO RECOVERY
MODIFICATIONS:		
		<u></u>
1. SUBSTRATE (Estimate percent of every	y type of substrate present. Check ONLY <u>two</u> pre	edominant substrate TYPE boxes ove is sum of boxes A.A.B. HHEI
	ni substrate types found (Max of 8). Final metric so	Motric
TYPE PE  DD BLDR SLABS (16 pts)	RCENT TYPE  SILT (3 pt)	Percent Points
□ □ BOULDER (> 256 mm) [16 pts]	LEAF PACKWOODY DE	EBRIS [] phs] Substrate
□□ BEDROCK [16 pt]	🔲 💆 FINE DETRITUS (13 plan	Q Max = 40
OBBLE (65-256 mm) (12 phs)	☐☐ CLAY ∞ HARDPAN (D)	M [
	D ☐ (1) MUCK (0 plus) ☐ (2) ARTIFICIAL (3) plus)	<u> </u>
□ □	J [7 ARTIFICIAL [3 pts]	
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock	(A) (3)	(B) 2. A+B
SCORE OF TWO MOST PREDOMINATE SUBSTI	RATE TYPES:	OF SUBSTRATE TYPES:
		valuation reach at the time of Pool Cept
2. Maximum Pool Depth (Measure the max evaluation. Avoid plungs pools from 1060	ximum pool depth within the 61 mater (2001) to culvets or storm water pipes) (Check ONLY one	e box):
> 30 centimeters [20 pls]	🗇 , >5 cm - 10 cm [15 p#s	
7 > 22.5 - 30 cm (30 pts)	5 cm [5 pts] NO WATER OR MOIS	T CHANNEL (Dob)
> 10 - 22.5 cm [25 pts]		1.24
COMMENTS		
COMMENT9	MAXIMUM POO	L DEPTH (centimeters):
3. BANK FULL WIOTH (Measured as line a	iverage of 3-4 measurements) (Check C	ONLY one box): Bankfuli
3. BANK FULL WIOTH (Measured as like a > 4,0 meters (> 13) [30 pts]	iverage of 3-4 measurements) [Check 6	ONLY one box): Bankfull 4 67 (15 pte) Width
3. BANK FULL WIOTH (Neasured as the a	iverage of 3-4 measurements) (Check C	ONLY one box):  4'57 [15 ptv]  Max=30
5. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13) [20 pts] > 3.0 m · 4.0 m (> 6° 7° - 13) [25 pts] > 1.5 m · 3.0 m (> 4° 8° - 6° 7°) [20 pts]	Check C	ONLY one box):  4 87) [15 pte]  Bankfull Width N 82=30
3. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13') [30 pts]	Check C	ONLY one box):  4'57 [15 ptv]  Max=30
5. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13) [20 pts] > 3.0 m · 4.0 m (> 6° 7° - 13) [25 pts] > 1.5 m · 3.0 m (> 4° 8° - 6° 7°) [20 pts]	Check to   1-4 measurements     (Check to   1-4 measurements     1-4 measurements     1-4 measurements     1-4 measurements	ONLY one box):  4 87) [15 pte]  Bankfull Width N 82=30
5. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13) [20 pts] > 3.0 m · 4.0 m (> 6° 7° - 13) [25 pts] > 1.5 m · 3.0 m (> 4° 8° - 6° 7°) [20 pts]	Inverage of 3-4 measurements) (Check C	ONLY one box):  4 87) [15 pte]  Bankfull Width N 82=30
3. BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) p0 pts] > 3.0 m · 4.0 m (> 6/7 - 13) [25 pts] > 1.5 m · -3.0 m (> 4/6 - 6/7 ) [20 pts] COMMENTS  RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH	This Information must also be completed LIAN QUALITY  STROTE: River Left (L.) and Ref. FLOODPLAIN QUALITY  FLOODPLAIN QUALITY  STROTE: River Left (L.) and Ref. FLOODPLAIN QUALITY	ONLY one bax): 4' 5') (15 pte) Width Maz=10 SHKFULL WIDTH (meters)
3. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13) [D0 pts]   > 3.0 m · 4.0 m (> 6/7 - 13) [D5 pts]   > 1.5 m · 3.0 m (> 4/6 - 6/7) [20 pts]   COMMENTS    RIPARIAN ZONE AND FLOODPLE   RIPARIAN WIOTH   L R (Per Bank)	(Check Control of the Completed Can QUALITY Check Control of the Complete Can Can Can Can Can Can Can Can Can Can	ONLY one box):  4 57 (15 pte)  KFULL WIDTH (meters)  Oh (R) as looking downstream?
3. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13) [20 pts]   > 3.0 m · 4.0 m (> 6/7 - 13) [25 pts]   > 1.5 m · 3.0 m (> 4/6 - 6/7 ) [20 pts]   COMMENTS    RIPARIAN ZONE AND FLOODPL   RIPARIAN WIOTH   R (Per Bank)   Wide > 10m	This information must also be completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Completed LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN QUALITY  Reflection of the Complete LAIN	ONLY one box):  4 57 [15 pte]    KFULL WIOTH (meters)    Sankfull Width   Maz=30   Sankfull   Sankf
3. BANK FULL WIOTH (Measured as lite a > 4.0 meters (> 13) [20 pts]   > 3.0 m · 4.0 m (> 6/7 - 13) [25 pts]   > 1.5 m · 3.0 m (> 4/6 - 6/7) [20 pts]   COMMENTS    RIPARIAN ZONE AND FLOODPL   RIPARIAN WIDTH   R (Per Bank)   Wide > 10m   Wide > 10m   Moderate 5-10m	This Information must also be completed LAIN QUALITY O'NOTE. River Laft (L) and Ref FLOODPLAIN QUALITY O'NOTE.	ONLY one box):  4 67 (15 pte)    KFULL WIOTH (meters)   Sankfull Width   Max=10
3. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13) [20 pts]   > 3.0 m · 4.0 m (> 6/7 - 13) [25 pts]   > 1.5 m · 3.0 m (> 4/6 - 6/7 ) [20 pts]   COMMENTS    RIPARIAN ZONE AND FLOODPL   RIPARIAN WIOTH   R (Per Bank)   Wide > 10m	This Information must also be completed LAIN QUALITY PROTECTION QUALITY TO MOST PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROT	ONLY one box):  4 67 (15 pte)    KFULL WIOTH (meters)
3. BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) [D0 pts]   > 3.0 m + 4 0 m (> 6/7 - 13) [D5 pts]   > 1.5 m + 3.0 m (> 4/6 - 6/7 - 7) [20 pts]   COMMENTS   RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH   R (Per Bank)   W4de > 10m   Mederate 5-10m   Namew < 5m   None	This Information must also be completed AN QUALITY   RODE IN Most Prodominent per Bank)   Rode Information Control Information Control Information Control Information Control Information Information Control	ONLY one bax):  4 5 7 (16 pte)    KFULL WIOTH (meters)
3. BANK FULL WIOTH (Measured as lite a > 4.0 meters (> 13) [20 pts]   > 3.0 m · 4.0 m (> 6/7 - 13) [25 pts]   > 1.5 m · 3.0 m (> 4/6 - 6/7 ) [20 pts]   COMMENTS    RIPARIAN ZONE AND FLOODPL   RIPARIAN WIOTH   R (PARIAN WIOTH   Wide > 10 m   Wide > 10 m   Moderate 5-10 m   Namow <5 m	This Information must also be completed LAIN QUALITY PROTECTION QUALITY TO MOST PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROTECTION OF THE PROT	ONLY one box):  4 67 (15 pte)    KFULL WIOTH (meters)
3. BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) p0 pts]   > 3.0 m · 4.0 m (> 6/27 - 13) [25 pts]   > 1.5 m · 3.0 m (> 4/67 - 6/27) [20 pts]   COMMENTS     RIPARIAN ZONE AND FLOODPL     RIPARIAN WIDTH     R (Per Benk)     Wide > 10 m     Moderate 5-10 m     Narrow < 5 m     None     FLOW REGIME (At Time of Evalue)	This Information must also be completed AN QUALITY   NOTE: River Laft (L) and Ref-FLOODPLAIN QUALITY   Residential, Perk, New Field   Residential, Perk, Ne	ONLY one bax):  4 67 (16 pte)  IKFULL WIGHTH (meters)  C 7/L  S  IKFULL WIGHTH (meters)  C 7/L  Bankfull Wighth (max=10, 5)  C 7/L  C Conservation Tillage  Urban or Industrial  Open Pasture. Row Crop  Athing or Construction
3. BANK FULL WIOTH (Measured as the a > 4.0 meters (> 13) [20 pts]   > 3.0 m + 4.0 m (> 47.5 + 13) [25 pts]   > 1.0 m + 3.0 m (> 4.5 + 67.7) [20 pts]   > 1.5 m + 3.0 m (> 4.5 + 67.7) [20 pts]   COMMENTS   RIPARIAN ZONE AND FLOODPL RIPARIAN WIOTH   R (Per Bank)   Wide > 10 m   Moderate 5-10 m   Moderate 5-10 m   Narrow < 5 m   None COMMENTS   FLOW REGIME (At Time of Evaluation of Evaluation Stream Flowing   Stre	This Information must also be completed LAIN QUALITY O'NOTE: River Left (L) and ReFLOODPLAIN QUALITY O'NOTE: Residential. Park, New Field Penced Pasturo (Check O'NLY one box).	ONLY one box):  4 67 (15 pte)    KFULL WIOTH (meters)
3. BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) p0 pts]   > 3.0 m · 4.0 m (> 6/27 - 13) [25 pts]   > 1.5 m · 3.0 m (> 4/67 - 6/27) [20 pts]   COMMENTS     RIPARIAN ZONE AND FLOODPL     RIPARIAN WIDTH     R (Per Benk)     Wide > 10 m     Moderate 5-10 m     Narrow < 5 m     None     FLOW REGIME (At Time of Evalue)	Total Measurements) [Check Content of the Content o	ONLY one bax):  4' 8') (15 pte)  (KFULL WIDTH (meters)  Only (R) as looking downstream?  Conservation Tillage  Open Pasture. Row Cop  Athing or Construction  Isolated pools, no flow (intermittent)
BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) p0 pts]  > 3.0 m · 4.0 m (> 6/7 - 13) [25 pts]  > 1.5 m · 3.0 m (> 4/6 - 6/7) [20 pts]  COMMENTS  RIPARIAN ZONE AND FLOODPL  RIPARIAN WIDTH  L R (Per Bank)  Wide > 10m  Moderate 5-10m  Namew <5m  None  COMMENTS  FLOW REGIME (At Time of Evalue)  Stream Flowing  Subsyrince flow with isolated pools  COMMENTS  None  COMMENTS	Total Control	ONLY one bax):  4 5) [15 pte]    Head of the pte   Head of the pte
BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) D0 pts]  > 3.0 m + 40 m (> 6/7 - 13) [25 pts]  > 1.5 m + 3.0 m (> 6/6 - 6/7) [20 pts]  COMMENTS  RIPARIAN ZONE AND FLOODPL  RIPARIAN WIDTH  L R (Per Bank) W4de > 10m Mederate 5-10m  Nancw < 5cn None COMMENTS  Steam Flooting Subsurface flow with isolated pools COMMENTS  SMUOSITY (Number of bends per None) None	This Information must also be completed LAIN QUALITY STRONG HONOR PROBLEM FIELD  RESIDENCE FOR THE COMPLAIN OUALITY STRONG HONOR PROBLEM OUALITY STRONG HONOR PROBLEM OUALITY STRONG HONOR PROBLEM OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OUT OF THE COMPLAIN OUT OUT OUT OUT OUT OUT OUT OUT OUT OUT	ONLY one bax):  4' 5') (15 pixe)  (KFULL WIDTH (meters)  C 2L  S  IKFULL WIDTH (meters)  C Conservation Tillage  Urban or industrial  Open Pasture. Row Crop  Maning or Construction  Isolated pools, no flow (intermittent)  o water (Ephemeral)
3. BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) p0 pts]  > 3.0 m · 4.0 m (> 6/7 - 13) [25 pts]  > 1.5 m · 3.0 m (> 4/6 - 6/7) [20 pts]  COMMENTS  RIPARIAN ZONE AND FLOODPL  RIPARIAN WIDTH  L R (Per Benk)  Wide > 10 m  Moderate 5-10 m  Nancw < 5cp  None  COMMENTS  FLOW REGIME (At Time of Evalue)  Stream Flowing  Subsuffice flow with isotated pook COMMENTS  ANUOSITY (Number of bends pee	Check Of the control of the contro	ONLY one bax):  4 67 (16 pte)  (KFULL WIGHH (meters)  C 7/L  SKFULL WIGHH (meters)  A conservation Tillage  Open Pasture. Row  Crop  Archael gor Construction  (solated pools, no flow (intermittent)  o water (Ephemeral)
BANK FULL MOTH (Measured as the a > 4.0 meters (> 13) D0 pts]  > 3.0 m + 40 m (> 6/7 - 13) [25 pts]  > 1.5 m + 3.0 m (> 6/6 - 6/7) [20 pts]  COMMENTS  RIPARIAN ZONE AND FLOODPL  RIPARIAN WIDTH  L R (Per Bank) W4de > 10m Mederate 5-10m  Nancw < 5cn None COMMENTS  Steam Flooting Subsurface flow with isolated pools COMMENTS  SMUOSITY (Number of bends per None) None	This Information must also be completed LAIN QUALITY STRONG HONOR PROBLEM FIELD  RESIDENCE FOR THE COMPLAIN OUALITY STRONG HONOR PROBLEM OUALITY STRONG HONOR PROBLEM OUALITY STRONG HONOR PROBLEM OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUALITY STRONG HONOR PROBLEM OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OF THE COMPLAIN OUT OUT OF THE COMPLAIN OUT OUT OUT OUT OUT OUT OUT OUT OUT OUT	ONLY one bax):  4 67 (16 pte)  (KFULL WIOTH (meters)    C 7/L

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ADDITIONAL STREAM INFORMATION (This information Must Also be Co	mpleted]:
GHEI PERFORMED7 - 🗆 Yes 🆪 No. OHEI Score	(if Yes, Allach Completed OHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream (### (2)5 mg
CWH Name.	
☐ EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>ENTIRE</u> W	
USGS Quadrangle Name: (47)   10.0	S Soil Map Page: NRCS Soil Map Stream Order
County. Carrell (J. Township/Q	Hy Currellian
MISCELLANEOUS	
Base Flow Conditions? (Y/N) Date of last precipilation: Apr	1 3/13 Quantity: 6.57"
Photograph Information:	
Elevated Turbidity? (Y/N):/ Canopy (% open)3\(\text{2}\)	
Were samples collected for water chamistry? (Y/N): (Note lab sample	e no. or id. and attach results) Eab Number
Field Measures: Temp (°C) $\overline{NH}$ Dissolved Oxygen (mgl) $\overline{NH}$	pH (S.U.) N/A Conductivity (µmhos/em) // V/A
is the sampling reach representative of the stream (YAN) If not, please	ėxplė in
Additional comments/Gescription of polution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N):Y (II Yes, Record all abservations. Voucher collect ID number Include appropriate field data sheets	ions ophonal. NOTE: all voucher samples must be labaled with the site from the Primary Headwater Habitet Assessment Manual)
Fish Observed? (Y/N)Y	
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF S	, ,
Include Important landmarks and other features of Interest for site e	valuation and a narrative description of the stream's location
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#### **APPENDIX D**

PHOTOGRAPHS OF THE SITE



**Photo 1** PEM Wetland A, located within the north-central portion of the Study Area, looking east, with abutting Stream 2 in background.



**Photo 2** PEM Wetland B, located within the eastern portion of the Study Area, at toe-of steep slope and abutting unnamed tributary of Pipes Fork (Stream 10), looking south.



**Photo 3** PEM Wetland C, located within the east-central portion of the Study Area in a historic, diversion, side slope ditch, looking north.



**Photo 4** Wetland D, located within the east-central portion of the Study Area in a historic, diversion, side slope ditch, looking south.



**Photo 5** PEM Wetland E, located adjacent to the south-central portion of the Study Area abutting Stream 4, looking north.



**Photo 6** PEM Wetland F, located adjacent to the south-central portion of the Study Area, looking north.



**Photo 7** PEM Wetland G, located within the north-central portion of the Study Area, looking north.



**Photo 8** PEM Wetland H, located within the north-central portion of the Study Area, looking north from bank of abutting Stream 7.



**Photo 9** PEM Wetland I, located within the eastern portion of the Study Area, at toe-of steep slope and abutting Stream 9 and Stream 10, looking south.



**Photo 10** PEM Wetland J, a marginal drainageway/depression located within the eastern portion of the Study Area, looking southwest toward confluence with abutting Stream 10.



**Photo 11** PSS Wetland K, marginal depression on steep slope adjacent to Stream 10, looking south within the eastern portion of the Study Area.



**Photo 12** PEM Wetland L, marginal depression on steep slope adjacent to Stream 10, looking south within the eastern portion of the Study Area.



**Photo 13** PEM Wetland M, located within the eastern portion of the Study Area Stream 10, looking southwest.



**Photo 14** PEM Wetland N, located within the southeastern portion of the Study Area abutting Stream 10, looking west from head of adjacent slope.



**Photo 15** PSS Wetland O, located within the northern portion of the Study Area, looking northeast.



**Photo 16** PEM Wetland P, located within the southwestern portion of the Study Area abutting Stream 13 and Stream 14, looking west.



**Photo 17** PEM Wetland Q, located within the southwestern portion of the Study Area abutting Stream 13, looking east.



**Photo 18** PEM Wetland R, located within the southwestern portion of the Study Area abutting Stream 13, looking north.



**Photo 19** Stream 1, ephemeral unnamed tributary (UNT) of Pipes Fork, looking south from access road.



**Photo 20** Stream 2, intermittent, UNT of Pipes Fork, looking southeast.



**Photo 21** Stream 3, ephemeral UNT of Pipes Fork, looking east toward collapsed culvert adjacent to Mobile Road NE.



**Photo 22** Stream 4, ephemeral UNT of Pipes Fork, looking south.



**Photo 23** Stream 5, ephemeral UNT of Pipes Fork, looking west across channel.



**Photo 24** Stream 6, ephemeral UNT of Pipes Fork, looking north.



**Photo 25** Stream 7, showing upper reach of intermittent UNT of Pipes Fork, looking east.



Photo 26 Stream 7, showing lower reach of intermittent UNT of Pipes Fork, looking west.



**Photo 27** Stream 8, ephemeral UNT of Pipes Fork, looking east across channel.



**Photo 28** Stream 9, ephemeral UNT of Pipes Fork within the eastern portion of the Study Area, looking west.



Photo 29 Perennnial UNT of Pipes Fork (Stream 10), looking north.



**Photo 30** Intermittent UNT of Pipes Fork (Stream 11) within the eastern portion of the Study Area, looking west.



**Photo 31** Upper reach of ephemeral Stream 12 a UNT of Pipes Fork located within the northern portion of the Study Area in between two (2) agricultural fields, looking north.



**Photo 32** Lower reach of ephemeral Stream 12 a UNT of Pipes Fork, looking north.



Photo 33 Ephemeral portion of Stream 13 a UNT of Pipe Run, looking west.



Photo 34 Intermittent portion of UNT of Pipe Run (Stream 13), looking east.



**Photo 35** Stream 14, ephemeral UNT of Pipe Run, looking south.

**APPENDIX E** 

**HYDRIC SOILS LIST** 

map unit	map unit name	component name and phase	percent composition	landforms
BnD	Bethesda channery clay loam, 8 to 25 percent slopes	poorly drained soils	5	Depressions
BnF	Bethesda channery clay loam, 25 to 70 percent slopes	poorly drained soils	5	Depressions
BoF	Bethesda channery silty clay loam, 25 to 70 percent slopes	poorly drained soils	10	
Ek	Elkinsville silt loam, rarely flooded	Peoga	5	Depressions
FaD	Fairpoint channery clay loam, 8 to 25 percent slopes	poorly drained soils	5	Depressions
FbA	Fitchville silt loam, 0 to 2 percent slopes	poorly drained soils	10	Depressions
FbB	Fitchville silt loam, 2 to 6 percent slopes	Sebring	5	Drainageways
FcA	Fitchville silt loam, 0 to 3 percent slopes	Flood pool areas	5	Flood plains
FcA	Fitchville silt loam, 0 to 3 percent slopes	Sebring	5	Depressions
FcB	Fitchville silt loam, 3 to 8 percent slopes	Flood pool areas	3	Flood plains
FcB	Fitchville silt loam, 3 to 8 percent slopes	Sebring	6	Depressions
GeB	Glenford silt loam, 2 to 6 percent slopes	poorly drained soils	5	Depressions
GfB	Glenford silt loam, 3 to 8 percent slopes	Areas of poorly drained soils	5	Depressions
GfC	Glenford silt loam, 8 to 15 percent slopes	Areas of poorly drained soils	5	Depressions
GhC	Glenford silt loam, 6 to 15 percent slopes	poorly drained soils	5	Hills
HkA	Holly silt loam, 0 to 2 percent slopes, frequently flooded	Holly	95	Flood plains
Но	Holly silt loam, ponded	Holly	90	Flood plains
Но	Holly silt loam, ponded	Flood pool areas	3	Flood plains
JwA	Jimtown silt loam, 0 to 3 percent slopes	poorly drained soils	5	Depressions
LbB	Library Variant silt loam, 3 to 8 percent slopes	Poorly drained soils	3	Draws
Lo	Lorain silty clay loam, silty substratum	Lorain	95	Terraces
Lo	Lorain silty clay loam, silty substratum	Sebring	5	Depressions
MrD	Morristown shaly silty clay loam, 8 to 25 percent slopes	Poorly drained soils	5	Depressions
Or	Orrville silt loam, occasionally flooded	Holly	5	Flood plains
OvA	Orrville silt loam, 0 to 2 percent slopes, occasionally flooded	Holly	5	Flood plains
Pe	Peoga silt loam, rarely flooded	Peoga	85	Terraces
Pe	Peoga silt loam, rarely flooded	Flood pool areas	5	Flood plains
Sb	Sebring silt loam	Sebring	85	Terraces
Sb	Sebring silt loam	Lorain	5	Depressions
Sg	Sebring-Urban land complex	Sebring	50	Drainageways

**APPENDIX F** 

**RESUMES** 

#### MICHAEL J. MUSSOMELI, PWS ENVIRONMENTAL SCIENTIST IV PITTSBURGH, PA

**EDUCATION:** B.S., Natural Resources Management, Rutgers University, Jan. 1999

**CERTIFICATIONS/** 

**REGISTRATIONS:** Professional Wetland Scientist, PWS No. 2179

**TRAINING:** Wetlands Delineation Certificate-Rutgers Professional Continuing

Education, 2000

Endangered Species of New Jersey-Rutgers Professional Continuing

Education, 2001

Advanced Techniques in Wetland Delineation- Massachusetts

Conservation Commission, 2003

Hydrology of Wetlands- Rutgers Professional Continuing Education, 2005

Ecological Restoration Symposium- NJ Pinelands Nursery, 2006

Maryland State Highway Administration Soil Erosion and Sediment

Control Training

-MDE Introductory Training: June 2007

-Basic Erosion and Sediment Control Class: July

2007

-Recertification: October 2011

Identification of Freshwater Wetland Sedges, Grasses, and Rushes-Institute for Wetland and Environmental Education and Research,

September 2007

Planning, Site Selection, and Hydrology Models for Constructed

Wetlands-Wetlands Training Institute, September 2008

Wetland Construction Design- Rutgers Continuing Education, December

2009

40 Hour HAZWOPER Health and Safety Training, March 2012

#### **EXPERIENCE SUMMARY:**

Michael Mussomeli is an environmental scientist with experience in wetland ecology, wildlife surveys, vegetation sampling, and construction monitoring throughout the northeast. Mike has performed hundreds of wetland delineations as well as numerous wildlife surveys and habitat assessments. He has provided environmental consultation to clients in the public and private sectors to ensure compliance with local, state, and federal environmental regulations and ordinances, guidance through the environmental permitting process, and minimization of impacts to aquatic and terrestrial resources. This permitting, documentation, and guidance includes the preparation of 404 and related state and local permits, environmental impact statements, GIS screenings, National Environmental Policy Act documentation, and preparation of other environmental reports.

#### PROJECT EXPERIENCE:

Senior Environmental Scientist; MarkWest Liberty Midstream and Resources, LLC; Various Gas Pipeline Projects; Washington, Greene, and Fayette Counties, PA; January 2012 to present. Conducted wetland delineations for over twenty (20) gas pipeline projects, totaling over 50 miles of right-of-way. Also prepared wetland delineation and stream assessment reports for each project in support of PASPGP-3 submissions.

Senior Environmental Scientist; Multiple Award Remediation Contract; Rock Island Arsenal Remediation Project; Rock Island, Illinois. March 2012- April 2012. Conducted wetland delineation on 20-acre landfill site in support of remediation activities. Also prepared a wetland report detailing findings for submission to USACE in support of permit requirements.

Senior Environmental Scientist; MarkWest Liberty Midstream and Resources, LLC; Boy Scout Camp Pipeline; Harrison County, Ohio; May 2012 to July 2012. Mr. Mussomeli led a team that conducted a wetland delineation, performed Ohio Rapid Assessment Method, and stream evaluation for Ohio a 3.5-mile pipeline. Mike also assisted in preparation and submission of preconstruction notice for Nationwide Permit 12 for the project.

Senior Environmental Scientist; U.S. Environmental Protection Agency; Sauer Dump Site; Baltimore County, Maryland. February 2012- April 2012. Conducted wetland delineation on 2.50-acre site in support of Superfund listing for hazardous waste site in Dundalk, Maryland. Also prepared wetland report detailing for submission to USEPA and responsible party.

Senior Environmental Scientist; Enervest Operating, LLC; Phase I Indiana Bat Assessment; Stark and Tuscarawas Counties, Ohio; May 2012 to July 2012. Conducted a Phase I habitat assessment for Indiana bat (*Myotis sodalis*) along a 1.5-mile corridor for proposed gas pipeline. Mr. Mussomeli also prepared a report of findings for submission to U.S. Fish and Wildlife Service for concurrence.

Senior Environmental Scientist; Chevron Appalachia, LLC; Wetland Delineation and Habitat Assessments for Water Withdrawal Activities; Various locations, Fayette, Greene, and Westmoreland Counties; January 2012 to present. Conducted wetland delineations and habitat assessments in support of water withdrawal activities. Mr. Mussomeli also prepared reports summarizing results of onsite resources as well as summarizing impacts associated with proposed activities. Habitat assessments/surveys at various sites for endangered, threatened, and species of special concern included Allegheny woodrat (Neotoma magister), heartleaf meehania (Meehania cordata), wild oats (Chasmanthium latifolium), purple rocket (Iodanthus pinnatifidus), harbinger-of-spring (Erigenia bulbosa), and white trout lily (Erythronium albidum).

Senior Environmental Scientist; Williams/Laurel Mountain Midstream Operations, LLC; Dunlap Creek Botanical Survey and Habitat Assessment; Luzerne and Redstone Townships, Fayette County, PA; June 2012 to July 2012. Conducted survey and habitat assessment for State-endangered tall larkspur (*Delphinium exaltatum*) along 3.5-mile corridor for proposed gas pipeline. Mr. Mussomeli also prepared a report of findings for submission to Pennsylvania Department of Conservation and Natural Resources.

Senior Environmental Scientist; Pennsylvania Department of Transportation; Tub Mill Run Bridge Replacement Project/Casselman River Bridge Replacement Project; Township of Elk Lick and Borough of Salisbury, PA; September 2010 to October 2011. Conducted

wetland delineations and field investigations for two (2) bridge replacement/rehabilitation projects: SR 0669 over Casselman River and SR 0069 over Tub Mill Run. Mr. Mussomeli also prepared wetland reports for each project.

Senior Environmental Scientist; South Jersey Transportation Authority; Atlantic City International Airport Grassland Restoration and Invasive Species Control Project; Township of Egg Harbor, NJ; May 2005 to September 2008. Responsible for vegetation monitoring as part of Habitat Evaluation Procedure (HEP) for management of airport lands for grassland habitat restoration to enhance habitat for State threatened grasshopper sparrow (Ammodramus savannarum), State endangered upland sandpiper (Bartramia longicauda) and control of invasive plant species [Chinese bush clover (Lespedeza cuneata)]. Also responsible for conducting survey for State threatened frosted elfin (Collophrys irus) and assisted in supplemental planting of frosted elfin larval host plant, wild indigo (Baptisia tinctoria), to enhance frosted elfin habitat.

Environmental Scientist; New Jersey Transit; Access to the Region's Core. Secaucus, NJ and New York City, NY; October 2006 to November 2007. Responsible for assisting in preparation of Draft Environmental Impact Statement (DEIS) for proposed construction of four-track right-of-way from Secaucus, NJ to New York City, with a portion of the 9.3-mile project corridor bisecting the Meadowlands District. Responsibilities include preparation and review of technical reports, document preparation, subconsultant coordination/oversight, and agency coordination (Federal Transit Administration, NJDEP, USACE, NJ Meadowlands Commission).

Environmental Scientist; County of Monmouth (NJ); Monmouth County Bridges R4 and R7 Consolidated Coastal Wetland Mitigation Site; Township of Hazlet, Borough of Keyport, Borough of Union Beach, NJ. January 2006 to October 2007. Responsible for preparation of New Jersey Department of Environmental Protection (NJDEP) CAFRA, Waterfront Development Permit, and Coastal Wetland Permit and U.S. Army Corps of Engineers (USACE) Nationwide Permits for the replacement of Monmouth County Bridges R4 and R7. This also includes the development of the mitigation plan and NJDEP approval for the R4 Consolidated Mitigation Site, which is proposed to be utilized as mitigation credit for R4, R7, and up to eight other bridge replacement/rehabilitation projects.

Project Manager; Maryland State Highway Administration; MD 328 over Tuckahoe Creek Bridge Replacement and Wetland Mitigation Project; Counties of Caroline and Talbot, MD; October 2007 to December 2011. As onsite environmental consultant to Maryland State Highway Administration (MDSHA), Mr. Mussomeli was responsible for wetland delineation and preparation of Joint Permit Application for USACE Individual Permit and Maryland Department of Public Works Tidal Wetlands License, as well as supervising wetland mitigation site searches and wetland mitigation design for bridge replacement project. Mr. Mussomeli also prepared Invitation for Bids and other advertisement documents on behalf of MDSHA.

Environmental Scientist; PSE&G; Route 1/9T Gas Line Replacement; City of Jersey City, NJ; April 2005 to August 2005. Responsible for environmental screening, including GIS background data search and field investigations, to assess environmental impacts and identify necessary permits for PSE&G gas line replacement in Jersey City.

Environmental Scientist; New Jersey Department of Transportation; Route 49/55 Interchange Improvement Project; City of Millville, NJ; May 2006 to March 2008. During preliminary design for this interchange improvement project, responsibilities included wetland

delineation, preparation of Category Exclusion Document (CED) including Technical Environmental Study (Ecology), environmental justice, Section 4(f) compliance, and Section 10 Reforestation Determination. During final design, responsibilities include preparation and submission of Statewide General Permits 10A and 11 for minor road crossing and construction of an outfall structure within wetlands, wetland transition areas, and State open waters, and preparation of Environmental Report and Individual Flood Hazard Area Permit and Hardship Waiver. Mr. Mussomeli also coordinated mitigation strategies for impacts to riparian zone.

Environmental Project Manager; Maryland State Highway Administration; I-695 MD 26 (Liberty Road) and Milford Mill Road Interchange Improvements; Baltimore County, MD. December 2007 to August 2011. As an onsite consultant for Maryland State Highway Administration (MDSHA), Mr. Mussomeli delineated wetlands within the 2.5-mile project corridor, identified significant trees within the project limits, prepared a wetland delineation report, and coordinated permitting requirements for Stimulus-funded bridge and roadway improvement project.

Environmental Scientist; United Water New Jersey/United Water New York; Various Projects in Bergen and Ocean Counties, NJ and Rockland County, NY; March 2006 to October 2007. Mr. Mussomeli was client point of contact for assessment of wetlands and wildlife permitting and issues for site improvements at a multitude of locations in northern and central NJ and southeastern New York. Responsibilities included client coordination, field investigations to determine the regulatory impacts for proposed site improvements and preparation of necessary permits (if applicable), wetland identification and delineation, permit preparation and submission, agency coordination, tree survey and location by GPS, GIS screenings, and report preparation.

Environmental Project Manager; Maryland State Highway Administration; U.S. 40 over Patapsco River Bridge Rehabilitation Project. Baltimore and Howard Counties, MD. October 2007 to December 2011. As an onsite consultant for Maryland State Highway Administration, Mr. Mussomeli served as environmental project manager for large bridge rehabilitation project and was responsible for wetland delineation, development of permitting/design strategies to minimize environmental impacts, consultant oversight, and agency coordination for replacement of structurally deficient bridge within high volume traffic corridor. Mr. Mussomeli also conducted a survey for State-listed rare ostrich fern (*Matteuccia struthiopteris*).

Environmental Scientist; Bordentown Hospitality; Bordentown Hospitality Hotel and Amenities Project. Township of Bordentown, NJ; August 2005 to October 2007. Responsible for wetland delineation, preparation of wetland report and preparation of General Permit 10A and Transition Area Waiver for development of 38-acre parcel for hotel, restaurant, offices, and amenities.

Wetland Scientist; Grumpy's Restaurant; Grumpy's Site Expansion Project. Town of Dennis, MA; July 2003 to August 2003. Responsibilities included wetland delineation, preparation of wetland report, and preparation and submission of Notice of Intent for proposed restaurant expansion.

Environmental Project Manager; Maryland State Highway Administration; U.S. 50 over Sinepuxent Bay Bridge Replacement; Ocean City, MD; October 2007 to September 2011. Project manager responsible for wetland delineation, mitigation site search, DEIS review, agency coordination, and preparation of Preferred Alternatives for Conceptual Mitigation Report for future replacement of U.S. 50 bridge to Ocean City. Mr. Mussomeli proposed an alternative form of

mitigation that consisted of contribution to Maryland Department of Natural Resources' Coastal Wetlands Initiative involving wetland enhancement through plugging ditches. Mr. Mussomeli coordinated with state and federal regulatory agencies for approval of this cost saving approach.

#### **CHRONOLOGICAL WORK HISTORY:**

Environmental Scientist IV; Tetra Tech, Inc.; Pittsburgh, PA, January 2012 – Present.

Senior Environmental Scientist; Parsons Brinkckerhoff; Princeton, NJ and Baltimore, MD, October 2004 – December 2011.

Environmental Scientist; Gravatt, Geller, and Associates; Freehold, NJ, April 2004 – October 2004.

Wetlands Specialist; A.M. Wilson and Associates; Marstons Mills, MA, (May 2003 – April 2004).

Natural Resource Specialist; Northeast Environmental Management Systems; Lodi, NJ, May 2002 – May 2003.

#### OTHER:

New Jersey Meadowlands Commission- Environmental Program Leader/Naturalist - Lead special events and presentations, including canoe and boat trips; hikes; nature interpretation; and programs on wetlands, wildlife, Meadowlands ecology, and beekeeping; professional development seminars for teachers; and design of educational museum exhibits at the Meadowlands Commission's Environment Center, in Lyndhurst, New Jersey.

Maryland Quality Initiative (MDQI)- On behalf of PB and MDSHA, performed education outreach program for elementary and high school students interested in engineering and science careers.

Allegheny woodrat (*Neotoma magister*) population study- Picatinny Arsenal, Morris County, NJ. As an undergraduate student at Rutgers University, assisted in population study including trapping and radio telemetry tracking of State endangered Allegheny woodrat.

James A. McFaul Environmental Center- Worked as park naturalist leading special events and presentations, design of museum exhibits, wildlife rehabilitation, animal care, park security, administration, maintenance of grounds and trails, and park planning for environmental center in Wyckoff, New Jersey.

Bogota Environmental Commission- 1999 to 2001

Tenafly Nature Center- Part-time Naturalist

National Wildlife Federation Backyard Habitat Stewardship Program

North Jersey Beekeepers Association

#### PROFESSIONAL AFFILIATIONS:

Society of Wetland Scientists

# Preston R Smith DEPARTMENT MANAGER/BIOLOGIST/ECOLOGIST PITTSBURGH, PA

**EDUCATION:** B.S. Biology (Environmental Science); University of Pittsburgh; Dec. 2000

M.S. Biological Sciences; Wright State University; March 2010

#### **EXPERIENCE SUMMARY:**

Mr. Preston Smith is a Biologist with 12+ total years of professional experience. Mr. Smith currently manages the Wetlands and Ecological Services Department for the Appalachian Basin Oil and Gas Services Group. Since starting at Tetra Tech, Mr. Smith has been involved in wetland delineations, habitat studies, and related report generation for commercial Oil and Gas clients in Western Pennsylvania, West Virginia, and Ohio. His current responsibilities including staff management, workload delegation including scheduling personnel for field work and report writing, and QA/QC of work products and deliverables. Mr. Smith has also been involved in NEPA Categorical Exclusion, Environmental Assessment, and Environmental Impacts Statement projects in several capacities serving as Project Manager, Deputy Project Manager, Water Resources Specialist, and Ecologist for various clients including the US Coast Guard, Department of Energy, Federal Energy Regulatory Commission, Nuclear Regulatory Commission, and Tennessee Department of Transportation. Additionally, Mr. Smith has served as an Ecological Risk Assessor for various DoD sites for the Navy and Air Force, and non-DoD sites for USEPA and commercial clients. He also has experience performing herpetological and small mammal surveys in Western Pennsylvania.

**TRAINING:** OSHA 1910.120 40-Hour HAZWOPER Training; June 22, 2007

OSHA 1910.120(e)(4) 8-Hour HAZWOPER Supervisory; October 17, 2008

OSHA 1910.120 8-Hour HAZWOPER Refresher; June 13, 2011

ACOE-based 40-hour Wetland Delineation Certification: June 26, 2009

#### **RELEVANT PROJECT EXPERIENCE:**

**Project Biologist; Confidential Client; Fayette County, PA; 2010.** As a Project Biologist, Mr. Smith completed a field survey for presence/absence and potential habitat survey for the Allegheny woodrat, *Neotoma magister*, and submitted the report to the PA Game Commission for expedited review for Marcellus Shale-related activities. The survey was approved by the PA Game Commission.

**Biologist/Wetland Delineator/Manager; Confidential Client; Western PA/Northern West Virginia/Easter Ohio; 2009-present.** As a wetland delineator, Mr. Smith conducts and manages wetland investigations based on the 1987 US Army Corps of Engineers Wetland Delineation Manual and Regional Supplements. The investigations involved identifying wetland vegetation, soils, and hydrology along linear pipelines and well pad sites and preparing Wetland Reports for Marcellus Shale-related activities. A post construction wetland investigation and report were also prepared.

Biologist/Wetland Delineator/Manager; Confidential Client; Eastern OH; 2011-present. As a wetland delineator, Mr. Smith conducted wetland investigations based on the 1987 US Army Corps of Engineers Wetland Delineation Manual and Regional Supplements. The investigations

involved identifying wetland vegetation, soils, and hydrology along linear pipelines and preparing Wetland Reports for Marcellus Shale-related activities.

**Biologist; Confidential Client; Eastern OH; 2012.** As a Biologist, Mr. Smith conducted a habitat survey for Indiana Bat roost tree suitability. The investigations involved identifying suitable habitat for the Indiana bat (*Myotis sodalis*) and preparing a report for submittal with a Nationwide Permit 12 to the Army Corps of Engineers.

**Project Permit Manager; Confidential Client; West Virginia; 2011**As the Project Permitting Manager, Mr. Smith coordinated with USFWS and WV Department of Natural Resources (WV DNR) to secure the permitting for Nationwide Permit 12 for a natural gas pipeline project. Mr. Smith also prepared a Stream Activity Application Report for submittal to the WV DNR as par tof this project.

**Project Permit Manager; Confidential Client; Ohio; 2012.** As the Project Permitting Manager, Mr. Smith coordinated with USFWS and US Army Corps of Engineers to secure the permitting for Nationwide Permit 12 for an approximately 5-mile natural gas pipeline project. Mr. Smith also prepared a Pre-Construction Notification for the ACOE as part of this permit.

**Project Permit Manager; Confidential Client; Ohio; 2012.** As the Project Permitting Manager, Mr. Smith coordinated with US Army Corps of Engineers to secure the permitting for Nationwide Permit 12 for an approximately 3.2-mile natural gas pipeline project. Mr. Smith also prepared a Pre-Construction Notification for the ACOE as part of this permit.

NEPA Analyst/Environmental Scientist; FERC-regulated Environmental Assessment for an Interstate Natural Gas Pipeline; West Virginia and Pennsylvania; 2010-present. As a NEPA analyst, Mr. Smith drafted the Aquatic Resource section of a FERC-regulated EA for a commercial Oil and Gas client for Marcellus Shale-related activities.

Biologist/Field Operations Leader; TX Energy Environmental Report; Eastman Chemical; Beaumont, TX; 2008. As the Field Operations Leader, Mr. Smith coordinated and participated in Biological surveys including fish and benthic sampling on the Neches River and a site habitat characterization in Beaumont, TX.

**Ecologist; Endangered Species Review; Munitions Response Program; MCB Quantico; 2007-2008.** As an Ecologist, Mr. Smith prepared the endangered species section of the Munitions Response Program at the Marine Corps Base Quantico. He gathered information on species occurring at the base and determined the Federal and State status of those species and identified locations where those species are likely to occur.

Project Manager; Wetland Delineation for the New Station Lake Charles; U.S. Coast Guard; Lake Charles, LA. 2011-present. As a project manager, Mr. Smith is currently managing all aspects of the Wetland Delineation for a proposed site of a new USCG facility in Lake Charles, LA. His duties included client management, budget monitoring, workload delegation, and review of the jurisdictional determination.

#### **CHRONOLOGICAL WORK HISTORY:**

Wetlands and Ecological Services Department Manager, Tetra Tech NUS, Inc.; Pittsburgh, PA; November 2011-present.

Biologist/Ecological Risk Assessor; Tetra Tech NUS, Inc.; Pittsburgh, PA; January 2007-November 2011.

Research Assistant/Lab Manager; Wright State University; Dayton, OH; September 2003-December 2006.

Managed an aquatic toxicology laboratory. Responsibilities included maintaining laboratory cultures and supplies, managing grant related research projects (see descriptions above), supervising undergraduate students, writing technical reports, conducting literature reviews, and maintaining laboratory and field equipment.

Research Assistant; Indiana University of Pennsylvania; Indiana, PA; September 2002-August 2003.

Provided support in maintaining laboratory insect cultures and supplies. Conducted small mammal surveys; endangered reptile surveys (Eastern Massasauga Rattlesnake); collected and identified amphibians and reptiles in Western Pennsylvania for the Pennsylvania Herpetological Atlas; identified benthic macroinvertebrates for Abandoned Mine Drainage projects.

## CODIE VILENO ENVIRONMENTAL SCIENTIST PITTSBURGH, PENNSYLVANIA

**EDUCATION:** M.S., Environmental Geography, State University College at Buffalo,

(anticipated) 2013

B.A., Anthropology, State University College at Buffalo, 2007

**TRAINING:** 38 Hour ACOE Wetland Delineation Training Program, November 2009

Engineering for Ecosystem Restoration Workshop, June 2010 American Red Cross Adult First Aid/CPR/AED, October 2011

16 Hour Wilderness First Aid, November 2012

40 hours EPA 165.5 HAZWOPER Health and Safety Worker 2012

Williams Contractor Safety Training 2012

#### **EXPERIENCE SUMMARY:**

Mr. Vileno has worked in the environmental field for over five years. His experience includes conducting and assisting on wetland delineations, habitat assessments, and endangered species surveys. He has additional experience performing and supervising Phase 1 archaeological surveys. Mr. Vileno's educational background includes studies in wetland ecology, stream ecology, hydrology, wetland/stream restoration methods, geology, environmental impact assessments, and archaeology.

#### PROJECT EXPERIENCE:

#### **Environmental Assesment**

Environmental Scientist; MarkWest Liberty Midstream & Resources, LLC; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Pennsylvania. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in southwestern Pennsylvania. Specific tasks included field survey, report preparation, and wetland functional assessments.

Environmental Scientist; MarkWest Ohio Gathering Company, LLC; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Ohio. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in eastern Ohio. Specific tasks included field survey, report preparation, and completion of Ohio EPA specific wetland and stream assessments.

Environmental Scientist; Antero Resources Appalachian Corp.; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Ritchie and Doddridge Counties, West Virginia. Responsible for performing and assisting with wetland delineations for various proposed natural gas well pads and access roads in northern West Virginia. Specific tasks included field survey and report preparation.

Environmental Scientist; Stone Energy; Wetland Delineation for Mercer 1 Well Pad; Sisterville, Tyler County, West Virginia; September 2012. Performed wetland delineation for proposed natural gas well pad and associated access road. Specific tasks included field survey and report preparation.

Environmental Scientist; Laurel Mountain Midstream Operating, LLC; Endangered Species Survey (Yellow Passionflower) for Miller to Headlee Pipeline Project; Greene and Cumberland Townships, Greene County, Pennsylvania; September 2012. Assisted with botanical survey for yellow passionflower along the proposed Miller to Headlee natural gas pipeline right-of-way and access roads. Tasks included pre-survey research, field survey, and report preparation.

Environmental Scientist; Laurel Mountain Midstream Operating, LLC; Endangered Species Survey (Drooping Bluegrass) for Nickelville Pipeline Project; Nickelville, Venango County, Pennsylvania; July 2012. Assisted with botanical survey for drooping bluegrass along the proposed Nickelville natural gas pipeline right-of-way. Specific tasks included field survey and report preparation.

Environmental Scientist; Laurel Mountain Midstream Operating, LLC; Endangered Species Survey (Tall Larkspur) for Dunlap Creek Pipeline Project; Luzerne and Redstone Townships, Fayette County, Pennsylvania; June 2012. Assisted with botanical survey for tall larkspur along the proposed Dunlap Creek natural gas pipeline right-of-way and access roads. Specific tasks included field survey and report preparation.

Environmental Scientist; Laurel Mountain Midstream Operating, LLC; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Pennsylvania. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in southwestern Pennsylvania. Specific tasks included field survey and report preparation.

Environmental Scientist; Enervest Operating, LLC; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Ohio. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in southeastern Ohio. Specific tasks included field survey, report preparation, and completion of Ohio EPA specific wetland and stream assessments.

Environmental Scientist; NAVFAC Washington; Marine Corps Base Quantico Wetland Functional Analysis; Quantico, Virginia; April 2012. Assisted with wetland functional assessments in support of remedial activities.

Environmental Scientist; NASA; Wallops Flight Facility Remedial Action Contract; Wallops Island, Virginia; March 2012. Assisted with wetland delineation and wetland functional assessments in support of remedial activities.

Environmental Scientist; Burnett Oil Company, Inc.; New Salem, Pennsylvania; December 2011 to February 2012. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in southwestern Pennsylvania. Specific tasks included field survey and report preparation.

Scientist; Army Corps of Engineers; South Park Lake Dredge Project; Buffalo, New York; October 2011. Supervised Phase 1 archaeological survey in preparation of dredging activities.

Scientist; Dominion East Ohio; Monroe County Gas Pipeline Project; Indiana Bat Habitat Assessment and Wetland Delineation; Woodsfield, Ohio; July 2011 to September 2011. Assisted with Indiana Bat Habitat assessment and wetland delineation along a proposed natural gas pipeline right-of-way. Specific tasks included field survey and completion of Ohio EPA specific wetland and stream assessments. Other responsibilities included Phase 1A archaeological assessment

Archaeological Technician; National Grid; Lockport to Mortimer; Rochester, New York; May 2011 to October 2011. Performed Phase 1 archaeological survey in support of transmission line replacement. Assisted with report preparation.

Scientist; National Fuel Gas Company; Tioga Pipeline Expansion; Tioga County, Pennsylvania; June 2011 to September 2011. Assisted with wetland delineation along proposed natural gas pipeline right-of-way. Other responsibilities included performing a Phase 1A archaeological assessment and supervising a Phase 1 archaeological survey.

Archaeological Technician; National Fuel Gas Company; Allegheny National Forest Pipeline Project; Warren, Pennsylvania; September 2009 to October 2009. Performed Phase 1 archaeological survey along proposed natural gas pipeline right-of-way.

Archaeological Technician; Dominion East Ohio; Pipeline Replacement; Wooster, Ohio; June 2008 – July 2009. Performed Phase 1 archaeological survey along proposed natural gas pipeline right-of-way.

Archaeological Technician; Horizon Wind Energy, LLC.; Arkwright Wind Farm; Arkwright, New York; September 2008 – March 2009. Performed Phase 1 archaeological survey on proposed turbine pads and transmission lines.

#### Sampling

On-Call Research Assistant; City of Buffalo, NY; Buffalo, New York; May 2009 to August 2009. Utilized YSI multiparameter sondes, and collected water samples during storm events to support City of Buffalo Combined Sewer Overflow monitoring program.

#### **CHRONOLOGICAL WORK HISTORY:**

Environmental Scientist III; Tetra Tech, Inc.; Pittsburgh, Pennsylvania; 2011 – Present

Scientist I; Tetra Tech, Inc.; Buffalo, New York; June 2008 – November 2011

Research Assistant; State University of New York Research Foundation; Buffalo, New York; October 2009 – January 2010

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On-Call Research Assistant; State University of New York Research Foundation; Buffalo, New York; May 2009 – August 2009

Report Writer; Test America Laboratories; Amherst, New York; November 2007 – June 2008

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Summary: Application - Appendix A electronically filed by Mr. Michael J. Settineri on behalf of Carroll County Energy LLC